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THE POTENTIAL OF YOUTH: AGE AND THE PREFERENCE FOR LEADERSHIP
POTENTIAL

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Thesis submitted in partial fulfilment of the requirements for the degree of Doctor of
Philosophy at the University of Kent.

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Abstract

Leadership potential is a crucial concern for employers (Korn Ferry, 2015), and psychological research has identified a preference for leadership potential, such that candidates with leadership potential are preferred in recruitment evaluations over candidates with proven leadership performance (Tormala et al., 2012). This preference has been associated with bias based on demographic group membership, advantaging male but not female candidates (Player et al., 2019). There is also evidence for an association between youth and leadership potential (Hirschfeld & Thomas, 2011), which can drive the preference for leadership potential such that candidates with potential are preferred because they are perceived to be younger than candidates with leadership performance (Sun et al., 2015). However, the evidence for this is mixed and Tormala et al. (2012) found no evidence for a pro-youth bias driving the preference for leadership potential.

This thesis explores the impact of candidate age on perceptions of leadership potential, and presents a systematic review of the literature and nine empirical studies. The systematic literature review finds evidence for an association between perceived leadership potential and membership of high-status demographic group membership, specifically younger, male, white, or heterosexual targets. Based on this evidence, I propose a leadership potential congruity model. Based on this theoretical model and the extant literature, I expect that i) candidates with leadership potential will be preferred over candidates with leadership performance, ii) younger candidates will be preferred over older candidates, and iii) the preference for potential will be accentuated when the candidate is younger, and attenuated when they are older. The nine empirical studies find evidence for a preference for leadership potential over leadership performance on measures of future performance, but not for willingness to hire. They also offer evidence for a pro-youth bias on measures of future

performance and willingness to hire, driven by underlying high-competence age stereotypes of younger workers.

Overall, the evidence in this thesis offers support for the leadership potential congruity model in finding an association between youth and leadership potential, and that a pro-youth bias drives the preference for leadership potential, particularly in contexts involving direct candidate comparisons. The theoretical and practical implications of these results are discussed, alongside study limitations and directions for future research informed by the leadership potential congruity model.

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Chapter One: Leadership Potential and Age in the Workplace

“If the demand for new, skilled and educated talent will outstrip supply by 2020 in the UK and many parts of the world (James 2013), are older workers a potentially untapped source of future labour – the nation’s hidden talent pool?” (ILM, 2015, p.5)

Firstly, Chapter 1 gives an overview of the thesis, outlining the nine studies undertaken to investigate the relationship between leadership potential and target age in the workplace. Secondly, it focuses on empirical research into leadership potential. It sets out conceptual frameworks that aim to define leadership potential and its underlying attributes, before reviewing psychological research that has found a preference for leadership potential over proven leadership performance in leadership selection (E.g., Sun et al., 2015; Tormala et al., 2012). It also integrates the preference for leadership potential into a role congruity framework (Eagly & Karau, 2002) to consider whether target demographic group membership can influence the preference for leadership potential. Thirdly, the chapter turns to age in the workplace, setting out evidence for underlying age stereotypes that drive age biases against older workers. It then goes on to explore the factors that can moderate the operation of age stereotypes, before discussing and evaluating theory and evidence into perceptions of older and younger leaders. Finally, the chapter integrates these two areas of research to focus on the empirical evidence for a role for target age in the preference for leadership potential, highlighting the gaps in extant literature that necessitate further research in this area.

1.1 Thesis Overview

Effective leadership is crucial for organisations (e.g., Yukl, 2012). Organisations with the highest quality leaders have been found to be 13 times more likely to outperform their competitors in performance metrics including financial performance, employee engagement,

and customer satisfaction (Boatman & Wellins, 2011). Therefore, it is understandable that the top two challenges for business leaders worldwide are developing future leaders and attracting and retaining top talent (DDI et al., 2018), and that leadership development is a \$366 billion global industry (Westfall, 2019). Despite this focus, 80% of organisations are facing a leadership talent shortage (Mercer Mettl, 2019), only 31% of organisations believe that they are effectively identifying future leaders (Boatman & Wellins, 2011), and 40% of designated high potential employees do not perform as hoped in the future (Cappelli & Keller, 2014). This highlights that organisations are investing heavily in identifying and developing future leaders, but may not be effectively identifying those with leadership potential.

In seeking to address this gap, there is a small body of psychological research that has explored leadership potential as a discrete construct. This research has tended to focus on creating clearer definitions of leadership potential and its component parts, identifying the antecedents of future leadership performance that can help organisations better identify markers of leadership potential (e.g, Church & Silzer, 2014; Dries & Pepermans, 2012; Marshall-Mies et al., 2000). Research into leadership potential has also identified unconscious biases that impact target evaluations. Tormala et al., (2012) identified a preference for leadership potential over leadership performance in recruitment, such that candidates with leadership potential are evaluated more positively than candidates with proven leadership experience. This preference for potential has also been found to advantage some demographic groups over others, benefitting men in recruitment contexts but not women (Player et al., 2019). There is also some evidence that candidate age may affect evaluations of leadership potential and the preference for leadership potential.

Firstly, there is evidence for an association between youth and leadership potential such that younger workers are perceived as higher in leadership potential than older workers

(Hirschfeld & Thomas, 2011), and younger workers have higher self-rated leadership potential than older workers (Tresh et al., 2019). Secondly, there is mixed evidence for whether an association between youth and leadership potential has a role in driving the preference for leadership potential. Tormala et al. (2012) found no difference in the perceived age of candidates with leadership potential and performance. However, Sun et al. (2015) found that candidates with leadership potential were viewed as significantly younger than candidates with leadership performance, and this perceived age difference partly drove a preference for leadership potential. Further research is needed to clarify the relationship between age and leadership potential, and to resolve contrasting findings over its possible role in driving the preference for leadership potential.

This thesis addresses these research gaps by exploring the extent to which candidate type (leadership potential vs. performance) and candidate age (younger vs. older) impact target evaluations in leadership recruitment, and interact to determine candidate preferences. In Chapter 2, a systematic literature review identifies and collates existing empirical research into target age and perceived leadership potential. A leadership potential congruity model is proposed based on this systematic literature review, a conceptual framework of the relationship between target demographics, perceived leadership potential, and recruitment evaluations. The model integrates research on the preference for leadership potential with role congruity theory (Eagly & Karau, 2002), to present a leadership selection process that builds on our existing theoretical understanding and opens up new opportunities for improved decision making. The thesis goes on to test specific elements of this new model.

Chapter 3 investigates the leadership attributes associated with leadership potential and performance, and younger and older leaders through two descriptive studies (Studies 1 and 2). It also explores the attributes in leadership candidates most valued and sought for in recruitment through qualitative analysis of focus groups with industry professionals (Study

3). Chapter 4 experimentally tests the extent to which candidate type (leadership potential vs. performance) and candidate age (younger vs. older) influence candidate evaluations in a fictitious leadership recruitment context (Studies 4, 5, and 6). Chapter 5 then explores potential moderators of the relationship between candidate type, candidate age, and candidate evaluations. Study 7 tests whether age, gender and age stereotype endorsement impact self-rated leadership potential, whereas Study 8 additionally tests the effects of age stereotype reinforcement, in the shape of age stereotyped organisational culture, on self-evaluations. Study 9 returns to other-evaluations, testing to the extent to which ageist attitudes, endorsement of prescriptive age stereotypes of succession, and organisational culture moderate the impact of candidate type and candidate age on candidate evaluations. Finally, Chapter 6 conducts a mini-meta-analysis of the studies undertaken in this thesis to determine the effect of candidate type and candidate age, combined across all studies, on evaluations of candidate leadership, performance, and willingness to hire (see Figure 1.1 for an overview of the thesis studies).

All studies were carried out in accordance with the recommendations of the School of Psychology Ethics Committee at the University of Kent, United Kingdom. All participants gave informed consent in accordance with the Declaration of Helsinki. The research was conducted in accordance with guidelines from the University of Kent Research Ethics (Human Participants) Committee, the Economic and Social Research Council (ESRC) Research Ethics Framework, and the ethical guidelines from the British Psychology Society (BPS). See Appendix A for ethics approval codes for each study.

The thesis concludes with a general discussion of results, theoretical and applied implications, study limitations, and directions for future research. Through the leadership potential congruity model, it contributes an evidence-based framework to inform future

research and develop our understanding of the relationship between target demographics, perceived leadership potential, and recruitment evaluations.

Thesis Study	Design	Date of Data Collection												
		2017	2018				2019				2020			
		Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Study 1	Quantitative, descriptive	█												
Study 2	Quantitative, descriptive													
Study 3	Qualitative, focus groups		█	█	█	█								
Study 4	Quantitative, experimental				█	█								
Study 5	Quantitative, experimental						█	█						
Study 6	Quantitative, experimental							█	█					
Study 7	Quantitative, correlational		█	█										
Study 8	Quantitative, experimental		█	█										
Study 9	Quantitative, experimental										█	█		
Systematic Literature Review*			█	█	█									
Meta-Analysis**														█

Figure 1.1. An overview of the studies included in this thesis, detailing their design and the date of data collection.

Notes. Q1 refers to Quarter 1 (Jan, Feb, March) and so on. *The date listed is when the original literature review was carried out. The process was later re-run to include more recent papers in the scope of the review. **This is the date the analysis was carried out.

1.2 Leadership Potential

“Organisations need to develop and sustain a pipeline of the right leaders, with the right abilities, in the right roles, and at the right times to ensure a sustainable competitive advantage. The idea of identifying and managing high-potential talent has become increasingly essential for organisations.” (Korn Ferry, 2015, p.2)

Identifying and developing leadership potential is a key focus for organisations, and a substantial area of investment. In the US, companies of all sizes are committed to improving their leadership capability, and an average of 17% of leadership development budgets are focused on identifying and developing high potential employees who are seen as future leaders (Bersin by Deloitte, 2014). Across the globe, senior executives and HR professionals in 2014 identified leadership capability as their major challenge for the next three years, and high potentials as a key development priority (Henley Business School, University of Reading, 2014). According to HR professionals, developing the next generation of organizational leaders is the biggest human capital challenge for organisations over the next ten years, and leadership is the most urgent capability gap for organisations preparing for the future in countries including the US, UK, China and Germany (SHRM, 2017).

This focus on identifying and developing future leaders, is against a backdrop of concern with the capability of current leaders. Ineffective management is costing UK businesses over £19 billion a year in lost working hours alone, 43% of UK managers rate their own line manager as ineffective, bad management by company directors causes 56% of UK corporate failures, and three quarters of organisations in England have reported a deficit of management and leadership skills (Department for Business, Innovation & Skills, LMNG, 2012). Furthermore, over a third of HR professionals are struggling to recruit candidates with the leadership skills they need (SHRM, 2017), whereas whilst 80% of organisations view

leadership as high priority, only 41% believe they are ready or very ready to meet their leadership requirements (Volini et al., 2019, April).

Errors in perceptions of leadership potential could be contributing to this gap in leadership capability. The performance-potential paradox means that past and current performance information is interpreted as indicative of future potential (Church & Wacloski, 2010), but the skills and capabilities needed for high performance can change substantially as an individual moves up an organisation's hierarchy (Greer & Virick, 2008; Konczak & Foster, 2009; Lombardo & Eichinger, 2000). Furthermore, an increasingly dynamic environment for organisations means that new skills and behaviours are needed in future leaders, making past performance data of questionable relevance to leadership potential (Church & Silzer, 2014). Therefore, past performance is a poor indicator of future potential (Church & Silzer, 2014) as individuals often need very different skills and strategies to excel in broader future leadership roles (Greer & Virick, 2008; Lombardo & Eichinger, 2000). Leadership potential and the identification of future leaders is clearly a significant strategic focus for organisations, but our ability to accurately evaluate perceived leadership potential is flawed.

1.2.1 Defining leadership potential.

"The term "leadership potential," at first glance, can seem too subjective to be useful." (Bridgespan, 2012, p.1)

The lack of an agreed and consistently applied definition of leadership potential presents a barrier to developing effective theory and practice (Church & Silzer, 2014), and has therefore driven a body of research seeking to define leadership development as a discrete concept. Silzer and Church (2009) described leadership potential as the employees within an organisation who have the potential to be effective in other future roles, usually with much

broader responsibilities and at higher levels in the hierarchy. Church and Silzer (2014) went on to describe individuals with leadership potential as those who can demonstrate the “...abilities, skills, characteristics and behaviours that are reliable predictors of later leadership success” (Church & Silzer, 2014, p.52). Research has sought to enhance this definition through exploring the antecedents of leadership potential, leading to two theoretical models of leadership potential founded on empirical research.

Firstly, Dries and Pepermans (2012) developed a model of leadership potential informed by original empirical research and an extensive review of the literature. They identified thirteen factors of leadership potential, plotted across four quadrants. The first quadrant is Analytical Skills, consisting of intellectual curiosity, strategic insight, problem solving and decision making. The second quadrant is Learning Agility, which includes emotional intelligence, adaptability and willingness to learn. The third quadrant is Drive, consisting of dedication, results orientation and Perseverance. Finally, the fourth quadrant, Emergent Leadership, encompasses motivation to lead, self-promotion, and stakeholder sensitivity.

Secondly, Church and Silzer (2014) developed a model of leadership potential entitled the Leadership Potential Blueprint. Based on empirical psychological research and organisational data, it blends knowledge and experience from both research and applied settings to define three dimensions of leadership potential. Foundational dimensions consist of personality characteristics, such as social skills and resilience, and cognitive capabilities, such as intelligence and the ability to deal with ambiguity. Growth Dimensions consist of learning skills, including the ability to adapt and learn from feedback, and motivation skills, such as drive and ambition. Finally, career dimensions comprise leadership skills, including the ability to manage, inspire and develop others, and functional/technical skills, which

covers the business knowledge and functional skills relevant to an individual's area of expertise.

These two models identify common aspects of leadership potential, including strategic thinking, learning ability and adaptability, drive and motivation, and motivating others. They also highlight the ability of research into leadership potential to contribute to theory and practice, informing correlational field studies (Troth & Gyetvey, 2014), the development of a leadership potential scale (Lee et al., 2015), and applied talent management practice in organisations including PepsiCo, Eli Lilly, and Citibank (Church & Silzer, 2014). Together they offer clear routes for researchers to further our understanding of leadership potential, and for practitioners to effectively identify future leaders. However, error and bias on the part of the evaluator can negatively impact perceptions and evaluations of performance in general (Heidemeier & Moser, 2009) and leadership potential specifically (Dries & Pepermans, 2012; Silzer & Church, 2009; Troth & Gyetvey, 2014).

1.2.2 The preference for leadership potential.

“Current leaders represent what...business needed in the past, not in the present or the future.” (Fulmer and Bleak, 2007)

One bias identified in a small but growing body of research, is a preference for leadership potential over leadership performance in leadership candidate evaluations. In eight different experiments, involving over 642 participants across diverse contexts, Tormala et al., (2012) found that participants consistently demonstrated a general preference for potential over performance. A preference for potential was found when evaluating athletes, paintings, comedians, graduate school applicants, chefs, and leadership candidates. This pattern of results was reproduced in both laboratory and field experiments, and was also found despite past performance of alternative candidates being objectively more impressive. A general

preference for potential was found in subsequent research (Kupor et al., 2014; Poehlman & Newman, 2013), across similarly diverse domains.

Tormala et al., 2012 uncovered a preference for *leadership* potential in Studies 2 and 3. In these experimental studies, participants evaluated hypothetical job candidates for a leadership role who either had 2 years of experience and scored highly on a test of leadership achievement (leadership performance candidate), or had no experience but scored highly on a test of leadership potential (leadership potential candidate). Study 2, which employed a between-participants design, revealed that leadership potential candidates were preferred over leadership performance candidates on measures of future career success and performance in five years' time. Study 3, which employed a within-participants design, revealed that leadership potential was preferred over leadership performance on independent candidate evaluations on an aggregate scale encompassing future success and willingness to hire measures, and also on a comparative measure of which candidate would have the better performance in five years' time. This was despite the performance candidate being viewed as having as a more objectively impressive resumé than the potential candidate. Tormala et al. (2012) concluded these results reflect a preference for leadership potential over leadership performance, an effect that has since received cross-cultural support through replication studies in China (Sun et al., 2015). When identifying future leaders, people may unconsciously over-rate untested potential and discount tested performance, even though it is objectively more impressive.

In exploring the mechanisms behind a general preference for potential, Tormala et al. (2012) found that candidates with potential were associated with greater uncertainty (Study 4) interest (Studies 5 and 6) and processing (Studies 7 and 8) than performance candidates. They concluded that potential was more attractive than performance because it was imbued with an uncertainty that made it more cognitively engaging and emotionally intense. Therefore, it

stimulated more processing which meant individuals attended to the information more, giving information on potential more impact and emphasis than information on performance. In support of this argument, previous research has found that uncertainty can elicit greater interest and deeper processing in individuals (Gal & Rucker, 2010; Tormala & Rucker, 2007), and that uncertainty can prompt greater favourability ratings (Bar-Anan et al., 2009) and make messages more persuasive and impactful (Karmarkar & Tormala, 2009).

Kupor et al. (2014) explored the role of uncertainty in the preference for potential in more depth. They found that both individual difference in tolerance for uncertainty, and conditions primed for high uncertainty, impacted upon the preference for potential and were associated with levels of interest and information processing. Potential was more attractive than performance when tolerance for uncertainty was high in either the individual or the situation. Furthermore, people high in tolerance for uncertainty reported deeper information processing when attending to high potential targets, and high tolerance for uncertainty provoked a greater interest in potential targets.

However, the research into this relationship between uncertainty and the preference for potential is limited. The role of uncertainty in explaining the preference for *leadership* potential appears to be unexplored in the psychology literature. Although Tormala et al. (2012) argue that uncertainty underpins the preference for potential across contexts, the drivers behind a preference for leadership potential specifically are mostly untested. Furthermore, a preference for leadership potential over leadership performance may advantage some demographic group members over others. Theory and evidence suggest that members of some groups may be more congruous with perceived leadership potential than others.

1.2.3 Role congruity theory.

“Be particularly aware of your (and others’) assumptions of “the kind of people” who usually do this job. That’s loaded with bias favoring the status quo.” (Young, 2020)

Role congruity theory (Eagly & Karau, 2002) is a theoretical model of prejudice affecting female leaders, which is based on an incongruity between the female gender role and leader roles. It emerges from a social role theory of sex differences (Eagly, 1987), in which popularly accepted gender roles exist, containing descriptive norms of what men and women typically do, and injunctive norms of what men and women ideally should do. Social role theory argues that many of the attributes linked to male and female gender roles, can be defined in terms of agentic or communal characteristics. Men are associated with agentic characteristics, such as being independent and assertive, whereas women are associated with communal characteristics, such as being caring and cooperative (Eagly, 1987; Eagly & Karau, 2002). In leadership evaluations, studies have found a preference for agentic over communal characteristics which can advantage men over women in leadership recruitment (Sczesny, 2004).

Role congruity theory argues that this reflects a perceived incongruity between female gender roles and expectations of leaders which advantages men over women in leadership evaluations, across cultures and organisational and political contexts (Eagly & Karau, 2002). This perceived incongruity extends to evaluations of leadership potential, such that women are viewed as having less leadership potential than men (Eagly & Karau, 2002). Therefore, role congruity theory suggests that a preference for leadership potential may benefit men over women as leadership potential is less congruous with female gender roles.

Player et al. (2019) explored the relationship between leadership potential and gender in leadership selection across two experimental studies, in which participants

evaluated leadership candidate profiles manipulating gender (male vs. female) and leadership characteristic (potential vs. performance). They found a preference for potential over performance on measures of expected future success, resumé evaluations, future performance, and comparative hiring choices, but only for male candidates. For female candidates the opposite pattern emerged and female candidates with leadership performance were preferred over those with leadership potential on measures of resumé evaluations, future performance, and comparative hiring choices.

Gender was found to moderate the preference for potential, such that possessing leadership potential advantages men in recruitment selection but not women (Player et al., 2019). In this way, a preference for leadership potential could indirectly perpetuate an existing gender bias in leadership recruitment (e.g., Catalyst Organisation, 2014; McKinsey & Company and LeanIn.Org, 2015; World Economic Forum, 2015), in which male candidates with leadership potential advance, to the detriment of female candidates with a proven track record of leadership performance. Player et al. (2019) demonstrates that the preference for leadership potential can advantage some demographic groups over others, raising the possibility that this bias may translate to other demographic group memberships beyond gender. One demographic characteristic that has received limited attention in research into leadership potential is target age.

1.3 Age in the Workplace

“We have seen a very high instance of age-related unfairness, particularly when people are selected for a new job or promotion only if their ‘face fits’, which unfortunately means some people feel that talent isn’t enough to overcome such prejudices.” (Keating, 2012)

Across the world, industrialised nations are dealing with the challenges of an ageing population. Better healthcare means that people are living longer. According to the United Nations (UN), the percentage of the world population aged 50 or over is predicted to increase from 17.7% in 2000 to 24.2% in 2020, and then to grow steadily before reaching 39.9% in the year 2100 (United Nations, 2017). In Europe and the United States the shift is even sharper, with the percentage of the population aged 50 or over in Europe predicted to increase to 39.8% in 2020 and 47.4% in 2100, and in the US to increase to 35.6% in 2020 and 44.6% in 2100. Population ageing has been highlighted by the UN as one of the most significant social changes of this century (United Nations, 2015), and is one of the ‘Grand Challenges’ identified by the UK government in their industrial strategy (HM Government, 2017).

In response, there has been a move towards later retirement ages and a longer working life (Reuters, 2010). This pattern has already asserted itself, in increasing statutory pension ages, government drives to encourage older people to stay in work for longer, and the UK Government has stated its commitment to increase the employment rate for older people (Government Office for Science, 2016). This offers financial benefits at a national level. OECD countries could achieve a long-term boost to gross domestic product of up to \$3.5 trillion if they increased the employment rate of people aged 55 and over (PWC, 2018). It also offers benefits at an individual level, as working longer can increase resilience (Bennett, 2015) and improve health (Waddell & Kurton, 2006), and is a valued opportunity for social interaction and meaningful contribution (Ipsos Mori, 2015).

Despite this lengthening of working life, evidence suggests that organisations and nations are failing to capitalise on the resources of older workers. There are three times as many unemployed older workers as there are young people not in education, employment or training (CIPD, 2015), a potentially significant source of workplace talent that organisations are failing to tap into. At the same time, for older workers seeking work or wanting to stay in work, ageism is a significant problem. Ageism is the most widely experienced form of discrimination in Europe (Age UK, 2011). 42% of people see age discrimination against people aged over 55 as widespread and 56% believe that being over 55 years of age is a disadvantage in recruitment (European Commission, 2015). Although a substantial majority of employers (94%) believe that older professionals are key in addressing a skills gap in the workplace, only 73% of older workers believe that their employers are not doing enough to capitalise on their knowledge and skills (Musaddique, 2017).

Increased age diversity in the workplace has both positive and negative impact for organisations and their employees. The combination of different knowledge areas and perspectives that increased age diversity in the workplace brings, should result in improved problem-solving, creativity, and overall performance (van Knippenberg & Schippers, 2007). Age diversity can improve productivity of organisations engaged in creative tasks (Backes-Gellner & Veen, 2013), improve organisational performance and reduce employee turnover if HR systems are age-inclusive and support a positive age-diversity climate (Boehm et al., 2014), and help senior management teams perform more effectively (Kilduff et al., 2000). However, two meta-analyses have found an overall negative relationship between age diversity and the performance of teams (Joshi & Roh, 2009; van Dijk et al., 2012). Age diversity can negatively impact the wellbeing of older and younger workers (Liebermann et al., 2013), board effectiveness and the profitability of banks (Talavera et al., 2018), and worker productivity when age diversity in the workforce is polarised into two distinct and

opposing age groups (De Meulenaere et al., 2016). Increased age diversity in the workplace is directly linked to the emergence of higher levels of age discrimination, which negatively impacts individuals' organisational commitment, leading to lower organisational performance (Kunze et al., 2011).

Social Identity Theory (Tajfel & Turner, 1979) may offer an explanation of the positive relationship between age diversity and ageism in the workplace. As age is a visible and easily identifiable characteristic, increased age diversity due to population and workforce ageing, could increase the salience of age and encourage greater identification based on age. Increased age-group identification may encourage unfavourable attitudes towards age out-group members, for instance, a meta-analysis by Finkelstein et al. (1995) found an ingroup bias based on age for younger, but not older, workers for certain work evaluations. Ingroup bias can depend on group status, such that an ingroup bias is demonstrated by high-status groups but not low-status groups (Jost & Elsbach, 2001). Therefore, the restriction of an age ingroup bias to younger workers (e.g., Posthuma & Campion, 2009) could be indicative of a lower status for older workers.

Furthermore, although age is a visible and easily identifiable attribute, age categorisation is also a subjective and relative process (Swift et al., 2017; Swift et al., 2018). In terms of self-evaluations, older people may feel younger than their actual age such that their subjective age is younger than their chronological age (Swift et al., 2018) and this can affect attitudes, such that older women with a lower subjective than chronological age report higher wellbeing and life satisfaction than older women with a higher subjective than chronological age (Degges-White & Meyer, 2006). When evaluating others, definitions of who is "older" may be similarly subjective and can vary based on nationality (Abrams et al., 2011) and the age of the evaluator, such that evaluations of when old age starts increase as people age (Swift et al., 2018). Therefore, there is some subjectivity and flexibility in the

point at which targets are categorised as old and associated with older worker stereotypes (Abrams et al., 2011; Swift et al., 2018).

1.3.1 Age stereotypes.

“It’s still seen as okay in our culture to make general assumptions about people based on how old they are” Rachael Saunders, Head of BITC Age at Work programme (in Balch, 2015)

Stereotypes are the expectations and beliefs about the attributes associated with the members of a particular outgroup (Fiske, 1998), and are often negative, derogatory characterisations of people based on their group membership (Fiske & Neuberg, 1990; Fiske & Taylor, 1991). Visible, tangible group membership characteristics, such as gender, race and age, trigger stereotypes that affect judgement and decision-making (Fiske, 1998). Age in particular has been found to be a particularly strong elicitor of category-based stereotypes, with older people being stereotyped more by their age than other demographic characteristics (Bassili & Reil, 1981).

Descriptive age stereotypes of older people, which represent how older people are typically viewed, are often mixed, encompassing positive and negative attributes. Older people are typically perceived as high in warmth, but low in competence (Fiske et al., 2002), leading to a characterisation of older people as ‘dodderly but dear’ (Cuddy et al., 2005). Positive descriptive stereotypes position older people as polite, careful and able to understand the views of others (Abrams et al., 2016), whereas negative stereotypes describe older people as less attractive and physically able than younger people (Kite et al., 2005). Although descriptive age stereotypes are both positive and negative, negative old age stereotypes have become increasingly prevalent, reflecting a medicalisation of ageing in which ageing is increasingly associated with ill health and dependence (Ng et al., 2015).

Prescriptive stereotypes reflect injunctive norms of what social groups should and should not do. North and Fiske (2013) position prescriptive age stereotypes across three dimensions: succession, consumption, and identity. Older people are expected to cede enviable positions of power to younger people (succession), not consume too much of shared resources such as healthcare (consumption), and not to participate in activities more typically associated with younger people such as going clubbing (identity). When people violate prescriptive stereotypes they receive backlash, particularly from the young. Across six experimental studies, North and Fiske (2013) found that younger (vs. older) raters gave more negative evaluations of capability and warmth for older targets who violated prescriptive age stereotypes than older targets who adhered to prescriptive age stereotypes.

This pattern of age stereotypes is replicated in the workplace. Descriptive age stereotypes position older workers as lower performers, with lower ability, motivation and productivity than younger workers (Cuddy & Fiske, 2002; Hedge et al., 2006; Kite et al., 2005), more resistant to change, harder to train, less adaptable and flexible, and providing a lower return on investment for training and development (Broadbridge, 2001; Chiu et al., 2001; McGoldrick & Arrowsmith, 2001), less able to learn (Brooke & Taylor, 2005; Finkelstein et al., 1995; Wrenn & Maurer, 2004), having a shorter job tenure and so providing less return on investment for training and development (Greller & Simpson, 1999; Hedge et al., 2006; Hutchens, 1993), lower in emotional resilience (Rauschenbach et al., 2012), and more costly than younger workers (Capowski, 1994; Finkelstein et al., 2000; Hutchens, 1993). A meta-analysis by Posthuma and Campion (2009) found a broad raft of psychological evidence pointing to the presence of established and pervasive old age stereotypes in the workplace that are more negative than positive.

Furthermore, age stereotypes can affect decision-making to the disadvantage of older workers. Older job applicants have been found to be evaluated more negatively than younger

applicants (Gordon & Arvey, 2004) and less likely to be selected for interview (Krings et al., 2011). Three studies by Abrams, Swift and Drury (2016) showed that when participants chose between two parallel candidates for a job role, one with an ‘older’ profile that reflected attributes linked with an older worker stereotype, and one with a ‘younger’ profile that reflected a younger worker stereotype, the ‘younger’ candidate was consistently preferred and seen as more hireable. These results are mirrored in different studies into the effects of age stereotypes on employee selection and appraisal (Avolio & Barrett, 1987; Finkelstein et al., 1995; Gordon et al., 1988), for example, Posthuma and Campion (2009) found a general preference for younger over older workers in workplace selection and appraisal decisions. Violation of prescriptive age stereotypes has also been found to negatively impact younger workers likelihood to interact with older workers and allocate older workers training resources (North & Fiske, 2016). There is clear evidence that workplace age stereotypes, both descriptive and prescriptive, can negatively impact older workers in terms of recruitment, networking, and training opportunities. Moreover, there are contextual variables that can moderate the operation and influence of age stereotypes in the workplace.

1.3.2 Moderators of age stereotypes.

“Some best-in-class employers understand the value, wisdom, and insight older workers can bring to the workforce...” (Martis, 2020)

Contextual variables, at the level of the organisation, the role, the assessment process, and the rater, can moderate the effect of age stereotypes on target evaluations. At the level of the organisation, age-based stereotypes have been found to be stronger in some industries than others. Age stereotypes are particularly strong in industries such as finance, insurance, retail, information technology and hospitality (Lucas, 1995; McGoldrick & Arrowsmith, 2001; Posthuma & Campion, 2009). This may be influenced by demographics of workers in these industries, as workers aged 50-64 are least likely to work in hospitality and finance

(Department of Work and Pensions, 2015). Perry and Finkelstein (1999) argue that negative stereotypes about older workers are more likely to be activated in situations where employee age is particularly salient, such as organisations where younger workers predominate. For example, older job applicants have been found to be evaluated as less hireable and as having less potential to advance when they were a lower proportion of a candidate pool (Cleveland et al., 1988). Furthermore, organisational context can moderate the impact of age stereotypes in the workplace. Leaders with youthful faces are preferred in times of change, whereas older leaders are preferred in times of stability (Spisak et al., 2014) and inter-group crisis (Spisak, 2012). At the level of the organisation, industry type, existing worker age profile, and organisational context may all moderate the effects of age stereotypes on evaluations of older workers.

At the level of the job role, candidate selection can be seen as a matching process, in which candidates are evaluated against the role prototype, and selected if they are perceived as a good fit with that prototype (Perry & Finkelstein, 1999). One element of the role prototype is age, such that roles are perceived as having an ideal age, which can be based on the age profile of a typical role incumbent or the tasks associated with the role (Cleveland et al., 1988; Perry & Finkelstein, 1999; Posthuma & Campion, 2009). When the ideal age of a role is incongruous with older age stereotypes, this can negatively affect selection prospects for older workers (Cleveland & Landy, 1983; Gordon & Arvey, 2004; Perry & Finkelstein, 1999). Therefore, the impact of age stereotypes on target evaluations can be moderated by the perceived ideal age of a role.

During the assessment process, the measures used and nature of candidate information can also affect the influence of age stereotypes on target evaluations. Biernat and Manis (1991) argue that the type of measure used in evaluations can affect whether stereotyped attitudes emerge or are masked. Subjective measures, such as likert scales, can mask

stereotyped thinking, whereas objective measures, such as evaluations against externally anchored response scales, may be more subject to stereotyped thinking. Furthermore, social comparison processes could accentuate age stereotyping such that age stereotyped evaluations are more likely to emerge in measures involving direct comparison of targets (Posthuma & Campion, 2009). Therefore, age-stereotyped evaluations may be more likely to emerge when objective, comparative measures are used, and less likely to emerge on subjective, individual measures.

The amount and nature of candidate information can also moderate the effect of age stereotypes on evaluations. A meta-analysis by Gordon and Arvey (2004) found more age bias when raters knew a candidate's age and had basic information about them, than when raters had access to more candidate information, and that older candidates were evaluated more negatively on the basis of information in a CV than information via video. This is in line with previous research that found that age stereotype activation and its impact was influenced by context and individuating information (Biernat & Vescio, 1993; Caspar et al., 2011; Quinn & Macrae, 2005), whereby individuating information can have primacy in forming our perceptions over stereotype-based information, reducing or even eliminating stereotype bias (Rubinstein et al., 2018). Therefore, the type of measures used in the assessment process, and the type and amount of candidate presented, can both affect the influence of age stereotypes on candidate evaluations.

Within the assessment or selection process, the rater can also have an impact. For instance, social identity (Tajfel & Turner, 1979) processes could mean that rater-target age similarity would affect target evaluations. Raters may view targets of the same age group as part of their ingroup and therefore favour them in evaluations over targets from different age groups. There is evidence of an ingroup bias based on age for younger workers (Gordon & Arvey, 2004; Rauschenbach et al., 2012), but old age stereotypes appear to be held and acted

upon by both younger and older workers (Posthuma & Campion, 2009) such that older workers are evaluated more negatively than younger workers by both younger and older raters (Krings et al., 2011; Shore et al., 2003). Younger raters seem to demonstrate an age ingroup bias in their evaluations, but older workers may not. This may reflect a status imbalance between younger and older age stereotypes. Younger workers may be more motivated to identify with a high-status younger age group that enhances self-esteem and consequently demonstrate an age ingroup bias, whereas older workers may be less motivated to identify with a lower status older age group. In fact, members of lower status groups may be more likely to demonstrate outgroup favouritism (Batalha et al., 2007; Sachdev & Bourhis, 1991). A lack of ingroup bias by members of stigmatised groups has been found in studies focused on gender, in which an ingroup bias demonstrated by men (a high-status group) is not consistently demonstrated by women (a low status group) (Hoyt et al., 2009; Laurin, 2016). The internalisation of negative age stereotypes may also have a role to play. Age stereotypes are internalised over the lifespan and can negatively impact self-perceptions (Levy, 2009) but also perceptions of others (Clarke & Korotchenko, 2016). Therefore, the lack of an ingroup bias in older workers may be a consequence of the internalisation of negative stereotypes of older workers.

In summary, research suggests that variables at the level of the organisation, role, assessment process, and rater may all moderate the effect of age stereotypes on candidate evaluations. However, there is little empirical research into the effects of these moderating variables in a leadership context, and the effects of age stereotypes on evaluations of leaders can appear more contested.

1.3.3 Age and leadership.

“Employers are becoming much more receptive to the idea of younger business leaders as young entrepreneurs like Mark Zuckerberg and Elon Musk have shaken up the aesthetic of traditional business structure over the last 10 years.” (Riley, 2018)

The stereotypes of older leaders specifically often reflect stereotypes of older workers in general, and demonstrate a similar mix of positive and negative associations. More positive attributes associated with older leaders include higher dominance (Elgar, 2016; Spisak, 2012), stability and reliability (Spisak et al., 2014), and leader generativity (Zacher et al., 2011) than younger leaders. More negative attributes associated with older leaders include less change-oriented behaviours (Walter & Scheibe, 2013) and less effectiveness (Streufer et al., 1990) than younger leaders. However, a full picture of the relationship between age and leadership requires consideration of age stereotypes but also leadership prototypes.

Implicit leadership theories (ILTs) have argued that individuals hold subjective concepts of leaders, or prototypes, which affect information-processing tasks and impact on perceptions and judgements of leaders (Eg. House et al., 2002; Knights & Willmott, 1992; Nichols & Erakovich, 2013). These internalised concepts of leaders separate our cognitive representations of leaders and non-leaders and allow us to function effectively in complex organisational contexts (Lord et al., 1982). Leadership prototypes offer more specific representations of leaders than more generalised stereotypes, containing descriptive representations of the attributes most typical of leaders, and normative representations of what we think leaders are and should be (Junker & van Dick, 2014; Lord et al., 1984). Leadership categorisation theory holds that evaluations of leaders are based on the extent to which a target fits, or does not fit, with a leadership prototype (Lord et al., 1982).

In this way, perceived target prototypicality has a direct influence on raters' evaluations and decision-making. Potential leaders are motivated to look like and act like a leader, so they are granted a leadership identity and its associated heightened status and income (DeRue & Ashford, 2010). When a leader is perceived as prototypical, this can influence follower attitudes and behaviours. A systematic review of the literature revealed that strong alignment between the leader and the prevailing leadership prototype positively impacts employee wellbeing and satisfaction, and evaluations of the leader's competence, effectiveness, likeability, and respectability (Junker & van Dick, 2014).

Leader prototypes include demographic characteristics. Junker and van Dick (2014) found a consistent preference for males over females, and for taller over shorter candidates, in leadership selection. They argued that being male and being tall were associated with being powerful and dominant, and are therefore more congruous with leadership prototypes and encourage a bias in favour of males in leadership selection. There is also evidence that being older can be more congruent with leadership prototypes than being younger. Buengeler et al., (2016) found across two experimental studies that older leaders were perceived as more prototypical than younger leaders, whereas younger workers may fit better with a follower prototype than a leader prototype (Junker & van Dick, 2014).

A superordinate leadership prototype that positions leaders as male and older (Junker & van Dick, 2014; Buengeler et al., 2016) may be applied flexibly to suit the context. For example, female leaders can be preferred during intragroup competition (van Vugt & Spisak, 2008), and feminine faces have been associated with a context of peace rather than war (Spisak et al., 2012). With regards to age, leader age has been specifically cited as a factor of diverging leadership prototypes which can bias leadership selection towards different age groups in different contexts (Spisak et al., 2014). Younger leaders are preferred over older leaders in a context necessitating exploration and prosociality (Spisak et al., 2014), whereas

older leaders are particularly associated with leadership prototypes during times of war (Spisak, 2012).

Overall, the evidence suggests that older age is more congruous with leadership prototypes, and that this perceived fit may advantage older workers in leadership evaluations and leadership recruitment. The perceived fit between age and leadership may have an upper age limit, such that older workers who violate prescriptive age stereotypes of succession by continuing to hold onto positions of power are negatively evaluated (North & Fiske, 2013). Furthermore, different leadership prototypes may emerge in different contexts and a candidate's prototypical fit can vary such that younger leaders may be more prototypical in some contexts. As leaders are increasingly having to drive new technology and respond to rapid change (Department for Business, Innovation & Skills, LMNG, 2012; Volini et al., 2019, April), challenges more typically aligned with younger worker stereotypes (Posthuma & Campion, 2009), contexts in which younger leaders are more prototypical may become more frequent. There is also evidence that a general preference for younger workers in recruitment may translate into a leadership context, and older workers have been found to be preferred only when they are explicitly being hired for a role subordinate to a younger worker (Abrams et al., 2016). Crucially, leadership potential may be a discrete leadership domain more associated with younger, rather than older, workers.

1.4 Leadership Potential and Age

“...if you are over 40, it is very unlikely that you'll be considered for a HiPo (high potential) program, and the rise of technology has made managers and leaders younger and less experienced.” Chamorro-Premuzic & Bhaduri, 2017

In general, older workers are perceived as having less potential than younger workers, in line with a stereotype of older workers as being less trainable, less able to learn new things

and less open to development (Posthuma & Campion, 2009). Studies into leadership potential specifically have yielded a similar pattern of results. Age has been found to be negatively related to perceived leadership potential, both in self-evaluations (Chaturvedi et al., 2012; Tresh et al., 2019) and evaluations of others (Hirschfeld & Thomas, 2011). Hirschfeld and Thomas (2011) also found that that this relationship was partially mediated by knowledge mastery, so that older workers were seen as having less leadership potential as they were perceived as having lower levels of team knowledge and strategic mastery knowledge.

This appears in line with a role congruity approach (Eagly & Karau, 2002) in which older workers are perceived as having less leadership potential than younger workers due to underlying old age stereotypes of low competence. There may be a pro-youth bias in perceptions of leadership potential, at least partly explained by negative descriptive old age stereotypes which position older workers as less competent and able to develop than younger workers (Posthuma & Campion, 2009). A pro-youth bias may also be driven by prescriptive age stereotypes of succession in which older people are expected to cede resources and positions of power to younger people, and receive backlash when they do not (North & Fiske, 2013). If leadership potential is perceived as a finite and valued attribute, older workers may be expected to cede ownership of this attribute to younger colleagues, and be evaluated negatively when they do not. However, existing research associating target age with leadership potential is mostly correlational (Hirschfeld & Thomas, 2011; Tresh et al., 2019). Studies testing causality in the relationship between target age and perceived leadership potential, and a role for target age in driving a preference for leadership potential over leadership performance, is more limited and contested.

In their initial work establishing a preference for potential, Tormala et al. (2012) surmised a possible role for target age in explaining the preference for potential such that candidates with leadership potential were preferred because they were assumed to be

younger. When they tested this with a sample of 77 US participants (Study 3) they found their results did trend in the expected direction, but not to significant levels. Therefore, they concluded that the preference for potential was not driven by a pro-youth bias.

Sun et al. (2015) replicated this study with a larger sample ($n = 1,128$) in China and did find evidence of a pro-youth bias. Candidates with leadership potential were perceived as younger than candidates with leadership performance, and mediation analysis revealed that perceived candidate age predicted positive evaluations of leadership potential candidates. Sun et al. (2015) concluded that the preference for leadership potential is a universal effect that translates into Chinese culture, but that its underlying mechanisms differ across cultures. They argued that in Chinese culture, potential is viewed as a property of youth, and therefore a preference for potential in China is driven by an underlying pro-youth bias. In China, candidates with potential are preferred over candidates with performance because they are assumed to be younger, whereas in US culture anyone can have potential, and so the preference for potential is not associated with target age.

In this way, Sun et al. (2015) explain inconsistent results into a pro-youth bias with cross-cultural differences in the mechanisms underpinning the preference for leadership potential. However, both studies showed results trending in the expected direction, with leadership potential candidates perceived as younger than leadership performance candidates. The results of Tormala et al. (2012) were not significant ($p = .12$), but employed a smaller sample than Sun et al. (2015) which may not have offered enough power to detect an effect of perceived candidate age. As both Tormala et al. (2012) and Sun et al. (2015) point to multiple psychological mechanisms underlying the preference for leadership potential, target age may have a relatively small impact that differs across national cultures.

The contrasting results of Tormala et al. (2012) and Sun et al. (2015) merit further investigation. Although Sun et al. (2015) propose cultural differences in the mechanisms underpinning the preference for leadership potential, the few studies in this area make any conclusions tentative. Further studies are needed to test whether a pro-youth bias has a role for driving a preference for leadership potential over performance in leadership evaluations. This would have a theoretical value in qualifying whether perceived target age is one of the multiple drivers of the preference for potential proposed by both Tormala et al. (2012) and Sun et al. (2015), extending our understanding of the mechanisms behind the effect. It would also allow us to integrate theory and research into age stereotypes and age bias in the workplace with the growing body of research into the preference for leadership potential, opening up new possibilities for research and theory development. Further research would also have an applied value in helping employers better understand how age bias in the workplace can affect employment opportunities for older workers, highlighting new areas for employers to mitigate age bias and ensure they capitalise on the opportunities offered by an ageing workforce.

1.5 Summary and Conclusion

A small body of research has identified a preference for leadership potential over performance in leadership evaluations, in which targets possessing future potential are preferred over targets with proven experience (Player et al., 2019; Sun et al., 2015; Tormala et al., 2012). This effect is principally driven by uncertainty, such that potential targets are imbued with an uncertainty that encourages greater attention and cognitive processing, and are thereby more attractive than performance targets (Kupor et al., 2014; Tormala et al., 2012). There is also evidence that the preference for leadership potential is associated with bias based on demographic group membership and advantages male but not female targets

(Player et al., 2019). This could be explained by role congruity theory and a lack of perceived fit between underlying group stereotypes and stereotypes of leaders (Eagly & Karau, 2002).

Research into age and potential suggests that older workers are perceived as having less potential in general than younger workers (Posthuma & Campion, 2009), and are specifically associated with less leadership potential in other-evaluations (Hirschfeld et al., 2011; Sun et al., 2015) and self-evaluations (Chaturvedi et al., 2012; Tresh et al., 2019). Hirschfeld et al. (2011) also found that a pro-youth bias in perceived leadership potential was driven by lower competence, suggesting that role congruity theory may translate into an age context such that a pro-youth bias in perceived leadership potential is partly explained by underlying age stereotypes that position older people as low-competence (Fiske et al., 2002).

There is mixed evidence as to whether a pro-youth bias in perceived leadership potential could partly drive the preference for leadership potential. Tormala et al. (2012) found that leadership potential candidates were not perceived as significantly younger than leadership performance candidates using a US sample, although results did trend in this direction. However, replication studies by Sun et al. (2015) in China found that leadership potential candidates were perceived as significantly younger than leadership performance candidates, and that this perceived age difference partly drove a preference for leadership potential. Leadership potential candidates were preferred over leadership performance candidates because they were perceived as younger. Sun et al. (2015) argued that a pro-youth bias drove a preference for leadership potential in a Chinese context and not a US context, but these contrasting findings have not been fully explored and resolved.

Therefore, this thesis will explore the role of target age in the preference for leadership potential over leadership performance. It will address this across nine studies, employing both qualitative and quantitative data, to better understand the relationship

between target age, perceived leadership potential, and the preference for leadership potential, and the variables that may moderate these relationships. This has a theoretical value in resolving the contrasting results of Tormala et al. (2012) and Sun et al. (2015), and integrating research into the preference for leadership potential (Tormala et al., 2012) and a pro-youth bias driven by perceived role incongruity (Eagly & Karau, 2002; Hirschfeld & Thomas, 2011). It also has an applied value in identifying a barrier to older workers continuing participation in the workplace and employer realising the enhanced problem-solving, creativity and performance a more age-diverse workforce can offer (van Knippenberg & Schippers, 2007).

Chapter Two: Systematic Literature Review of Age and Leadership Potential

In Chapter 2, I conducted a systematic review into the existing empirical research exploring age and leadership potential. Two researchers followed an agreed search protocol to identify empirical studies into leadership potential, age, and other demographic characteristics. Eleven studies were identified initially and eight more studies were identified using snowballing. The final selection of nineteen studies represented five themes, based on the demographic characteristic related to the leadership assessment: (i) age, (ii) gender, (iii) race or nationality, (iv) sexuality and (v) overall demographics. The first theme of age addresses the primary aim of the review, to explore whether a pro-youth bias accentuates a preference for leadership potential in organisational leadership selection and assessment. The results collated under theme 1 provide evidence for a pro-youth bias in the preference for leadership potential supporting the proposition that youth would accentuate a preference for leadership potential. It also finds evidence that the pro-youth bias is based on the underlying stereotypical traits associated with younger and older workers, and therefore that role congruity theory (Eagly & Karau, 2002) can be translated into an age context. Themes 2 to 5 address the review's second aim to explore whether role congruity theory (Eagly & Karau, 2002) extends to understanding the impact of other demographic group memberships on perceived leadership potential. The evidence presented under themes 2 to 5 suggests that a candidate's demographic membership influences perceived leadership potential based on underlying stereotypes. It suggests that the desirable attribute of leadership potential is reserved for majority group members and fits poorly with stereotypes of stigmatised demographic groups. Based on the results of the systematic literature a new model of leadership potential congruity is proposed.

2.1 Introduction

Identifying and developing effective future leaders continues to be a strategic focus for organisations. In 2017 talent acquisition was recognised as one of the top three challenges faced by organisations globally (Schwartz et al., 2017), and in the UK alone, over half of organisations run talent management activities focused on developing high potentials into future leaders (CIPD, 2015). However, the strategic prioritisation of identifying future leaders may not be effectively identifying the best candidates (Zenger & Folkman, 2017). Analysis of 20,000 high potential employees over six years found that 70% of current high performers lacked key aspects of the ability, engagement or aspiration needed to succeed in future roles (Martin & Schmidt, 2010).

The focus on future leaders has driven a growing body of psychological research into leadership potential. Furthermore, the performance-potential paradox in which performance metrics are incorrectly perceived as indicators of leadership potential (Church & Waclovski, 2010; Player et al., 2019) underlines a need for research into leadership potential as a discrete construct (Church & Silzer, 2014; Dries & Pepermans, 2012). Initially, research into leadership potential focussed on creating clearer definitions of potential. For example, Silzer and Church (2009) described potential as the ability to be effective in future roles and operate at a higher level and with a broader set of responsibilities. With this definition as a foundation, recent research has also explored the antecedents of leadership potential, identifying predictors of leadership potential including cognitive ability (Church & Silzer, 2014; Dries & Pepermans, 2012), emotional stability (Hirschfeld et al., 2008), analytical skills and ability to learn new skills (Church & Silzer, 2014; Dries & Pepermans, 2012). However, subjective biases based on demographic factors may still prevent organisations selecting the optimal candidates for their future leaders (e.g., Capelli & Keller, 2014; Player et al., 2019).

A small number of studies have found that leadership potential and leadership performance are evaluated differently, revealing a bias towards perceived leadership potential over proven leadership performance. For example, evaluators assessing candidates for a leadership role, preferred candidates emphasising leadership potential over those with previous leadership achievements (Tormala et al., 2012; Studies 2 and 3). This effect has been replicated in studies in the UK (Player et al., 2019), the US (Tormala et al., 2012), and China (Sun et al., 2015), providing some support for a cross-cultural preference for leadership potential over leadership performance.

Exploration of the psychological mechanisms underpinning the preference for potential suggest that potential is imbued with uncertainty that stimulates greater interest and cognitive processing (Kupor et al., 2014; Tormala et al., 2012). However, these studies focused on the mechanisms behind a general preference for potential rather than leadership potential specifically. Studies into leadership potential have instead highlighted an association between perceived leadership potential and demographic group membership (e.g., Player et al., 2019).

Player et al. (2019) focused on candidate gender and identified gender as a boundary condition in the preference for leadership potential. Men with high perceived leadership potential were advantaged in leadership selection, but female candidates needed to demonstrate previous leadership performance in order to succeed. This could be explained by a disparity between female gender role stereotypes and leadership stereotypes. Role congruity theory posits that agentic attributes typically associated with men are also associated with leaders, such as being assertive and dominant, whereas women are associated with more communal attributes, such as being helpful and supportive (Eagly & Karau, 2002). Furthermore, when women behave outside of gender role expectations, they can receive backlash (Heilman et al., 2004). Therefore, a lack of fit between stereotypes of female gender

roles and leadership may explain why perceived leadership potential offers an advantage to men but not women. This raises the question of whether the same framework can be applied to explain discrimination faced by other demographic groups. Specifically, older workers could be disadvantaged because potential is more strongly associated with younger than older workers (Posthuma & Campion, 2009).

A challenge for navigating this potential bias is that research focusing on applicant age and leadership potential is mixed. Tormala et al. (2012; Study 3) tested whether the preference for potential could be explained by a pro-youth bias and hypothesised that if potential is stereotypically associated with youth, then candidates with leadership potential will be perceived as younger than targets with leadership performance. However, they found no difference in the perceived age of leadership potential and leadership performance targets, and discounted a pro-youth bias in the preference for leadership potential. Conversely, when Sun et al. (2015) replicated the study with a larger sample in China, leadership potential candidates were perceived as younger than leadership performance candidates, partly explaining a preference for leadership potential. Participants preferred the leadership potential target partly because they were perceived to be younger. Sun et al. (2015) suggested cultural differences in the psychological mechanisms underpinning the preference for leadership potential: their results reflected Chinese cultural beliefs that potential is the property of youth, whereas Tormala et al.'s (2012) results reflected US cultural beliefs that anyone can have potential.

Any association between the preference for leadership potential and target age is important to understand. As life expectancy increases, state pension provisions are deferred, and people's working lives extend (United Nations, 2015; Reuters, 2010), there is a need to ensure that individuals have access to meaningful work for longer, and that organisations can unlock the potential of older workers. Moreover, feedback on leadership potential affects

worker motivation, such that individuals informed that they are low in leadership potential have lower ambition, performance and organisational commitment than those who are told that they are high in leadership potential (Steffans et al., 2018). Age bias in perceived leadership potential could demotivate older workers and limit employers' ability to engage older workers. Therefore, it is essential to understand the subjective biases that could disadvantage older workers in leadership selection, and to explore whether role congruity theory vis-à-vis leadership extends to age.

The mixed findings around a pro-youth bias in perceived leadership potential remains under-explored and unresolved. The novel contribution of this study is to conduct a systematic literature review to provide a clearer picture of the existent research and inform future research. As perceived leadership potential can be conflated with leadership performance (Church & Silzer 2009; Player et al., 2019) and is evaluated differently to leadership performance (Tormala et al., 2012), the review will focus on leadership potential specifically and respond to a need for further research into leadership potential as a distinct construct (Church & Silzer, 2009; Dries & Pepermans, 2012). Therefore, it will analyse and assess existing empirical research on age and leadership potential. Firstly, it seeks to address whether a pro-youth bias accentuates a preference for leadership potential in organisational leadership selection and assessment. Secondly, it contributes to the literature by exploring whether role congruity theory (Eagly & Karau, 2002) extends to understanding the impact of other demographic group memberships on perceived leadership potential. Therefore, the review will also involve studies into other demographic variables and perceived leadership potential.

2.2 Method

The systematic literature review was structured using the PRISMA framework (Moher et al., 2009). A search protocol was created and is detailed in Appendix B. Searches were carried

out in the Psychinfo and Academic Search Complete online databases, as they are leading online databases of psychology literature. The Public Library of Science (PLOS) One database was also searched, as this database included the Sun et al. (2015) study that sparked this review. Literature published until the end of January 2020 was included in the search. The search terms focused on the principal variables identified in the literature informing this review: a) leadership potential, b) preference for potential, and c) youth bias. Searches were carried out by two researchers following the agreed search protocol¹. The researchers met after each stage of the protocol to ensure consistent application and interpretation of the protocol and independently assessed each article in the final selection for risk of bias.

Figure 2.1 presents a flow diagram of the selection process and the articles retained and discarded at each stage of the initial search protocol, which resulted in an initial selection of eleven studies. The researchers then carried out the forward snowballing technique of citation tracking (Greenhalgh & Peacock, 2005; Wohlin, 2014), reviewing the research papers that had cited the articles identified with the initial search protocol in order to identify the most recent relevant research. This resulted in the identification of eight additional articles and a final selection of nineteen papers from the initial search protocol and citation tracking combined.

Details were extracted on the demographic variable tested, the author/s, their research question, the sample size and type, the method and the relevant results pertaining to the focus of the review. Details of selected studies are presented in Table 2.1.

¹ The second researcher was a peer Psychology PhD student. Their role was to replicate the search carried out by the lead researcher in order to increase confidence that all relevant studies were included in the review. They had no role in the design of the study or the synthesis and interpretation of results.

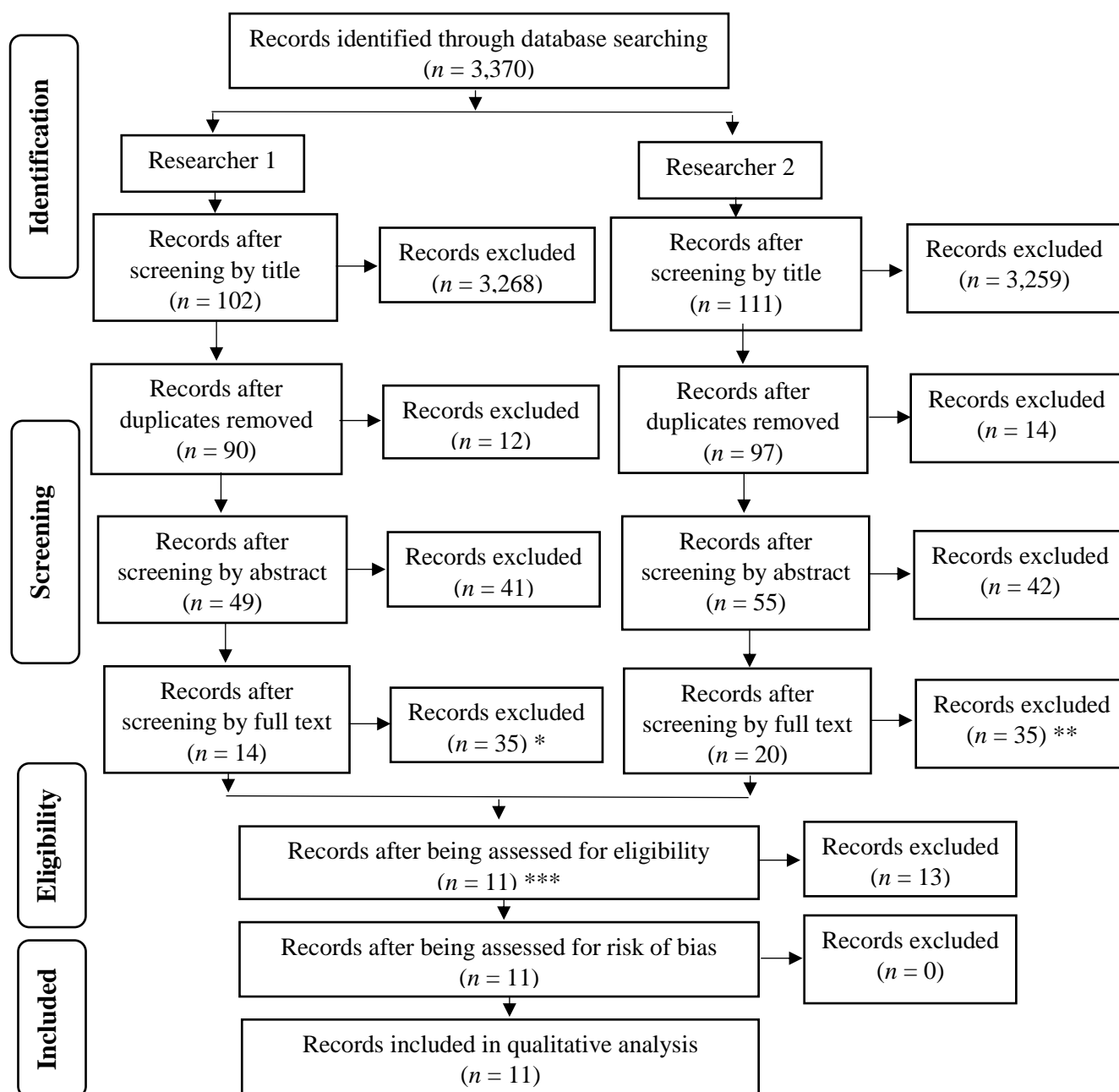


Figure 2.1. Flow diagram of the selection process and articles retained at each stage.

Note: * Nineteen records excluded as no focus on demographics, 11 excluded as not empirical, 4 excluded as no full text available, and 1 excluded as no focus on leadership assessment. ** Seventeen records excluded as not empirical, 13 excluded as not focused on assessing leadership potential, 3 excluded as no focus on demographics, and 2 excluded as no full text available. *** Twenty-four in total after 10 duplicates removed. Ten records excluded as not focused enough on demographics, 3 excluded as not focused on assessing leadership potential.

Table 2.1. *Summary of Studies Selected in the Systematic Literature Review*

Category	Author	Research question	Sample	Method	Results
Age (and gender)	Hirschfeld & Thomas (2011)	To assess the impact of age- and gender-based role incongruence on observed leadership potential (OLP).	972 US Air Force leadership development programme participants.	Descriptive study. Reviewed archival data of participants on a leadership development programme. OLP measured by combining peer and observer ratings.	Older worker age was related to lower OLP, partly mediated by less perceived knowledge mastery. Gender was related to lower perceived strategy knowledge mastery for women but had no effects on OLP.
Age (and gender and race or nationality)	Kwok, Hanig, Brown, & Shen (2018) *	To explore the role of leader identity plays in leader emergence.	88 Royal Canadian Air Cadets.	Descriptive study. Employed a measure of leadership emergence consisting of perceived leadership potential, promotability, and influence.	Age did not correlate with leader emergence, but gender and ethnicity did, advantaging female and non-white cadets. Ethnicity affected leader emergence, so that non-white cadets were rated higher than white cadets.
Age (and gender)	Lisak & Erez (2015) *	To test the impact of global characteristics of cultural intelligence, global identity and openness to cultural diversity on leadership emergence in multicultural teams.	317 students, representing 32 nationalities studying in the US, England, Hong Kong, Germany, Israel, Italy,	Descriptive study. Participants were assigned to a virtual team for a four-week project. Leader emergence measured by participants selecting the most suitable team member to act as leader.	Age was positively correlated with leader emergence. Age and gender did not predict leader emergence.

Category	Author	Research question	Sample	Method	Results
			Spain or Switzerland.		
Age	Sun, Xu, Luo, Wei, Wei, & Xue (2015)	Is there a preference for leadership potential in China? If so, is this partly explained by a pro-youth bias.	17 studies with 1,128 participants in China.	Experimental study. Participants evaluated leadership potential or leadership performance targets and assessed target age. Potential and performance were manipulated by scores on job tests. Results were analysed using individual participant data meta-analysis.	A preference for leadership potential was partly explained by a pro-youth bias.
Age	Tormala, Jia, & Norton (2012)	To explore whether there is a preference for leadership potential over leadership performance.	Study 3: 77 US participants recruited through an online database.	Experimental study. Participants assessed the favourability and perceived age of leadership potential or performance targets. Potential and performance were manipulated by scores on job tests.	There was no difference in the perceived age of leadership potential and leadership performance targets.
Age (and gender)	Tresh et al., (2019) *	To explore the impact of age and gender stereotypes on self-rated leadership potential.	Study 1: 252 participants. Study 2: 199 participants. Study 3: 189 participants. All UK participants.	Study 1: Correlational study. Measuring stereotype endorsement and self-rated leadership potential. Study 2: Experimental study. Participants viewed masculine or feminine job adverts and rated their own leadership potential.	Greater age was related to lower self-rated leadership potential in Study 1, but not in Studies 2 and 3. Age stereotypes did not mediate the relationship in Study 1. Women had higher self-rated leadership potential in Studies

Category	Author	Research question	Sample	Method	Results
			recruited through an online crowdsourcing platform.	Study 3: Experimental study. Participants viewed young or old job adverts and rated their own leadership potential.	2 and 3, but there were no effects of gender in Study 1. There were intersectional differences so that endorsing age and gender stereotypes affected the self-rated leadership potential of some intersectional identities but not others.
Gender	Korenman, Wetzler, Carroll, & Velilla (2019)	To explore whether the masculinity or femininity of target faces affect their perceived leadership ability.	202 US Army cadets.	Experimental study. Participants reviewed 16 faces, 8 male and 8 female, with either masculine or feminine faces, and rated their leadership ability.	Male faces rated higher in leadership ability than female faces. Male participants gave higher ratings to masculine male faces than feminine male faces. Male participants gave higher ratings to feminine female faces than masculine female faces.
Gender	Leslie, Manchester, & Dahm (2017) *	To test whether the adoption of diversity goals in organisations advantages women	Study 1: 1,311 employees of a Fortune 500 company.	Study 1: Correlational study. Measured gender, potential, performance, and pay. Potential	Study 1: There were no gender differences in the predictors of leadership potential (human

Category	Author	Research question	Sample	Method	Results
		high in leadership potential.	Study 2: 270 graduate business students. Study 4: 303 workers. All from the US.	was measured using supervisor ratings in annual reviews. Study 2: Experimental study. Participants viewed an employee profile which manipulated potential with a manager rating and evaluated them and made reward recommendations. Study 4: Experimental study. Used the same basic method as Study 2.	capital, personal life factors, and work attitudes). Study 2: Gender and leadership potential were unrelated to perceived competence, agency and warmth. Study 4: Gender was unrelated to perceived competence, agency and warmth.
Gender	Looney, Kurpius, & Lucart (2004) *	To explore the impact of evaluator and target gender on support for promotion.	108 US Navy midshipmen.	Experimental study. Participants evaluated either a male or female leadership candidate for promotion, rating their support for their promotion.	Candidate gender did not affect support for promotion. Support for male leaders related to the belief that men need to be tough. Female leaders rated higher than male leaders on emotional characteristics of leadership.
Gender	Mohr & Downey (1977)	To explore potential bias in peer ratings as a function of the sex	40 US Army officers.	Descriptive study. Participants on an army training course assessed the leadership	Men had higher self-perceived leadership potential than women.

Category	Author	Research question	Sample	Method	Results
		of the evaluator and the target.		potential of themselves and their peers	Men had higher peer-assessed leadership potential than women, from both male and female peers.
Gender (and race or nationality)	Myung, Loeb, & Horng (2011)	To explore informal recruitment mechanisms for school principals.	8,197 US teachers.	Descriptive study. Participants completed self-report questionnaires and said whether they had been informally identified as a future principal.	Male teachers more likely to be informally identified as potential leaders, than female teachers. Black and Hispanic teachers more likely to be informally identified as potential leaders than white teachers.
Gender	Player et al. (2019) *	To investigate whether leadership potential is overlooked in women, but not in men.	Study 1: 98. Study 2: 199 in full- or part-time employment. All recruited through an online crowdsourcing platform.	Quasi-experimental studies. Potential and performance were manipulated by scores on job tests.	Potential was preferred over performance when the target was male, but performance was preferred over potential when the target was female.

Category	Author	Research question	Sample	Method	Results
Gender	Swain & Korenman, (2018) (Study 1)	To explore the effect humility has on perceived leadership potential, and whether those effects differ by target gender.	143 US Army officers.	Descriptive study. Officers were asked to assess their subordinates' leadership potential.	Women received higher ratings of leadership potential than males. Gender homophily between evaluator and target was positively associated with perceived leadership potential.
Gender (and race)	Thomason, Weeks, Bernardin, & Kane (2011) *	To explore the impact of personality factors on assessments of managerial potential.	114 US Assistant Store Managers.	Descriptive study. Managers were asked to rate subordinates' managerial potential.	Gender and race did not predict perceived managerial potential.
Race or Nationality	Gundemir, Homan, de Dreu, & van Vugt (2014) (Study 4)	To explore whether dual identity is a boundary condition on the pro-White leadership bias.	67 Dutch students.	Experimental study. Study 4 was a laboratory study in which participants completed an IAT, reviewed a leadership candidate resume, recording their willingness to promote them to a higher leadership role.	There is an implicit pro-white leadership bias. This implicit association predicted willingness to promote a white target to a more senior leadership role.
Race or Nationality	Kim & van Dyne (2012)	To explore whether prior intercultural contact has mediated effects on perceived international leadership potential	Study 2: 181 employees and 708 observers, all working adults on a part-time	Descriptive study. Observers assessed the international leadership potential of employees.	Cultural intelligence mediates the relationship between intercultural contact and international leadership

Category	Author	Research question	Sample	Method	Results
		via cultural intelligence.	graduate course in the US.		potential for nationality majorities, but not minorities.
Race or Nationality	Rosette, Leonardelli, & Phillips (2008) (Study 4)	To investigate whether race was part of the business leader prototype, and whether that could explain differences in evaluations of white and non-white leaders.	151 University students from North America.	Experimental study. Participants assessed the leadership potential of a leadership candidate who was white, Hispanic or Asian. Organisational performance and attribution for that performance was also manipulated.	White leaders rated as higher in leadership potential than racial minority leaders, but only when organisational success was attributed to that leader (not when it was externally attributed).
Race or Nationality (and sexuality)	Wilson, Remedios, & Rule (2017) *	To investigate whether race and sexuality stereotypes explain differences in perceived leadership ability of male targets.	Study 1: 80. Study 2: 161. Study 3A: 60. Study 3B: 81. Study 4: 122. All US residents recruited through an online crowdsourcing platform.	Experimental studies. Participants viewed target faces and assessed the extent to which they believed other people would think the target would be a good leader.	Study 1: Black gay men rated higher than black straight or white gay men, and equivalent with straight white men. Study 2: Perceived warmth positively predicted leadership, especially black men. Perceived dominance negatively predicted leadership for black men. Study 3A: Perceived masculinity positively predicted leadership for white, but not black, men.

Category	Author	Research question	Sample	Method	Results
					Study 3B: Black men rated higher than white men. Moderately masculine faces preferred.
					Study 4: Perceived heterosexuality positively related to leadership for black and especially white men.
Overall demographics	Church, Rotolo, Ginther, & Levine (2015)	To collect data on current high-potential programmes and assessment practices.	Individuals from 111 companies mostly headquartered in the US.	Descriptive study. Online survey to representatives of organisations.	34% of respondent organisations use target demographics as indicators of leadership potential

Note. * indicates papers identified as part of the snowballing procedure.

2.3 Results

The nineteen studies were collated within five themes, based on the demographic characteristic related to the leadership assessment: (i) age, (ii) gender, (iii) race or nationality, (iv) sexuality and (v) overall demographics. Some studies related to more than one demographic characteristic, and so were included in more than one theme. The first theme of age addresses the primary aim of our study, to explore whether a pro-youth bias accentuates a preference for leadership potential in organisational leadership selection and assessment. Themes 2 to 5 address our second aim to explore whether role congruity theory (Eagly & Karau, 2002) extends to understanding the impact of other demographic group memberships on perceived leadership potential.

2.3.1 Age.

Hirschfeld and Thomas (2011) analysed data of military officers with an average age of 32, with the youngest aged 25-29 and the oldest aged 40-55. Target age was negatively related to observed leadership potential (OLP) in evaluations from peers and observers. Older candidates scored lower than younger candidates on knowledge mastery tests, which partly mediated the relationship between age and perceived leadership potential. Hirschfeld and Thomas concluded that candidate age was associated with less leadership potential partly due to lower perceived capability. They argued for a lack of fit between negative stereotypes of older workers and leadership attributes, disadvantaging older workers in leadership potential assessments.

Hirschfeld and Thomas (2011) also tested the effects of some contextual variables. They found that the target's overall fit with the leadership role was more important than relative team age, concluding that any effects of candidate age on role congruence were not influenced by overall team demographics. Furthermore, they were working in a military organisation which valued energy and speed, traits more associated with younger than older

workers (Posthuma & Campion, 2009). As evaluators tend to assess candidates in terms of their fit with perceived organisational culture (Sarris & Kirby, 2005), a youth-oriented military culture may accentuate any association between youth and leadership potential and further disadvantage older workers. Furthermore, the leadership role required multi-tasking and adaptability, characteristics similarly associated with younger workers (Posthuma & Campion, 2009) and which could exacerbate perceived incongruity for older workers. Hirschfeld and Thomas (2011) did not test for the impact of the organisation type, workplace culture and leader role on candidate evaluations, but highlight these as potential moderators of the relationship between candidate age and outcomes.

Kwok et al. (2018) analysed Canadian military leadership trainers' evaluations of their cadets' leader emergence. The average age of cadets was 15.22 ($SD = 0.83$). They found no relationship between cadet age and leader emergence, but the youth of the target group means that old age stereotypes would not have been relevant, and this study does not represent a meaningful test of age and leadership potential.

Lisak and Erez (2015) explored leader emergence in temporary virtual teams of graduate students with an average age of 26.20 ($SD=4.95$). Older team members were more associated with leadership emergence, but age did not predict leader emergence. However, the young age of the target group means that 'older' does not equate to 'old' and the results of this study cannot be seen as a meaningful test of age and perceived leadership potential. Furthermore, the researchers also suggest that leadership emergence may operate differently in different team contexts.

Sun et al. (2015) replicated Tormala et al.'s (2012; Study 2) experimental study in which participants assessed candidate profiles in a recruitment context, manipulating candidate leadership potential and performance, employing a Chinese sample. Data was

collected across 17 separate studies and a meta-analysis was conducted on the results. The separate studies had a mean participant age ranging from 20.14 to 26.64, although five studies did not record participant age data. Participants also assessed the age of candidates. The leadership potential candidate was perceived as younger than the leadership performance candidate, which partly explained the preference for leadership potential. Sun et al. (2015) concluded that whereas the preference for leadership potential was generalisable across cultures, the underlying psychological mechanisms differed. In China, the preference for leadership potential is partly explained by a pro-youth bias in which leadership potential candidates are favoured as they are believed to be younger.

Tormala et al. (2012) conducted experimental studies that revealed a preference for potential over achievement when assessing diverse targets including leadership candidates in a recruitment context (Studies 2 and 3). They found a general preference for potential principally explained by an attraction to the uncertainty associated with potential (Study 4). One study also tested for a pro-youth bias in the preference for leadership potential (Study 3). Candidates with leadership potential were perceived as younger than candidates with leadership performance, but the difference was not significant. Tormala et al. (2012) concluded that a pro-youth bias did not explain the preference for leadership potential. However, candidates with both potential and performance were perceived as being younger than the scale mid-point, which could reflect an assumption that job candidates are more likely to be younger than older.

Tresh et al. (2019) tested whether participant age affected self-rated leadership potential, and if this could be explained by the endorsement and reinforcement of age stereotypes. In Study 1, participants were recruited in two age groups, 18-30 and 50+, and participant age was negatively related to self-rated leadership potential. Endorsement of age stereotypes had different associations with self-rated leadership potential at an intersectional

level. Endorsement of low-competence stereotypes of older people was associated with lower self-rated leadership potential for older women; endorsement of high-warmth stereotypes of older people was associated with lower self-rated leadership potential for older men.

Reinforcement of age stereotypes, in the form of organisational culture, did not affect self-rated leadership potential. Age was not significantly related to self-rated leadership potential in Studies 2 and 3.

Overall, three studies suggest significant effects of age on leadership assessment, with older targets perceived as having less leadership potential than younger targets (Hirschfeld & Thomas, 2011; Sun et al., 2015; Tresh et al., 2019). Although the target age in Hirschfeld & Thomas (2011) appears to be fairly young, and therefore 'older' may be more concerned with subjective rather than chronological age, these studies still offer evidence that age is negatively related to leadership potential. In line with role congruity theory, there is also evidence that this perception is based on underlying old-age stereotypes of low-competence (Hirschfeld et al., 2011), that there are differing intersectional effects of old-age stereotypes for older men and older women (Tresh et al., 2019), and that a preference for leadership potential can result in preference towards younger candidates (Sun et al., 2015).

Two studies where the average target age is younger have not found that age predicts leadership potential (Lisak & Erez, 2015; Kwok et al., 2018). Contextual factors could affect whether youth is associated with leadership potential, including national culture (Sun et al., 2015), organisation type and leadership role (Hirschfeld & Thomas, 2011), organisational culture (Hirschfeld & Thomas, 2011), the evaluator (Hirschfeld & Thomas, 2011), team context (Lisak & Erez, 2015), target age variation (Kwok et al., 2018), and other target demographics (Tresh et al., 2019).

In addressing the primary aim of this research, the results collated under theme 1 provide evidence for a pro-youth bias in the preference for leadership potential, and support the proposition that youth would accentuate a preference for leadership potential. Turning to the second aim of this review, there is also evidence that the pro-youth bias is based on the underlying stereotypical traits associated with younger and older workers, and therefore that role congruity theory (Eagly & Karau, 2002) can be translated into an age context. Themes 2-5 will explore this further.

2.3.2 Gender.

Hirschfeld and Thomas (2011) studied gender and leadership potential in a military context and found indirect effects of gender on perceived leadership potential via lower strategic knowledge mastery, suggesting that women had lower perceived leadership potential due to lower perceived capability. They postulate contextual factors that could affect the relationship between gender and perceived leadership potential, arguing that aspects of their study context may have mitigated subjective bias against women, such as a workplace culture and HR practices promoting gender equality, and using trained evaluators.

Korenman et al. (2019) carried out an experimental study also in a military context. Male faces received higher ratings of leadership potential than female faces. Target faces were manipulated to be more masculine or feminine (gender), and there was an interaction between target sex, target gender, and participant sex. Male assessors gave higher leadership potential ratings to sex-gender congruent (vs. incongruent) faces.

Kwok et al. (2018) investigated leader emergence through analysis of data on trainer evaluations of Canadian Army cadets. Their results revealed that female gender was related to higher leader emergence, but did not predict leader emergence.

Leslie et al., (2017) explored gender and perceived leadership potential in a correlational study in an organisation focused on diversity. They found no difference in the variables predicting leadership potential in women and men. Two experimental studies also found that target gender did not affect perceived competence, agency and warmth, underlying traits associated with gender differences in leadership evaluations that advantage men (E.g., Eagly & Karau, 2002; Sczesny, 2004). Leslie et al., (2017) argue that women with high perceived leadership potential may be valued in organisational contexts emphasising diversity, positively impacting perceptions of fit for women with leadership roles.

Lisak and Erez (2015) explored leader emergence in a virtual, multicultural, short-term team. They found no relationship between gender and leader emergence, but their results may not be generalisable into other team contexts.

Looney et al., (2004) carried out experimental research in a military context in which midshipmen evaluated a male or female candidate for promotion. Gender did not affect support for promotion, but support for male candidates was associated with a belief that men needed to be tough, whereas only female leaders were viewed as having emotional characteristics of leadership. It suggests that in a male-dominated military context, societal gender role stereotypes are salient and influence leader evaluations.

Mohr and Downey (1977) analysed data on army officers, finding lower perceived leadership potential for female rather than male targets, from male and female evaluators. They also found lower self-perceived leadership potential in female candidates, and a correlation between self- and peer-rated leadership potential for male candidates only.

Myung et al., (2011) explored gender and perceived leadership potential in an educational context. Women were less likely than men to be identified as future leaders by men and women. This pro-male bias differed across school context, with men more likely to

be identified as future leaders when female representation was more dominant, supporting the assertion that the ‘Think manager – think male’ effect is a strongly-held belief in US managers of both sexes (Schein, 1973; 1975; 1996).

Player et al. (2019) employed an experimental paradigm in which online participants evaluated male and female leadership candidates high in leadership potential or performance. For male candidates, potential was preferred over performance, whereas for female candidates, performance was preferred over potential. Female evaluators demonstrated a gender in-group preference on hiring measures, but male evaluators did not. Furthermore, female evaluators expected female candidates with performance to be more successful than those with potential, which may reflect a heightened awareness in women of gender differences in the leadership attributes needed for success (Owuamalam & Zagefka, 2014).

Swain and Korenman (2018) also studied army officers who assessed subordinates’ leadership potential. Women were more associated with perceived leadership potential than men, which may reflect increased gender equality within the US military since women were accepted into combat roles (Barry, 2013). Swain and Korenman (2018) also found evaluator-target gender congruity positively impacted perceived leadership potential, highlighting that a gender ingroup bias can affect evaluations from men and women.

Thomason et al., (2011) investigated managerial potential in a retail context, analysing supervisor and peer evaluations of Assistant Store Managers’ potential to succeed to a manager position. Candidate gender did not predict perceived managerial potential in retail contexts, perhaps because this is a more female-dominated industry.

Tresh et al. (2019) assessed the effects of stereotype endorsement and reinforcement on self-rated leadership potential and found higher self-rated leadership potential in women than men. These results may fit with the gender ingroup bias by female evaluators found by

Player et al., (2019), and cross-cultural research finding that the ‘Think manager – think male’ effect is less pronounced in women than men (Schein et al., 1996). This relationship was not affected by gender stereotype reinforcement, but stereotype endorsement had differing effects at an intersectional level and endorsing communal stereotypes was associated with higher self-rated leadership potential for older women. The results suggest that the target of the evaluation (self vs. other) affects perceived leadership potential and that perceived leadership potential is partly driven by underlying gender stereotypes.

Overall, the research suggests that evaluations of others demonstrate higher perceived leadership potential in men (Korenman et al., 2019; Mohr & Downey, 1977; Myung et al., 2011) than women (Swain & Korenman, 2018). Empirical support for the relationship between gender and leadership potential suggests that the ‘Think manager – think male’ effect (Schein, 1973; 1975) remains influential and pervasive. Furthermore, leadership potential may advantage men in hiring decisions but not women (Player et al, 2019). This bias has been found in the military (Korenman et al., 2019; Mohr & Downey, 1977) and education (Myung et al., 2011) sectors, although the predominance of research in a military context makes assessment of effects in different sectors difficult. The studies also suggest contextual factors that impact this pro-male bias, such as the gender of the evaluator (Korenman et al., 2019; Player et al. 2019), organisational culture (Leslie et al., 2017), industry type (Thomason et al., 2011), the assessment process (Myung et al., 2011), team context (Looney et al., 2004), gender stereotype congruity (Korenman et al., 2019), and whether the evaluator was evaluating themselves or another (Mohr & Downey, 1977; Tresh et al., 2019).

The mechanisms behind any gender bias seem largely unexplored. There is consistent evidence for the ‘Think manager – think male’ effect (Schein, 1973; 1975), and Hirschfeld and Thomas’s (2011) suggest it could be explained by a perceived competence gap between

men and women. However, Tresh et al. (2019) do not find that gender stereotypes consistently explain the relationship between gender and self-rated leadership potential, although it may do for some intersectional identities. Although there is consistent evidence for an association between males and leadership potential, it is not clear whether a pro-male bias drives a preference for leadership potential.

2.3.3 Race or nationality.

Gundemir et al., (2014) found that organisational leadership roles were more associated with white-majority leaders than ethnic-minority leaders, by members of both racial groups. Leadership traits such as being decisive and intelligent, were more associated with white-majority leaders than ethnic-minority leaders, suggesting a pro-white leadership bias built on an association between universal leadership prototypes and racial categories. This pro white-majority bias predicted hiring intentions, demonstrating that an association between white ethnicity and leadership translated into a subjective bias in perceived leadership potential that disadvantaged ethnic-minority candidates.

Kim and van Dyne (2012) studied the relationship between inter-cultural contact, cultural intelligence and international leadership potential. They categorised participants as majority or minority, based on country of origin, and found that cultural intelligence, mediated the relationship between inter-cultural contact and perceived leadership potential more for majority than minority candidates. Therefore, they argue that inter-cultural contact is a more important consideration when selecting majority (vs. minority) candidates, positioning national majority/minority status as affecting perceived leadership potential.

Kwok et al. (2019) found being non-white was related to higher leader emergence, and positively predicted leader emergence.

Myung et al., (2011) also found that Black and Hispanic teachers were more likely to be identified as future leaders than white leaders. They also identified a racial in-group bias, with principals more likely to identify future leaders from their own racial group.

Rosette et al., (2008) carried out four experimental studies into racial bias in leadership assessment. Leaders tended to be perceived as white, regardless of industry type, workforce ethnicity, and evaluator race. White targets were more associated with underlying traits of leadership effectiveness, but white leaders were only favoured when credited with organisational success.

Thomason et al., (2011) also tested candidate race to investigate managerial potential in retail. Race did not predict perceived managerial potential.

Wilson et al. (2017) explored the impact of racial and sexuality on perceptions of who would be a good leader, across four experimental studies. One study found that black targets were rated as better potential leaders than white targets. Targets with doubly stigmatised identities (black gay men) were viewed as better potential leaders than those with a single stigmatised identity (black straight men; white gay men). Perceived warmth and masculinity positively predicted leadership evaluations for white men, and the positive effect of perceived warmth on leadership evaluations was accentuated for black men, whereas perceived dominance negatively predicted leadership evaluations of black men. Their results show clear differences in the underlying mechanisms behind assessments of leadership potential between black and white targets.

Overall, these studies suggest that target race and nationality influence perceived leadership potential. An implicit pro-white leadership bias means that white-majority candidates are perceived as having more leadership potential than ethnic minority targets, which can advantage them in hiring decisions (Gundemir et al., 2014; Rosette et al., 2008).

This may be explained by perceived underlying traits of competence (Rosette et al., 2008), warmth, and masculinity (Wilson et al., 2017), whereas black targets may only be preferred when they are high in warmth and low in dominance (Wilson et al., 2017). The traits associated with different racial groups mean that there are different underlying mechanisms that can advantage candidates of different races in assessments of leadership potential. The research suggests a pro-white bias in perceived leadership potential that is part of a general association between white-majority status and leadership, but not that a pro-white bias drives a preference for leadership potential. Furthermore, the experimental studies exploring race and perceived leadership potential only focused on male targets (Gundemir et al., 2014; Rosette et al., 2008; Wilson et al., 2017), mostly in a US context (Rosette et al., 2008; Wilson et al., 2017). As the underlying mechanisms of perceived leadership potential may differ across intersectional identities (Tresh et al., 2019) and cultures (Sun et al., 2015), the research here may offer only a limited picture of the relationship between race and perceived leadership potential. The research also suggests factors that can affect a general pro-white bias in assessments of leadership potential, such as the target's other group identities (Wilson et al., 2017), organisational performance and attribution for that performance (Rosette et al., 2008), racial identity of the evaluator (Myung et al., 2011), and background racial composition and intercultural contact (Kim & van Dyne, 2011).

2.3.4 Sexuality.

Wilson et al. (2017) found that target sexuality affected who would be viewed as the best leader. Intersectional analysis found that being straight advantaged white men in perceived leadership potential, whereas being gay advantaged black men. There was also a positive relationship between perceived straightness and perceived leadership potential, especially for white targets. Ambiguous group identities, such as sexuality, can interact with more concrete group memberships, such as race, to impact perceived leadership potential.

There is little exploration of the mechanisms behind associations with sexuality and leadership potential.

2.3.5 Overall demographics.

Church et al., (2015) researched the factors organisations consider when assessing leadership potential. Thirty-four percent of responding organisations considered candidate demographics as indicative of leadership potential, but there are no details on the demographic characteristics considered.

The second aim of this review was to assess whether role congruity theory (Eagly & Karau, 2002) extends to understanding the impact of other demographic group memberships on perceived leadership potential. Overall, the evidence presented under themes 2 to 5 finds that a candidate's demographic membership influences perceived leadership potential based on underlying stereotypes. It suggests that the desirable attribute of leadership potential is reserved for majority group members and fits poorly with stereotypes of stigmatised demographic groups.

2.3.6 Leadership potential congruity model.

The results of the systematic literature review suggest that target age, gender, race or nationality, and sexuality impacts perceived leadership potential. It also highlights contextual factors that can moderate that relationship, although not all have been tested empirically. To summarise the findings, I propose a leadership potential congruity model of the relationship between target demographics, perceived leadership potential, and hiring decisions, and the contextual variables that influence this relationship (Figure 2.2). This integrates existing research into a framework to inform both theoretical development and applied practice.

The model is founded on evidence for a preference for leadership potential over leadership performance in recruitment (Tormala et al., 2012; Sun et al., 2015). It incorporates

research finding an association between perceived leadership potential and demographic group membership, specifically age (younger) (Sun et al., 2015), gender (male) (Mohr & Downey, 1977;), race (white) (e.g., Rosette et al., 2008) and sexual orientation (heterosexual) (Wilson et al., 2017). Finally, it integrates evidence that a lack of fit between demographic group stereotypes and leadership can disadvantage members of stigmatised groups (e.g., Hirschfeld & Thomas, 2011; Myung et al., 2011; Gundemir et al., 2014; Wilson et al., 2017).

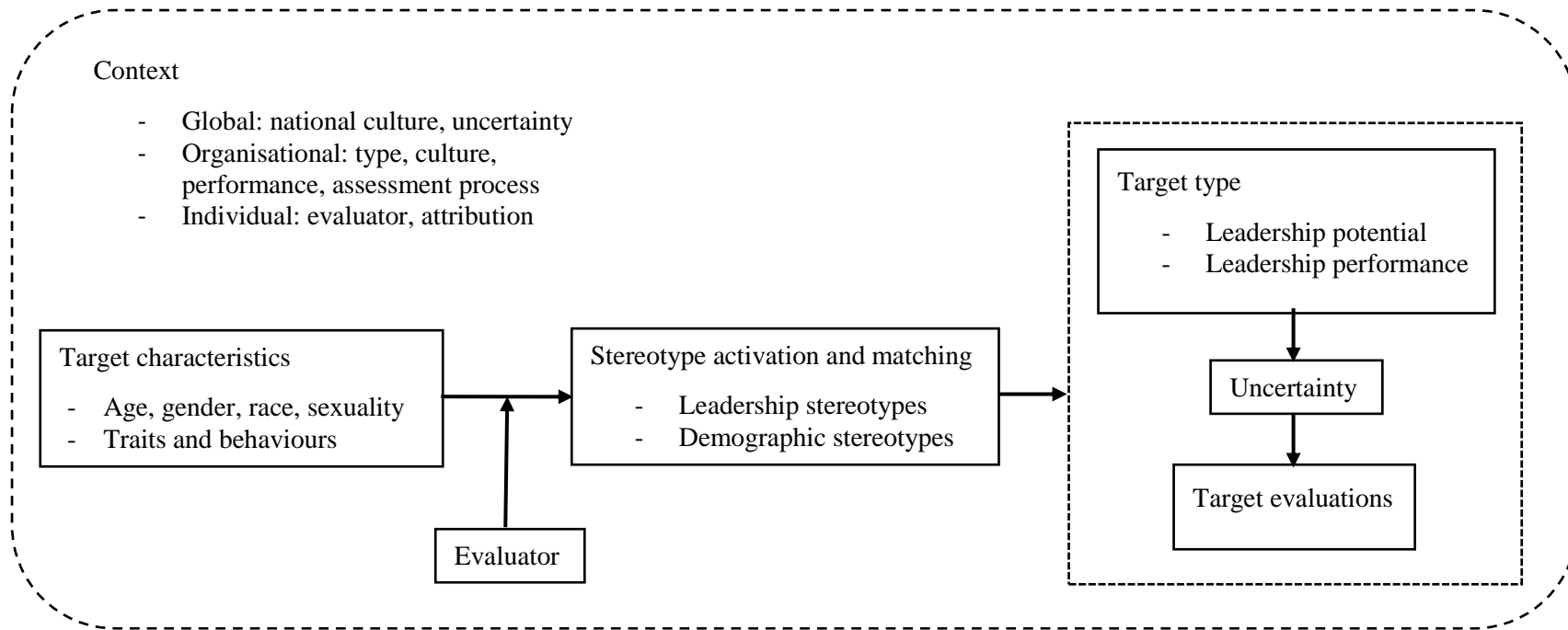


Figure 2.2. Leadership potential congruity model. A conceptual framework of the relationship between target demographics, perceived leadership potential, and target evaluations.

2.4 Discussion

This is the first systematic literature review to explore existing empirical psychology research into the impact of target demographic characteristics on perceived leadership potential. Its narrow focus on leadership potential addresses a need for research into assessing leadership potential specifically (Church & Silzer, 2009; Dries & Pepermans, 2012). It reveals a small body of research in descriptive, experimental and field research settings that has found a significant impact of target demographics on perceived leadership potential that tends to disadvantage older, female, ethnic-minority and gay workers.

In addressing our primary research question, the limited studies into age and perceived leadership potential suggest a bias against older candidates, partly explained by the lower perceived capability of older workers. This is consistent with a role congruity approach to bias in leadership assessments (Eagly & Karau, 2002), suggesting that the low capability stereotype associated with older workers (E.g., Posthuma & Campion, 2009) is incongruous with stereotypes of leaders, leading to lower perceived leadership potential for older workers. It is also consistent with stereotypes of older workers as having less potential for development, future potential, and potential to learn new skills (Abrams et al., 2016; Posthuma & Campion, 2009), and may be part of a general pro-youth bias in assessments of future-oriented ability.

Moreover, this review highlights the paucity of studies exploring candidate age and perceived leadership potential, extracting only six relevant studies. In several of these studies, the average target age is under 35 (Hirschfeld & Thomas, 2011; Kwok et al., 2018; Lisak & Erez, 2015) and therefore their findings on evaluations of 'older' targets may not equate to evaluations of 'old' targets. Furthermore, the evidence for a pro-youth bias in perceived leadership potential can appear conflicting, supported by research from Sun et al. (2015) but not in research from Tormala et al. (2012). Sun et al. (2015) argue for cultural differences in

the psychological mechanisms underlying a preference for potential, but also employed a larger sample size than Tormala et al. (2012) that could have had more power to detect effects. Further research is needed to demonstrate a clear effect of age on perceived leadership potential, and explore possible cultural differences in its underlying mechanisms.

The second aim of the review was to explore whether role congruity theory (Eagly & Karau, 2002) extends to understanding the impact of other demographic group memberships on perceived leadership potential. The studies collated under themes 2 to 5 reveal that target demographic characteristics can explicitly impact perceived leadership potential in organisations (Church et al., 2015). Demographic characteristics can implicitly affect perceived leadership potential due to the fit between the traits associated with demographic groups and leadership, advantaging younger (e.g., Hirschfeld & Thomas, 2011), male (e.g., Korenman et al., 2019), white (e.g., Gundemir et al., 2014), and straight (Wilson et al., 2017) candidates. Leadership potential is perceived as a positive attribute reserved for high-status, non-stigmatised group membership.

The research here provides support for a role congruity approach to understanding the impact of target demographics on perceived leadership potential. Older workers and women have been found to have lower perceived leadership potential partly because of lower underlying knowledge mastery (Hirschfeld & Thomas, 2011); racial minorities have been found to be less associated with the underlying traits of effective leadership than their white peers (Rosette et al., 2008). Lower perceived leadership potential in older, female, and racial minority workers appears to be partly due to a lack of perceived fit between the underlying attributes associated with these groups, and leadership. As leadership potential is a positive and desirable trait, this extends the argument that it tends to be associated with majority, non-stigmatised groups, translating role congruity theory (Eagly & Karau, 2002) beyond its

original gender context to encompass other stigmatised group identities based on a perceived lack of fit between candidate demographics and expectations of leaders.

The research highlighted in this review isolates other factors that may influence how role congruity affects perceived leadership potential. At an individual level, the target's intersectional identity (Tresh et al., 2019; Wilson et al., 2017), stereotype congruence (Korenman et al., 2019), and perceived role in organisational success (Rosette et al., 2008) all affect perceived leadership potential and its underlying mechanisms, whereas evaluator/target demographic homophily influences perceptions of leadership potential (Swain & Korenman, 2018). At an organisational level, organisation type and culture (Hirschfeld & Thomas, 2011), team and task context (Lisak & Erez, 2015), and the assessment process (Myung et al., 2011) may all affect perceptions of leadership potential. Finally, at a global level, national culture (Sun et al., 2015) and prevailing uncertainty (Tormala et al., 2012) both impact on how and why the preference for potential emerges. As much of the research presented here has been conducted in Western, white-majority nations (E.g., Hirschfeld & Thomas, 2011; Tormala et al., 2012), research with more diverse samples may be needed to investigate a moderating role for national culture.

The empirical research presented in this systematic literature review demonstrates some consistent findings in how target demographics can impact perceived leadership potential. It suggests widely held unconscious biases that advantages young (e.g., Hirschfeld & Thomas, 2011), male (e.g., Mohr & Downey, 1977), straight (Wilson et al., 2017), and white-majority (Gundemir et al., 2014) leadership candidates over older, female, gay, and ethnic-minority candidates. It also finds evidence that there is a preference for leadership potential over leadership performance in recruitment contexts (Sun et al., 2015; Tormala et al., 2012), which positions leadership potential as a valued and positive trait in workers. There is also evidence that possessing leadership potential may offer an advantage to some

demographic groups but not others (e.g. men over women, Player et al., 2019), and so may be reserved for, and valued in, members of majority non-stigmatised groups. The positioning of role congruity theory as a framework to explain these biases, and a lack of fit between stereotypes of leadership and older, female, gay, and ethnic-minority group members, seeks to explain the psychological mechanisms underpinning these unconscious biases. The existing research also suggests a number of contextual factors that can influence this framework. All of these findings inform the leadership potential congruity model presented in this review (Figure 2.2).

2.4.1 Implications.

Our model in Figure 2.2 offers a clear framework to develop psychological theory in leadership selection and ageism. It extends role congruity theory (Eagly & Karau, 2002) beyond its roots in explaining gender bias in leadership, to a broader demographic-based role incongruence that also helps to explain age and racial differences in perceived leadership potential (e.g., Hirschfeld & Thomas, 2011; Rosette et al., 2008). Its focus on leadership potential also allows for the first time a synthesis of research into demographic-based role incongruence, with research into a preference for leadership potential. This integration offers new opportunities for research and encourages a broader application of role incongruity theory that integrates previously unconnected research.

Our conceptual model also has applied value in isolating the factors that influence demographic-based biases in assessments of leadership potential. At an individual level, it allows leadership candidates from disadvantaged groups to recognise and potentially mitigate barriers that may impede advancement. By emphasising attributes and experience congruent with leadership stereotypes, individuals may reduce the activation of stereotypes that could disadvantage them. At an organisational level, it allows organisations to design leadership selection processes that minimise demographic-based biases that may impede optimal

candidate selection and leadership diversity, which has been linked with improved financial performance and innovation (Bantel & Jackson, 1989; McKinsey & Company, 2015). In the context of an ageing workforce and increased competition in the acquisition and development of talent (United Nations, 2015; Bradt, 2015), mitigating age bias may provide organisations with the competitive edge they need in the war for talent.

2.4.2 Limitations and future directions.

There are two limitations that must be considered when evaluating the outcomes of this review. Firstly, the lack of empirical research into age and leadership potential makes it difficult to generalise results to a broader population. Only four studies focus directly on the impact of target age and perceived leadership potential (Hirschfeld & Thomas, 2011; Sun et al., 2015; Tormala et al., 2012; Tresh et al., 2019). Further experimental studies are needed to clarify the existence of a pro-youth bias in perceived leadership potential, and to test if the role congruity pattern observed in a field setting is replicated in an experimental context. More research is also needed into the contextual variables that could affect this pro-youth bias, particularly those suggested by research into the relationship between other demographic variables and leadership assessments, such as the social identity of the evaluator, organisational context, and national culture. The small number of studies into age and perceived leadership potential, as well as the lack of empirical testing of contextual factors, mean that further study is needed to develop our theoretical understanding and clarify the practical implications of their relationship.

In attempting to address the limitation raised by the low number of studies into age and leadership potential, the search parameters included other demographic variables. This decision was informed by the suggestion that role congruity theory (Eagly & Karau, 2002) could extend beyond its roots in gender and leadership to explain other demographic-based bias in leadership assessment. Although this decision has created a broader body of results

within which to explore a pro-youth bias in perceived leadership potential, it does present a second limitation as the focus on age in the search protocol means that our results are not a comprehensive review of gender-, race- and sexuality-based bias in perceived leadership potential. Results should instead be viewed as a comprehensive and broad review of empirical research into age and leadership potential, within a role congruity framework. Furthermore, replication studies that test the extent to which the effects of one demographic characteristic reflect the effects of other demographic characteristics in assessments of leadership potential, would help us more confidently extend role congruity theory (Eagly & Karau, 2002) beyond gender. Studies that enable analysis of intersectional identities would also help us understand the impact of complex real-world identities in identifying future leaders.

2.5 Conclusion

This systematic literature review has explored the impact of candidate age on perceived leadership potential, including studies into the impact of other demographic variables to explore this within a role congruity framework. The findings suggest a pro-youth bias in perceived leadership potential that disadvantages older workers in workplace evaluations. It also suggests that leadership potential is a positively valued attribute reserved for majority groups, with a perceived lack of fit between the underlying attributes associated with leaders and those associated with workers who are older, female, gay, and from ethnic minorities. Further research is needed to clarify these relationships and the contextual variables that can moderate it. Our leadership potential congruity model presented in Figure 2.2 offers a clear framework to test in future empirical research, so developing psychological theory in leadership selection and ageism, and inform applied practice.

Chapter Three: Attributes Associated with Different Types of Leader

Chapter 3 addresses two research questions. Firstly, what are the leadership attributes associated with younger leaders, older leaders, leadership potential and leadership performance? Secondly, what are the leadership attributes most valued in future leaders? These two questions were explored through two descriptive online studies employing quantitative analysis, and one focus group study with industry professionals which was analysed qualitatively with thematic analysis. In addressing the first research question, results suggest that younger leaders tend to be perceived as more technically able, motivated, innovative, and learning-oriented than older leaders. Older leaders tend to be viewed as more wise, stable, traditional, strategic and decisive than younger leaders. The results extend understanding of worker age stereotypes in a leadership context. Results also show a consistent perception of leadership performance as encompassing concrete knowledge, skills and experience. Leadership potential proved to be a more difficult concept to define, although it was associated with learning, drive and future performance. The results suggest a gap between recognised antecedents of leadership potential and perceived leadership potential, which could position perceived leadership potential as a vehicle for unconscious bias. The findings also provide evidence of an association between youth and leadership potential, and age and leadership performance. In addressing the second research question, there is mixed evidence of recruitment biases that could advantage candidates of different ages and type. However, the results suggest a general preference for attributes associated with younger leaders and leadership performance. In exploring these two research questions, the chapter identifies a need for experimental research in a recruitment context to test the effects of candidate age (younger vs. older) and candidate type (potential vs. performance) on leadership recruitment evaluations.

3.1 Introduction

Leadership is one of the principal concerns of organisations globally, with an increasing power to effect organisational brand and financial value (Deloitte Insights, 2020). Quality leadership has been associated with improved organisational performance (BIS, 2012), employee wellbeing (HSE, 2008), organisational health (De Smet et al., 2014), higher employee engagement (MacLeod & Clarke, 2009), greater innovation and better qualified employees (Bosworth et al., 2002). Organisations with the highest quality leaders have been found to be 13 times more likely to outperform their competitors in performance metrics including financial performance, employee engagement, and customer satisfaction (Boatman & Wellins, 2011).

However, the attributes associated with effective leadership appear contested. Trait leadership theories argue that individual personality traits such as extraversion and emotional stability form the basis of leader effectiveness (Colbert et al., 2012; Judge et al., 2002). Contingency theories, such as situational leadership theory (Hershey & Blanchard, 1977), focus on leaders' ability to adapt and adjust their leadership style to the demands of the situation (Vecchio et al., 2006). Transformational leadership emphasises vision, learning, adaptability and an ability to inspire over more transactional management behaviours of reward and punishment (Avolio & Bass, 1991; Bass, 1985; Tichy & Devanna, 1986). There is no one unified theory of leadership applicable to all leaders in all contexts. Instead, the diverse nature of theory and research reflects the complexity and contextual demands of organizational leadership (Dinh et al., 2014). Multilevel contextual cues encourage different values of leadership attributes at a macro level, for example based on national culture (Jepson, 2010), at a meso level, for example based on organisation type (Ivanoska et al., 2019), and at a micro level, for example based on functional group membership (Mills et al., 2014).

Although there is little consensus over the content of effective leadership, there is strong empirical support that certain leadership attributes are associated with some demographic groups over others. A ‘Think manager, think male’ effect (Schien, 1973; 1975) argues that attributes associated more with men, such as agentic leadership behaviours of assertiveness and competition, advantage men in leadership selection (Eagly & Karau, 2002). A parallel ‘Think manager, think white’ effect (Gundemir et al., 2014) argues that an association between white racial groups and leadership behaviours including decisiveness and confidence, can advantage white leadership candidates. The characteristics associated with different groups reflect pervasive societal stereotypes and affect judgement and decision-making (Fiske, 1998). Age is one group membership that can be a powerful trigger for category-based stereotypes (Bassili & Reil, 1981).

3.1.1 Age Stereotypes and leadership.

Descriptive age stereotypes tend to position older people as high in warmth and low in competence (Fiske et al., 2002), demonstrating both positive and negative old-age stereotypes. Societal old-age stereotypes have become increasingly negative over time (Ng et al., 2015) and a meta-analysis by Posthuma & Campion (2009) found that older worker stereotypes were more likely to be negative than positive. In comparison to younger workers, older workers are perceived as lower performers (Cuddy & Fiske, 2002), resistant to change (Broadbridge, 2001), less able to learn (Finkelstein et al., 1995), lower in emotional resilience (Rauschenbach et al., 2012), and more costly to manage (Finkelstein et al., 2000). Tables 3.1 and 3.2 set out positive and negative old age stereotypes respectively.

Table 3.1

Positive Stereotypes Associated with Older People

Able to get along with people	Complain effectively	Less likely to miss work	Sincere
	Dependable		Solving crosswords
Able to manage people	Experienced	Likeable	Spry
Able to use a library	Friendly	Loyal	Stable
Academically skilled	Generous	Make good financial decisions	Traditional
Accepting	Good-natured	Moral	Trustworthy
Active in the community	Good story-tellers	Neat	Understand others
Calm	Happy	Polite	Warm
Careful	Have a healthy diet	Pride in their work	Willing to take direction
Cheerful	Helpful	Reliable	Wise
Committed to the job	Honest	Sage	Work ethic
	Intelligent	Settle arguments	
	Kind		

Note. Reprinted from “Exploring Representations of Old Age and Ageing: Literature Review,” by Swift, H. J. & Steeden, B., 2020, retrieved from Centre for Ageing Better website: <https://www.ageing-better.org.uk/sites/default/files/2020-03/Exploring-representations-of-old-age.pdf>

Table 3.2

Negative Stereotypes Associated with Older People

Asexual	Frail	Less willing to change	Sad
Boring	Frustrating	Lonely	Senile
Bothersome	Grumpy	Low energy	Shorter job tenure
Cautious	Ill	Mentally inflexible	Sickly
Costly to employ	Ill-natured	Mentally slower	Slow
Declining physical and cognitive health	Inactive	Needy	Slow learners
Dependent	Incompetent	Passive	Socially isolated
Depressed	Inflexible	Physically weak	Ugly
Depressing	Irritable	Poor adaptability	Unable to learn new skills
Difficult	Lacking creativity	Poor health	Unattractive
Disabled	Less ability	Poor IT skills	Unimaginative
Easily confused	Less ambitious	Poor performance	Unproductive
Feeble	Less engaged	Religious	Weak
Forgetful	Less motivated	Resistant to change	Worried
Forgettable	Less trusting	Rigid	

Note. Reprinted from “Exploring Representations of Old Age and Ageing: Literature Review,” by Swift, H. J. & Steeden, B., 2020, retrieved from Centre for Ageing Better website: <https://www.ageing-better.org.uk/sites/default/files/2020-03/Exploring-representations-of-old-age.pdf>

Leader stereotypes are also influenced by leader age. Older leaders are associated with less change-oriented behaviours, and greater passive leadership (Walter & Scheibe, 2013), are endorsed for stability whereas younger leaders are endorsed for change (Spisak et al., 2014), and are viewed as more dominant than younger leaders and so preferred in conflict (Spisak, 2012). The perceived comparative value of younger and older leaders is less clear.

Abrams et al. (2016) ran experimental recruitment research in which they created candidate profiles based on age-based stereotypes that contained no explicit candidate age cues. Across three studies, older candidate profiles were viewed as less hireable than younger candidate profiles, unless the role was subordinate to a younger profile. This demonstrates that old-age stereotypes negatively influence hiring decisions toward older workers, but also suggests that negative stereotypes of workers would translate into a leadership context. However, social comparison theory (Festinger, 1954) argues that workers evaluate themselves in comparison to others, and therefore in a team of people with similar abilities, age may become a salient characteristic that grants older leaders' greater legitimacy. Greater age may increase leaders' perceived legitimacy and be more prototypical of leadership (Buengeler et al., 2016; Junker & van Dick, 2014; Kearney, 2008).

Overall, there is a lack of empirical research into the stereotypes of younger and older leaders, and little clarity over their perceived comparative value. In considering future leaders, it is also not clear how candidate age can influence perceived leadership potential.

3.1.2 Leadership potential.

Leadership potential has been described as the employees with the potential to be effective in other future roles, usually with much broader responsibilities and at higher levels in the hierarchy (Silzer & Church, 2009). Predictors of leadership potential evidenced by research include cognitive ability (Dries & Pepermans, 2012), extraversion and

conscientiousness (Hirschfeld et al., 2008), emotional stability (Allen et al., 2014), teamwork knowledge (Hirschfeld et al., 2008), problem solving skills (Troth & Gyvetvey, 2014), motivation to lead (Chan & Drasgow, 2001) interest in leadership (Allen et al., 2014), career aspirations (Troth & Gyvetvey, 2014), team-oriented behaviours (Luria & Berson, 2012) and engagement behaviours (Troth & Gyvetvey, 2014).

Empirical research informs two models that seek to encapsulate the core aspects of leadership potential. Dries and Pepermans' (2012) argue for a model consisting of analytical skills, learning agility, drive, and emergent leadership. Church and Silzer (2014) present a framework encompassing personality characteristics, including social skills; cognitive capability, including strategic thinking; learning skills; motivation; leadership skills; and functional technical skills. Research into leadership potential has focused on predictors of actual leadership potential (Dries & Pepermans, 2012) or employed manipulations that explicitly state candidate's levels of leadership potential (E.g., Player et al., 2019). There is less research into the content of *perceived* leadership potential.

Understanding perceptions of leadership potential is important, as candidates assigned high leadership potential can be valued more highly than candidates with proven leadership performance. Experimental studies by Tormala et al. (2012) found that fictitious candidate profiles showing high scores on a test of leadership potential, were preferred over candidate profiles showing high scores on a test of leadership performance. This effect has been replicated in China (Sun et al., 2015) and is largely driven by uncertainty, as the uncertainty imbuing leadership potential stimulates greater processing and more positive reactions (Kupor et al., 2014).

This preference for leadership potential over leadership performance may advantage some demographic groups over others. In terms of gender, Player et al. (2019) found that

leadership potential only advantages male candidates in recruitment, whereas female candidates need to demonstrate leadership performance. In terms of age, results are mixed. Tormala et al. (2012) found no difference between the perceived age of candidates with leadership potential and leadership performance. However, replication studies by Sun et al. (2015) found that candidates with leadership potential were perceived as younger than candidates with leadership performance, and this perceived age difference partly drove the preference for leadership potential, such that leadership potential candidates were preferred because they were perceived to be younger. They concluded that an association between youth and leadership potential in China constituted a pro-youth bias in the preference for leadership potential. The extent to which there may be an association between youth and leadership potential, and age and leadership performance, remains unclear.

Overall, gaps in the literature illustrate a need to understand the extent to which workplace age stereotypes translate into a leadership context, the content of *perceived* leadership potential, and the attributes and types of leadership valued in recruitment. This would have applied value in helping us better understand, and mitigate, the unconscious age biases, evidenced by Abrams et al. (2016), that may negatively affect recruitment decisions. The three studies here aim to address these gaps by exploring two research questions. Firstly, what are the leadership attributes associated with younger leaders, older leaders, leadership potential and leadership performance? Secondly, what are the leadership attributes most valued in future leaders?

3.1.3 Overview of studies.

Three studies were conducted to better understand the attributes associated with younger leaders, older leaders, leadership potential, and leadership performance, their relationships with each other, and their value in a recruitment context. A mixed methods design was employed, combining both quantitative and qualitative approaches, as this can

provide a more thorough understanding of an issue, with conclusions that can be seen as stronger as they are derived from different types of data (McKim, 2017; Plano Clark et al., 2008). A mixed methods approach in organisational research has been associated with increased validity and knowledge creation than single-method approaches (Hurmerinta-Peltomaki & Nummela, 2006; Molina-Azorin, 2012).

Study 1 was a descriptive study in which participants evaluated different leadership attributes in terms of their value and association with candidates of different ages (younger vs. older) and types (potential vs. performance). Study 2 was a descriptive study in which participants evaluate leadership task and indicate whether they fit best with younger or older leaders, and leadership potential or leadership performance. Study 3 employed focus groups with industry professionals to identify the attributes most valued in future leaders.²

3.2 Study 1.

Study 1 employed a quantitative approach to explore the leadership attributes linked with younger leaders, older leaders, leadership potential and leadership performance, and their comparative valence for ideal leadership.

3.2.1 Method.

Participants and design.

Eighty-five participants were recruited through the University of Kent student participant pool, of whom 11 participants were excluded for failing an attention check. The remaining sample of 74 participants (74.32% female; $M_{age} = 19.38$, $SD = 1.52$). All participants received a course credit for taking part. The study had a descriptive design.

² All data were collected in line with the British Psychological Society's (BPS) Code of Conduct (1993) and study procedures were approved by the University of Kent Psychology Ethics Committee, Ethics IDs: 201815270162945027, 201915731279616053, and 201815179380284921 respectively.

Procedure and materials.

Participants were invited to take part in an online Qualtrics survey on how individuals evaluate different types of leadership candidate and make hiring decisions. They were presented with brief information on the survey and informed consent information, clicking to continue with the survey to indicate their informed consent to take part.

Participants were presented with three question sets: candidate age, candidate type, and valence. Question sets were presented in a random order. Each question set consisted of the same 40 leadership attributes and an attention check. Items were sourced from previous research and were presented in random order, and included items associated with leadership potential and performance (Eg. Dries & Pepermans, 2012; Marshall-Mies et al., 2000) and items associated with older and younger worker stereotypes (Posthuma & Campion, 2009; Abrams et al., 2016; North & Fiske, 2013; Spisak et al., 2014).

In the candidate age question set, participants indicated the extent to which each attribute was typical of a younger leader or an older leader, using a seven-point scale (1 = *very typical of a younger leader*, 7 = *very typical of an older leader*). Definitions of younger and older leaders were based on previous research and categories used by relevant organisations (Rauschenbach et al., 2012; Age UK, 2014; Gov.UK, 2017). Younger leaders were described as aged 30 and under, whilst older leaders were described as aged 50 and over.³

In the candidate type question set, participants indicated the extent to which they thought each trait was more typical of leadership potential or leadership performance, using a seven-point scale (1 = *very typical of leadership potential*, 7 = *very typical of leadership*

³ Participants were also asked a qualitative question on the attributes of different types of leader. Results are not discussed here because of space constraints.

performance). Based on Church and Silzer (2014), leadership potential was described as the ability to perform in future, wider, more diverse leadership roles, whereas leadership performance was described as proven performance in a leadership role.

In the valence question set, participants were asked to indicate how important they thought each attribute was to good leadership, using a seven-point scale (1 = *very unimportant for good leadership*, 7 = *very important for good leadership*).

Finally, participants completed demographic information code and were presented with a full debrief.

3.2.2 Results.

Means were calculated for each leadership attribute for candidate age, candidate type, and valence, and a one-sample t-tests was conducted to test if means were significantly different from the scale mid-point. Means and t-test results are presented in Table 3.3, where attributes are ordered by valence.

Table 3.3

Mean Scores of Leadership Attributes in Each Condition of the Study I

Leadership Attribute	Condition					
	Candidate Age		Candidate Type		Valence	
	<i>M (SD)</i>	<i>t</i>	<i>M (SD)</i>	<i>t</i>	<i>M (SD)</i>	<i>t</i>
Reliable	4.49 (0.95)	4.39 ***	4.49 (1.67)	2.51 *	6.28 (1.28)	15.39 ***
Focused	4.30 (0.86)	2.99 **	4.30 (1.68)	1.52	6.14 (1.40)	13.14 ***
Able to communicate a vision	4.04 (1.09)	0.32	4.46 (1.75)	2.27 *	6.12 (1.23)	14.87 ***
Able to manage people	4.65 (1.13)	4.95 ***	4.76 (1.78)	3.66 ***	6.12 (1.37)	13.28 ***
Driven	3.51 (1.19)	-3.53 **	3.89 (1.67)	-0.56	6.08 (1.38)	12.95 ***
Able to manage tasks	4.28 (0.90)	2.71 **	4.61 (1.55)	3.37 **	6.07 (1.40)	12.72 ***
Professional	4.55 (1.06)	4.49 ***	4.69 (1.58)	3.76 ***	6.04 (1.32)	13.32 ***

Leadership Attribute	Condition					
	Candidate Age		Candidate Type		Valence	
	<i>M (SD)</i>	<i>t</i>	<i>M (SD)</i>	<i>t</i>	<i>M (SD)</i>	<i>t</i>
Able to influence others	4.34 (1.16)	2.50 *	4.41 (1.73)	2.02 *	6.01 (1.34)	12.93 ***
Able to deliver a vision	3.93 (1.03)	-0.57	4.41 (1.87)	1.86 #	6.00 (1.33)	12.89 ***
Confident	4.12 (1.23)	0.85	4.31 (1.66)	1.62	5.97 (1.39)	12.71 ***
Efficient	4.00 (1.25)	<.001	4.77 (1.42)	4.67 ***	5.95 (1.27)	13.18 ***
Team oriented	3.95 (1.19)	-0.39	4.49 (1.69)	2.48 *	5.95 (1.31)	12.75 ***
Provides stability	4.82 (1.12)	6.36 ***	4.72 (1.64)	3.77 ***	5.93 (1.30)	12.82 ***
Ambitious	3.26 (1.26)	-5.07 ***	3.61 (1.68)	-2.01 *	5.93 (1.40)	11.89 ***
Strategic	4.36 (1.12)	2.81 **	4.16 (1.69)	0.83	5.92 (1.20)	13.73 ***

Leadership Attribute	Condition					
	Candidate Age		Candidate Type		Valence	
	<i>M (SD)</i>	<i>t</i>	<i>M (SD)</i>	<i>t</i>	<i>M (SD)</i>	<i>t</i>
Willing to learn	2.91 (1.31)	-7.22 ***	3.43 (1.80)	-2.71 **	5.86 (1.36)	11.81 ***
Knowledgeable ^a	4.90 (1.02)	7.58 ***	4.64 (1.48)	3.72 ***	5.72 (1.26)	11.71 ***
Keen	3.24 (1.18)	-5.52 ***	3.58 (1.66)	-2.17 *	5.69 (1.28)	11.34 ***
Intellectually capable	4.43 (0.98)	3.79 ***	4.16 (1.54)	0.91	5.69 (1.34)	10.81 ***
Calm	4.42 (1.22)	2.96 **	4.27 (1.37)	1.70 #	5.68 (1.26)	11.42 ***
Task oriented	4.26 (1.11)	1.99 #	4.32 (1.62)	1.72 #	5.66 (1.16)	12.31 ***
Analytical	4.32 (1.11)	2.51 *	4.11 (1.64)	0.57	5.62 (1.17)	11.95 ***
Patient ^a	4.39 (1.01)	3.35 **	4.24 (1.38)	1.52	5.62 (1.27)	10.98 ***

Leadership Attribute	Condition					
	Candidate Age		Candidate Type		Valence	
	<i>M (SD)</i>	<i>t</i>	<i>M (SD)</i>	<i>t</i>	<i>M (SD)</i>	<i>t</i>
Well-presented	4.45 (1.08)	3.57 **	4.24 (1.58)	1.33	5.53 (1.35)	9.75 ***
Loyal	4.24 (1.21)	1.72 #	4.42 (1.66)	2.17 *	5.51 (1.51)	8.62 ***
Intelligent	4.09 (0.73)	1.12	4.18 (1.36)	1.11	5.50 (1.26)	10.21 ***
Friendly	3.77 (0.99)	-2.00 *	3.93 (1.31)	-0.45	5.49 (1.35)	9.49 ***
Mature	5.27 (1.31)	8.36 ***	4.46 (1.64)	2.41 *	5.47 (1.46)	8.66 ***
Conscientious	4.07 (1.05)	0.55	4.28 (1.49)	1.64	5.46 (1.26)	9.94 ***
Polite	4.19 (1.17)	1.40	4.15 (1.30)	0.98	5.43 (1.32)	9.37 ***
Experienced	5.74 (1.19)	12.56 ***	4.73 (1.96)	3.20 **	5.41 (1.29)	9.36 ***

Leadership Attribute	Condition					
	Candidate Age		Candidate Type		Valence	
	<i>M (SD)</i>	<i>t</i>	<i>M (SD)</i>	<i>t</i>	<i>M (SD)</i>	<i>t</i>
Entrepreneurial	3.80 (1.39)	-1.26	3.95 (1.43)	-0.33	5.36 (1.31)	8.97 ***
Fast Learner	2.95 (1.34)	-6.75 ***	3.46 (1.63)	-2.85 **	5.31 (1.28)	8.80 ***
Visible	3.95 (1.10)	-0.42	4.15 (1.52)	0.84	5.30 (1.36)	8.19 ***
Energetic	2.59 (1.27)	-9.52 ***	3.92 (1.61)	-0.43	5.24 (1.45)	7.37 ***
Talented	3.82 (0.87)	-1.75 #	3.69 (1.59)	-1.69 #	5.18 (1.31)	7.74 ***
Happy	3.50 (1.17)	-3.67 ***	3.89 (1.25)	-0.75	5.18 (1.43)	7.09 ***
Cautious	4.50 (1.37)	3.15 **	3.96 (1.40)	-0.25	5.04 (1.28)	7.01 ***
Curious	3.16 (1.23)	-5.87 ***	3.50 (1.43)	-3.02 **	4.95 (1.41)	5.76 ***

Leadership Attribute	Condition					
	Candidate Age		Candidate Type		Valence	
	<i>M (SD)</i>	<i>t</i>	<i>M (SD)</i>	<i>t</i>	<i>M (SD)</i>	<i>t</i>
IT Literate	2.55	-9.77***	3.91	-0.58	4.66	4.72
	(1.27)		(1.42)		(1.21)	***

Notes. Candidate age: 1 = younger; 7 = older. Candidate type: 1 = leadership potential; 7 = leadership performance. Valence: 1 = very unimportant; 7 = very important. Attributes are listed in order of valence. Standard deviations in parentheses. Df = 73. Significance: #p<.10; *p<.05; **p<.01; ***p<.001. ^a These items were listed twice in the survey in error and the statistics here are the average of the two scores.

Ten attributes were more associated with younger than older leaders: IT literate, energetic, willing to learn, fast learner, curious, keen, ambitious, happy, driven, and friendly. Sixteen attributes were more associated with older than younger leaders: experienced, mature, knowledgeable, provides stability, able to manage people, professional, reliable, intellectually capable, well presented, patient, cautious, focused, calm, strategic, able to manage tasks, and analytical. Mean valence scores were calculated for attributes associated with younger and older leaders. A paired samples t-test revealed that older leader attributes ($M = 5.78, SD = 1.06$) were more valued than younger leader attributes ($M = 5.44, SD = 1.01$), $t(73) = -6.59, p < .001$.

Five attributes were more associated with leadership potential than leadership performance: curious, fast learner, willing to learn, keen, and ambitious. Thirteen attributes were more associated with leadership performance than leadership potential: efficient, provides stability, professional, knowledgeable, able to manage people, able to manage tasks, experienced, reliable, team oriented, mature, able to communicate a vision, loyal, and able to influence others. Mean valence scores were calculated for attributes associated with leadership potential and leadership performance. A paired samples t-test revealed that leadership performance attributes ($M = 5.89, SD = 1.10$) were valued more highly than leadership potential attributes ($M = 5.55, SD = 1.03$), $t(73) = -5.78, p < .001$.

3.2.3 Discussion.

The attributes associated with leader ages were consistent with workplace age stereotypes (Posthuma & Campion, 2009; Swift & Steeden, 2020). Younger leaders were viewed as more technically able (IT literate), motivated (energetic, keen, ambitious, driven), and better learners (willing to learn, fast-learner, curious). Older leaders were perceived as more wise (experienced, mature, knowledgeable), stable (provides stability, reliable, patient, cautious, focused, and calm), traditional (professional, well-presented) and able to problem-

solve (analytical, strategic). This perception of younger leaders as motivated and better learners, and older leaders as wise and stable, also aligns with endorsement of younger leaders for change and older leaders for stability (Spisak et al., 2014).

Results did raise two possible inconsistencies with workplace age stereotypes. Firstly, there was an association between younger leaders and happiness and friendliness that appears to contradict high-warmth stereotypes of older people (Fiske et al., 2002). As the study employed a young sample, this may represent an ingroup bias based on age found in previous research (E.g., Finkelstein et al., 1995), with younger participants attributing high-warmth evaluations to younger targets because they view them as part of their ingroup. Furthermore, North and Fiske (2013) argued that younger raters can give older targets low-warmth assessments in situations where the older person controls, and does not cede, resources. Therefore, the young age of the sample and the focus on leadership with its implied control of resources, may explain why younger leaders were perceived as warmer. Secondly, the aggregated attributes associated with older leaders were valued more highly than those associated with younger leaders, which contradicts overwhelmingly negative older worker stereotypes (Posthuma & Campion, 2009). This could be a consequence of a young, work-naïve sample. Alternatively, older leaders may be perceived more positively than older workers (Junker & van Dick, 2014), suggesting a variance in older age stereotypes for work roles of different types and status that reflects sub-categories of older age stereotypes demonstrated in previous studies (Hummert et al., 1990; 1995). More investigation is needed to understand the extent to which high-warmth and negative stereotypes of older people translate into a leadership context.

The leadership attributes associated with leadership potential align with two predictors of leadership potential: learning (curious, fast learner, willing to learn) and drive (keen, ambitious) (Church & Silzer, 2014; Dries & Pepermans, 2012). Fewer attributes were

associated with leadership potential than other categories, suggesting that it may be a narrowly defined concept, or that it may be less tangible and clearly understood. Over twice as many attributes were associated with leadership performance, focusing on concrete knowledge, skills and behaviours, such as knowledgeable, experienced, and able to manage people. Leadership performance may be a more tangible and accessible concept than leadership potential. Furthermore, performance attributes were valued more highly than potential attributes, which initially appears to contradict a preference for potential (Tormala et al., 2012). However, abstract words can have a higher valence than concrete words (Kousta et al., 2011), and so the more abstract concept of leadership potential may hold greater appeal than its constituent parts, such as being willing to learn. Therefore, the individual attributes associated with leadership potential may be less appealing than the holistic concept of leadership potential itself.

There was also an association between leadership potential and youth, and between leadership performance and age. All of the attributes associated with leadership potential were also viewed as more typical of younger leaders, replicating the association between leadership potential and youth found by Sun et al. (2015). Of the thirteen attributes associated with leadership performance, nine were significantly, and one marginally, associated with older leaders also.

Overall, the attributes associated with older leaders and leadership performance were found to be valued more than those associated with younger leaders and leadership potential respectively. The pattern of attributions suggests an association between youth and leadership potential, and age and leadership performance. Furthermore, the lower number of attributes aligned with leadership potential than any other category, could mean that leadership potential is a less accessible concept. However, the young sample may limit the generalisability of the findings. In terms of leader age, participants may have viewed *both* age

categories as older, as the two leader age markers referred to, 30 and 50, are both higher than the mean participant age. In terms of leader type, the concepts of leadership potential and performance may lack meaning for a work-naïve audience. These limitations were addressed in Study 2.

3.3 Study 2.

Study 2 built on the results of Study 1 by employing a different sample and adjusting the study task. It was a descriptive study in which an older, working sample indicated whether different leadership tasks were more suited to younger or older leaders, and leadership potential or leadership performance.

3.3.1 Method.

Participants and design.

Eighty participants were recruited (75% female, 23.8% male, 1.3% non-binary; $M_{age} = 33.26$, $SD = 10.15$) through the Prolific crowdsourcing platform, all UK nationals and employed. Participants took an average of 10.91 ($SD = 11.32$) minutes to complete the survey and were each paid £1.25⁴. The study had a descriptive design.

Procedure and materials.

Participants were invited to take part in an online business simulation study. They read an introduction to the study and details of consent and clicked through to the next screen to indicate their consent to take part.

They were asked to review 20 regular team tasks and indicate the type of person each was best suited to. Five tasks were designed to fit better with older leaders: “*Team cohesion – resolve any disagreements in the team; Complaints – raise complaints effectively with*

⁴ The study also included a pilot of future study manipulations which are not reported here.

suppliers; Research – use library resources to understand our products; Understanding – understand the views of our customers; Mentoring – mentor new members of the team". Five tasks were designed to fit better with younger leaders: *"Training – be adaptable and learn new skills; Innovation – create innovative new marketing campaigns; Technology – be in charge of new technology in the team; Urgent decisions – deal with the urgent, day-to-day decisions in the team; Social media – run the team social media accounts"*. Five tasks were designed to fit with leadership potential: *"Team strategy – develop the high-level strategy for the team; Complex decisions – make the complex decisions that need to be made when complete information is not available; Organizational strategy – clarify how the team's work contributes to organizational goals; Team evolution – ensure the team adapts to changing circumstances; Succession – be developed as the team's future leader"*. Five tasks were designed to fit with leadership performance: *"Efficiency – improve efficiency across the team; Task management – assign tasks in the team and make sure they are completed; Performance – incorporate tried and tested performance techniques into the team; Knowledge – act as the knowledge hub for the team; Achievement – share experience with the team of how to achieve excellence"*.

The tasks were based on the output of Study 1 and existing literature (E.g., Abrams et al., 2016; Dries & Pepermans, 2012). For each task participants indicated the extent to which the task was best suited to someone with leadership potential and leadership performance, and a younger person or an older person. Participants then completed demographic information and were presented with a full study debrief.

3.3.2 Results.

Aggregate means were calculated for older, younger, potential, and performance tasks, and ran paired-sample t-tests to test whether task categories were more associated with younger or older leaders, and leaders with potential or performance. Younger tasks were seen

as suiting younger ($M = 5.42$, $SD = 0.91$) better than older leaders ($M = 4.23$, $SD = 0.91$), $t(79) = 8.73$, $p < .001$. Younger tasks were seen as equally suited to leaders with potential ($M = 4.95$, $SD = 0.96$) or performance ($M = 4.96$, $SD = 0.89$), $t(79) = -0.12$, $p = .91$. Older tasks were perceived as more suited to older ($M = 5.22$, $SD = 0.87$) than younger leaders ($M = 4.50$, $SD = 0.84$), $t(79) = -7.49$, $p < .001$, and more suited to leaders with performance ($M = 5.42$, $SD = 0.89$) over leaders with potential ($M = 4.82$, $SD = 1.00$), $t(79) = -5.51$, $p < .001$.

Leadership potential tasks were perceived as more suited to leaders with performance ($M = 5.66$, $SD = 0.83$) than potential ($M = 5.14$, $SD = 0.86$), $t(79) = -5.23$, $p < .001$.

Leadership potential tasks were perceived as equally suited to younger ($M = 4.76$, $SD = 0.94$) than older leaders ($M = 4.91$, $SD = 0.84$), $t(79) = -1.31$, $p = .20$. Leadership performance tasks were perceived as more suited to leaders with performance ($M = 5.66$, $SD = 0.81$) than potential ($M = 4.72$, $SD = 0.89$), $t(79) = -7.96$, $p < .001$, and older ($M = 5.27$, $SD = 0.82$) rather than younger leaders ($M = 4.42$, $SD = 0.95$), $t(79) = -7.42$, $p < .001$.

Paired-sample t-tests tested whether each task was more associated with younger or older leaders, and leaders with potential or performance (see Tables 3.4 and 3.5 respectively). Four of the 'younger' tasks were viewed as more suited to younger than older leaders (training, innovation, technology, social media) and two were more associated with potential than performance (training, social media). Three of the 'older' tasks were more associated with older than younger leaders (team cohesion, complaints, mentoring) and four were more associated with performance than potential (team cohesion, complaints, understanding, mentoring). One 'potential' task was more associated with potential than performance (succession), and two were more associated with younger than older leaders (team evolution, succession). All the 'performance' tasks were associated with leaders with performance over potential, and four were associated with younger over older leaders (task management, performance, knowledge achievement).

Table 3.4

Study 2: Means and Paired Sample T-test Results for Each Task by Leader Age

Task	Person age		<i>t</i>
	Younger	Older	
Team cohesion (older)	4.20 (1.21)	5.34 (1.08)	-7.12 ***
Complaints (older)	4.45 (1.17)	5.18 (1.07)	-4.32 ***
Research (older)	4.91 (1.26)	5.06 (1.31)	-0.80
Understanding (older)	4.80 (1.28)	5.03 (1.16)	-1.57
Mentoring (older)	4.13 (1.36)	5.51 (1.07)	-6.91 ***
Training (younger)	5.61 (1.31)	4.35 (1.24)	6.35 ***
Innovation (younger)	5.45 (1.14)	4.28 (1.16)	6.61 ***
Technology (younger)	5.60 (1.15)	3.93 (1.38)	7.75 ***
Urgent decisions (younger)	4.51 (1.23)	5.09 (1.18)	-3.51 **
Social media (younger)	5.90 (1.09)	3.49 (1.33)	11.82 ***
Team strategy (potential)	4.50 (1.34)	5.06 (1.23)	-3.23 **
Complex decisions (potential)	4.46 (1.19)	5.21 (1.11)	-4.34 ***
Organizational strategy (potential)	4.61 (1.20)	5.05 (1.16)	-3.01 **
Team evolution (potential)	5.15 (1.22)	4.60 (1.15)	3.09 **
Succession (potential)	5.08 (1.24)	4.61 (1.10)	2.50 *

Task	Person age		<i>t</i>
	Younger	Older	
Efficiency (performance)	4.80 (1.21)	4.91 (1.09)	-0.74
Task management (performance)	4.58 (1.13)	5.28 (1.10)	-4.90 ***
Performance (performance)	4.24 (1.18)	5.29 (1.09)	-5.97 ***
Knowledge (performance)	4.44 (1.19)	5.28 (1.11)	-5.22 ***
Achievement (performance)	4.04 (1.42)	5.60 (0.99)	-8.66 ***

Note. Task type in parentheses. Standard deviations in parentheses. Df = 79. # $p < .10$; * $p < .05$;

** $p < .01$; *** $p < .001$

Table 3.5.

Study 2: Means and Paired Sample T-test Results for Each Task by Leader Type

Task	Person type		<i>t</i>
	Leadership potential	Leadership performance	
Team cohesion (older)	5.01 (1.45)	5.79 (1.12)	-4.40 ***
Complaints (older)	4.96 (1.27)	5.53 (1.14)	-3.63 ***
Research (older)	4.69 (1.58)	4.73 (1.43)	-0.28
Understanding (older)	4.71 (1.48)	5.16 (1.40)	-3.09 **
Mentoring (older)	4.70 (1.45)	5.88 (1.07)	-5.89 ***
Training (younger)	5.50 (1.26)	5.11 (1.11)	3.20 **
Innovation (younger)	5.04 (1.43)	4.84 (1.29)	1.36
Technology (younger)	5.04 (1.34)	4.88 (1.24)	1.19
Urgent decisions (younger)	4.71 (1.25)	5.76 (1.12)	-6.44 ***
Social media (younger)	4.46 (1.34)	4.21 (1.36)	2.04 *
Team strategy (potential)	4.78 (1.34)	5.81 (1.01)	-6.10 ***
Complex decisions (potential)	4.75 (1.30)	5.95 (1.01)	-7.30 ***
Organizational strategy (potential)	5.04 (1.10)	5.60 (1.14)	-3.96 ***
Team evolution (potential)	5.28 (1.16)	5.53 (1.11)	-1.84 #

Task	Person type		<i>t</i>
	Leadership potential	Leadership performance	
Succession (potential)	5.86 (1.21)	5.40 (1.26)	2.64 *
Efficiency (performance)	4.95 (1.10)	5.55 (1.11)	-4.04 ***
Task management (performance)	5.00 (1.28)	5.79 (1.03)	-4.65 ***
Performance (performance)	4.63 (1.12)	5.60 (1.12)	-5.81 ***
Knowledge (performance)	4.61 (1.16)	5.48 (1.29)	-5.81 ***
Achievement (performance)	4.40 (1.51)	5.89 (1.02)	-6.97 ***

Note. Task type in parentheses. Standard deviations in parentheses. Df = 79. # $p < .10$; * $p < .05$;

** $p < .01$; *** $p < .001$

3.3.3 Discussion.

‘Younger’ and ‘older’ tasks tended to be assigned to younger and older leaders respectively, and so aligned with age stereotypes. The tasks positioned younger leaders as technologically capable, innovative, learning-oriented, and high future performers, and older leaders as experienced, strategic, decisive, task managers, able to maintain and develop a team. These results conform to workplace age stereotypes (e.g., Posthuma & Campion, 2009; Spisak et al., 2014) and are consistent with the findings of Study 1. ‘Performance’ tasks were also assigned to performance candidates and positioned them as experienced, strategic, decisive, task managers and able to maintain and develop a team. Assigning concrete tasks to the concept of leadership potential proved more difficult. Only one ‘potential’ task was viewed as more suitable for leaders with potential, and the other four were viewed as more suitable to leaders with performance. The predictors of leadership potential identified in research do not seem to align with perceptions of leadership potential. Leadership potential is a concept associated with learning, IT literacy and future performance, but difficult to define in concrete terms and work related tasks.

There was mixed evidence of an association between candidate age and candidate type. Performance tasks were predominantly viewed as suiting older rather than younger leaders, and older tasks as suiting leaders with performance rather than potential. Evidence for an association between leadership performance and older leaders is consistent across Studies 1 and 2. There was less evidence for an association between youth and potential. The majority of younger tasks were not viewed as more suiting leaders with potential than performance, and more potential tasks were viewed as suitable for older rather than younger leaders. There may be a relationship between youth and potential, based on associations with learning and future performance, as found in Sun et al. (2015). The limited evidence offered

in Study 2 may reflect difficulties in translating leadership potential into concrete tasks, and therefore further investigation is needed.

There is consistent evidence for age stereotyping across Studies 1 and 2, across different tasks and with samples of different age ranges and levels of work experience. Younger leaders are viewed as technologically able, innovative and future performers, whereas older leaders are viewed as experienced, strategic, task managers. There is also consistent evidence for a strong association between age and performance, but the concept of leadership potential appears to be difficult to pin down in concrete terms. Although leadership potential is increasingly well-defined in terms of its predictors and antecedents (Church & Silzer, 2014; Dries & Pepermans, 2012), *perceived* leadership potential may be a more fragile construct, without clearly understood content, and therefore open to interpretation and manipulation.

3.4 Study 3.

Study 3 employed a different sample population and methodology to approach the second research question from a qualitative standpoint. Focus groups with practitioners involved in leadership assessment discussed the leadership attributes most valued in future leaders in an applied setting, and discussions were analysed to identify common themes.

3.4.1 Method.

Analytic approach.

The study used a qualitative design, employing a phenomenological methodology, collecting data in semi-structured focus groups which was analysed using thematic analysis. Focus groups were used rather than interviews, as the dynamic interactions of a group setting can generate greater insight than individual interviews (Seal et al., 1998) and can encourage learning around a particular topic and elicit rich and elaborate data (Stewart & Shamdasani,

2015; Acocella, 2012). They generate accessible output (Stewart & Shandasani, 2015), which is important in ensuring the results have an applied value. They were semi-structured to ensure a consistent emic approach, in which participants can respond with their own ideas in their own words, with minimal direction from the researcher (Sullivan, 2009).

An inductive analytic strategy was employed, starting with specific observations which evolve into broader themes through analysis (McAbee et al., 2017). We believed this to be an appropriate strategy, as the focus groups aimed to improve understanding of what selectors look for in leadership candidates by identifying themes in the discussions. Two inductive approaches to qualitative analysis were considered. Grounded theory (Strauss & Corbin, 1990) was rejected as it aims to generate theory, but this was not the aim of this study. Instead, we selected thematic analysis as it can highlight and label patterns in people's experience of a particular phenomenon, and is a flexible tool for qualitative analysis that can generate rich data in psychology (Boyatzis, 1998; Braun & Clarke, 2006).

Participants.

There were four focus groups, each with four to six participants, as 90% of all themes can be found within three to six focus groups (Guest et al., 2017) and four individuals with a shared area of knowledge generate accurate information with a high confidence level (Romney et al., 1986). They were held between February and September 2018, two in East Sussex, two in Kent. Twenty participants (80% female; $Mage = 44.85$, $SD = 7.40$) were recruited via LinkedIn and Kent CIPD using opportunity sampling, as this enough to generate rich insight (Sandelowski, 1995) and achieve thematic saturation (Guest et al., 2006). All participants had at least three years' experience of leadership selection in organisations, and 60% had ten or more years' experience. See Appendix C for participant demographics for all studies.

Procedure.

Before each focus group participants were sent an information sheet on the study (Appendix D), and a consent form including demographic questions (Appendix E). The focus groups were held in hired meeting rooms or available corporate spaces. On arrival, participants completed a hard copy of the consent form. The researcher then started audio recording the session using ‘voice recorder’ software on a mobile phone. Sessions were facilitated using a script to ensure consistency across sessions (Appendix F), which included an introduction, informed consent information, session ground rules, an icebreaker, four core questions, and a debrief prompt.

The researcher worked through the script, including the four core questions. Open questions were used to encourage response freedom so participants could raise the points most important to them (Krueger & Casey, 2001; Stewart & Shamdasani, 2015), and therefore candidate age was not directly alluded to in the questions. However, they did include key words to implicitly highlight key research variables (Stewart & Shamdasani, 2015). For example, question 2 aimed to collect information on the demographic elements of leader stereotypes, whereas question 3 aimed to direct participants towards age-based stereotypes. The researcher also used probing questions to clarify responses and encourage discussion.⁵ After the discussion each participant received a full written and verbal debrief (Appendix G). Focus group recordings were saved to a secure dropbox account and anonymised transcripts were created by the researcher.

Data analysis.

⁵ Participants also completed an individual exercise in which they rated the leadership attributes explored in Study 1. Results are not discussed here but are available on request.

Data analysis advanced through five phases (Braun & Clarke, 2006). Firstly, the researcher transcribed and familiarised themselves with the data through reading and re-reading. Secondly, initial codes were generated to group interesting aspects of the data. Thirdly, potential themes were generated to collate related coded data. Fourthly, themes were reviewed to check they represented both the coded extracts and the whole data set. Finally, themes were defined and named to be clear and concise.

3.4.2 Results.

Five main themes were identified through the thematic analysis: 1) Organisational context; 2) Strategy and change; 3) Diversity vs. similarity; 4) Engaging people; 5) Emotional intelligence and resilience. These themes represent topics that emerged in each focus group. There is some overlap and so comments may illustrate more than one theme but will be included in the section they represent best.

Organisational context.

This theme is concerned with the context of the leadership role, and the need to select a leader who fits organisational culture and values:

“...I think a lot of it still comes down to personal fit, and vision, values, and certainly in smaller business you perhaps understand how the culture of the business is going to evolve, flexible working, culture, all these kind of good things that are coming in, employee engagement, motivation, a lot of older leaders, not necessarily the age, but traditional leaders don’t necessarily share those vision and values.” (*Recruitment Director, Focus Group 1*)

One Executive level leader focused on fit with the role, suggesting that experienced leaders may not be seen as a good fit as they are perceived as less trainable:

“...there is an element that actually someone who’s got previous experience, it could be a hindrance, because actually that person could have come from another admin role where

they're doing completely different processes and actually you want to be in a position to train that person to be what you're, what you're looking for..." (*Executive leader, Focus Group 4*)

One recruitment manager reflected on the need for different types of leader in different business climates, suggesting that leaders need to fit the demands of the time:

"...so say you've got something where you're going through a period of change, then those qualities need to complement that. You're going to want someone who's got a bit more drive, a bit more commitment, a bit more influencing skills, erm, change management experience, all that kind of stuff. Whereas if you're recruiting for somebody in a role that's kind of ticking on quite nicely, you've got a really established team, erm, kind of no problems, then you may be a bit more flexible on what attributes you may need within that position." (*Recruitment Manager, Focus Group 4*)

This theme suggests that fit with organisational culture, role and climate can override a candidate's objective ability and experience, which may disadvantage older, experienced candidates. Contextual variables may be key in determining who has leadership potential for a particular role. Experienced candidates able to provide stability may be advantaged in a stable business context, whereas driven, learning-oriented candidates may be advantaged during times of change.

Strategy and change.

This theme focuses on needing leaders who can create strategy, give direction, and drive change in an uncertain world.

“I think if we could have one theme, I suppose, in a VUCA⁶ world, all of the leaders, whatever company they’re working for now, have got to be people that are going to be comfortable with change.” (*Talent Management Consultant, Focus Group 3*)

In order to achieve this, there was a need for new leaders to embrace new technology and learning:

“I also think it’s about building on technology for the future. The shape of organisations, particularly that I’ve worked in, both Hastings and BUPA, will change due to the automation, the technology that comes along, so we do look for leaders who can take us on that journey as well.” (*Leadership and Talent Manager, Focus Group 2*)

“...one of the things that’s echoing for me in what we’ve been talking about, is someone who has a capacity to really learn. Because, you know, if change is so constant, and we’re constantly wanting to create a different culture, you know, merge, innovate, recreate, so it’s not, it’s not about what you know, but it’s about the ability to really learn and adapt and change...” (*Leadership Consultant, Focus Group 1*)

This theme foregrounds the impact of a changing world and the need for new leaders to respond strategically and drive change. It highlights attributes including IT literacy, willingness to learn, and curiosity, associated with younger leaders with potential in Study 1.

Diversity vs. similarity.

This theme highlighted a tension in leadership selection whereby a desire for diversity conflicts with a tendency to hire leaders aligned with the existing leader profile. Intentions to increase diversity may be undone by homosocial reproduction practices in which new group

⁶ VUCA refers to a volatile, uncertain, complex and ambiguous context (Bennett & Lemoine, 2014).

members are selected on the basis of their similarity to current group members (Moore, 1962). The benefits of diverse leadership teams were recognised:

“Where I worked before I had three team leaders, all very, very different. One of them was fantastic at customer service. She wasn’t very...she was OK at everything else, but her customer service skills were amazing. The other one was very logical. So if you had a problem, you could see her, and you could see her sitting in a meeting, looking up at the ceiling, and she would go away and she’d come back with a solution. And the other one was finance, she was like an accountant. So she’d be the one that would be looking at what are we making, what are spending. And the three of them were a formidable team.” (*Healthcare Manager, Focus Group 1*)

The behaviours of existing leadership teams were seen as a barrier to translating this recognition into diverse leadership recruitment:

“And I see people recruited that do have diverse thinking, and then what happens is they’re ostracised out. So, you know, they are sidelined and sidelined until their confidence starts to fall, and, er, that affects their performance, so, I absolutely agree with you. It’s particularly difficult when they’re trying to recruit for the future culture, and then the existing culture can’t adapt yet to the future culture...” (*Leadership Consultant, Focus Group 1*)

The tension between diversity and similarity was viewed as varying across industry and function, benefitting some demographic groups over others:

“...but what I see in the finance sector, is always looking for people with very, very similar background and experience. Someone who has worked in this area of finance, that’s got a long track record, who understands that area of finance. Whereas if you are looking for marketing, it could be someone who’s been marketing in, you know, in, in, erm, food manufacture, can then go into marketing services. You know, they cross over, but that’s not

the same in finance, and I think that means that there's a narrower pool of people to draw upon, and they're more of, as you're saying, kind of, older men, traditional men..."

(Leadership Consultant, Focus Group 1)

The theme of diversity vs. similarity finds a gap between a stated desire to increase diversity and homosocial reproduction in hiring practices that favours fit over innovation. This may benefit older leaders with leadership performance but be moderated by type of industry. Leadership diversity may be more attainable in industries such as marketing, whereas industries such as finance may be more resistant to change.

Engaging people.

A theme emerged of needing collaborative, inclusive leaders who can motivate and inspire their people. It stressed a move away from traditional command and control leadership, toward a coaching, facilitative style in which leaders succeed through building relationships with others:

"...so I think that's where another attribute of a leader would be, to be inclusive, to be empowered, to be collaborative, to make people feel as if they're part of the decision making process, rather than the, perhaps, the leader of fifty years ago that was authoritarian, dictatorial, this is what you'll do now." *(Talent Management Consultant, Focus Group 3)*

The ability to communicate vision in a compelling and inspiring way was viewed as crucial:

"Do you remember that hedge fund company we worked with, do you remember, a few years ago. Brilliant strategist, brilliant visionary, but she couldn't sell the vision. Luckily the Chairman was really persuasive, somebody that just had that natural charisma, and was able to sell the vision. If he hadn't been there, she would have been completely scuppered."

(Talent Management Consultant, Focus Group 3)

Charisma was also associated with energy:

“...but you want someone that knows how to convey the information in a different way. And then, also someone who’s got a particular energy level. So everyone responds to different kinds of people, but it’s hard to have a leader that just, you know, sits at the table during a meeting talking in a monotone, hunched over, there has to be some, a little bit of charisma, even if it’s like faked, but someone that knows how to act, act like a leader.”

(Learning Consultant, Focus Group 2)

This theme highlights leadership attributes that inspire and engage people. This could advantage older leaders with performance, as being able to influence others was associated with older leaders with performance in Study 1. However, the focus on a more modern, less traditional approach to leadership may advantage younger leaders with potential, along with an emphasis on energy associated with younger leaders in Study 1.

Emotional intelligence and resilience.

The final theme emphasises leaders who are self-aware and can deal with stress and challenge. This was viewed as essential to deal with the demands of the modern workplace:

“And if you, for whatever reason, if you can’t work sixty hour, and maybe I’m thinking of multi-nationals rather than smaller organisations, but if you don’t have the stamina to, OK I lived close to the office then, but to commute, to do sixty hour weeks, to be prepared to work every evening after you’ve put your kids to bed and stuff, in many organisations there is no place for you in a leadership team.” *(Learning Consultant, Focus Group 2)*

“But I think all organisations, like I think when I used to work at xxx in London, and xxx is quite a cut-throat, xxx who worked for them knows, it’s quite a cut-throat industry, you know, and you’d also be looking for, you know, for a leader, you know, are they going to

be able to handle the stress that naturally goes around this organisation.” (*Chief Operating Officer, Focus Group 4*)

This theme also highlighted that leaders needed to be calm under pressure:

“...one thing I probably would do, is, which is touching on the resilience, there are people who are innately more resilient, and I think as a leader that’s key, because it’s that calmness, that, erm, that ability to, to kind of stay calm when everybody else is losing their heads, which is really significant now...” (*Business Psychologist, Focus Group 1*)

This theme positions leaders as requiring physical and mental stamina, and an ability to work long hours, which acts as a barrier for some and may advantage those with high energy and drive, attributes associated with younger leaders in Study 1. However, older leaders with performance were associated with calmness and experience in Study 1, and these attributes were also viewed as essential components of emotionally intelligent and resilient leadership. This theme may present a mix of advantage and disadvantage for leaders of different types and age.

3.4.3 Discussion.

The themes emerging from the focus groups present an ideal future leader as able to form strategy and drive change, engage their people, be emotionally intelligent and resilient, and offer a good fit with organisational culture, vision and values. In terms of age, homosocial reproduction tendencies may advantage older candidates, whereas perceptions of older leaders as strategic (Studies 1 and 2), influencing others (Study 1), and calm (Study 1) may advantage them in evaluations of strategy and change, engaging people, and resilience respectively. However, overall these themes may present a greater advantage to younger leaders. The themes of organisational culture and engaging people highlighted a need for transformational, collaborative, trainable leaders who can drive change in an evolving

organizational landscape. An association between youth and IT literacy (Studies 1 and 2), learning (Studies 1 and 2), innovation (Study 2), curiosity (Study 1), energy and drive (Study 1) and more emotional resilience (Rauschenbach et al., 2012) may advantage younger leaders in evaluations of strategy and change, engaging people, and emotional intelligence.

In terms of leader type, the shift toward more transformational leadership and a rejection of more traditional leadership may similarly bias recruiters against leaders with established leadership performance. An association between leadership potential and learning and trainability (Studies 1 and 2) would seem to advantage leaders with potential in evaluations of organisational fit and strategy and change, as there is a clear focus on adaptable, trainable leaders. However, an association between leadership performance and strategy (Study 2), influencing others (Study 1) and communicating a vision (Study 1) may benefit experienced leaders, as may homosocial hiring tendencies. The themes here offer advantages to leaders with potential and leaders with performance.

The importance of organisational fit was perceived as crucial in this study, and also in previous research (Schwabel, 2014). It may moderate hiring biases, as different industry types may have differential leader preferences (Ekvall & Rhhammar, 1998), and participants suggested that financial services may favour candidates with leadership performance, whereas marketing may allow a diversity that welcomes leadership potential. Furthermore, organisations undergoing change may seek younger leaders, whereas organisations seeking stability may prefer older leaders (Spisak et al., 2014). Industry type and business climate may moderate perceived leader-organisation fit. However, perceived organisational fit is also an ill-defined concept that may act as a pathway to bias and perpetuate homogenous hiring tendencies (Knowledge@Wharton, 2015; Reynolds Lewis, 2015). Organisational context may moderate the relationship between candidate attributes and hiring preferences, but also encourage judgements of fit that disguise hiring biases.

3.5 General Discussion

Across three studies, two research questions were explored. Firstly, what are the leadership attributes associated with younger leaders, older leaders, leadership potential and leadership performance? In exploring this question, we build on existing research into age stereotypes (E.g., Posthuma & Campion, 2008; Cuddy & Fiske, 2002) and leadership (E.g., Dries & Pepermans, 2012; Church & Silzer, 2014) to better understand the attributes associated with younger and older leaders. The studies also extend research into the antecedents of leadership potential (E.g., Church & Silzer, 2014; Dries and Pepermans, 2012) to define what constitutes *perceived* leadership potential and performance. Secondly, the studies addressed the research question of what are the leadership attributes most valued in future leaders? This is founded on research that positions younger worker stereotypes and leadership potential as more valued than older workers and leadership performance respectively (Posthuma & Campion, 2009; Tormala et al., 2012). The studies explore whether worker age stereotypes translate into a leadership context, and whether the value assigned to attributes associated with candidate age and type, mirror the value assigned to higher-level concepts such as leadership potential (Tormala et al., 2012).

In exploring the first research question, Studies 1 and 2 demonstrate a consistent view of the attributes associated with younger and older leaders. Younger leaders were viewed as more technically able, motivated, innovative, and learning-oriented than older leaders, and identified as future leaders. Older leaders were perceived as more wise, stable, traditional, strategic, and decisive than younger leaders, and more able to manage and develop a team. Attributes associated with younger and older leaders also tended to be associated with leadership potential and performance respectively. These representations of younger and older leaders generally reflect stereotypes of younger and older workers (E.g., Posthuma & Campion, 2009; Swift & Steeden, 2020). Firstly, this suggests that stereotypes of younger

and older workers translate into a leadership context. Secondly, the consistency of perceptions from younger and work-naïve participants in Study 1, and older and work-experienced participants in Study 2, suggest that leader age stereotypes are pervasive and entrenched in both a work context and wider society.

Studies 2 and 3 also explored the attributes associated with leadership potential and leadership performance. They demonstrated a consistent understanding of what is meant by leadership performance, with a focus on concrete knowledge, skills and experience. Thirteen attributes were associated with leadership performance in Study 1, and all leadership performance tasks were viewed as best suiting a leader with performance in Study 2. A common understanding of leadership potential was more elusive. Fewer attributes and tasks were associated with leadership potential than leadership performance, younger leaders, or older leaders. In Study 2, only one leadership potential task was significantly associated with leaders with potential, whereas four were associated with leaders with performance.

Perceived leadership potential encompassed learning and drive (Church & Silzer, 2014; Dries & Pepermans, 2012) and was associated with future performance. Tasks reflecting ambiguity, complexity, and adaptability, also identified as predictors of leadership potential (Church & Silzer, 2014; Dries & Pepermans, 2012), were viewed as more appropriate for someone with leadership performance, perhaps reflecting a recognised conflation between evaluations of leadership potential and performance (Church & Silzer, 2014). Results found a gap between recognised predictors of leadership potential (Church & Silzer, 2014; Dries & Pepermans, 2012) and *perceived* leadership potential. They also position leadership potential as an ill-defined concept, and as such it may be malleable and open to bias (Knowledge@Wharton, 2015).

The second research question explored the leadership attributes most valued in future leaders. There was some difference in the type of attributes viewed as most desirable between Studies 1 and 3, which may reflect differences in the population sample. The student sample employed in Study 1 valued more concrete and transactional leadership attributes, such as being reliable, focused, and able to manage people and tasks. The practitioner sample in Study 3 gave more focus to more transformational leadership attributes (Tichy & Devanna, 1986), such as strategy, change and engaging people. The themes highlighted in Study 3 describe ideal future leaders as strategic, change-oriented, engaging, and resilient, and also highlight two potential sources of recruitment bias. Firstly, a tendency for homosocial reproduction (Moore, 1962) in leadership recruitment can hinder diversity and encourage a homogeneity in terms of leader demographics and ways of thinking. Secondly, the importance assigned to organisational fit may act as a vehicle for unconscious bias (Knowledge@Wharton, 2015; Reynolds Lewis, 2015).

The thematic analysis in Study 3 presents a mixed picture as to the types of candidate they may advantage in recruitment. In Study 1, the attributes associated with older leaders and leadership performance had a higher aggregate value than those associated with younger leaders and leadership potential respectively. However, the industry practitioners in Study 3 emphasise attributes of drive, willingness to learn, and adaptability that are more associated with younger leaders and leadership potential both in Study 1 and the extant literature into worker age stereotypes (E.g., Posthuma & Campion, 2009) and leadership potential (E.g., Dries and Pepermans, 2012). Study 3 suggests that homosocial reproduction and perceived organisational fit may offer a pathway for bias in leadership recruitment, but it is unclear from the three studies the age and type of candidate this bias may advantage.

3.5.1 Limitations and future directions.

These studies offer three limitations to be addressed in subsequent studies. Firstly, although the studies explore the attributes and tasks associated with candidates of different age and type, and their perceived value, they do not explicitly test these in a recruitment context. The evaluations in Studies 1 and 2 may differ in a live recruitment context, as attributes assessed in abstract can shift when attached to an individual target, and Abrams et al. (2016) found that attributes assigned an equivalent valence when assessed in isolation, had a different perceived value when they were combined in a candidate profile. Furthermore, the themes and comments in Study 3 may not reflect recruitment decision-making in practice. Biases such as social desirability bias can limit the discussion in focus groups (Bergen & Labonté, 2020; Harvey, 2018) and there can be a gap between reported and actual behaviours (Rundle-Thiele, 2009). Therefore, the focus group discussions and subsequent thematic analysis may not fully reflect recruiter attitudes and behaviours. Future research should explore candidate age and type in a recruitment context to test whether the attributions and evaluations uncovered here translate into leadership recruitment, which is addressed in Chapters 4 and 5.

Secondly, these studies do not test for causality in hiring decisions. Study 1 found that the attributes associated with younger leaders and leadership potential were valued less than those associated with older leaders and leadership performance. Extrapolating these results to a recruitment context, it could be assumed that younger candidates with leadership potential are less likely to be hired than older candidates with leadership performance. However, the studies did not test for this. Although previous research has found that younger candidates are more hireable (E.g., Abrams et al., 2016) and that candidates with leadership potential are preferred (Tormala et al., 2012), we have not tested whether candidate age and type predicts

hiring decisions. Future research should manipulate candidate age and type in an experimental context, to test whether they do predict leader hiring decisions.

Thirdly, the variation in sample demographics across the three studies make it difficult to be confident in general patterns of attitudes and behaviours. For example, the younger ($M_{age} = 19.38$, $SD = 1.52$), presumably work-naïve student sample in Study 1 valued concrete leadership attributes, such as being able to manage people and tasks, whereas the older ($M_{age} = 44.85$, $SD = 7.40$), work-experienced sample in Study 2 valued more transformational leadership attributes, such as being strategic and engaging. Furthermore, evaluations of younger/older leader attributes in Study 1 could be particularly problematic considering that participants were on average younger than both the younger and older leader categories. Although the practitioner sample employed in Study 3 is presumably more representative and insightful as to actual recruitment evaluations and decision-making, the sampling differences can only limit confidence in the conclusions reached. Future research should include a more consistent sample demographic, employing more age-diverse, work-experienced samples so there can be greater confidence that results reflect actual recruitment attitudes and behaviours.

3.6 Conclusion

The studies in Chapter 3 suggest a clear and consistent understanding of leader age profiles, positioning younger leaders as driven, learning-oriented and adaptable, and older leaders as possessing concrete knowledge, skills and experience. There is a similarly consistent understanding of leadership performance as associated with concrete leadership knowledge and experience, but leadership potential appears to be an ill-defined and poorly understood concept. There was a consistent association between youth and leadership potential, and between age and leadership performance. There was mixed evidence as to the leadership most valued in recruitment. Attributes associated with older leaders and leadership

performance were valued more highly in Study 1, whereas a focus on leaders who could be strategic, learning-oriented and driving of change in Study 3 suggest that younger leaders and leadership potential may be more highly valued. The focus groups analysis also suggest that candidate preferences may be moderated by organisation homosocial reproduction tendencies and perceived organisational fit may provide pathways to bias in leadership recruitment.

Limitations in the research should be addressed by future research exploring candidate age and type in a recruitment context, using an experimental methodology to test causality, and employing an age-diverse, work-experienced sample to ensure assessments reflect workplace evaluations. These limitations are addressed in the studies in Chapter 4.

Chapter 4: Candidate Type, Candidate Age, and Leadership Evaluations

Chapter 4 reports the results of three experiments exploring the impact of candidate age (younger vs. older) and candidate type (potential vs. performance) on leadership evaluations. It draws together existing psychological research suggesting a preference for potential over performance (Tormala et al., 2012) and a pro-youth bias in recruitment in general (Abrams et al., 2016), and test whether a preference for leadership potential over performance is partly driven by a pro-youth bias (Sun et al., 2015). Firstly, the studies find evidence of a general pro-youth bias in which younger candidates are preferred over older candidates. Secondly, they find that a pro-youth bias is partly driven by underlying age stereotypes, such that younger candidates are preferred because they are viewed as more competent than older candidates. Thirdly, the studies find a preference for leadership potential over leadership performance, but only on measures of future performance. On hiring measures, there was instead evidence for a preference for performance. Finally, the studies find that the preference for potential is partly driven by a pro-youth bias such that candidates with leadership potential are viewed as better future performers partly because they are believed to be younger. The preference for potential appears to present an advantage to younger candidates only. Older candidates tend not to be preferred on measures of future performance and willingness to hire, whether they demonstrate leadership potential or performance.

4.1 Introduction

Quality leadership in organisations has been associated with higher organisational performance (BIS, 2012), employee wellbeing (Yarker & Donaldson-Feilder, 2008), employee engagement (MacLeod & Clarke, 2009) and innovation (Bosworth et al., 2002). It is no surprise, therefore, that globally leadership is one of the top concerns for organisations, and talent acquisition their third most important challenge (Schwartz et al., 2017). In the UK, nearly three fifths of organisations actively running talent management activities, with their main priority being the development of high potentials and future leaders, and 80% of organisations planning leadership development activities in the next 12 months (CIPD, 2015).

Despite this focus on leadership and identifying and developing effective future leaders, the impact of this work is questionable. Organisations continue to report a deficit in their leadership capability with high levels of dissatisfaction with leadership quality in the UK (CIPD, 2014). Only 31% of global organisations believe that they are effectively identifying future leaders (Boatman & Wellins, 2011), only 43% of UK managers rate their own line manager as effective, and 65% of organisations in the UK report a deficiency in management and leadership skills (BIS, 2012). Furthermore, work to identify and develop effective future leaders is frequently unsuccessful, with 40% of designated high potential employees under-delivering (Cappelli & Keller, 2014). Identifying people with leadership potential is of crucial importance to organisations, but they are often not getting it right.

At the same time, the world population is ageing. Driven by decreasing fertility and increasing longevity, people aged 65 and over are now the fastest growing age group globally (Government Office for Science, 2016). The proportion of the world population aged 50 or over is predicted to increase from 17.7% in 2000 to 24.2% in 2020, and then to grow steadily before reaching 39.9% in the year 2100 (UN, 2017). The ageing population is mirrored by an ageing workforce and a move towards later retirement ages and longer working lives

(Reuters, 2010). However, older workers are more likely to be unemployed than younger workers (CIPD, 2015), and ageism is the most widely experienced form of discrimination in Europe (Age UK, 2011), suggesting that the workplace is failing to embrace an ageing workforce. In response to these issues, the UK Government is committed to increasing the employment rate for older people, by investigating why employment rates decrease after age 50, reducing negative attitudes to older workers, and ensuring there are reskilling opportunities throughout life (Government Office for Science, 2016). As part of an increased focus on older people in the workplace, it is important to understand how older people are evaluated at work, including in leadership recruitment.

4.1.1 Age stereotypes and role congruity theory

Age-based perceptions are founded on stereotypes of age groups, with younger worker age groups typically described as those aged under 30, and older worker age groups as aged 50 and over (Rauschenbach et al., 2012; Age UK, 2014; Gov.UK, 2017). Stereotypes of older people tend to be more negative than positive, and increasingly so over the last 200 years (Loretto, 2010; Ng et al., 2015; Swift & Steeden, 2020). Descriptive stereotypes position older people as high in warmth, but low in competence (Fiske et al., 2002), and negative perceptions of older people's competence are prevalent in the workplace. In comparison to younger colleagues, older workers are perceived as lower performers, less motivated, less able to learn, and more resistant to change (Posthuma & Campion, 2009). Crucially, older workers are viewed as having less potential than younger workers (Posthuma & Campion, 2009).

The impact of negative old-age stereotypes can be profound, affecting how older people are viewed by others and the emotions and behaviours they elicit. Groups high in warmth but low in competence, such as older people, elicit pity and benevolent ageist behaviours, such as patronising speech and being treated as less capable than others, but also

hostile ageist behaviours such as social exclusion and elder mistreatment (Cuddy et al., 2007; Cuddy et al., 2005). In the workplace, old-age stereotypes influence employer decision-making and behaviours (Harper et al., 2006; Posthuma & Campion, 2009). Older workers have found to be disadvantaged in recruitment (Abrams et al., 2016; Posthuma & Campion, 2009), opportunities for new types of work, learning opportunities, flexible working (Harper et al. 2006), performance evaluations, and promotions (Posthuma & Campion, 2009).

There is evidence that target age influences recruitment decisions via age stereotypes. Older people are viewed as less hireable than younger candidates with similar attributes (Posthuma & Campion, 2009), and candidate profiles reflecting older worker stereotypes are less hireable than profiles based on younger worker stereotypes (Abrams et al., 2016). The influence of age stereotypes on recruitment decisions is particularly apparent in roles that require abilities incongruent with old-age stereotypes, such as computer, physical or creative skills (Turek & Henkens, 2019). A pro-youth bias in recruitment, mediated by underlying age stereotypes, may also translate into a disadvantage in leadership evaluations.

Study 3 found that recruiters place great importance on candidates' perceived fit with organisational culture and values, suggesting that perceived fit can outweigh candidates' objective ability and experience. The importance of perceived fit is also supported in psychological theory, and role congruity theory (Eagly & Karau, 2002) argues that bias can result from estimations of fit between social group stereotypes and the attributes viewed as necessary for success in a particular role. Where there is alignment between the stereotypes of a group and the requirements of a role, members of that group tend to be favoured in hiring decisions. Where there is an incongruity between the group stereotype and the requirements of the role, members of that group are disadvantaged. Therefore, demographic characteristics may advantage some individuals over others in leadership selection. For example, gender role stereotypes describe and expect men to be agentic, that is competitive and assertive, whereas

women are expected to be communal, which includes being supportive and nurturing (Eagly, 1987). As agentic characteristics are more congruous with leadership stereotypes, role congruity therefore operates as an unconscious bias that advantages men in leadership evaluations and decisions to the detriment of women (Eagly & Karau, 2002).

There is mixed evidence for how role congruity theory may operate in an age context, and a lack of research focused on the impact of candidate age on leadership recruitment evaluations. Older leaders are viewed as more prototypical than younger leaders (Buengeler et al., 2016) and are associated more with dominant behaviour which is congruent with our expectations of leaders (Spisak, 2012). However, pervasive and overwhelmingly negative stereotypes of older workers as low-competence and low-performance (Posthuma & Campion, 2009) may be perceived as incongruous with leadership. Furthermore, in support of role congruity theory (Eagly & Karau, 2002) in an age context, Hirschfeld and Thomas (2011) found that older candidates were rated as lower in leadership potential than younger candidates, and argued that this was due to a lack of fit between older worker and leadership stereotypes.

Therefore, the studies are expected to demonstrate a pro-youth bias in candidate assessments, in which younger candidates are viewed more positively due to their association with younger-age stereotypes. Study 4 employs explicit age cues (date of birth) in order to evaluate reactions to clear and unambiguous measures of candidate age. Studies 5 and 6 employ implicit age cues (candidate photographs) in order to evaluate reactions to more ecologically valid candidate age cues, as candidate date of birth is usually illegal in job applications in the UK (Gov.UK, 2021), whereas LinkedIn profiles featuring candidate photographs are widely used in recruitment (Ollington et al., 2013). The use of both explicit and implicit candidate age cues should allow for greater confidence in study results on the effects of age on candidate evaluations.

Hypothesis 1: Younger leadership candidates will be preferred over older leadership candidates.

Hypothesis 2: The preference for younger candidates will be mediated by their age stereotypicality. Younger candidates will be preferred because they are perceived as more competent than older candidates.

4.1.2 A preference for leadership potential.

Leadership potential has been described as the employees within an organisation who have the potential to be effective in other future roles, usually with much broader responsibilities and at higher levels in the hierarchy (Silzer & Church, 2009). Indicators of future leadership potential include candidates' cognitive ability (Dries & Pepermans, 2012), emotional stability and tolerance for stress (Allen et al., 2014), motivation to lead (Chan & Drasgow, 2001), extraversion, conscientiousness and teamwork knowledge (Hirschfeld et al., 2008). However, the recognised antecedents of leadership potential may not translate into perceived leadership potential, and recent research has started exploring the unconscious biases that can affect perceptions of leadership potential.

Firstly, a small but consistent body of research has revealed a preference for leadership potential over proven leadership performance in leadership selection (Tormala et al., 2012; Sun et al., 2015). Tormala et al. (2012) presented participants with one of two candidates: a potential candidate with no relevant experience who had scored highly on a test of leadership potential; or a performance candidate with two years of relevant experience who had scored highly on a test of leadership achievement. They found that the potential candidate was preferred over the performance candidate on measures of future career success and performance in five years (Study 2). In a subsequent study, they also found that candidates with leadership potential were preferred over candidates with leadership

performance on measures aggregating future performance and willingness to hire (Tormala et al., 2012; Study 3). The preference for potential effect means that perceived potential to lead is valued more highly than concrete leadership experience and success.

Tormala et al. (2012) explored the mechanisms behind this effect, finding that the uncertainty associated with potential induced greater interest and cognitive processing than established performance (Studies 4, 7 and 8). Kupor et al. (2014) subsequently qualified this relationship through mediation analyses that found that deeper processing and greater interest mediated the interactive effect of candidate type (potential vs. performance) and tolerance for uncertainty on favourable evaluations. Tormala et al. (2012) and Kupor et al. (2014) did not test the role of uncertainty and cognitive processing on the preference for *leadership* potential specifically, but their results suggest that leadership potential is preferred over leadership performance because it is imbued with an uncertainty that encourages deeper cognitive processing and provokes greater interest.

There is also evidence that the preference for leadership potential may present an advantage to members of some social groups over others. In experimental studies, Player et al. (2019) found a preference for leadership potential over performance, but only for male candidates. Male candidates with leadership potential were preferred over male candidates with leadership performance on measures of career success and future performance, whereas female candidates with leadership performance were preferred over female candidates with leadership potential. Player et al. (2019) argued for gender as a boundary condition to the preference for leadership potential, conferring an advantage on men in leadership selection but not women.

Research into candidate age and leadership potential offers mixed findings. Tormala et al. (2012) found no perceived age difference between leadership potential and leadership

performance candidates, therefore concluding that the preference for leadership potential did not involve a pro-youth bias. However, replication studies in China with a larger sample found that leadership potential candidates were perceived as younger than leadership performance candidates, and this perceived age difference predicted more positive evaluations for leadership potential candidates (Sun et al., 2015). Sun et al. (2015) concluded that the preference for leadership potential was partly driven by a pro-youth bias in Chinese culture.

The pro-youth bias found by Sun et al. (2015) and the older worker stereotype of low potential (Posthuma & Campion, 2009) suggest an association between youth and potential that is under-explored in existing literature. These studies address this gap and expect to find a preference for leadership potential over leadership performance that is qualified by an interaction with candidate age, such that the preference for potential will be accentuated for younger candidates and attenuated for older candidates.

Hypothesis 3: Candidates with leadership potential will be preferred over candidates with leadership performance.

Hypothesis 4: The preference for leadership potential will be accentuated when the candidate is younger and attenuated when the candidate is older.

4.1.3 Overview of studies.

This chapter will cover three experiments exploring the impact of candidate age (younger vs. older) and candidate type (potential vs. performance) on leadership recruitment evaluations. Studies 4 and 5 investigate this in a within-participants paradigm, employing explicit age cues and implicit photographic age cues respectively, whereas Study 6 tests this with a between-participants design. All studies were pre-registered with the Open Science

Framework (<https://osf.io/ya8ez>; <https://osf.io/safgu/>; <https://osf.io/s7dhc>) and have ethical approval from the authors' institutional ethics panel⁷.

4.2 Study 4.

Study 4 tests Hypotheses 1, 3 and 4 with an online experiment investigating the impact of candidate age and candidate type on evaluations of candidate performance, leadership and willingness to hire in a leadership recruitment context.

4.2.1 Method.

Participants and design.

Participants were UK nationals recruited via the online crowdsourcing platform Prolific. After 31 participants were removed for failing attention checks, incomplete data or being aged under 18, 135 participants were included in analysis (76 female, 58 male, 1 other; $M_{age} = 22.12$, $SD = 10.14$). Participants took an average of 15.41 minutes ($SD = 27.35$) to complete the survey and were paid £1.25 for taking part. The study employed a 2 (candidate age: younger vs. older) x 2 (candidate type: potential vs. performance) within-participants experimental design.

Procedure and materials.

Participants were invited to take part in an online Qualtrics survey exploring how individuals evaluate different types of leadership candidate. Four leadership candidates were presented in random order. Candidate type was manipulated using a graphic purporting to show candidate scores against a Leadership Potential Index (LPI) and a Leadership Achievement Inventory (LAI). Leadership potential candidates scored high on the LPI and above the mid-point on the LAI; leadership performance candidates scored high on the LAI

⁷ Due to researcher error, the OSF registration for Studies 4 and 5 does not include Hypothesis 1, and the OSF registration for Studies 5 and 6 does not include Hypothesis 2.

and above the mid-point on the LPI. Candidate age was manipulated using candidate date of birth only, with younger candidates aged 25 or under, and older candidates aged 55 or over.

A pilot study successfully tested the candidate manipulations.

After viewing each candidate profile, participants completed continuous dependent measures on the candidate's leadership and performance, and participants' willingness to hire. After viewing all four candidates, participants were reminded of their profiles before completing a set of choice questions on candidate leadership and performance, and participants' willingness to hire. Participants finally completed demographic information before being presented with a full written debrief.

Measures.

All items in continuous measures were randomised and scored on a seven-point likert scale (1 = *strongly disagree*, 7 = *strongly agree*) and scales were created using mean scores.

Leadership.

Four items measured perceptions of candidate's leadership on a continuous scale, asking participants "*To what extent do you think the candidate...will fulfil their leadership potential/ is a credible leader/ is a leader/ will succeed as a leader?*". Participants also completed two choice questions stating the candidate they preferred as the best leader, and with the most potential.

Performance.

Three items assessed candidates' performance on a continuous scale, "*How well do you think the candidate will perform in the job?/ Compared to other employees, how well do you think the candidate will perform in the job?/ How well do you think the candidate's 'significant others' think they would perform in the job?*" (adapted from Player et al., (2015).

Participants also completed two choice questions stating the candidate they preferred as the candidate who had performed better in the past, and would perform better in the future.

Willingness to hire.

Three items assessed participants' willingness to hire on a continuous scale, "*To what extent do you think that...you would hire this candidate?/ this candidate would be a good appointment?/ you would employ this person?*" (adapted from Player et al., 2015).

Participants also completed three choice questions stating the candidate they would prefer to hire, employ, and as the best appointment.

4.2.2 Results

Dependent measures.

All scales had a Cronbach's alpha of $\geq .84$, and so were considered to have good internal reliability (Nunnally, 1978) (see Table 4.1 for scale alphas, means and correlations). Main and interaction effects for continuous measures were analysed with a repeated-measures ANOVA using a Bonferroni correction to keep the Type 1 error at 5% overall (see Table 4.2 for means and standard deviations)⁸. As research into target age can demonstrate an ingroup bias based on age (Posthuma & Campion, 2009), participant age was initially included as a factor. Participant age was collected on a continuous scale and was entered as a between-participants factor in the repeated-measures ANOVA. This was retained if there was a significant interaction between candidate age and participant age, and analysis was re-run without participant age if the interaction was non-significant. Dichotomous preference questions were analysed with one-sample chi-square tests (see Table 4.3 for frequencies). To evaluate the strength of association between candidate age, candidate type and participant

⁸ Data was not normally distributed, but the results of ANOVAs are still robust if there are moderate deviations from normality (Glass et al. 1972, Harwell et al. 1992, Lix et al. 1996). The analysis presented includes outliers. Analysis was also run without outliers but this did not change the pattern of results or levels of significance.

preferences, Cramér's V (ϕ_c) was manually calculated using the formula $\phi_c = \sqrt{\frac{\chi^2}{N(k-1)}}$ (van den Berg, n.d.).

Leadership.

The interaction between candidate age and participant age was non-significant, $F(21,113) = 1.45, p = .11, \eta_p^2 = .21$, therefore participant age was not retained as a covariate. The main effect of candidate age was marginally significant, $F(1,134) = 3.59, p = .06, \eta_p^2 = .03$, such that older candidates were perceived as higher in leadership than younger candidates. The main effect of candidate type was significant, $F(1,134) = 10.12, p = .002, \eta_p^2 = .07$, such that performance candidates were perceived as higher in leadership than younger candidates. The interaction between candidate age and candidate type was non-significant, $F(1,134) = 0.02, p = .89, \eta_p^2 < .001$.

There was a significant association between candidates and the best leader, $\chi^2(3) = 17.62, p = .001, \phi_c = .36$, with older performance candidates preferred the most and older potential candidates the least. The association with candidate age was non-significant, $\chi^2(1) = 1.25, p = .26, \phi_c = .10$. The association with candidate type was significant, $\chi^2(1) = 12.45, p < .001, \phi_c = .30$, such that candidates with performance were preferred over potential. When candidates with performance were selected, the association with candidate age was marginally significant, $\chi^2(1) = 3.68, p = .055, \phi_c = .17$, such that older performance candidates were marginally preferred over younger performance candidates.

There was a significant association between candidates and the most leadership potential, $\chi^2(3) = 124.53, p < .001, \phi_c = .96$, with younger potential candidates preferred the most and older performance candidates the least. There was a significant association with candidate age, $\chi^2(1) = 53.52, p < .001, \phi_c = .63$, such that younger candidates were preferred over older. When younger candidates were selected there was a significant association with

candidate type, $\chi^2(1) = 42.04, p < .001, \phi_c = .56$, such that younger potential candidates were preferred over younger performance candidates. There was a significant overall association with candidate type, $\chi^2(1) = 58.67, p < .001, \phi_c = .66$, such that potential candidates were preferred over performance. When potential candidates were selected, there was a significant association with candidate age, $\chi^2(1) = 45.37, p < .001, \phi_c = .58$, such that younger potential candidates were preferred over older potential candidates.

Performance.

The interaction between candidate age and participant age was non-significant, $F(21,113) = 1.19, p = .28, \eta_p^2 = .18$, therefore participant age was not retained as a covariate. The main effects of candidate age, candidate type, and the interaction between candidate age and candidate type were all non-significant ($ps \geq .102$).

There was a significant association between candidates and best past performer, $\chi^2(3) = 58.81, p < .001, \phi_c = .66$, with older performance candidates preferred the most and younger potential candidates the least. There was a significant association with candidate age, $\chi^2(1) = 11.27, p = .001, \phi_c = .29$, such that older candidates were preferred over younger candidates. When older candidates were selected, there was a significant association with candidate type, $\chi^2(1) = 32.29, p < .001, \phi_c = .49$, such that older performance candidates were preferred over older potential candidates. There was a significant overall association with candidate type, $\chi^2(1) = 39.47, p < .001, \phi_c = .54$, such that performance candidates were preferred over potential candidates. When performance candidates were selected, there was a significant association with candidate age, $\chi^2(1) = 12.46, p = .001, \phi_c = .30$, such that older performance candidates were preferred over younger performance candidates.

There was a significant association between candidates and best future performer, $\chi^2(3) = 101.95, p < .001, \phi_c = .87$, with younger potential candidates preferred the most and

older performance candidates the least. There was a significant association with candidate age, $\chi^2(1) = 41.67, p < .001, \phi_c = .56$ such that younger candidates were preferred over older candidates. When younger candidates were selected, there was a significant association with candidate type, $\chi^2(1) = 37.80, p < .001, \phi_c = .53$, such that younger potential candidates were preferred over younger performance candidates. There was a significant overall association with candidate type, $\chi^2(1) = 39.47, p < .001, \phi_c = .54$, such that potential candidates were preferred over performance candidates. When potential candidates were selected, there was a significant association with candidate age, $\chi^2(1) = 39.39, p < .001, \phi_c = .54$, such that younger potential candidates were preferred over older potential candidates.

Willingness to hire.

The interaction between candidate age and participant age was non-significant, $F(21,113) = 1.22, p = .25, \eta_p^2 = .19$, therefore participant age was not retained as a covariate. The main effects of candidate age, candidate type, and the interaction between candidate age and candidate type were all non-significant ($ps \geq .16$).

There was a significant association between candidates and hire choices, $\chi^2(3) = 14.60, p = .002, \phi_c = .33$, with younger potential candidates preferred the most and older potential candidates the least. There was a significant association with candidate age, $\chi^2(1) = 12.45, p < .001, \phi_c = .30$, such that younger candidates were preferred over older candidates. When younger candidates were selected, the association with candidate type was non-significant, $\chi^2(1) = 0.73, p = .39, \phi_c = .07$. The overall association with candidate type was non-significant, $\chi^2(1) = 0.01, p = .93, \phi_c = .01$.

There was a significant association between candidates and employ choices, $\chi^2(3) = 16.97, p = .001, \phi_c = .35$, with younger potential candidates preferred the most and older potential candidates the least. There was a significant association with candidate age, $\chi^2(1) =$

13.70, $p < .001$, $\phi_c = .32$, such that younger candidates were preferred over older candidates. When younger candidates were selected, the association with candidate type was non-significant, $\chi^2(1) = 1.36$, $p = .24$, $\phi_c = .10$. The overall association with candidate type was non-significant, $\chi^2(1) = 0.01$, $p = .93$, $\phi_c = .01$.

There was a significant association between candidates and the best appointment, $\chi^2(3) = 10.57$, $p = .014$, $\phi_c = .28$, with younger performance candidates preferred the most and older potential candidates the least. There was a significant association with candidate age, $\chi^2(1) = 3.92$, $p = .048$, $\phi_c = .17$, such that younger candidates were preferred over older candidates. When younger candidates were selected, the association with candidate type was non-significant, $\chi^2(1) = 0.62$, $p = .43$, $\phi_c = .07$. There was a significant overall association with candidate type, $\chi^2(1) = 5.40$, $p = .02$, $\phi_c = .20$, such that performance candidates were preferred over potential candidates. When performance candidates were selected, the association with candidate type was non-significant, $\chi^2(1) = 0.31$, $p = .58$, $\phi_c = .05$.

Table 4.1

Study 4: Correlations Between Scales

Scale	α	$M (SD)$	2	3
1. Leadership	.85	5.53 (0.58)	.78 ***	.76 ***
2. Performance	.84	5.60 (0.58)		.80 ***
3. Willingness to hire	.87	5.54 (0.64)		

Notes. *** $p < .001$ (2-tailed)

Table 4.2

Study 4: Means and Standard Deviations for Each Scale in Each Condition

Scale	Younger candidates			Older Candidates			Total	
	Potential	Performance	Total	Potential	Performance	Total	Potential	Performance
Leadership	5.36 (0.87)	5.60 (0.84)	5.48 (0.64)	5.46 (0.90)	5.71 (0.82)	5.59 (0.68)	5.41 (0.77)	5.66 (0.71)
Performance	5.54 (0.72)	5.59 (0.82)	5.56 (0.63)	5.58 (0.78)	5.71 (0.85)	5.65 (0.67)	5.56 (0.63)	5.65 (0.74)
Willingness to hire	5.57 (0.85)	5.55 (0.91)	5.56 (0.70)	5.46 (0.97)	5.58 (0.98)	5.52 (0.75)	5.51 (0.77)	5.57 (0.84)

Note. Standard deviations in parentheses.

Table 4.3

Study 4: Frequencies of Candidate Selection in Choice Questions

Measure	Younger candidates			Older Candidates			Total	
	Potential	Performance	Total	Potential	Performance	Total	Potential	Performance
Best leader	19.26	25.93	45.19	15.56	39.26	54.82	34.82	65.18
Most potential	65.93	15.56	81.49	14.07	4.44	18.51	80.00	20.00
Past performer	10.37	25.19	35.56	12.59	51.85	64.44	22.96	77.04
Future performer	62.22	15.56	77.78	14.81	7.41	22.22	77.03	22.97
Hire	35.56	29.63	65.19	14.07	20.74	34.81	49.63	50.37
Employ	37.04	28.89	65.93	13.33	20.74	34.07	50.37	49.63
Best appointment	26.67	31.85	58.52	13.33	28.15	41.48	40.00	60.00

Note. Frequencies in percentages. $N = 135$.

4.2.3 Discussion.

Hypothesis 1 was partly supported. Although older candidates were viewed as the best past performers and higher in leadership, younger candidates were preferred on measures of perceived leadership potential, future performance, and participants' willingness to hire, despite recognition of the objectively better past performance of older candidates. This mirrors the pro-youth bias in recruitment found in previous research (Abrams et al., 2016) and translates it into a leadership recruitment context. The average strength of association between candidate age and hiring measures was medium ($\phi_c = .26$), whereas that for candidate type and hiring measures was only small ($\phi_c = .07$). The age of candidates was more strongly associated with willingness to hire than relevant information on leadership ability.

There was also partial support for Hypothesis 3. Although candidates with leadership performance were associated with better leadership and past performance, candidates with leadership potential were preferred on measures of perceived leadership potential and future performance. This is consistent with previous results showing a preference for potential over performance in perceived future performance, despite leaders with performance being viewed as objectively more impressive (Tormala et al., 2012; Sun et al., 2015; Player et al., 2019). However, higher perceived future performance did not translate into higher willingness to hire, and candidates with leadership performance were viewed as the best appointment. As found by Player et al. (2019), candidates with leadership potential were viewed as better future performers, but candidates with leadership performance were viewed as more hireable.

Study 4 offered some evidence in support of Hypothesis 4. Where there was a preference for leadership potential, younger potential candidates were preferred over older potential candidates. Furthermore, younger candidates with leadership potential were the most preferred choice in terms of who participants would hire and employ, whereas older

candidates with leadership potential were least preferred. This provides further support for an association between youth and leadership potential (Sun et al., 2015), and suggests this may only benefit age-congruent targets in recruitment. Possessing leadership potential may advantage younger candidates in leadership evaluations, but disadvantage older candidates.

The study also identified a possible moderator of leadership candidate evaluations as the effects of candidate age and candidate type tended to emerge on choice measures rather than continuous measures. Evaluations influenced by social group stereotypes are more pronounced on objective measures such as choice questions, than subjective measures such as likert scales (Biernat & Manis, 1994; Biernat & Vescio, 1993), and age-biased evaluations are more likely to emerge on measures involving direct comparisons (Posthuma & Campion, 2009). Therefore, the type of measure used may moderate both a pro-youth bias and preference for leadership potential in recruitment.

The study does have its limitations. Firstly, the young sample age may reduce its generalisability, particularly because the average participant age was younger than both the younger and older targets. Secondly, the lack of significant effects on continuous measures meant that it was not possible to run mediation analyses to fully explore the interaction between candidate age and candidate type on evaluations. Thirdly, as the use of explicit age information in recruitment is illegal in the UK, the manipulations have limited ecological validity. These limitations are addressed in the next two studies.

4.3 Study 5.

Study 5 tests Hypotheses 1 to 4 in a within-participants experimental study. It employs alternative candidate manipulations and adds an age stereotype measure. Age stereotype measures were included as the stereotype content model (Fiske et al., 2002) argues that age-based evaluations are based on underlying stereotypes of competence and warmth, and role

congruity theory (Eagly & Karau, 2002) posits that leadership evaluations are influenced by perceived congruity between demographic group membership and leadership roles. In this way, Study 5 expands on the results of Study 4 by testing the extent to which any effects of candidate age on evaluations may be driven by underlying age stereotypes.

4.3.1 Method.

Participants and design.

Power analysis (G*Power: Faul, Erdfelder, Lang, & Buchner, 2007) determined that 158 participants were required for an 80% chance of detecting a medium effect ($F = .25$). Participants were recruited via Prolific and were UK nationals in full- or part-time employment. After 10 participants were removed for failing attention checks, 166 participants were included in analysis (95 female, 69 male, 1 transgender, 1 did not identify as male, female or transgender; $M_{age} = 34.59$, $SD = 9.40$). Participants took an average of 948.83 seconds ($SD=484.56$) to complete the study and were paid £1.67 for taking part. The study employed a 2 (candidate type: leadership potential vs. leadership performance) x 2 (candidate age: younger vs. older) within-participants experimental design.

Procedure and materials.

Participants were invited to take part in an online Qualtrics study to evaluate leadership candidates and make hiring decisions. Four leadership candidates were presented in random order. The candidate profiles were presented in the form of fictitious LinkedIn profiles (see Appendix H). Within each profile, candidate type was manipulated as in Study 4. Candidate age was manipulated using candidate photographs from a face database (Minear & Park, 2004). The two younger candidate photographs were of White men aged 22 and 23,

while the older candidate photographs were White men aged 61 and 63. Manipulations were successfully tested in pilot work⁹.

After viewing each candidate profile, participants completed manipulation checks and continuous dependent measures on candidate age stereotypicality and participants' willingness to hire. After viewing all four candidates, participants were reminded of their profiles before completing a set of choice questions on leadership, performance, and willingness to hire. Participants finally completed demographic information and viewed a debrief.

Measures.

For all continuous measures, items were presented in random order. Choice questions were presented in random order and participants also allocated 100 points between candidates, the most points to their preferred candidate, and the fewest to their least preferred.

Perceived age.

Two items measured the perceived age of candidates: "To what extent do you think this candidate would be younger (older) than other candidates?". Item 1 was recoded so that high scores on both items reflected a belief that the candidate was older. Both items were significantly positively correlated, $r(664) = .47, p < .001$, and a perceived age scale was created based on the mean scores of both items.

Participant age. Participants entered their age using a sliding scale running from 0 to 100.

⁹ Photographs were tested for differences in familiarity and attractiveness in pilot work. There was no difference between the younger photos, or the older photos. However, the younger photos were viewed as more familiar and attractive than older photos. This was not controlled for in the study and is addressed in the discussion.

Leadership.

The same choice questions were used as in Study 4.

Age stereotype measure.

Eight items measured candidates' competence and warmth (adapted from Marcus et al., 2016). Four measured perceived competence: "*To what extent do you believe that this candidate...is a better performer/ is more productive/ is able to achieve more/ is intellectually competent?*". Four measured perceived warmth: "*To what extent do you believe that this candidate...is friendly/ is warm-hearted/ has a warmer personality/ is likeable?*". Items were intermixed, randomised and scored on a seven-point likert scale (1 = *strongly disagree*, 7 = *strongly agree*).

Performance.

The same choice questions were used as in Study 4.

Willingness to hire.

The same continuous and choice questions were used as in Study 4.¹⁰

4.3.2 Analytic strategy.

Scales were created based on the mean item scores for competence, warmth and willingness to hire. All scales in each condition had a Cronbach's alpha of $\geq .90$, and so were considered to have good internal reliability (Nunnally, 1978) (see Table 4.4 for alphas and correlations). Analysis of continuous measures employed a repeated measures ANOVA using

¹⁰ Perceived leadership potential and leadership performance were also measured.

a Bonferroni correction (see Table 4.5 for means and standard deviations)¹¹. Analysis of choice questions was completed with chi-square tests (see Table 4.6 for frequencies).

As the allocation of points for candidates are interdependent, they were analysed using multilevel modelling with restricted maximum likelihood estimation. Multilevel modelling has been found to be suitable for repeated measures designs and can yield higher power than ANOVAs (Quené & Van den Bergh, 2004). To enable analysis, the data was restructured to show point allocations for each candidate on separate rows, resulting in four lines of data for each participant. For each outcome variable two sequential models were computed. Model 1 tested the main effects of candidate age (1 = younger; 2 = older) and candidate type (1 = potential; 2 = performance). Model 2 tested the interaction between candidate age and type (see Table 4.7 for mean point allocations and Table 4.8 for multilevel modelling results)¹².

4.3.3 Results

Perceived age.

The interaction between candidate age and participant age was non-significant, $F(35,130) = 1.10, p = .34, \eta_p^2 = .23$, therefore participant age was not retained as a covariate. There was a significant effect of candidate age, $F(1,165) = 757.43, p < .001, \eta_p^2 = .82$, such that older candidates were perceived as older than younger candidates. There was a significant effect of candidate type, $F(1,165) = 50.40, p < .001, \eta_p^2 = .23$, such that potential candidates were perceived as younger than performance candidates. The interaction between candidate

¹¹ Data was not normally distributed, but the results of ANOVAs are still robust if there are moderate deviations from normality (Glass et al. 1972, Harwell et al. 1992, Lix et al. 1996). The analysis presented includes outliers. Analysis was run without outliers but this did not change the pattern or level of significance of the results.

¹² An unconditional model and ICC could not be calculated as each participant allocated 100 points and therefore the global mean was 100 with no variance.

age and candidate type was non-significant, $F(1,165) = 0.48, p = .49, \eta_p^2 = .003$. The results confirmed the effectiveness of the age manipulation.

Leadership.

There was a significant association between candidates and the best leader, $\chi^2(3) = 25.08, p < .001$, with younger performance candidates preferred most and younger potential candidates least. The association with candidate age was non-significant, $\chi^2(1) = 0.10, p = .76, \phi_c = .02$, but the association with candidate type was significant, $\chi^2(1) = 20.27, p < .001, \phi_c = .35$, such that performance candidates were preferred over potential candidates. When performance candidates were selected, there was a non-significant association with candidate age, $\chi^2(1) = 2.29, p = .13, \phi_c = .12$.

Model 1, of the multilevel model analysis, revealed no significant relationship between candidate age and point allocations. Point allocations refer to how many of the 100 points available that participants allocated to each candidate, the most points allocated to the candidate they most preferred as the best leader, and the fewest to the candidate they least preferred as the best leader. There was a significant positive relationship between candidate type and allocations, such that performance candidates were preferred over potential candidates. Model 2 qualified this with a significant negative interaction between candidate age and type, such that performance candidates were preferred in both age conditions, but more so in the younger condition, and younger performance candidates were preferred over older performance candidates (see Figure 4.1). Model 2 was a significantly better fit than Model 1.

There was a significant association between candidates and the most leadership potential, $\chi^2(3) = 125.33, p < .001$, with younger potential candidates most preferred and older performance candidates least preferred. The association with candidate age was

significant, $\chi^2(1) = 77.89, p < .001, \phi_c = .68$, such that younger candidates were preferred over older candidates. When younger candidates were selected, there was a significant association with candidate type, $\chi^2(1) = 29.68, p < .001, \phi_c = .42$, such that younger potential candidates were preferred over younger performance candidates. The overall association with candidate type was significant, $\chi^2(1) = 38.55, p < .001, \phi_c = .48$, such that potential candidates were preferred over performance candidates. When potential candidates were selected, there was a significant association with candidate age, $\chi^2(1) = 50.74, p < .001, \phi_c = .55$, such that younger potential candidates were preferred over older potential candidates.

Model 1 revealed significant negative relationships between candidate age and point allocations and candidate type and allocations, such that younger (vs. older) and potential (vs. performance) candidates were preferred respectively. Point allocations refer to how many of the 100 points available that participants allocated to each candidate, the most points allocated to the candidate they most preferred as having most leadership potential, and the fewest to the candidate they least preferred as having most leadership potential. Model 2 qualified this with a marginally significant positive interaction effect, such that potential candidates were preferred in both age conditions but more so in the younger condition, and younger potential candidates were preferred over older potential candidates (see Figure 4.2). Model 2 was a significantly better fit than Model 1.

Age stereotype measure.

The interactions between candidate age and participant age were non-significant ($ps \geq .29$), therefore participant age was not retained as a covariate.

There was a significant effect of candidate age on perceived competence, $F(1,165) = 9.63, p = .002, \eta_p^2 = .06$, with younger candidates preferred over older candidates. There was a significant effect of candidate type, $F(1,165) = 11.98, p = .001, \eta_p^2 = .07$, with performance

candidates preferred over potential candidates. The interaction between candidate age and candidate type was non-significant, $F(1,165) = 0.19, p = .67, \eta_p^2 = .001$.

There was a significant effect of candidate age on perceived warmth, $F(1,165) = 49.16, p < .001, \eta_p^2 = .23$, with younger candidates preferred over older candidates. The effect of candidate type, and interaction between candidate age and candidate type, were non-significant ($ps \geq .54$).

Performance.

There was a significant association between candidates and who was the best past performer, $\chi^2(3) = 91.11, p < .001$, with older performance candidates preferred the most and younger potential candidates the least. The association with candidate age was significant, $\chi^2(1) = 18.89, p < .001, \phi_c = .34$, with older candidates preferred over younger candidates.

When older candidates were selected, there was a significant association with candidate age, $\chi^2(1) = 35.76, p < .001, \phi_c = .46$, such that older performance candidates were preferred over older potential candidates. The overall association with candidate type was significant, $\chi^2(1) = 70.27, p < .001, \phi_c = .65$, with performance candidates preferred over potential candidates.

When performance candidates were selected, there was a significant association with candidate age, $\chi^2(1) = 9.99, p = .002, \phi_c = .25$, such that older performance candidates were preferred over younger performance candidates. Model 1 revealed significant positive relationships between candidate age and point allocations for performance and between candidate type and allocations, such that older (vs. younger) and performance (vs. potential) candidates were preferred respectively. Point allocations refer to how many of the 100 points available that participants allocated to each candidate, the most points allocated to the candidate they most preferred as the best past performer, and the fewest to the candidate they

least preferred as the best past performer. Model 2 found a non-significant interaction effect. Model 2 was a significantly better fit than Model 1.

There was a significant association between candidates and the best future performer, $\chi^2(3) = 113.76, p < .001$, with younger potential candidates preferred the most and older performance candidates the least. The association with candidate age was significant, $\chi^2(1) = 104.96, p < .001, \phi_c = .80$, with younger candidates preferred over older candidates. When younger candidates were selected, the association with candidate type was significant, $\chi^2(1) = 4.89, p = .027, \phi_c = .17$, such that younger potential candidates were preferred over younger performance candidates. The overall association with candidate type was significant, $\chi^2(1) = 4.72, p = .03, \phi_c = .17$, with potential candidates preferred over performance candidates. When potential candidates were selected there was a significant association with candidate age, $\chi^2(1) = 64.34, p < .001, \phi_c = .62$, such that younger potential candidates were preferred over older potential candidates. Model 1 revealed significant negative relationships between candidate age and point allocations and between candidate type and allocations, such that younger (vs. older) and potential (vs. performance) candidates were preferred respectively. Model 2 found a non-significant interaction effect. Model 2 was a significantly better fit than Model 1.

Willingness to hire.

The interaction between candidate age and participant age was non-significant, $F(35,130) = 0.88, p = .66, \eta_p^2 = .19$, therefore participant age was not retained as a covariate. There was a main effect of candidate age on continuous measures of willingness to hire, $F(1,165) = 37.10, p < .001, \eta_p^2 = .18$, with younger candidates preferred over older candidates. The effect of candidate type, and interaction between candidate age and candidate type, were non-significant ($ps \geq .31$).

There was a significant association between candidates and hire choices, $\chi^2(3) = 57.01, p < .001$, with younger performance candidates preferred the most and older potential candidates the least. This differed from Study 4, in which the younger potential candidate was most preferred as the candidate to hire. The association with candidate age was significant, $\chi^2(1) = 43.66, p < .001, \phi_c = .51$, with younger candidates preferred over older candidates. When younger candidates were selected, there was a significant association with candidate type, $\chi^2(1) = 8.68, p = .003, \phi_c = .23$ such that younger performance candidates were preferred over younger potential candidates. The overall association with candidate type was significant, $\chi^2(1) = 7.51, p = .006, \phi_c = .21$, with performance candidates preferred over potential candidates. When performance candidates were selected, there was a significant association with candidate age, $\chi^2(1) = 33.36, p < .001, \phi_c = .45$, such that younger performance candidates were preferred over older performance candidates.

Model 1 revealed a significant negative relationship between candidate age and point allocations and a significant positive relationship between candidate type and allocations, such that younger (vs. older) and performance (vs. potential) candidates were preferred respectively. Model 2 qualified this with a negative significant interaction effect, such that younger performance candidates were preferred over younger potential candidates, but there was no difference between older performance and older potential candidates (see Figure 4.3). Model 2 was a significantly better fit than Model 1.

There was a significant association between candidates and employment choice, $\chi^2(3) = 53.95, p < .001$, with younger performance candidates preferred most and older potential candidates least. The association with candidate age was significant, $\chi^2(1) = 45.82, p < .001, \phi_c = .53$, with younger candidates preferred over older candidates. When younger candidates were selected, there was a significant association with candidate type, $\chi^2(1) = 5.25, p = .022, \phi_c = .18$, such that younger performance candidates were preferred over younger potential

candidates. The overall association with candidate type was significant, $\chi^2(1) = 4.38, p = .036, \phi_c = .16$, with performance candidates preferred over potential candidates. When performance candidates were selected, there was a significant effect of candidate age, $\chi^2(1) = 32.40, p < .001, \phi_c = .44$, such that younger performance candidates were preferred over older performance candidates.

Model 1 revealed a significant negative relationship between candidate age and point allocations and a significant positive relationship between candidate type and allocations, such that younger and performance candidates were preferred respectively. Model 2 qualified this with a significant negative interaction effect, such that younger performance candidates were preferred over younger potential candidates, but there was no difference between older performance and older potential candidates (see Figure 4.4). Model 2 was a significantly better fit than Model 1.

There was a significant association between candidates and the best appointment, $\chi^2(3) = 57.01, p < .001$, with younger performance candidates preferred the most and older performance candidates the least. The association with candidate age was significant, $\chi^2(1) = 43.66, p < .001, \phi_c = .51$, with younger candidates preferred over older candidates. When younger candidates were selected there was a significant association with candidate type, $\chi^2(1) = 8.68, p = .003, \phi_c = .23$, such that younger performance candidates were preferred over younger potential candidates. The overall association with candidate type was significant, $\chi^2(1) = 5.84, p = .016, \phi_c = .19$, with performance candidates preferred over potential candidates. When performance candidates were selected, there was a significant association with candidate age, $\chi^2(1) = 36.57, p < .001, \phi_c = .47$, such that younger performance candidates were preferred over older performance candidates.

Model 1 revealed a significant negative relationship between candidate age and point allocations and a significant positive relationship between candidate type and allocations, such that younger (vs. older) and performance (vs. potential) candidates were preferred respectively. Model 2 qualified this with a significant negative interaction effect, such that younger performance candidates were preferred over younger potential candidates, but there was no difference between older performance and older potential candidates. Model 2 was a significantly better fit than Model 1.

Mediation analyses.

In order to test Hypotheses 2, the data was restructured so that there was one row for each candidate evaluation, and therefore four rows per participant. Mediation analyses were run (using model 4 in PROCESS, 5000 bootstraps, Hayes, 2013).

Mediation analysis was run with candidate age (1 = younger; 2 = older) as the predictor, perceived competence as the mediator, and the continuous hiring measure as the outcome. Candidate age significantly predicted perceived competence ($b = -0.16$, $SE = 0.07$, $t = -2.39$, $p = .017$, 95% CI -0.29 , -0.03) which in turn significantly predicted willingness to hire ($b = 0.65$, $SE = 0.04$, $t = 15.86$, $p < .001$, 95% CI 0.57 , 0.73). Younger candidates were associated with higher willingness to hire partly through increased perceived competence ($b = -0.10$, $SE = 0.04$, 95% CI -0.19 , -0.02). The direct ($b = -0.32$, $SE = 0.07$, $t = -4.55$, $p < .001$, 95% CI -0.45 , -0.18) and total effects ($b = -0.42$, $SE = 0.08$, $t = -5.15$, $p < .001$, 95% CI -0.58 , -0.26) were also significant.

Mediation analysis was run with candidate age (1 = younger; 2 = older) as the predictor, perceived warmth as the mediator, and the continuous hiring measure as the outcome. Candidate age significantly predicted perceived warmth ($b = -0.44$, $SE = 0.07$, $t = -6.71$, $p < .001$, 95% CI -0.57 , -0.31) which in turn significantly predicted willingness to hire

($b = 0.41$, $SE = 0.05$, $t = 8.90$, $p < .001$, 95% CI 0.32, 0.50). Younger candidates were associated with higher willingness to hire partly through increased perceived warmth ($b = -0.18$, $SE = 0.04$, 95% CI -0.25, -0.11). The direct ($b = -0.24$, $SE = 0.08$, $t = -3.02$, $p = .003$, 95% CI -0.40, -0.08) and total effects ($b = -0.42$, $SE = 0.08$, $t = -5.15$, $p < .001$, 95% CI -0.58, -0.26) were also significant.

Exploratory mediation analyses were also run to test whether the relationship between candidate type and perceived performance in the form of point allocations was mediated by perceived candidate age. Analysis was initially run with candidate type (1 = potential; 2 = performance) as the predictor, perceived candidate age as the mediator, and point allocations for who was the best past performer. Candidate type significantly predicted perceived age ($b = 0.50$, $SE = 0.14$, $t = 3.60$, $p < .001$, 95% CI 0.23, 0.78) which in turn significantly perceived past performance ($b = 1.86$, $SE = 0.33$, $t = 5.56$, $p < .001$, 95% CI 1.20, 2.51). Performance candidates were associated with higher past performance partly because they were perceived to be older than other candidates ($b = 0.93$, $SE = 0.33$, 95% CI 0.35, 1.65). The direct ($b = 13.17$, $SE = 1.21$, $t = 10.88$, $p > .001$, 95% CI 10.79, 15.55) and total effects ($b = 14.10$, $SE = 1.23$, $t = 11.51$, $p < .001$, 95% CI 11.70, 16.51) were also significant.

Analysis was then run with candidate type (1 = potential; 2 = performance) as the predictor, perceived candidate age as the mediator, and point allocations for who would be the best future performer. Candidate type significantly predicted perceived age ($b = 0.50$, $SE = 0.14$, $t = 3.60$, $p < .001$, 95% CI 0.23, 0.78) which in turn significantly perceived future performance ($b = -3.43$, $SE = 0.31$, $t = -10.91$, $p < .001$, 95% CI -4.05, -2.81). Potential candidates were associated with higher future performance partly because they were perceived to be younger than other candidates ($b = -1.72$, $SE = 0.51$, 95% CI -2.73, -0.75). The direct ($b = -3.59$, $SE = 1.14$, $t = -3.15$, $p = .002$, 95% CI -5.83, -1.36) and total effects ($b = -5.32$, $SE = 1.23$, $t = -4.34$, $p < .001$, 95% CI -7.73, -2.91) were also significant.

Table 4.4

Study 5: Correlations Between Scales

Scale	A	M (SD)	2	3
1. Competence	.91	5.02 (0.66)	.59 ***	.48 ***
2. Warmth	.92	4.50 (0.64)		.29 ***
3. Willingness to hire	.90	5.24 (0.76)		

Notes. *** $p < .001$ (2-tailed)

Table 4.5

Study 5: Means and Standard Deviations for Each Scale in Each Condition

Scale	Younger candidates			Older Candidates			Total	
	Potential	Performance	Total	Potential	Performance	Total	Potential	Performance
Competence	5.00 (0.84)	5.20 (0.87)	5.10 (0.73)	4.86 (0.81)	5.02 (0.87)	4.94 (0.74)	4.93 (0.70)	5.11 (0.77)
Warmth	4.70 (0.82)	4.73 (0.82)	4.72 (0.74)	4.27 (0.87)	4.29 (0.86)	4.28 (0.77)	4.48 (0.68)	4.51 (0.71)
Willingness to hire	5.39 (0.94)	5.50 (1.00)	5.45 (0.81)	5.03 (1.12)	5.03 (1.12)	5.03 (0.94)	5.21 (0.87)	5.27 (0.90)

Note. Standard deviations in parentheses.

Table 4.6

Study 5: Frequencies of Candidate Selection in Choice Questions

Scale	Younger candidates			Older Candidates			Total	
	Potential	Performance	Total	Potential	Performance	Total	Potential	Performance
Best leader	12.65	38.55	51.20	19.88	28.92	48.80	32.53	67.47
Leadership potential	60.84	22.29	83.13	13.25	3.61	16.87	74.10	25.90
Past performance	3.01	30.12	33.13	14.46	52.41	66.87	17.47	82.53
Future performance	53.01	36.75	89.76	5.42	4.82	10.24	58.43	41.57
Hire	27.71	46.39	74.10	12.05	13.86	25.90	39.76	60.24
Employ	30.72	44.58	75.30	12.05	12.65	24.70	42.77	57.23
Best appointment	27.71	46.39	74.10	13.25	12.65	25.90	40.96	59.04

Note. Frequencies in percentages. $N = 166$.

Table 4.7

Study 5: Mean Point Allocations

Scale	Younger candidates			Older Candidates			Total	
	Potential	Performance	Total	Potential	Performance	Total	Potential	Performance
Best leader	20.61 (12.76)	30.88 (18.37)	25.74 (9.31)	21.70 (15.60)	26.81 (18.98)	24.26 (9.31)	21.16 (10.88)	28.84 (10.88)
Leadership potential	36.73 (18.56)	24.16 (17.88)	30.45 (8.20)	23.70 (12.77)	15.40 (12.01)	19.55 (8.20)	30.22 (10.80)	19.78 (10.80)
Past performance	14.92 (9.79)	27.44 (14.01)	21.18 (8.39)	20.98 (16.00)	36.66 (19.78)	28.82 (8.39)	17.95 (10.22)	32.05 (10.22)
Future performance	34.19 (16.48)	29.47 (17.41)	31.83 (7.76)	21.13 (11.39)	15.21 (10.40)	18.17 (7.76)	27.66 (9.62)	22.34 (9.62)
Hire	26.02 (18.05)	34.96 (20.80)	30.49 (9.71)	19.54 (15.09)	19.47 (15.63)	19.51 (9.71)	22.78 (11.19)	27.22 (11.19)

Scale	Younger candidates			Older Candidates			Total	
	Potential	Performance	Total	Potential	Performance	Total	Potential	Performance
Employ	26.62	33.82	30.22	19.12	20.44	19.78	22.87	27.13
	(17.53)	(18.85)	(9.31)	(14.80)	(14.17)	(9.31)	(10.61)	(10.61)
Best appointment	26.01	33.59	29.80	19.38	21.02	20.20	22.70	27.30
	(18.16)	(20.40)	(10.05)	(15.69)	(15.99)	(10.05)	(11.27)	(11.27)

Note. Standard deviations in parentheses.

Table 4.8

Study 5: Multilevel Regression Models Predicting Point Allocations

Outcome	Fixed effects	Model 1	Model 2
		<i>B (SE)</i>	<i>B (SE)</i>
Best leader	Intercept	15.70 (2.82) ***	4.07 (6.45)
	Candidate age	-1.49 (1.29)	6.27 (4.08)
	Candidate type	7.69 (1.29) ***	15.44 (4.08) ***
	Candidate age x candidate type		-5.17 (2.58) *
AIC		5614.53	5606.79
Leadership potential	Intercept	57.00 (2.64) ***	66.62 (6.05) ***
	Candidate age	-10.90 (1.21) ***	-17.31 (3.83) ***
	Candidate type	-10.43 (1.21) ***	-16.85 (3.82) ***
	Candidate age x candidate type		4.28 (2.42) #
AIC		5529.41	5522.69
Past performance	Intercept	-7.62 (2.59) **	-0.52 (5.95)
	Candidate age	7.64 (1.19) ***	2.91 (3.76)
	Candidate type	14.10 (1.19) ***	9.37 (3.76) *
	Candidate age x candidate type		3.16 (2.38)
AIC		5505.56	5500.23
Future performance	Intercept	53.46 (2.41) ***	50.75 (5.53) ***
	Candidate age	-13.66 (1.11) ***	-11.85 (3.50) **

Outcome	Fixed effects	Model 1	Model 2
		<i>B (SE)</i>	<i>B (SE)</i>
	Candidate type	-5.32 (1.11) ***	-3.51 (3.50)
	Candidate age x candidate type		-1.20 (2.21)
AIC		5408.21	5404.48
Hire	Intercept	34.83 (2.99) ***	14.55 (6.81) *
	Candidate age	-10.99 (1.37) ***	2.53 (4.30)
	Candidate type	4.43 (1.37) **	17.95 (4.30) ***
	Candidate age x candidate type		-9.01 (2.72) **
AIC		5693.07	5678.35
Employ	Intercept	34.27 (2.79) ***	21.04 (6.38) **
	Candidate age	-10.44 (1.28) ***	-1.62 (4.04)
	Candidate type	4.26 (1.28) **	13.08 (4.04) **
	Candidate age x candidate type		-5.88 (2.55) *
AIC		5602.91	5593.91
Best appointment	Intercept	32.49 (3.00) ***	19.13 (6.85) **
	Candidate age	-9.60 (1.37) ***	-0.69 (4.34)
	Candidate type	4.61 (1.37) **	13.52 (4.34) **
	Candidate age x candidate type		-5.94 (2.74) *
AIC		5696.32	5687.78

Note: Candidate age: 1 = younger, 2 = older. Candidate type: 1 = potential; 2 = performance. For model 1, $df = 661$; for model 2, $df = 660$. Significance: # $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

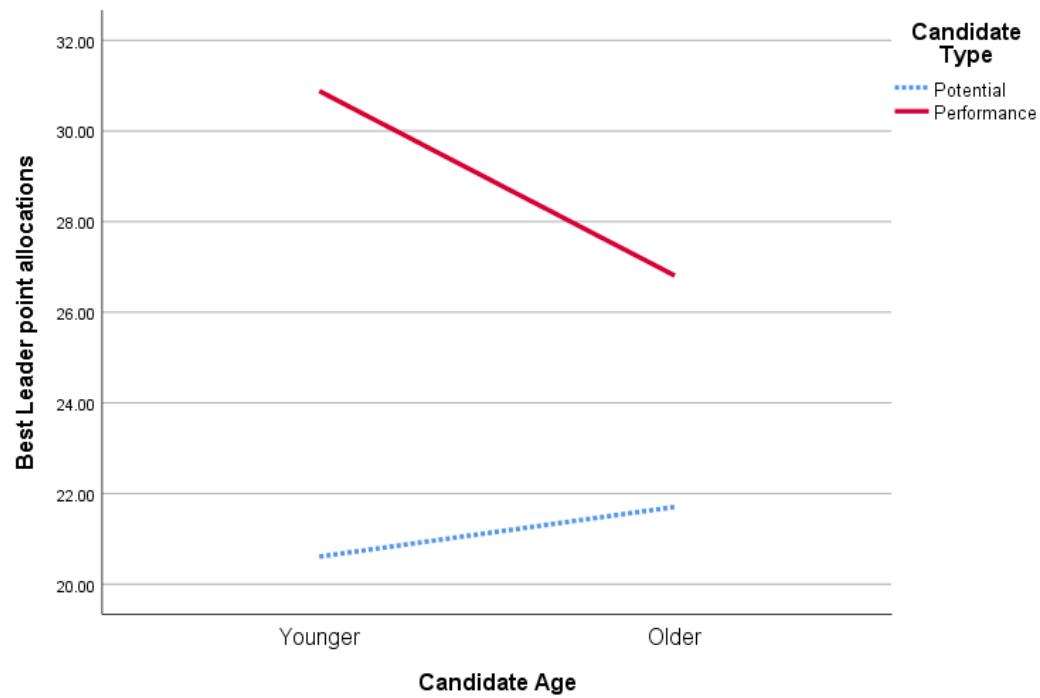


Figure 4.1. Mean point allocations for which candidate was perceived as the best leader in Study 5.

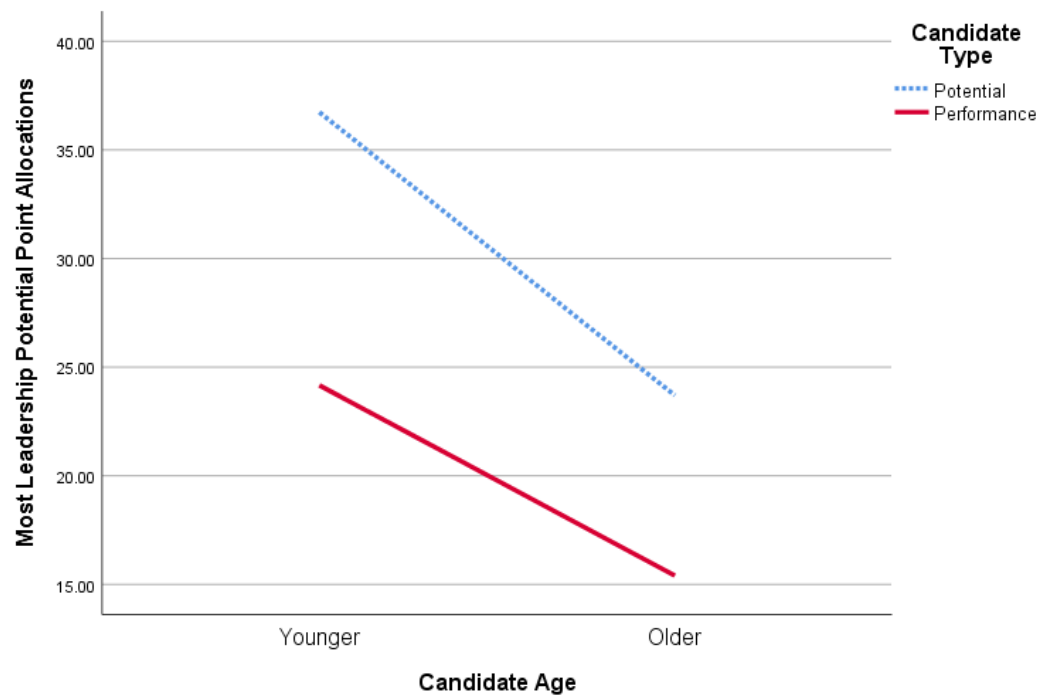


Figure 4.2. Mean point allocations for which candidate was perceived as having the most leadership potential in Study 5.

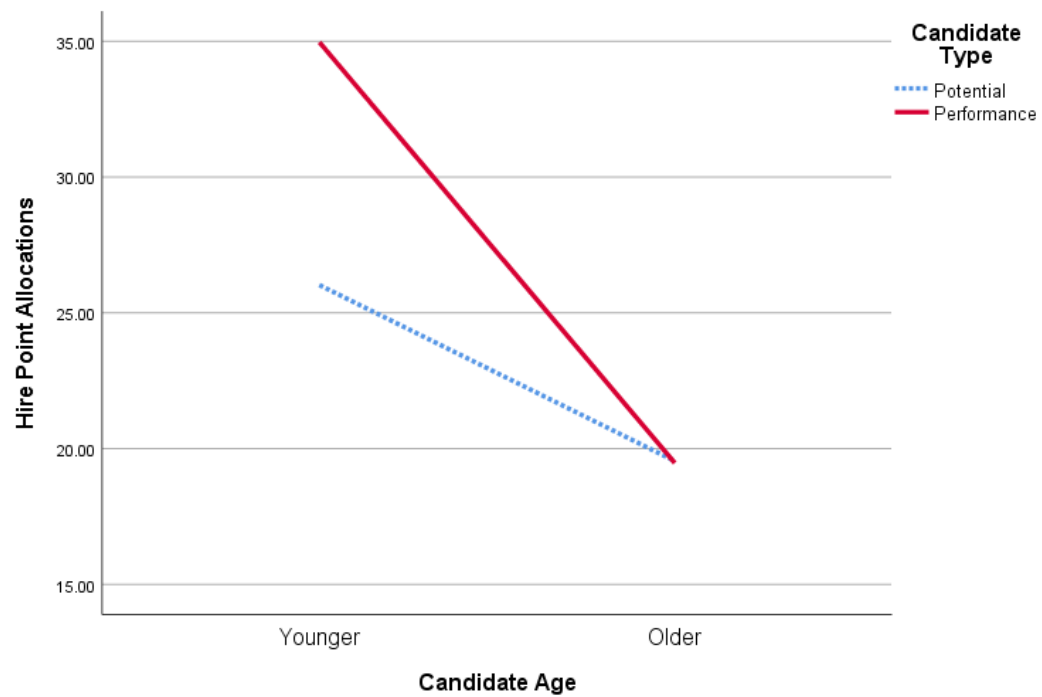


Figure 4.3. Mean point allocations for which candidate participants would hire in Study 5.

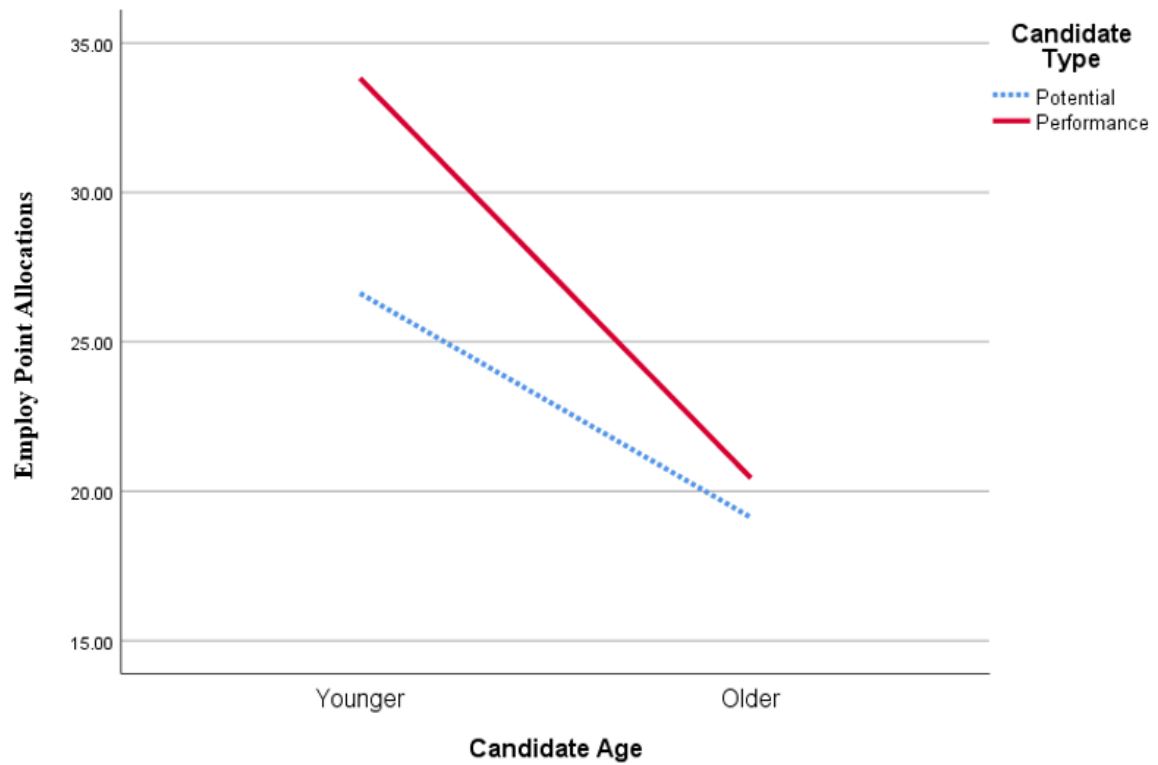


Figure 4.4. Mean point allocations for which candidate participants would employ in Study 5.

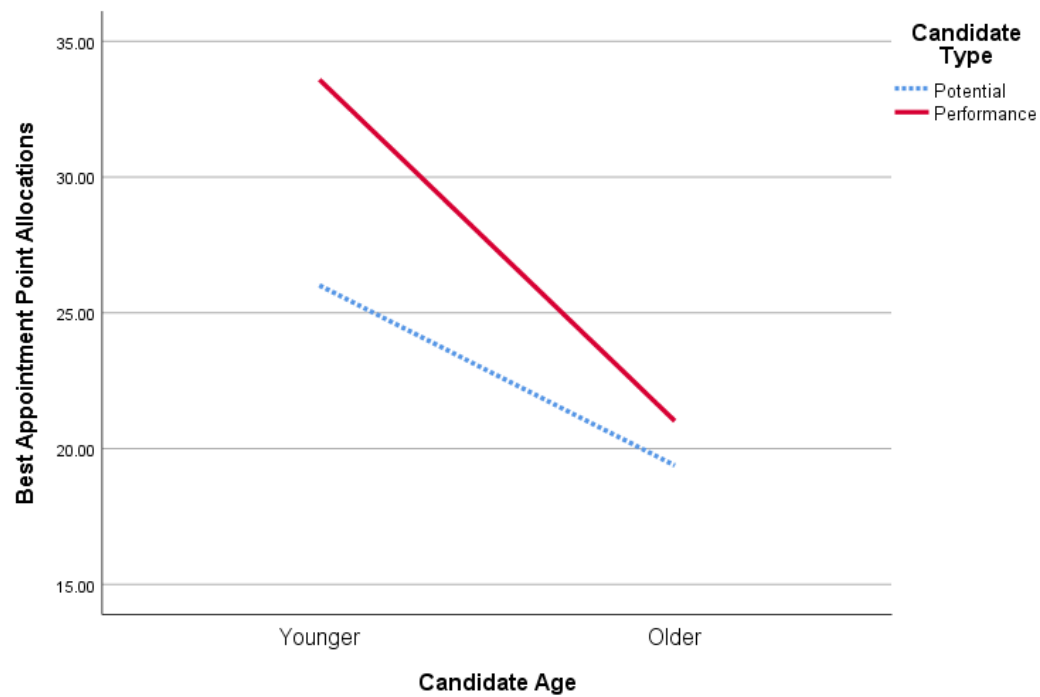


Figure 4.5. Mean point allocations for which candidate participants perceived as the best appointment in Study 5.

4.3.4 Discussion.

The results of Study 5 supported Hypothesis 1 as younger candidates were preferred on measures of leadership potential, future performance, and all hiring measures. Moreover, there was a stronger average association between candidate age and evaluations than candidate type and evaluations ($\phi_c = .48$ and $\phi_c = .32$ respectively). This provides further support for a preference for younger over older candidates in recruitment (Abrams et al., 2016) which translates into a leadership context. Manipulations and results also provide evidence that facial features can predict perceived leadership ability (Korenman et al., 2019) and elicit age-based stereotypes (Brewer et al., 2019; Ebner, 2008). Demographic information on candidates appeared to have a greater impact on candidate evaluations than job-relevant information on leadership potential and performance.

Hypothesis 2 was partly supported as younger candidates were more hireable because they were viewed as more competent. This demonstrates that underlying age stereotypes affect perceptions and decision-making, in line with the BIAS map (Cuddy et al., 2007). Moreover, younger candidates were also viewed as warmer than older candidates, which also partly mediated willingness to hire. This would appear to not support the stereotype content model which positions older people as higher in warmth than younger people (Fiske et al., 2002). However, older leaders may represent a subgroup of older people, a young-old group compared to an old-old 'elderly' group more readily associated with high-warmth stereotypes (Fiske et al., 2002). It could also constitute a halo effect in which people demonstrating one positive characteristic are erroneously assumed to hold other positive attributes (Balzer & Sulsky, 1992). A general pro-youth bias may mean that younger candidates are attributed greater competence *and* warmth than older candidates.

Hypothesis 3 was partly supported and there was a preference for potential over performance on measures of future performance, in line with previous findings (Tormala et

al., 2012; Sun et al., 2015; Player et al., 2019). Exploratory analysis also revealed that potential candidates were preferred on measures of future performance partly because they were believed to be younger than other candidates. As found by Sun et al., (2015), candidates with leadership potential were preferred in part because they were believed to be younger. However, the preference for potential did not translate into a hiring advantage and there was a preference for performance over potential on all choice hiring measures.

There was partial support for Hypothesis 4. Where there was a preference for potential, younger candidates with leadership potential tended to be preferred over older candidates with leadership potential. Furthermore, the preference for potential was partly driven by the candidate being perceived as younger than other candidates. However, on hiring choices there was a consistent preference for the younger performance candidate. Analysis of point allocations also revealed greater polarisation between younger candidates than older candidates, such that younger performance candidates were consistently preferred over younger potential candidates. The association between youth and leadership potential may mean that leadership potential is both expected and discounted when evaluating younger candidates, thereby advantaging younger candidates with leadership proven leadership experience. This performance advantage did not benefit older candidates, who were viewed as less hireable than younger candidates whether they possessed potential or performance.

The study does present limitations. Firstly, it did not control for candidate familiarity and attractiveness. Older faces are viewed as less attractive than younger faces (Ebner, 2008), and facial familiarity and attractiveness can have significant downstream halo effects on leader evaluations (E.g., Verhulst et al., 2010). Therefore, the results on candidate age may be confounded by familiarity and attractiveness. Secondly, the studies explored recruitment in within-participants designs and found that a pro-youth bias and preference for potential tend to emerge on objective rather than subjective measures. Exploring the effects of candidate

age and candidate type in a between-participants paradigm would allow us to test the extent to which the same biases emerge in a recruitment context involving less direct comparison between candidates.

4.4 Study 6¹³

To test Hypotheses 1, 2, 3 and 4, Study 6 replicated Study 5 in a between-participants paradigm with a more age-diverse sample. There is evidence that age-stereotyped evaluations are more likely to emerge in contexts involving candidate comparisons (Posthuma & Campion, 2009), such as within-participants designs, than situations without direct comparison, such as between-participants designs. Therefore, replication with a between-participants design will test the extent to which the biases identified in Studies 4 and 5 emerge in a context without explicit candidate comparison. Previous studies have also found evidence of an ingroup bias based on age in younger people's evaluations of others (Finkelstein et al., 1995). As the participants in Studies 4 and 5 had an average age (22.12 and 34.59 respectively) more aligned with the younger candidate manipulations, Study 6 aimed for a more age-diverse sample to mitigate the effects of any ingroup bias based on age.

4.4.1 Method.

Participants and design.

Power analysis (G*Power: Faul, Erdfelder, Lang, & Buchner, 2007) determined that 128 participants were required for an 80% chance of detecting a medium effect ($F = .25$). Participants were recruited via Prolific and were UK nationals in full- or part-time employment. They were recruited in two age groups: younger aged 20-30 ($n = 65$; $M_{age}=25.89$, $SD=3.03$) and older aged 50-65 ($n = 65$; $M_{age}=54.77$, $SD=4.08$). These were

¹³ Two alternative versions of this study were also run which found non-significant effects of candidate age and candidate type. Results are not included here but are included in the meta-analysis in Chapter 6. Across the three studies, there was testing for moderation effects of uncertainty, prototypicality, and prescriptive age stereotype endorsement. Moderation analyses were non-significant.

combined into one dataset for analysis. Seven participants were removed for failing attention checks, leaving 130 participants included in analysis (61 female, 69 male; $M_{age} = 40.33$, $SD = 14.93$). Participants took an average of 400.28 seconds ($SD = 300.48$) to complete the study and were paid £0.84 for taking part. The study employed a 2 (candidate age: younger vs. older) x 2 (candidate type: leadership potential vs. leadership performance) between-participants experimental design.

Procedure and materials.

Participants were invited to take part in an online Qualtrics to evaluate leadership candidates. After reading information on the study and giving informed consent to take part, participants were randomly presented with one of four leadership candidates. Candidate profiles were presented in the form of fictitious LinkedIn profiles as used in Study 5. After viewing each candidate profile, participants completed manipulation checks, dependent measures and demographic information before being presented with a full debrief.

Measures.¹⁴

Age stereotype measures.

The same measure was used as in Study 5.

Willingness to hire.

The same continuous measures were used as in Study 5.

4.4.2 Results.

Scales were created based on the mean item scores each measure. All scales in each condition had a Cronbach's alpha of $\geq .85$, and so were considered to have good internal

¹⁴ Perceived leadership potential, performance, age group, comparative age, age identification and social distance were also measured. Details of measures and analysis are available from the researcher.

reliability (Nunnally, 1978) (see Table 4.9 for alphas and correlations). Analysis of main and interaction effects employed a 2 x 2 ANOVA using a Bonferroni correction (see Table 4.10 for means and standard deviations)¹⁵.

Dependent measures.

A multivariate ANOVA was run with candidate age and candidate type as fixed factors. Using Pillai's trace, there was a significant main effect of candidate age, $F(3,124) = 3.60, p = .02, \eta_p^2 = .08$. The effects of candidate type were non-significant, $F(3,124) = 1.91, p = .13, \eta_p^2 = .04$. The interaction between candidate age and candidate type was non-significant, $F(3,124) = 1.75, p = .16, \eta_p^2 = .04$.¹⁶

Age stereotype measures.

Separate univariate ANOVAs on the age stereotype measures revealed a significant effect of candidate age on perceived competence, $F(1,126) = 4.67, p = .033, \eta_p^2 = .04$, with younger candidates viewed as more competent than older candidates. There was also a significant effect of candidate age on perceived warmth, $F(1,126) = 10.81, p = .001, \eta_p^2 = .08$, such that younger candidates were viewed as warmer than older candidates.

Willingness to hire.

Separate univariate ANOVAs on willingness to hire revealed a significant effect of candidate age, $F(1,126) = 4.64, p = .03, \eta_p^2 = .04$, such that younger candidates were viewed as more hireable than older candidates.

¹⁵ Analysis was initially run with participant age group (younger vs. older) as a fixed factor to test for an ingroup bias based on age. The interaction between candidate age and age-group was non-significant, $F(3,120) = 0.88, p = .46, \eta_p^2 = .02$ and therefore analyses were re-run and are reported here without age group. Data was not normally distributed, but the results of ANOVAs are still robust if there are moderate deviations from normality (Glass et al. 1972, Harwell et al. 1992, Lix et al. 1996).

¹⁶ Analysis was also run with significant outliers removed. The effect of candidate age became non-significant on competence ($F(1,117) = 2.06, p = .15, \eta_p^2 = .02$) and willingness to hire ($F(1,117) = 1.55, p = .22, \eta_p^2 = .01$).

Mediation analyses.

Separate mediation analyses were also run with candidate age (1 = younger; 2 = older) as the predictor, perceived competence and perceived warmth as the mediators, and willingness to hire as the outcome (using model 4 in PROCESS, 5000 bootstraps, Hayes, 2013). When perceived competence was the mediator, candidate age was a significant predictor of perceived competence ($b = -0.30$, $SE = 0.14$, $t = -2.12$, $p = .04$, 95% CI -0.57 , -0.02) and perceived competence was a significant predictor of willingness to hire ($b = 0.96$, $SE = 0.07$, $t = 14.27$, $p < .001$, 95% CI 0.83 , 1.09). Younger candidates were perceived to be more hireable partly through increased perceived competence ($b = -0.28$, $SE = 0.14$, 95% CI -0.58 , -0.02). The direct effect was non-significant, $b = -0.08$, $SE = 0.11$, $t = -0.78$, $p = .44$, 95% CI -0.30 , 0.13 , whereas the total effect was significant, $b = -0.37$, $SE = 0.17$, $t = -2.16$, $p = .03$, 95% CI -0.71 , -0.03 .

When perceived warmth was the mediator, candidate age was a significant predictor of perceived warmth ($b = -0.53$, $SE = 0.16$, $t = -3.37$, $p = .001$, 95% CI -0.84 , -0.22) and perceived warmth was a significant predictor of willingness to hire ($b = 0.65$, $SE = 0.08$, $t = 8.34$, $p < .001$, 95% CI 0.50 , 0.80). Younger candidates were perceived to be more hireable partly through increased perceived warmth ($b = -0.34$, $SE = 0.12$, 95% CI -0.59 , -0.13). The direct effect was non-significant, $b = -0.03$, $SE = 0.14$, $t = -0.18$, $p = .86$, 95% CI -0.31 , 0.26 , whereas the total effect was significant, $b = -0.37$, $SE = 0.17$, $t = -2.16$, $p = .03$, 95% CI -0.71 , -0.03 .

Table 4.9

Study 6: Correlations Between Scales

Scale	α	M (SD)	2	3
1. Competence	.85	4.89 (0.81)	.67 ***	.79 ***
2. Warmth	.94	4.34 (0.93)		.61 ***
3. Willingness to hire	.94	5.18 (0.99)		

Notes. *** $p < .001$ (2-tailed).

Table 4.10

Study 6: Means and Standard Deviations for Each Scale in Each Condition

Scale	Younger candidates			Older Candidates			Total	
	Potential	Performance	Total	Potential	Performance	Total	Potential	Performance
Competence	5.05 (0.76)	5.02 (0.91)	5.03 (0.83)	4.60 (0.65)	4.86 (0.84)	4.74 (0.76)	4.84 (0.74)	4.93 (0.87)
Warmth	4.66 (0.75)	4.54 (1.07)	4.60 (0.91)	4.18 (0.86)	3.98 (0.90)	4.07 (0.88)	4.44 (0.83)	4.25 (1.02)
Willingness to hire	5.27 (0.89)	5.47 (0.88)	5.36 (0.88)	4.93 (0.92)	5.05 (1.18)	4.99 (1.06)	5.11 (0.91)	5.25 (1.06)

Note. Standard deviations in parentheses.

4.4.3 Discussion.

The results of Study 6 supported Hypothesis 1 as there was an effect of candidate age such that younger candidates were viewed as more hireable than older candidates. In support of Hypothesis 2, the pro-youth bias in hiring attitudes was partly driven by younger age stereotypes, such that younger candidates were viewed as more competent, which predicted higher willingness to hire. The results of Study 6 echo those of Study 5 in finding a pro-youth bias in hiring attitudes driven by age-stereotyped perceptions, and a similar pro-youth bias in perceived warmth. The effects of candidate age emerge with a more age-diverse sample and a between-participants paradigm. Although age-biased evaluations tend to emerge more on objective measures (Posthuma & Campion, 2009), there is still a significant effect of age-stereotyping on subjective measures.

The study offers no support for Hypothesis 3 and 4 as there were no significant effects of candidate type. This is consistent with the results of Studies 4 and 5 in finding that the effects of candidate type were less likely to emerge on continuous measures. Any effects of candidate type may be dependent on social comparison and therefore less likely to emerge in a between-participants paradigm with more subjective continuous measures. Furthermore, a preference for potential may be restricted to explicit measures on future performance and so may not have been apparent in this study as this was not tested.

This study does present some limitations. Firstly, it did not include measures of past and future performance. This meant that it was not possible to test for the pattern of results found in Studies 4 and 5 in which there was a preference for performance in evaluations of past performance, and a preference for potential in evaluations of future performance. Secondly, these results were sensitive to the presence of outliers in the data and the effects of candidate age on competence and willingness to hire became non-significant when outliers

were removed. Further data would allow better estimation the influence of candidate age on subjective leadership evaluations.

4.5 General Discussion

Across three experimental studies four hypotheses were investigated. Firstly, there was a hypothesis that younger candidates would be preferred over older candidates. This was supported and although older candidates were viewed as the best past performers, younger candidates were preferred on measures of leadership potential, future performance, and hirability. This pro-youth bias was consistent across all three studies, in within- and between-participants paradigms, on subjective and objective measures, and with explicit and implicit age cues. Candidate age tended to have a stronger association with evaluations than candidate type, suggesting that age has more impact on candidate evaluations than job-relevant information on ability. These results have theoretical implications in finding that the predominantly negative perceptions of older workers (Posthuma & Campion, 2009) and the pro-youth bias in hiring attitudes (Abrams et al., 2016) extend into a leadership context, despite older leaders being viewed as more prototypical than younger leaders (Buengeler et al., 2016). They also have an applied value in highlighting the negative effects of unconscious age biases on hiring attitudes that could hinder optimal candidate selection for organisations and employment opportunities for older workers.

There was also support for Hypothesis 2, that a pro-youth bias would be mediated by age stereotype embodiment such that younger candidates would be preferred because they were perceived as more competent than older candidates. The pro-youth bias on hiring measures was partly mediated by higher perceived competence and warmth. In line with age stereotype expectations (E.g., Fiske et al., 1999), younger candidates were perceived as more competent. There was also an unexpected pro-youth bias on perceived warmth, an attribute more associated with older people (Fiske et al., 1999). There are three possible reasons for this unexpected finding. Firstly, it could represent a halo effect in which people demonstrating one positive characteristic are erroneously assumed to hold other positive

attributes (Balzer & Sulsky, 1992). Secondly, it could reflect a curvilinear relationship between competence and warmth (Imhoff & Koch, 2017), such that the greater competence attributed to younger candidates actually reflects an average competence, which is then positively related to warmth. Thirdly, North and Fiske (2013) argue that younger raters can give older targets low-warmth assessments in situations where the older person controls, and does not cede, resources. As the mean participant age in Studies 5 and 6 was younger than the older candidate age, the high-warmth attribution to younger candidates may represent a backlash against older candidates for pursuing a leadership position. Overall, these results have theoretical implications in suggesting a better fit between the underlying attributes of younger candidates and leadership that extends role congruity theory (Eagly & Karau, 2002) into an age context. There are also applied implications in identifying negative age stereotypes as a barrier to older workers advancing, and to the UK government meeting its ambition to increase the employment rate for older people (Government Office for Science, 2016).

There was partial support for Hypothesis 3 that candidates with leadership potential would be preferred over candidates with leadership performance. This was restricted to evaluations of perceived potential and future performance, echoing but refining the results of Tormala et al. (2012; Study 3) in which evaluations of future performance were aggregated. Although candidates with leadership potential were viewed as better future performers than those with leadership performance, this did not translate into an advantage in hiring attitudes. In fact, candidates with proven leadership performance tended to be preferred on hiring measures. When deciding who to hire, concrete past performance and experience may be more attractive than the uncertainty of the promise of future performance. These results have theoretical implications in untangling the measures of future performance and hiring previously aggregated by Tormala et al. (2012) and demonstrating that the preference for

potential is restricted to evaluations of future performance, a qualification suggested in previous research (Player et al., 2019). This also has an applied value in demonstrating to workers identified as high-potentials the importance of gaining leadership experience if their potential is to be translated into a hiring advantage.

Hypothesis 4 predicted that the preference for potential would be accentuated when the candidate was younger and attenuated when they were older. This hypothesis was supported as the preference for potential tended to advantage younger potential candidates over older potential candidates. When younger and older candidates demonstrate identical markers of leadership potential, younger candidates are perceived as having higher potential and future performance. Furthermore, Study 5 found that a preference for potential on measures of future performance was partly driven by a pro-youth bias, such that candidates with leadership potential were preferred because they were believed to be younger.

Unexpectedly, it is the counter-stereotypical association of youth and proven performance that proved an advantage in hiring attitudes. The association between youth and leadership potential found in Chapter 3 may mean that leadership potential is both expected and discounted in hiring decisions, such that younger performance candidates are advantaged through the unexpected association of a high-competence younger worker stereotype with proven leadership experience and performance. The same counter-stereotype advantage did not benefit older candidates and older potential candidates tended to be the least favoured candidate on hiring measures. Although candidates with leadership performance were viewed as having higher past performance partly *because* they were perceived as older, they were preferred on hiring measures *despite* being perceived as older. This has theoretical implications in connecting theory on age stereotypes (North & Fiske, 2013) and the preference for potential (Tormala et al., 2012), offering evidence for a backlash against older targets who violate prescriptive age stereotypes that position potential as a property of youth

(North & Fiske, 2013). There are also applied implications as results suggest that organisations need to control for age bias when designing high-potential leadership programmes.

Beyond the hypotheses, the studies identify a possible moderator of the effects of candidate age and candidate type. As effects tended to emerge on objective rather than subjective measures, the extent to which a pro-youth bias or preference for potential may impact evaluations may depend on the measures employed in the recruitment process. This reflects previous research that has found that subjective measures can mask a preference for potential (Player et al., 2015) and stereotyped decision-making (Biernat & Manis, 1994; Posthuma & Campion, 2009). This has theoretical implications in highlighting a boundary condition for the preference for leadership potential, and an applied value in the design of assessment processes that unconscious bias.

4.5.1 Limitations and future directions.

These studies offer limitations that could be addressed in future research. Firstly, Studies 5 and 6 used candidate photographs to manipulate age, but familiarity or attractiveness were not controlled for. As age influences attractiveness (Ebner, 2008), and both familiarity and attractiveness can affect leadership evaluations (Verhulst et al., 2010), the effects of candidate age may be confounded by familiarity and attractiveness. Future research could similarly manipulate candidate age with LinkedIn profile photographs but controlling for familiarity and attractiveness, to test the robustness of these results. As LinkedIn profiles with facial photographs are a widely used tool in recruitment (Ollington et al., 2013), this is an ecologically valid manipulation and therefore its results could have valuable practical implications in highlighting their potential to elicit age bias.

Secondly, the study design employed online panel data in a theoretical recruitment scenario and measured willingness to hire rather than actual hiring behaviours. Therefore,

findings may not fully reflect decision-making within a real-world recruitment situation. This was mitigated by recruiting participants in employment who would be more likely to have experience of real-world recruitment situations (Studies 5 and 6). Furthermore, employing online panel data has been found to be equally suitable for exploring applied psychology research areas as employing conventional data (Walter et al., 2019). There is also evidence that the behaviours elicited in hypothetical experimental contexts accurately reflect real-world behaviours (Ganong & Coleman, 2005, 2006), whereas the Theory of Reasoned Action argues that intentions do predict behaviours (Fishbein & Ajzen, 1975). However, recent research has suggested that hiring intentions may not translate into actual hiring behaviour (Araten-Bergman, 2016). Therefore, future field research that can test the impact of candidate type and candidate age on actual hiring behaviours in a leadership recruitment context, would allow us to more confidently translate these findings into a real-world context.

Thirdly, the context employed in the three studies was the recruitment of a candidate into a general leadership position. Recruitment can be viewed as a candidate-job matching process and different job roles have been found to have different ideal ages (Cleveland et al., 1988; Perry & Finkelstein, 1999; Posthuma & Campion, 2009). Furthermore, younger-looking leaders are preferred during times of change and older leaders preferred in a stable context (Spisak et al., 2014). Therefore, it is reasonable to assume that the results could differ in the presence of more contextual information on the organisation and that the relationship between candidate attributes and evaluations could be moderated by aspects of organisational context. This limits the generalisability of these results into a real-world setting and will be addressed in the next chapter.

4.6 Conclusion.

These studies find a pro-youth bias on evaluations of future performance (Studies 4 and 5) and willingness to hire (Studies 4, 5 and 6), suggesting that a general pro-youth bias in

recruitment (Abrams et al., 2016) translates into a leadership context. There is evidence for role congruity theory (Eagly & Karau, 2002) in an age context, as the pro-youth bias in leadership recruitment was partly driven by age stereotyped perceptions of younger candidates as more competent than older candidates (Studies 5 and 6). The results replicate existing research in finding evidence for a preference for leadership potential in candidate evaluations (Tormala et al., 2012; Sun et al., 2015; Player et al., 2019), and refine this in restricting the effect to evaluations of future performance rather than willingness to hire. On hiring measures, the counter-stereotypical association of youth and leadership performance proved to be an advantage (Study 5).

The preference for potential on measures of future performance was partly driven by perceived age, such that candidates with leadership potential were preferred because they were believed to be younger (Study 5), replicating Sun et al. (2015) in a UK context. Possessing leadership potential proved to be an advantage to younger but not older candidates. There were differential effects of stereotype incongruent targets, with younger performance candidates advantaged (Study 5), and older potential candidates disadvantaged (Studies 4 and 5), on hiring attitudes. Finally, there is evidence for a moderating role for assessment design, as effects of candidate age and candidate type tended to emerge on objective rather than subjective measures. Chapter 5 addresses one of the future research directions identified in Chapter 4 by exploring whether aspects of the organisational context can influence the relationship between candidate age, candidate type, and recruitment evaluations.

Chapter Five: Moderators of Leadership Evaluations

Chapter 5 reports the results of three studies, one correlational and two experimental, into the effects of candidate age (younger vs. older) and candidate type (potential vs. performance) on evaluations. The studies extend existing findings into the effects of candidate age on other-evaluations, to self-evaluations and find a pro-youth bias in self-rated leadership potential. Potential moderators of the pro-youth bias and preference for leadership potential are also explored, specifically target gender, age stereotype endorsement, age stereotype reinforcement, and organisational context. Exploratory intersectional analysis revealed differential effects of age stereotype endorsement for older women and older men. Endorsement of competence age stereotypes was associated with lower self-rated leadership potential for older women, whereas endorsement of warmth age stereotypes was associated with lower self-rated leadership potential for older men. Age stereotype endorsement also affected other-evaluations, such that higher endorsement of benevolent ageism and prescriptive succession stereotypes was associated with a discounting of older targets' past performance. No effects of age stereotype reinforcement are found, in the form of organisational culture cues on self-evaluations. However, analysis reveals that age stereotype reinforcement affects evaluations of the organisation, such that 'older' (vs. younger) organisational cultures are perceived as higher in job fit and job appeal by older participants. Furthermore, no evidence is found for organisational culture cues affecting the preference for leadership potential, and candidates with leadership potential were not preferred more in organisations emphasising succession to those emphasising achievement.

5.1 Introduction

In Chapter 4, evidence for a pro-youth bias was found in which younger leadership candidates are preferred in terms of future potential and willingness to hire over older candidates. Furthermore, there was a preference for leadership potential over leadership performance in evaluations of future performance. This did not translate into hiring attitudes and candidates with leadership performance were viewed as more hireable than candidates with leadership potential. Overall, there appears to be a tendency to value the counter-stereotypical association of youth with proven performance on hiring measures, but to disvalue a similarly counter-stereotypical association between age and leadership potential. As set out in the leadership potential congruity model in Chapter 2, contextual variables at a global, organisational, and individual level may moderate the impact of candidate age and candidate type on evaluations, such as national culture (Sun et al., 2015), organisational culture (Leslie et al., 2017), and evaluator demographics (Myung et al., 2011).

Classic leadership theories suggest contextual variables that affect leader preferences. Implicit leadership theory argues that leader evaluations are based on perceived fit between the target and internalised leadership prototypes (Hogan et al., 1994; Nicholas & Erakovich, 2012). Dominant leadership prototypes can be context-dependent, influenced by factors including gender role congruity (Ayman & Korabik, 2010), organisation type (Paris et al., 2009), organisational culture and values (Knights & Willmott, 1992), and the personality of the rater (Hunt et al., 1990). Transformational leadership has been argued as a universally endorsed leadership style (Bass, 1997), although aspects of transactional leadership can be valued over those of transformational leadership in some cultures (Fukushige & Spicer, 2007), and the leader behaviours underpinning transformational leadership can differ across cultures (Den Hartog et al., 1999). Furthermore, contingency theories foreground the importance of context in determining perceived leader-role fit (Ayman & Korabik, 2010).

Fiedler (1978) highlights the importance of contextual factors such as the leader-follower relationship, the nature of the task, and the power position of the leader on their ability to perform. Therefore, leadership selection can be seen as fitting leader attributes with the demands of the situation.

Situational variables that can moderate perceived fit can be conceptualised at three levels: a global level, organisational level, and at the level of the individual. Global variables include national culture (Den Hartog et al., 1999; Fukushige & Spicer, 2007) and levels of uncertainty (Waldman et al., 2001). Organisational factors include the type of organisation (Paris et al., 2009), organisational culture (Knights & Willmott, 1992), and the assessment process (Biernat & Manis, 1994; Posthuma & Campion, 2009). Individual variables include aspects of the rater such as target-evaluator gender congruity (Eagly et al., 1992) and the extent to which the rater endorses relevant stereotypes (Bonnot & Croizet, 2011), and target intersectional identities such as age and gender (Martin et al., 2019). Therefore, global, organisational and individual level variables are expected to moderate the effects of candidate age and candidate type on leader evaluations.

5.1.1 Age stereotypes and self-perceptions.

Discrimination against older people is underpinned by stereotypes of older people that are overwhelmingly negative and embedded in diverse social domains including healthcare, fashion, and the workplace (Swift & Steeden, 2020). In the workplace, older workers are viewed as less competent, less able to learn, and more resistant to change than younger workers, disadvantaging older workers in recruitment, retention, and performance appraisals (Posthuma & Campion, 2009). Age stereotypes have an impact on how older people are viewed by others, but also on older people's self-perceptions. Stereotype embodiment theory (Levy, 2009) argues that old-age stereotypes are internalised from an early age, becoming more self-relevant as people become older, leading to an unconscious embodiment of old-age

stereotypes in later life. In this way, ageing can be viewed as a social construct and age stereotypes as self-fulfilling, unconsciously impacting on older people's health, self-perceptions and behaviours in multiple domains, including the workplace (Kornadt & Rothermund, 2012; Levy, 2009).

The impact of age stereotypes on older people's self-perceptions depends on the extent to which older people subscribe to old age stereotypes. More positive views of ageing have a beneficial impact on health, predicting better physical health and health behaviours in later life (Wurm et al., 2007), as well as longer life and better functional health (Levy et al., 2002a; Levy et al., 2002b) and expected control over health in old age (Sargent-Cox, 2015). Longitudinal analysis of self-perceptions over a four-year period found that people's beliefs of what constituted a typical 'old' person predicted self-perceptions, and initially negative views of older people predicted a negative trend in later self-perceptions (Kornadt et al., 2015). Age stereotypes can set expectations in older people that define self-perceptions in later life (Levy, 2009).

Stereotype threat research has found that exposing stigmatised groups to negative stereotype cues can adversely affect performance, such as lower performance on aptitude tests by African-Americans (Steele & Aronson, 1995), and on maths tests by women (Shih et al., 1999). Older people are similarly affected by exposure to negative age stereotypes, predicting lower will to live (Levy et al., 2000), worse handwriting (Levy, 2000), and worse performance on cognitive and physical tasks (Levy & Leifheit-Limson, 2009). Within the workplace, stereotype threat has been negatively related to older workers' job satisfaction, organisational commitment and job involvement, and positively related to turnover intentions (National Seniors Productive Ageing Centre, 2011).

The process of stereotype embodiment (Levy, 2009), and the stereotype that older workers have less potential (Posthuma & Campion, 2009), leads us to expect that the negative relationship between age and perceived leadership potential in evaluations of others will be replicated in self-ratings. Expectations are that this will be due to endorsement of age stereotypes which reflect an internalisation of societal age stereotypes (Bonnot & Croizet, 2011). Stereotype threat would also lead us to expect that older workers' self-ratings will be moderated by external age stereotype reinforcement in the shape of organisational age stereotype cues.

Hypothesis 1: There will be a relationship between age and self-rated leadership potential, such that older people (vs. younger people) will have lower self-rated leadership potential.

Hypothesis 2: Endorsement of age stereotypes (competence and warmth) will mediate the relationship between age and self-rated leadership potential. The extent to which older people endorse stereotypes of older people as high in warmth and low in competence, will partly explain lower self-rated leadership potential in older employees.

Hypothesis 3: Age and stereotype reinforcement (organisational culture) will interact to predict self-rated leadership potential for older (but not younger) people, such that older people will perceive significantly less self-rated leadership potential in a younger stereotyped culture than in an older stereotyped culture.

5.1.2 Age stereotype endorsement and reinforcement.

Just as endorsement and reinforcement of age stereotypes can impact on self-perceptions (Levy, 2009), the same mechanisms are expected to affect evaluations of others. Ageist attitudes have been found to negatively affect recruitment attitudes and behaviours toward older people, such that more negative attitudes toward older people are related to

avoidance of hiring older people (Fasbender & Wang, 2017). Therefore, it is expected that ageist attitudes will affect the relationship between age and leadership evaluations such that a pro-youth bias in recruitment evaluations would be accentuated when ageist attitudes in the rater are higher, and attenuated when they are lower.

Organisational cues of age stereotypes similarly enhance age-stereotyped attitudes and behaviours. Negative stereotypes about older workers are more likely to be activated in workplaces where employee age is particularly salient (Perry & Finkelstein, 1999). Industries with a younger profile or a reliance on younger workers, such as finance, insurance, retail and technology, are associated with a higher prevalence of age stereotypes that disadvantage older workers in recruitment (Perry & Finkelstein, 1999; Posthuma & Campion, 2009). As there is an association between youth and potential (Hirschfeld & Thomas, 2011; Sun et al., 2015), organisations where potential or performance are salient may accentuate a preference for potential and youth or performance and older-age respectively. Furthermore, Poehlman & Newman (2014) found that the preference for potential was attenuated when there was a present temporal focus and performance was positioned in the past. Moreover, a focus on future potential may encourage more negative evaluations of older targets for perceived violation of prescriptive age stereotypes of succession. Older people are expected to pass on power to younger people and receive backlash if they violate this expectation (North & Fiske, 2013). Therefore, an organisational context that emphasises future potential (vs. past achievement) may accentuate a pro-youth bias and preference for leadership potential.

Hypothesis 4: The relationship between candidate age and recruitment evaluations will be moderated by ageist attitudes, such that a pro-youth bias will be accentuated when ageist attitudes are higher and attenuated when they are lower.

Hypothesis 5: The preference for potential will be moderated by organisation type, such that a preference for potential on measures of future performance will be accentuated in organisations emphasising future performance and attenuated in organisations emphasising past achievement.

Hypothesis 6: Endorsement of prescriptive age stereotypes of succession will moderate the relationship between candidate age, organisation type and candidate evaluations. Higher endorsement of succession stereotypes will be associated with more positive evaluations of younger candidates in organisations emphasising future performance.

5.1.3 Overview of studies.

Three studies were conducted to explore self-evaluations and moderators of the relationship between candidate age, candidate type, and target evaluations. Study 7 was a cross-sectional study exploring the impact of age stereotype endorsement on self-rated leadership potential. Study 8 was an experimental study testing the effect of age-stereotyped organisational culture on self-rated leadership potential. Finally, Study 9 was an experimental study testing whether ageist attitudes and organisational culture moderated the relationship between candidate age, candidate type and candidate evaluations. All studies were pre-registered with OSF (<https://osf.io/83rf2/>, <https://osf.io/j6rm5/>, and <https://osf.io/dcjyh> respectively)¹⁷.

5.2 Study 7

Study 7 tested Hypotheses 1 and 2, employing a cross-sectional survey to explore whether endorsement of age stereotypes moderated self-rated leadership potential.

¹⁷ Studies 7 and 8 are published within Tresh et al., 2019 as Studies 1 and 3 respectively. As second author, I worked with the lead author to conceive the research hypotheses and design, supported the data analysis and writing of the paper, and shaped the overall research.

5.2.1 Method.

Participants and Design.

Participants were recruited via the online crowdsourcing platform Prolific. Initially, 276 participants were recruited; 19 participants either failed the attention check, provided identifiable information or timed-out after 20 min so their data was not included in the analysis. The total number of participants included in analysis was 252, 128 male and 124 female¹⁸. Participants were recruited in one of two age categories: 126 participants were in the 18–30 category ($M = 25.54$, $SD = 3.16$) and 126 participants were in the age 50 and older category ($M = 55.80$, $SD = 4.98$)¹⁹. All participants were in full- or part-time employment in the UK. Participants received a payment of £0.50 and the average completion time was 354.77 s ($SD = 139.90$).

Study 7 adopted a correlational design. Relationships were measured between participant age, endorsement of competence and warmth (age) stereotypes and self-rated leadership potential.

Procedure.

Participants were invited to take part in an online survey on Qualtrics to understand self-perceptions. They were informed that data would be treated confidentially, would be anonymized for publication, and that participation was voluntary and could be withdrawn at any time. Email contact details for two of the researchers were also supplied, and participants gave their informed consent by clicking to take part in the study. Participants then completed

¹⁸ Two participants indicated “other gender”. Given the gender intergroup nature of the study and the lack of representation of non-binary categories, these two participants were not included in analyses.

¹⁹ Three participants fell outside of the range of the two age categories and were not included in the analysis reported below.

the measures as defined below. Participants were finally presented with a full debrief of the study and reminded of the researchers' contact details.

Measures.

All questions were scored on a seven-point scale (1 = very much disagree, 7 = very much agree).

Age Stereotype Endorsement.

Endorsement of age stereotypes was measured using 20 items adapted from the “Work-related age-based stereotypes scale” (Marcus et al., 2016) asking *participants* “*please indicate the extent to which you agree with the following statements... Older workers are more intellectually competent/ achieve more/ physically capable/ better performers/ productive/ skilled/ perform worse/ suitable for training/ possess greater potential/ learn faster/ more flexible/ able to learn new things/ waste time training/ waste time and money training/ warm-hearted/ warmer personalities/ likable/ cold/ kind/ friendly than younger workers.*” Items indicating competent or adaptable traits were reverse-coded, as were “negative warm” traits, these included: intellectually competent, achieve more, physically capable, better performers, productive, skilled, suitable for training, possess greater potential, learn faster, more flexible able to learn new things and cold.

The scale measured three dimensions: competence (N = 7, $\alpha = 0.73$), warmth (N = 6, $\alpha = 0.86$), and adaptability (N = 7, $\alpha = 0.68$). Given that no hypotheses were made about adaptability stereotypes and that this scale had low reliability, this subscale was not included in the analyses reported below²⁰. Competence had a low reliability and therefore the scale was reduced to 6 items, omitting the item on physical capability.

²⁰ Results for the ‘adaptability’ dimension of the adapted ‘work-related age-based stereotypes scale’ are available upon request from Ben Steeden.

A final mean score was used as the index of endorsement of competence stereotypes and warmth stereotypes. Higher scores indicated greater endorsement of age stereotypes. A high score on competence stereotypes reflected attitudes that younger people are more competent than older people. A high score on warmth stereotypes indicated attitudes that older people are warmer than younger people.

Self-Rated Leadership Potential.

Ratings of one's own leadership potential was measured using 7 items (three items adapted from Tresh, 2020, and four items adapted from Mueller et al., 2010) asking participants “*please indicate the extent to which you think you personally have the following... leadership potential/ the potential to become a successful leader/ the capability to be a leader/ the potential to become an effective leader/ the potential to develop leadership skills/ the potential to advance to a leadership position/ the potential to be a leader who is a role model for my co-workers.*” A mean score was used as the index of leadership potential, with higher scores indicating higher self-rated leadership potential²¹.

5.2.2 Results

Means and standard deviations, scale reliability statistics, and correlations are reported in Table 5.1.

Hypothesis testing.

To test Hypothesis 1, Pearson's bivariate correlations were run to establish relationships between age and endorsement of competence stereotypes, endorsement of warmth stereotypes, and self-rated leadership potential. In support of Hypothesis 1, there was a significant relationship between age and self-rated leadership potential; $r(250) = -.13, p =$

²¹ Perceptions of access to development opportunities were measured, reliability of the scale and the relationship with other variables are available upon request.

0.04. Younger workers rated more leadership potential in themselves and older workers rated less leadership potential in themselves. There was a significant relationship between age and endorsement of competence stereotypes; $r(250) = -.29, p < 0.001$, and age and endorsement of warmth stereotypes; $r(250) = .27, p < 0.001$. In partial support of Hypothesis 2, younger people were more likely to endorse competence stereotypes than older people, and contrary to Hypothesis 2, they were less likely to endorse warmth stereotypes than older people.

To test whether there was an indirect effect between age and self-rated leadership potential via age stereotypes (Hypothesis 2), PROCESS macro (Model 4; see Hayes, 2013 with 5,000 bootstraps) was used with age as the predictor (0 = younger, 1 = older), endorsement of competence and warmth stereotypes as mediators (competence in model 1, warmth in model 2) and self-rated leadership potential as the outcome.

Results showed that age was a significant predictor of endorsement of competence stereotypes, such that younger people were more likely to endorse competence stereotypes ($b = -0.50, SE = 0.10, t = -4.81, p < 0.001, 95\% CI -0.71, -0.30$). Endorsement of competence stereotypes was not a predictor of self-rated leadership potential ($b = -0.07, SE = 0.09, t = -0.78, p = 0.44, 95\% CI -0.26, -0.11$). The direct ($b = -0.36, SE = 0.16, t = -2.25, p = 0.03, 95\% CI -0.68, -0.05$) and total effects were significant ($b = -0.33, SE = 0.15, t = -2.12, p = 0.03, 95\% CI -0.63, 0.02$). The indirect effect was non-significant ($b = 0.04, SE = 0.06, 95\% CI -0.07, 0.16$).

Results showed that age was a significant predictor of endorsement of warmth stereotypes, such that younger people were less likely to endorse warmth stereotypes ($b = 0.49, SE = 0.11, t = 4.49, p < 0.001, 95\% CI 0.28, 0.71$), but endorsement of warmth stereotypes was not a predictor of self-rated leadership potential ($b = -0.01, SE = 0.09, t = -0.09, p = 0.93, 95\% CI -0.18, 0.17$). The direct ($b = -0.32, SE = 0.16, t = -2.01, p = 0.05,$

95% CI $-0.64, -0.01$) and total effects were significant ($b = -0.33, SE = 0.15, t = -2.12, p = 0.03, 95\% CI -0.63, -0.02$). The indirect effect was non-significant ($b = -0.004, SE = 0.06, 95\% CI -0.12, 0.12$).

Moderation analyses.

There was support for Hypothesis 1, younger people were associated with higher self-rated leadership potential. Furthermore, there was partial support for Hypothesis 2 because younger people were more likely to endorse competence stereotypes than older people. However, this did not relate to self-rated leadership potential. It is possible that for older workers who do endorse age stereotypes, there is a negative relationship with self-rated leadership potential that does not occur for younger workers. Exploratory moderation analyses tested the interactive effects of endorsement of age stereotypes and age on self-rated leadership potential (using model 1 in PROCESS, Hayes, 2013). Age stereotypes were introduced as predictors (competence in model 1, warmth in model 2), participant age as a moderator, and self-rated leadership potential as the outcome. Results were non-significant (see Table 5.2).

Gender and age.

Analysing age on its own there was little evidence of a relationship between endorsing in-group stereotypes and reduced self-rated leadership potential for older people. What was not examined is how the intersecting identities of age and gender may respond to age stereotypes. Gender is a stigmatised identity in leadership evaluations and underlying female gender roles of communality are viewed as less congruent with expectations of leaders than male gender roles of agency, disadvantaging women in leadership evaluations and selection (Eagly & Karau, 2002). The literature on discrimination toward older women indicates that a combined identity of being leadership-incongruent in terms of both gender

and age may have a double jeopardy effect, leading to more negative evaluations than being leadership-incongruent based on a single identity (Duncan and Loretto, 2004). This is echoed in the healthcare context, where internalized negative stereotypes have a cumulative burden on older women, reducing health care seeking behaviours (Chrisler et al., 2016). It is possible that the burden of negative stereotypes that relate to older women's gender and age have a similar effect on their self-rated potential to lead.

Exploratory moderation analyses tested the main and interactive effects of gender and age, with endorsement of age stereotypes, on self-rated leadership potential at the intersectional level of identity (using model 3 in PROCESS, Hayes, 2013). In total, two models were tested: competence stereotypes (model 1), and warmth stereotypes (model 2). Results of the three-way interactions are reported in text because there was a particular interest in the intersection of age and gender, all other effects are reported in full in Table 5.3.

Competence Stereotypes.

Endorsement of competence stereotypes was introduced as a predictor, and participant age and participant gender as moderators, with self-rated leadership potential as the outcome (Figure 5.1). Results showed a marginally significant main effect of endorsement of competence stereotypes and significant main effects of participant gender and participant age on self-rated leadership potential. All two-way interactions were significant.

Results showed a significant interaction between endorsement of competence stereotypes (that younger people are more competent than older people), participant age and participant gender ($b = -0.91$, $SE = 0.38$, $t = -2.42$, $p = 0.02$, 95% CI -1.66 , -0.17). Conditional effects showed that endorsement of competence stereotypes had differential effects across gender for older workers, $F(1, 244) = 5.24$, $p = 0.02$, but not younger workers $F(1, 244) = 1.21$, $p = 0.27$. Endorsement of competence stereotypes was associated with

lowered self-rated leadership potential in older women ($b = -0.49$, $SE = 0.20$, $t = -2.50$, $p = 0.01$, 95% CI -0.88 , -0.10) but not older men ($b = 0.14$, $SE = 0.19$, $t = 0.71$, $p = 0.48$, 95% CI -0.24 , 0.51). Conditional effects showed that endorsement of competence stereotypes had differential effects across age groups for women, $F(1, 244) = 5.73$, $p = 0.02$, but not men, $F(1, 244) = 0.88$, $p = 0.35$. Endorsement of competence stereotypes was associated with lowered self-rated leadership potential in older women ($b = -0.49$, $SE = 0.20$, $t = -2.50$, $p = 0.01$, 95% CI -0.88 , -0.10), but not younger women ($b = 0.19$, $SE = 0.20$, $t = 0.91$, $p = 0.36$, 95% CI -0.22 , 0.59).

Warmth Stereotypes.

Endorsement of warmth stereotypes was introduced as a predictor, and participant age and participant gender as moderators, with self-rated leadership potential as the outcome (Figure 5.2). Results showed significant main effects of endorsement of warmth stereotypes, participant gender, and participant age on self-perceived leadership potential. All two-way interaction effects were significant.

Results showed a significant interaction between endorsement of warmth stereotypes (that older people are warmer than younger people), participant age and participant gender ($b = 1.13$, $SE = 0.36$, $t = 3.14$, $p = 0.002$, 95% CI 0.42 , 1.84). Conditional effects showed that endorsement of warmth stereotypes had differential effects across gender for older workers; $F(1, 244) = 6.29$, $p = 0.01$, and marginally-significant effects for younger workers; $F(1, 244) = 3.61$, $p = 0.06$. Endorsement of warmth stereotypes was associated with lower self-rated leadership potential for older men ($b = -0.41$, $SE = 0.20$, $t = -2.10$, $p = 0.04$, 95% CI -0.80 , -0.03) but not older women ($b = 0.28$, $SE = 0.20$, $t = 1.45$, $p = 0.15$, 95% CI -0.10 , 0.67). There were no effects for younger men ($b = 0.22$, $SE = 0.15$, $t = 1.44$, $p = 0.15$, 95% CI -0.08 , 0.52) or younger women ($b = -0.22$, $SE = 0.17$, $t = -1.26$, $p = 0.21$, 95% CI -0.56 ,

0.12). Conditional effects showed that endorsement of warmth stereotypes had differential effects across age groups for men; $F(1, 244) = 6.46, p = 0.01$, and marginally-significant effects for women; $F(1, 244) = 3.68, p = 0.06$. Endorsement of warmth stereotypes was associated with lowered self-rated leadership potential for older men ($b = -0.41, SE = 0.20, t = -2.10, p = 0.04, 95\% CI -0.80, -0.03$), but not younger men ($b = 0.22, SE = 0.15, t = 1.44, p = 0.15, 95\% CI -0.08, 0.52$). There were no effects for younger women ($b = -0.22, SE = 0.17, t = -1.26, p = 0.21, 95\% CI -0.56, 0.12$) or older women ($b = 0.28, SE = 0.20, t = 1.45, p = 0.15, 95\% CI -0.10, 0.67$).

Table 5.1.

Study 7: Means, Standard Deviations and Correlation Matrix for Specified Variables

Variable	A	M (SD)	2	3	4
1. Age			-.29 **	.27 **	-.13 *
2. Competence stereotypes	.81	3.94 (0.86)		-.70 **	-.01
3. Warmth stereotypes	.86	4.02 (0.90)			-.04
4. Leadership potential	.97	5.07 (1.23)			

Note. **. Correlation significant at the 0.01 level (2-tailed); *. Correlation significant at the 0.05 level (2-tailed).

Table 5.2.

Study 7: Exploratory Moderated Regression Analysis for Age Stereotypes.

Items	B	SE B	<i>t</i>	<i>p</i>	LCI	UCI
Competence						
Competence stereotypes	0.18	0.29	0.62	.54	-0.39	0.74
Age	0.31	0.75	0.42	.68	-1.16	1.79
Competence stereotypes x Gender	-0.17	0.19	-0.92	.36	-0.54	0.20
Warmth						
Warmth stereotypes	0.11	0.27	0.42	.67	-0.42	0.65
Age	0.03	0.75	0.04	.96	-1.45	1.52
Warmth stereotypes x Gender	-0.09	0.18	-0.48	.63	-0.45	0.27

Table 5.3.

Study 7: Three-way Interaction Between Endorsement of Stereotypes, Participant Gender and Participant Age on Self-Rated Leadership Potential.

Items	B	SE	<i>t</i>	R ²	ΔR ²	<i>F</i>	df	<i>p</i>	LCI	UCI
Competence				.22	.05	1.83	7,244	.08		
Competence stereotypes	-1.53	0.87	-1.76					.08	-3.25	0.19
Age	-4.72	2.30	-2.06					.04	-9.24	-0.20
Gender	-4.77	2.46	-1.94					.05	-9.61	0.07
Competence stereotypes x Age	1.15	0.57	2.00					.05	0.02	2.28
	Men					0.88	1,244	.35		
	Women					5.73	1,244	.02		
Competence stereotypes x Gender	1.20	0.59	2.04					.04	0.04	2.36
	Younger workers					1.21	1,244	.27		

Items	B	SE	t	R ²	ΔR ²	F	df	p	LCI	UCI
Older workers						5.24	1,244	.02		
Age x Gender	3.49	1.52	2.30					.02	0.50	6.49
Competence stereotypes x Age x Gender	-0.91	0.38	-2.42					.02	-1.66	-0.17
				0.05	0.02	5.85	1,244	.02		
Younger men	-0.10	0.16	-0.62					.54	-0.41	0.22
Younger women	0.19	0.20	0.91					.36	-0.22	0.59
Older men	0.14	0.19	0.71					.48	-0.24	0.51
Older women	-0.49	0.20	-2.50					.01	-0.88	-0.10
Warmth				.24	.06	2.15	7,244	.04		
Warmth stereotypes	2.42	0.83	2.93					.003	0.79	4.05
Age	6.91	2.35	2.95					.004	2.29	11.53
Gender	6.21	2.15	2.88					.004	1.97	10.45

Items	B	SE	<i>t</i>	R ²	ΔR ²	<i>F</i>	df	<i>p</i>	LCI	UCI
Warmth stereotypes x Age	-1.76	0.56	-3.14					.002	-2.87	-0.66
Men						6.46	1,244	.01		
Women						3.68	1,244	.06		
Warmth stereotypes x Gender	-1.57	0.54	-2.92					.004	-2.63	-0.51
Younger workers						3.61	1,244	.06		
Older workers						6.29	1,244	.01		
Age x Gender	-4.63	1.50	-3.10					.002	-7.57	-1.68
Warmth stereotypes x Age x Gender	1.13	0.36	3.14					.002	0.42	1.84
				0.06	0.04	9.88	1,244	.002		
Younger men	0.22	0.15	1.44					.15	-0.08	0.52
Younger women	-0.22	0.17	-1.26					.21	-0.56	0.12
Older men	-0.41	0.20	-2.10					.04	-0.80	-0.03

Items	B	SE	<i>t</i>	R ²	ΔR ²	<i>F</i>	df	<i>p</i>	LCI	UCI
Older women	0.28	0.20	1.45					.15	-0.10	0.67

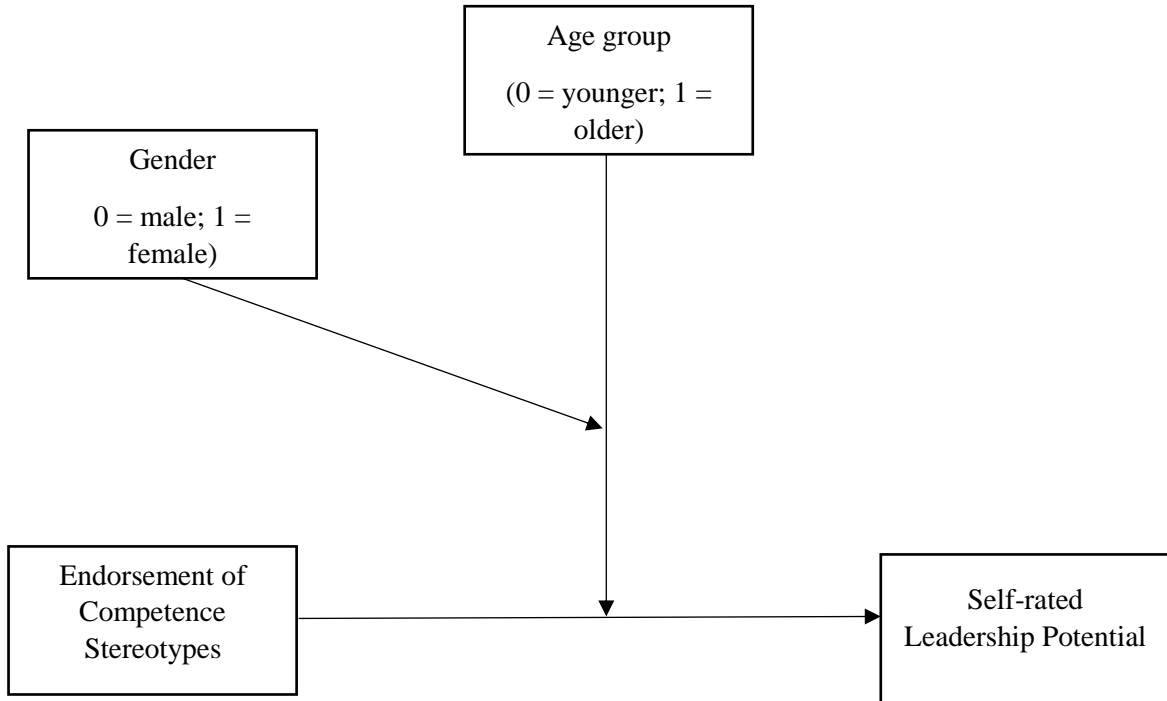


Figure 5.1. Study 7: Moderated moderation model 1.

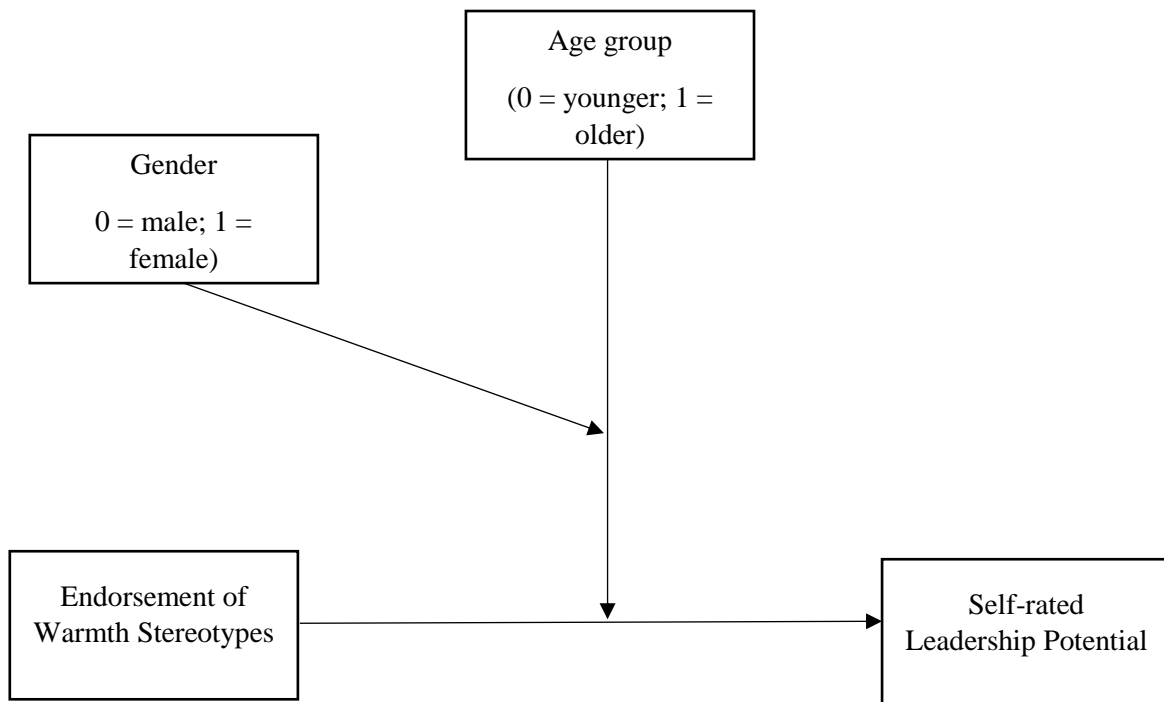


Figure 5.2. Study7: Moderated moderation model 2.

5.2.3 Discussion.

Hypothesis 1 was supported and greater age was significantly related to lower self-rated leadership potential. These results echo previous research in finding a negative relationship between target age and perceived leadership potential (Hirschfeld et al., 2011; Sun et al., 2015), but for the first time extends this effect into self-perceptions. There was limited support for Hypothesis 2 and younger people were more likely than older people to endorse competence stereotypes. However, younger people were less likely to endorse warmth stereotypes and the relationship between age and self-rated leadership potential was not mediated by competence or warmth stereotype endorsement.

Exploratory analysis instead revealed differential effects of stereotype endorsement based on intersecting identities of age and gender. Endorsement of competence stereotypes negatively and significantly predicted self-rated leadership potential in older women, but not older men or younger workers. This suggests a double jeopardy effect in which the additive effect of two low-competence identities, being female and being older, negatively impacts the self-perceptions of older women (Duncan and Loretto, 2004). For older men, but not older women or younger workers, it was the endorsement of warmth stereotypes that negatively and significantly impacted self-rated leadership potential. As gender stereotypes position men as high-competence, it may be that this buffers the impact of old age stereotypes of low-competence whereas the addition of the high-warmth stereotype of old age, more aligned with female gender roles, has more impact on the self-perceptions of older men.

Intersectional analysis has revealed a significant effect of stereotype endorsement on older, but not younger, workers, supporting a stereotype embodiment argument that as people age old-age stereotypes become more self-relevant and impact self-perceptions (Levy, 2009). There were differential effects of competence and warmth stereotypes on older men and older

women, demonstrating that gender moderates the effects of stereotype endorsement on self-perceptions. In the next study, the effects of stereotype reinforcement on self-rated leadership potential are explored and intersectional differences are tested for.

5.3 Study 8

Study 8 tested Hypotheses 1 and 3. It employed a quasi-experimental design to investigate the impact of age stereotype reinforcement, in the shape of age-stereotypes organisational cultures, on self-rated leadership potential.

5.3.1 Method.

Participants and design.

Through Prolific, 217 participants were recruited. After removing 28 participants for the reasons outlined in study 1, no participants were removed for based on their responses to manipulation checks, and 189 participants were retained and their data used in the analyses presented below (49 men, 140 women, 18 - 65 years; $M= 40.97$, $SD= 15.17$). There were 93 participants in the younger group ($M= 26.05$, $SD= 3.08$) and 96 participants in the older group ($M= 55.43$, $SD= 4.16$). All participants were in full- or part-time employment. Participants were paid £0.95 for taking part in the online study and the average completion time was 380.78 seconds ($SD = 146.76$).

A 2 Participant age (younger vs. older) x 2 Workplace culture (younger, older) quasi-experimental mixed design was adopted. Participant age was a between-participants variable, whereas workplace culture was a within-participants variable.

Procedure.

Participants were invited to take part in an online survey on Qualtrics exploring people's job choices. They were provided with the same consent information as in Study 7

and gave informed consent by clicking to continue. Participants were presented randomly with the younger or older workplace culture condition first or second. In each condition, participants initially viewed a fictional online job advert for a leader in a UK-based company. The job adverts for both conditions began with the phrase “We are recruiting new leaders in the UK!” and were identically presented and worded, except for the name of the company to ensure meaningful comparison (“The Smith Group” or “The Jones Group”) and descriptors that were linked with either younger or older workplace stereotypes. The descriptors used in the younger workplace condition were: keen, energetic, ambitious, willing to learn, and fast learner; those used for the older workplace condition were: experienced, mature, knowledgeable, professional, and provides stability. Descriptors were sourced from the existing literature (Abrams et al., 2016; Posthuma & Campion, 2009; Swift et al., 2013). No other information on the type of employer, such as size or industry, was included.

Participants completed a manipulation check and dependent measures after each advert before reviewing both adverts again and answering dependent measure choice-questions. Participants completed demographic questions on age, gender and ethnic origin and were finally presented with a full debrief.

Measures.

Questions were scored on a seven-point scale (1 = *very much disagree*, 7 = *very much agree*), with the exception of choice questions.

Manipulation checks.

To measure the extent to which participants perceived the organization to be younger or older, participants indicated their agreement with three items: “*Think about this job advert and please indicate the extent to which you agree with the following... younger people would enjoy this job/ older people would enjoy this job/ people of all ages would enjoy this job.*”

Job appeal.

Job appeal was measured using 5 items (adapted from Gaucher et al., 2011) asking participants “*please indicate to what extent you agree or disagree with the following statements... I think I could enjoy this job/ this is not a job I would want/ this company would be a good employer/ this job looks interesting/ this company seems like a great place to work.*” A mean score was used as the index of job appeal. Two choice questions also measured job appeal, asking participants “*Which job would you be most likely to want?/ enjoy?*”.

Job fit.

Job fit was measured using 4 items (adapted from Gaucher et al., 2011) asking participants “*please indicate to what extent you agree or disagree with the following statements... I could fit in well at this company/ I’m similar to the people who work in this company/ My values and this company’s values are similar/ The type of people who would apply for this job are very different from me.*” A mean score was used as the index of job appeal. Two choice questions also measured job fit, asking participants “*Which job would be the best fit for you?/ The people at which company do you think would be most similar to you?*”.

Self-rated leadership potential.

Self-rated leadership potential was measured using the same items as in Study 7. A mean score was used as the index of self-rated leadership potential. Two choice questions also measured leadership potential, asking participants “*Which job can help you fulfil your*

potential to be a successful leader?/ Which job can help you fulfil your potential to advance to a leadership position?” .²²

5.3.2 Results.

To test the interaction between age and age-stereotyped organizational culture on self-rated leadership potential for younger and older workers, a repeated-measures ANOVA using a Bonferroni correction was conducted with age (younger workers vs. older workers) as a between-participants variables and workplace culture (younger, older) as the within-participants variable. See Table 5.4 for means and standard deviations, and Table 5.5 for correlations.

Manipulation checks.

Organizational culture and age stereotypes.

There was a significant main effect of organizational culture on perceptions of younger workers enjoying the role, $F(1,187)= 30.97, p<.001, \eta_p^2=.14$. Participants perceived younger people to be more likely to enjoy the younger organizational culture ($M= 5.25, SD= 1.27$) than the older organizational culture ($M= 4.66, SD= 1.21$). There was a significant main effect of participant age on perceptions of younger workers enjoying the role, $F(1,187)= 8.03, p=.005, \eta_p^2=.04$. Participants were more likely to perceive that younger people would enjoy this role, if they were older workers ($M= 5.16, SD= 0.10$) compared to younger workers ($M= 4.75, SD= 0.10$). There was no interaction effect, $F(1,187)= 0.41, p=.2, \eta_p^2=.002$.

There was a significant main effect of organizational culture on perceptions of older people enjoying the role, $F(1,187)= 36.33, p<.001, \eta_p^2=.16$. Participants perceived older people to be more likely to enjoy the older organizational culture ($M= 4.80, SD= 1.21$) than

²² We also measured leadership aspirations, reliability of the scale and the relationship with other variables are available upon request.

the younger organizational culture ($M= 4.18, SD= 1.45$). There was no main effect of participant age or interaction effect ($F_s \leq 2.00, p_s \geq .16$).

Dependent measures.

Job appeal.

There was no main effect of organizational culture or participant age on job appeal ($F_s \leq 1.45, p_s \geq .23$). There was a significant interaction between organizational culture and participant age on job appeal, $F(1, 187)= 10.01, p=.002, \eta_p^2=.05$.

Further analyses showed that in the younger organizational culture younger workers perceived the job to be more appealing than older workers, $F(1, 187)= 5.77, p=.02, \eta_p^2=.03$. There was no difference in the older organizational culture, $F(1, 187)= 0.11, p=.74, \eta_p^2=.001$. Older people perceived the job in the older organizational culture to be more appealing than in the younger organizational culture, $F(1, 187)= 7.60, p=.006, \eta_p^2=.04$. Younger people did not perceive the job in either culture as significantly more appealing than the other, $F(1, 187)= 2.98, p=.09, \eta_p^2=.02$.

There was a significant association between age and wanting the job in either culture, $\chi^2(1, N= 189)= 6.47, p=.01$. Specifically, older people were more likely to want the job in the older organizational culture (66.7%) than the younger organizational culture (33.3%). There was a significant association between age and perceptions of enjoying the job in either culture, $\chi^2(1, N= 189)= 13.72, p<.001$. Specifically, older people were more likely to perceive that they would enjoy the job in the older organizational culture (65.6%) than the younger organizational culture (34.4%).

Job fit.

There was a main effect of organizational culture on perceived fit, $F(1, 187) = 5.14$, $p = .02$, $\eta_p^2 = .03$. The older organizational culture was perceived to be higher fit than the younger organizational culture. There was no main effect of participant age on perceived fit, $F(1, 187) = 0.65$, $p = .42$, $\eta_p^2 = .003$. There was a significant interaction between organizational culture and participant age on perceived fit, $F(1, 187) = 11.16$, $p = .001$, $\eta_p^2 = .06$.

Further analyses showed that in the younger organizational culture younger workers perceived greater organizational than older workers, $F(1, 187) = 4.36$, $p = .04$, $\eta_p^2 = .02$. There was no difference in the older organizational culture, $F(1, 187) = 0.54$, $p = .46$, $\eta_p^2 = .003$. Older people perceived greater organizational fit in the older organizational culture than in the younger organizational culture, $F(1, 187) = 15.98$, $p < .001$, $\eta_p^2 = .08$. Younger people did not perceive greater organizational fit in either culture, $F(1, 187) = 0.56$, $p = .45$, $\eta_p^2 = .003$.

There was a significant association between age and perceiving a better fit in either culture, $\chi^2(1, N = 189) = 8.05$, $p = .005$. Specifically, older people were more likely to perceive a better fit in the older organizational culture (66.7%) than the younger organizational culture (32.3%). There was a significant association between age and perceptions of similarity to other people in the company in either culture, $\chi^2(1, N = 189) = 5.75$, $p = .02$. Specifically, older people were more likely to perceive similarity to people in the older organizational culture (66.7%) than the younger organizational culture (33.3%).

Self-rated leadership potential.

There were no main effects of organizational culture or participant age on self-rated leadership potential, and no interaction effect ($F_s \leq 2.03$, $p_s \geq .16$). There was no association between age and perceptions of fulfilling potential in either culture, $\chi^2(1, N = 189) = 1.50$, $p = .22$. There was no association between age and perceptions of advancing to a leadership position in either culture, $\chi^2(1, N = 189) = 0.41$, $p = .52$.

Intersectional analyses.

To test the intersectional effects of age stereotyped organizational culture on self-rated leadership potential, exploratory analysis were conducted using repeated-measures ANOVA with age and gender as between-participants variables and workplace culture as the within-participants variable. This resulted in 28 younger men, 65 younger women, 21 older men, and 75 older women.

Job appeal.

There was no main effect of participant gender on job appeal, no interaction effect of participant age and gender, no interaction effect of organisational culture and participant gender, and no three-way interaction between participant age, participant gender and organisational culture on job appeal ($F_s \leq 1.55$, $p_s \geq .21$).

Job fit.

There was no main effect of participant gender and no interaction effect of participant age and participant gender on perceived fit ($F_s \leq 0.88$, $p_s \geq .35$). There was a significant interaction effect between organizational culture and participant gender on perceived fit; $F(1, 185) = 8.46$, $p < .005$, $\eta_p^2 = .04$. Further analyses showed that women perceived greater organizational fit in the older organizational culture ($M = 4.28$, $SD = 1.14$) than the younger organizational culture ($M = 3.96$, $SD = 1.25$), $F(1, 185) = 12.13$, $p = .001$, $\eta_p^2 = .06$. Men perceived no difference in organization fit between the cultures, $F(1, 185) = 1.77$, $p = .19$, $\eta_p^2 = .01$. There was no three-way interaction between participant age, participant gender and organizational culture on perceived fit, $F(1, 185) = 0.01$, $p = .93$, $\eta_p^2 < .001$.

Self-rated leadership potential.

There was a significant main effect of participant gender on self-rated leadership potential, $F(1, 185) = 5.23, p = .02, \eta_p^2 = .03$. Women had higher self-rated leadership potential ($M = 5.44, SD = 0.08$) than men ($M = 5.07, SD = 0.14$). There were no interaction effects between participant age and participant gender or organisational culture and participant gender, and no three-way interaction between participant age, participant gender, and organisational culture on self-rated leadership potential ($F_s \leq 1.81, p_s \geq .18$).

Table 5.4.

Study 8: Means and Standard Deviations for Job Appeal, Job Fit, and Self-rated Leadership Potential

	Younger participants		Older participants		Culture overall	
	Younger culture	Older culture	Younger culture	Older culture	Younger culture	Older culture
	<i>M(SD)</i>	<i>M(SD)</i>	<i>M(SD)</i>	<i>M(SD)</i>	<i>M(SD)</i>	<i>M(SD)</i>
Job appeal	4.66 (1.22)	4.48 (1.14)	4.25 (1.16)	4.54 (1.09)	4.44 (1.20)	4.50 (1.11)
Job fit	4.20 (1.25)	4.12 (1.11)	3.82 (1.25)	4.24 (1.20)	4.00 (1.26)	4.17 (1.16)
Leadership potential	5.23 (1.21)	5.24 (1.15)	5.42 (0.93)	5.44 (0.88)	5.32 (1.08)	5.34 (1.03)

Table 5.5

Study 8: Correlation Matrix for all dependent variables

	α	1	2	3	4	5	6
1 Job appeal (younger culture)	.89		.60**	.81**	.57**	.59**	.43**
2 Job appeal (older culture)	.88			.54**	.83**	.41**	.54**
3 Job fit (younger culture)	.88				.62**	.41**	.26**
4 Job fit (older culture)	.87					.35**	.44**
5 Leadership potential (younger culture)	.96						.70**
6 Leadership potential (older culture)	.96						

Note. **. Correlation significant at the 0.01 level (2-tailed); *. Correlation significant at the 0.05 level (2-tailed).

5.3.3 Discussion.

Hypothesis 1 was not supported and participant age had no significant effect on self-rated leadership potential. Furthermore, exploratory intersectional analysis also did not find differential effects on self-rated leadership potential between older men and older women as identified in Study 7. Hypothesis 3 was also not supported and there was no interaction between participant age and organisational culture on self-rated leadership potential.

Unexpectedly, the addition of a specific organisational cultural context may have acted to suppress any effects of general societal age stereotypes on self-perceptions. General societal age stereotypes may influence older people's self-perceptions than organisational age stereotype cues.

There was an interaction between candidate age and organisational culture on perceived job appeal and job fit. Older workers rated the older organisational culture as more appealing and a better fit for them than the younger organisational culture, whereas younger workers found the younger and older organisational cultures as equally appealing and a good fit. Therefore, organisational age stereotype cues may not impact workers' self-perceptions, but instead impact perceptions of organisations and potentially influence employment decisions. In the next study, the impact of organisational culture on evaluations of others is investigated.

5.4 Study 9

Study 9 tested Hypotheses 4 – 6. It employed an experimental design to investigate the extent to which the effects of candidate age and candidate type on evaluations, are moderated by endorsement of ageist attitudes and stereotype reinforcement (organisational culture).

5.4.1 Method.

Participants and design.

Power analysis (G*Power: Faul, Erdfelder, Lang, & Buchner, 2007) determined that 128 participants were required for an 80% chance of detecting a medium effect ($F = .25$). After one participant was removed for failing an attention check, 164 participants were recruited on Prolific and included in analysis, 70.12% female, $M_{age} = 34.19$ ($SD = 11.36$). Participants took an average of 514.77 seconds ($SD = 296.05$) to complete the study and were each paid £1.00 for their time.

A 2 (candidate age: younger vs. older) x 2 (candidate type: potential, performance) x 2 (organisational culture: succession vs. achievement) experimental between-participants design was adopted.

Procedure and materials.

Participants were invited to take part in an online recruitment study on Qualtrics. They were informed that data would be treated confidentially, anonymized for publication, and that participation was voluntary and could be withdrawn at any time. Email contact details for the main researcher was also supplied, and participants gave their informed consent by clicking to take part in the study. Participants were then randomly assigned into one of two organisational culture conditions, succession or achievement. In each condition

participants viewed a job advert for a leader at XSG Services that emphasised succession (or achievement): “*We are a leading player in the UK, and we are looking for a new leader to join us. For this role, we have a strong focus on succession (achievement). We are looking for someone who can develop as a future leader of the company (share their experience with the company of how to achieve excellence)*”. They were then presented with an overview of four candidates who had applied for the role, before being randomly assigned one candidate to evaluate. Candidate information was presented in the form of written profiles, with candidate age manipulated by date of birth and candidate type manipulated by performance on tests of leadership potential and leadership achievement. Organisational and candidate profiles were tested in pilot work. Participants then completed dependent measures, before completing measures of their endorsement of prescriptive age succession stereotypes and ageist attitudes. Finally, they supplied demographic information and were presented with a full written debrief.

Measures.

Performance.

The same continuous measure was used as in Study 4. Separate one-item measures assessed perceived past and future performance “*To what extent do you agree that this candidate... has performed best in the past/ would perform better in the future?*”. Items were randomised and scored on a seven-point likert scale (1 = *strongly disagree*, 7 = *strongly agree*).

Leadership.

Three items measured perceptions of candidate’s leadership on a continuous scale, asking participants “*To what extent do you think the candidate...is a credible leader/ is a*

leader/ will succeed as a leader?”. Items were randomised and scored on a seven-point likert scale (1 = *strongly disagree*, 7 = *strongly agree*).

Willingness to hire.

The same continuous measure was used as in Study 4.

Age stereotype measures.

The same continuous measures of competence and warmth were used as in Study 5.²³

Prescriptive succession stereotype endorsement.

Eight items measured endorsement of prescriptive age stereotypes of succession, adapted from North & Fiske (2013) (E.g. “*Most older people don't know when to make way for younger people*”) and was measured on a six-point Likert scale (1 = *strongly disagree*, 6 = *strongly agree*).

Ambivalent ageism scale.

Thirteen items measured endorsement of ageist attitudes (Cary et al., 2017). Nine items measured benevolent ageism (E.g., “*Older people need to be protected from the harsh realities of society*”) and four items measured hostile ageism (E.g., “*Old people exaggerate the problems they have at work*”), on a seven-point Likert scale (1 = *strongly disagree*, 7 = *strongly agree*).

5.4.2 Results.

Scales were created for each multi-item measure (see Table 5.6 for means, reliability statistics and correlations). For age stereotype measures, subscales were created for

²³ Gender stereotype endorsement (agency and communality) was also measured. Results are not relevant to hypotheses and are not reported here.

competence and warmth. For the ambivalent ageism measure, subscales were created for benevolent ageism and hostile ageism. Separate three-way ANOVAs using a Bonferroni correction were run for each dependent variable with candidate age, candidate type, and organisational culture as the independent variables (see Table 5.7 for means and standard deviations).²⁴

Performance.

There was a significant effect of candidate age on perceived past performance, $F(1, 156) = 8.44, p = .004, \eta_p^2 = .05$. Older candidates were viewed as better past performers than younger candidates. The main effect of candidate type was also significant, $F(1, 156) = 34.20, p < .001, \eta_p^2 = .18$. Performance candidates were viewed as better past performers than potential candidates. All interactions were non-significant ($F_s \leq 1.30, p_s \geq .26$).

The effect of candidate age on perceived future performance was non-significant, $F(1, 156) = 0.16, p = .69, \eta_p^2 = .001$. The effect of candidate type was significant, $F(1, 156) = 4.30, p = .04, \eta_p^2 = .03$ and potential candidates were preferred over performance candidates. There was a significant interaction between candidate age and candidate type, $F(1, 156) = 5.12, p = .03, \eta_p^2 = .03$. Analysis of the simple main effects revealed a marginally significant effect of age within the potential conditions, $F(1, 156) = 3.43, p = .066, \eta_p^2 = .02$, such that younger potential candidates were preferred over older potential candidates. There was also a significant effect of type within the younger condition, $F(1, 156) = 9.61, p = .002, \eta_p^2 = .06$, such that younger potential candidates were preferred over younger performance candidates. All other interactions were non-significant ($F_s \leq 0.52, p_s \geq .47$).

²⁴ There were no significant effects of organisational culture on any dependent variables ($F_s \leq 2.48, p_s \geq .12$) and none were hypothesised.

The effect of candidate age on the performance scale was non-significant, $F(1, 156)=0.35, p=.55, \eta_p^2=.002$. The effect of candidate type was significant, $F(1, 156)=13.65, p<.001, \eta_p^2=.08$. Performance candidates were preferred over potential candidates. The interaction between candidate age and candidate type was significant, $F(1, 156)=5.34, p=.022, \eta_p^2=.03$ ²⁵. Analysis of the simple main effects revealed a significant effect of age in the performance condition, $F(1, 156)=4.37, p=.038, \eta_p^2=.03$, such that older performance candidates were preferred over younger performance candidates. There was also a significant effect of candidate type in the older condition, $F(1, 156)=17.66, p<.001, \eta_p^2=.10$, such that older performance candidates were preferred over older potential candidates. All other interactions were non-significant ($F_s \leq 0.52, p_s \geq .47$).

Leadership.

The effect of candidate age on leadership was non-significant, $F(1, 156)=0.90, p=.35, \eta_p^2=.01$. The effect of candidate type was significant, $F(1, 156)=12.81, p<.001, \eta_p^2=.08$, and performance candidates were preferred over potential candidates. The interaction between candidate age and candidate type was marginally significant, $F(1, 156)=3.13, p=.079, \eta_p^2=.02$. Analysis of the simple main effects revealed a significant effect of candidate type in the older condition, $F(1, 156)=14.01, p<.001, \eta_p^2=.08$, such that older performance candidates were preferred over older potential candidates. There was also marginally significant effect of age in the performance condition, $F(1, 156)=3.82, p=.052, \eta_p^2=.02$, such that older performance candidates were preferred over younger performance candidates. All other interactions were non-significant ($F_s \leq 1.89, p_s \geq .17$).

Willingness to hire.

²⁵ When outliers were removed the interaction between candidate age and candidate type became non-significant, $F(1, 152)=2.14, p=.145, \eta_p^2=.01$.

There was a marginally significant effect of candidate age on willingness to hire, $F(1, 156) = 3.13, p = .079, \eta_p^2 = .02$. Older candidates were preferred over younger candidates. The effect of candidate type was also significant, $F(1, 156) = 27.95, p < .001, \eta_p^2 = .15$, and performance candidates were preferred over potential candidates. The interaction between candidate age and candidate type was significant, $F(1, 156) = 4.03, p = .046, \eta_p^2 = .02$. Analysis of the simple main effects revealed a significant effect of age in the performance condition, $F(1, 156) = 7.38, p = .007, \eta_p^2 = .05$, such that older performance candidates were preferred over younger performance candidates. There was a significant effect of candidate type in the younger condition, $F(1, 156) = 5.49, p = .02, \eta_p^2 = .03$, and even more so in the older condition, $F(1, 156) = 26.05, p < .001, \eta_p^2 = .14$, such that performance candidates were preferred over potential candidates in both age conditions. All other interactions were non-significant ($F_s \leq 1.40, p_s \geq .24$).

Mediation analysis.

To test whether there was an indirect effect between age and candidate evaluations via endorsement of age stereotypes (Hypothesis 4), PROCESS macro (Model 4; see Hayes, 2013 with 5,000 bootstraps) was used with age as the predictor (0 = younger, 1 = older), endorsement of competence and warmth stereotypes as mediators (competence in model 1, warmth in model 2), and the dependent variable as the outcome for all significant main effects of candidate age. All indirect effects were non-significant and therefore the relationship between candidate age and evaluations was not mediated by age stereotype embodiment (see Table 5.8).

Moderation analysis.

Ambivalent ageism scale.

Moderation analyses were conducted to test whether endorsement of ageist attitudes on the ambivalent ageism scale moderated the relationship between candidate age and evaluations (using model 1 in PROCESS, Hayes, 2013). Candidate age was introduced as the predictor, endorsement of benevolent ageism or hostile ageism as the moderator, and the dependent variables as the outcomes (Model 1: benevolent ageism = moderator, past performance = outcome; Model 2: hostile ageism = moderator, past performance = outcome; Model 3: benevolent ageism = moderator, willingness to hire = outcome; Model 4: hostile ageism = moderator, willingness to hire = outcome) (see Table 5.9 for results).

Model 1 revealed a significant interaction between candidate age and endorsement of benevolent ageism. When benevolent ageism was lower, older candidates were perceived as significantly higher in past performance than younger candidates. When benevolent ageism was higher, there was no significant relationship between candidate age and perceived past performance. Models 2 – 4 revealed non-significant interactions between candidate age and endorsement of ageism.

Prescriptive age stereotypes of succession.

Moderated moderation analysis was conducted to test whether the relationship between candidate age and evaluations was moderated by the main and interactive effects of organisation type and endorsement of age stereotypes of succession (using model 3 in PROCESS, Hayes, 2013). Candidate age was the predictor, organisational culture and endorsement of prescriptive age stereotypes were the moderators, and the dependent variables were the outcomes (past performance in Model 1 [Figure 5.3]., willingness to hire in Model 2[Figure 5.4.) (see Table 5.10 for results).

In Model 1 the interaction between candidate age, organisational culture and endorsement of succession stereotypes was marginally significant. When endorsement of

succession stereotypes was lower, there was a marginally significant effect of candidate age if the organisational culture is succession oriented and a significant association if the organisational culture is achievement condition, such that older candidates were associated with higher past performance. When endorsement of succession stereotypes was higher, the effect of candidate age was non-significant in both organisational cultures. In Model 2, the three-way interaction was non-significant.

Exploratory moderation analyses were run to test whether endorsement of succession stereotypes moderated the relationship between candidate age and evaluations (using model 1 in PROCESS, Hayes, 2013). Candidate age was introduced as the predictor, endorsement of succession stereotypes as the moderator, and the dependent variables as the outcomes (past performance in Model 1, willingness to hire in Model 2) (see Table 5.9 for results).

The interaction between candidate age and succession stereotype endorsement was significant in Model 1 and marginally significant in Model 2. In both models, when endorsement of succession stereotypes was lower there was a significant relationship between candidate age such that older candidates were associated with higher perceived past performance and willingness to hire. When endorsement of succession stereotypes was higher, there was no significant relationship between candidate age and perceived past performance or willingness to hire.

Table 5.6

Study 9: Means, Standard Deviations, Cronbach's Alpha and Correlations for All Scales

Scale	M (SD)	α	2	3	4	5	6	7	8
1. Performance	5.11 (0.89)	.81	.68 ***	.76 ***	.64 ***	.21 **	.02	-.07	-.06
2. Leadership	5.01 (1.03)	.90		.68 ***	.61 **	.27 **	.03	-.12	-.08
3. Willingness to hire	4.95 (1.22)	.94			.64 ***	.25 **	.15	.02	.05
4. Competence	5.12 (0.77)	.77				.32 ***	-.02	-.02	-.05
5. Warmth	4.34 (0.68)	.90					.17 *	.09	.09
6. Benevolent ageism	2.61 (0.88)	.84						.63 ***	.43***
7. Hostile ageism	2.64 (1.02)	.71							.55***
8. Succession endorsement	3.25 (0.98)	.86							

Notes. * <.05; **<.01; ***<.001.

Table 5.7

Study 9: Means and Standard Deviations for Dependent Variables in Each Condition

Variable	Candidate age	Succession condition			Achievement condition			Overall		
		Candidate type			Candidate type					
		Potential	Performance	Total	Potential	Performance	Total	Potential	Performance	Total
Past performance	Younger	3.58 (1.33)	5.19 (1.12)	4.30 (1.47)	3.60 (1.30)	4.36 (1.18)	4.05 (1.27)	3.59 (1.30)	4.77 (1.21)	4.19 (1.38)
	Older	4.32 (1.32)	5.44 (1.03)	4.79 (1.32)	4.06 (1.56)	5.24 (1.16)	4.76 (1.45)	4.21 (1.42)	5.32 (1.11)	4.78 (1.38)
	Total	3.92 (1.37)	5.30 (1.08)		3.84 (1.44)	4.83 (1.24)		3.89 (1.39)	5.04 (1.19)	
Future performance	Younger	5.54 (0.76)	4.71 (1.27)	5.17 (1.09)	5.33 (0.82)	4.59 (1.33)	4.89 (1.20)	5.46 (0.78)	4.65 (1.29)	5.05 (1.14)

	Older	4.91 (0.92)	4.94 (1.53)	4.92 (1.19)	5.00 (0.94)	5.04 (1.31)	5.02 (1.16)	4.95 (0.92)	5.00 (1.38)	4.98 (1.17)
	Total	5.25 (0.89)	4.81 (1.37)		5.16 (0.88)	4.83 (1.32)		5.21 (0.88)	4.82 (1.34)	
	Younger	4.91 (0.92)	5.14 (0.86)	5.01 (0.93)	5.02 (0.85)	5.17 (0.70)	5.11 (0.76)	4.95 (0.89)	5.16 (0.79)	5.06 (0.84)
Performance	Older	4.95 (0.73)	5.54 (0.82)	5.20 (0.81)	4.51 (1.16)	5.56 (0.77)	5.13 (1.07)	4.76 (0.95)	5.55 (0.78)	5.17 (0.95)
	Total	4.93 (0.83)	5.32 (0.87)		4.75 (1.04)	5.38 (0.76)		4.86 (0.92)	5.35 (0.80)	
	Younger	4.92 (0.86)	5.08 (1.02)	4.99 (0.93)	4.60 (0.75)	5.02 (1.24)	4.85 (1.07)	4.80 (0.82)	5.05 (1.12)	4.93 (0.99)
Leadership	Older	4.77 (0.97)	5.31 (1.30)	5.00 (1.14)	4.49 (0.99)	5.64 (0.75)	5.17 (1.02)	4.65 (0.98)	5.51 (1.00)	5.09 (1.08)

	Total	4.85 (0.90)	5.18 (1.14)		4.54 (0.87)	5.35 (1.04)		4.73 (0.90)	5.27 (1.08)	
Willingness to hire	Younger	4.47 (1.30)	4.89 (1.46)	4.66 (1.37)	4.49 (1.08)	5.24 (0.89)	4.94 (1.03)	4.48 (1.21)	5.07 (1.20)	4.78 (1.23)
	Older	4.68 (0.99)	5.73 (1.06)	5.12 (1.13)	4.20 (1.20)	5.75 (0.85)	5.12 (1.26)	4.47 (1.10)	5.74 (0.92)	5.12 (1.19)
	Total	4.57 (1.16)	5.25 (1.35)		4.33 (1.14)	5.51 (0.90)		4.48 (1.15)	5.40 (1.12)	
Competence	Younger	5.16 (0.77)	5.17 (0.74)	5.16 (0.75)	5.07 (0.64)	4.99 (0.78)	5.02 (0.72)	5.13 (0.72)	5.08 (0.76)	5.10 (0.74)
	Older	4.92 (0.72)	5.42 (0.79)	5.13 (0.78)	4.65 (0.81)	5.51 (0.69)	5.16 (0.85)	4.80 (0.76)	5.48 (0.73)	5.15 (0.81)
	Total	5.05 (0.75)	5.28 (0.76)		4.84 (0.75)	5.27 (0.78)		4.97 (0.76)	5.27 (0.77)	

Warmth	Younger	4.48 (0.80)	4.29 (0.51)	4.39 (0.69)	4.13 (0.42)	4.30 (0.56)	4.23 (0.51)	4.35 (0.70)	4.29 (0.53)	4.32 (0.62)
	Older	4.16 (0.60)	4.33 (1.02)	4.23 (0.79)	4.35 (0.61)	4.53 (0.76)	4.46 (0.70)	4.24 (0.61)	4.45 (0.86)	4.35 (0.75)
	Total	4.33 (0.73)	4.30 (0.76)		4.25 (0.54)	4.42 (0.68)		4.30 (0.66)	4.37 (0.71)	

Table 5.8

Study 9: Mediation Analyses for the Effect of Candidate Age on Dependent Measures Mediated by Stereotype Embodiment

Dependent measure	Mediator	<i>b</i>	<i>se</i>	<i>t</i>	<i>p</i>	LLCI	ULCI
Past performance	Competency						
Direct effect		0.55	0.22	2.76	.006	0.16	0.95
Indirect effect		0.03	0.08			-0.13	0.20
Total effect		0.58	0.22	2.71	.008	0.16	1.01
Past performance	Warmth						
Direct effect		0.58	0.22	2.69	.008	0.15	1.00
Indirect effect		0.01	0.03			-0.05	0.09
Total effect		0.58	0.22	2.71	.008	0.16	1.01
Past performance	Agency						
Direct effect		0.57	0.21	2.67	.008	0.15	0.99
Indirect effect		0.02	0.05			-0.07	0.13
Total effect		0.59	0.22	2.71	.008	0.16	1.01
Past performance	Communality						

	Direct effect	0.55	0.21	2.58	.011	0.13	0.97
	Indirect effect	0.04	0.05			-0.04	0.14
	Total effect	0.58	0.22	2.71	.008	0.16	1.01
Willingness to hire	Competence						
	Direct effect	0.29	0.15	2.01	.047	0.01	0.58
	Indirect effect	0.05	0.12			-0.19	0.29
	Total effect	0.34	0.19	1.79	.076	-0.04	0.71
Willingness to hire	Warmth						
	Direct effect	0.33	0.18	1.77	.078	-0.04	0.69
	Indirect effect	0.01	0.05			-0.10	0.11
	Total effect	0.34	0.19	1.79	.076	-0.04	0.71
Willingness to hire	Agency						
	Direct effect	0.30	0.17	1.78	.076	-0.03	0.64
	Indirect effect	0.04	0.09			-0.14	0.21
	Total effect	0.34	0.19	1.79	.076	-0.04	0.71
Willingness to hire	Communality						

Direct effect	0.28	0.18	1.56	.120	-0.07	0.63
Indirect effect	0.06	0.07			-0.08	0.19
Total effect	0.34	0.19	1.79	.076	-0.04	0.71

Note. Candidate age was coded as 1 = Younger, 2 = Older.

Table 5.9.

Study 9: Moderated Regression Analysis.

Items	Moderator	B	SE	t	R ²	ΔR ²	F	df	p	LCI	UCI
Outcome: Past performance	Benevolent ageism				.28	.08	4.47	3,160	.005		
Candidate age		2.07	0.68	3.07					.003	0.74	3.40
Benevolent ageism		0.90	0.37	2.43					.016	0.17	1.63
Candidate age x Benevolent ageism		-0.57	0.25	-2.30					.023	-1.06	-0.08
Low benevolent ageism		1.12	0.31	3.59					<.001	0.50	1.74
High benevolent ageism		0.08	0.31	0.24					.810	-0.54	0.69
						.03	5.29	1,160	.023		
Outcome: Past performance	Hostile ageism				.21	.05	2.52	3,160	.060		
Candidate age		0.73	0.60	1.21					.230	-0.47	1.92
Hostile ageism		0.13	0.34	0.38					.705	-0.54	0.80

Items	Moderator	B	SE	<i>t</i>	R ²	ΔR ²	<i>F</i>	df	<i>p</i>	LCI	UCI
Candidate age x Hostile ageism		-0.05	0.21	-0.24					.812	-0.47	0.37
Low hostile ageism		0.65	0.33	2.00					.048	0.01	1.30
High hostile ageism		0.54	0.31	1.77					.079	-0.06	1.15
						.0003	0.06	1,160	.812		
Outcome: Willingness to hire	Benevolent ageism				.24	.06	3.38	3,160	.020		
Candidate age		1.29	0.59	2.18					.031	0.12	2.46
Benevolent ageism		0.72	0.33	2.22					.028	0.08	1.37
Candidate age x Benevolent ageism		-0.36	0.22	-1.65					.101	-0.78	0.07
Low benevolent ageism		0.70	0.27	2.54					.012	0.15	1.24
High benevolent ageism		0.04	0.27	0.14					.887	-0.50	0.58
						.02	2.71	1,160	.101		
Outcome: Willingness to hire	Hostile ageism				.16	.03	1.39	3,160	.247		

Items	Moderator	B	SE	t	R ²	ΔR ²	F	df	p	LCI	UCI
Candidate age		0.80	0.53	1.50					.136	-0.25	1.84
Hostile ageism		0.29	0.30	0.99					.322	-0.29	0.88
Candidate age x Hostile ageism		-0.17	0.19	-0.91					.366	-0.54	0.20
Low hostile ageism		0.54	0.29	1.89					.061	-0.03	1.11
High hostile ageism		0.17	0.27	0.65					.517	-0.36	0.71
						.01	0.82	1,160	.366		
Outcome: Past performance	Succession endorsement				0.27	0.07	4.22	3,160	.007		
Candidate age		2.20	0.75	2.93					.004	0.71	3.68
Succession endorsement		0.73	0.35	2.05					.042	0.03	1.43
Candidate age x succession endorsement		-0.50	0.22	-2.26					.026	-0.94	-0.06
Low succession endorsement		1.14	0.33	3.45					.001	0.49	1.79

Items	Moderator	B	SE	t	R ²	ΔR ²	F	df	p	LCI	UCI
High succession endorsement		0.08	0.31	0.25					.806	-0.53	0.69
						.03	5.09	1,160	.026		
Outcome: Willingness to hire	Succession endorsement				0.21	0.05	2.58	3,160	.056		
Candidate age		1.57	0.66	2.38					.019	0.27	2.88
Succession endorsement		0.66	0.31	2.10					.037	0.04	1.27
Candidate age x Succession endorsement		-0.37	0.19	-1.91					.058	-0.76	0.01
Low succession endorsement		0.78	0.29	2.70					.008	0.21	1.36
High succession endorsement		-0.01	0.27	-0.03					.978	-0.55	0.53
						.02	3.64	1,160	.058		

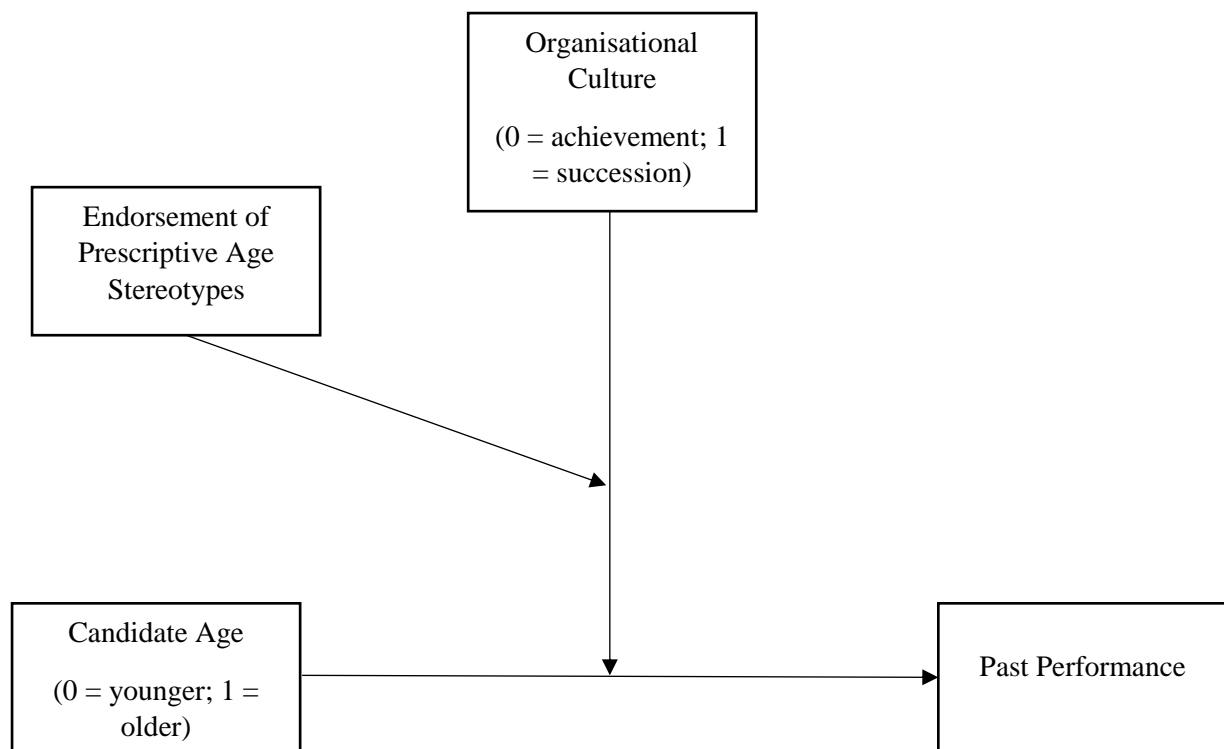


Figure 5.3. Study 9: Moderated moderation model 1.

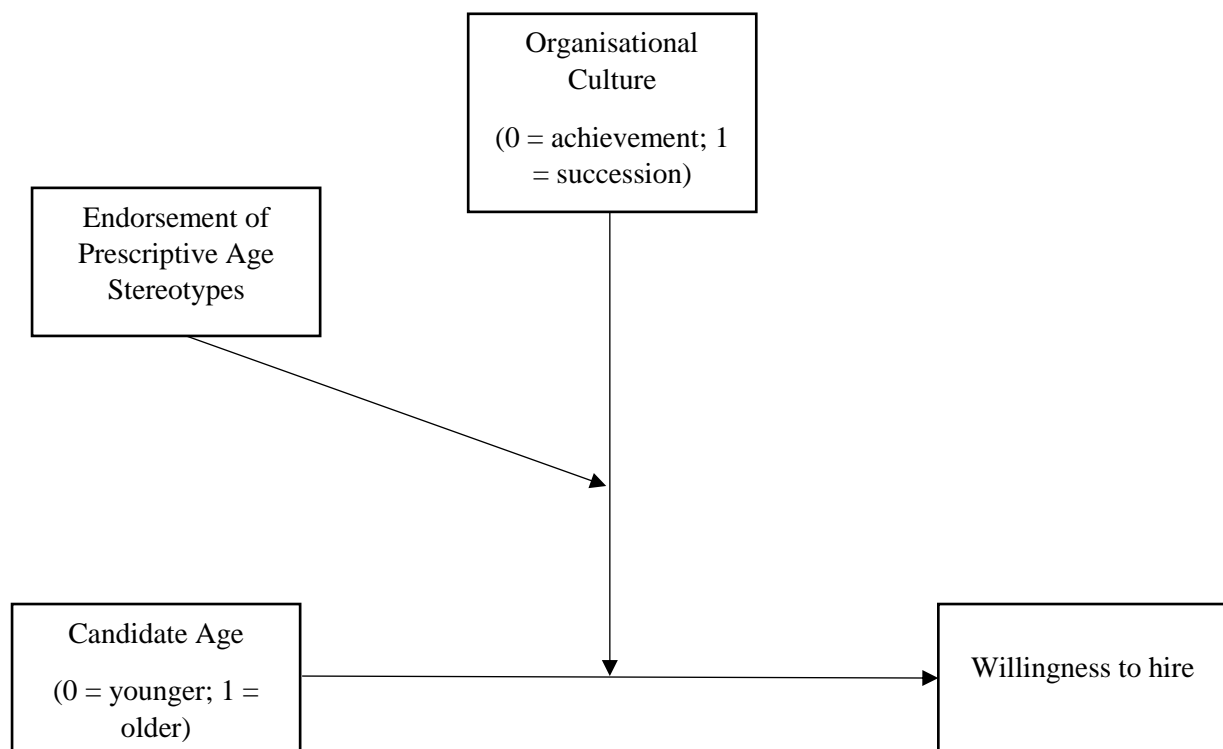


Figure 5.4. Study 9: Moderated moderation model 2.

Table 5.10.

Study 9: Moderated Moderation Analysis of the Interaction Between Candidate Age, Organisational Culture, and Endorsement of Prescriptive Age Stereotypes of Succession.

Items	B	SE	<i>t</i>	R ²	ΔR ²	<i>F</i>	df	<i>p</i>	LCI	UCI
Outcome: Past performance				.31	.10	2.38	7,156	.024		
Candidate age	-1.45	2.31	-0.63					.532	-6.02	3.12
Organisational culture	-3.98	2.47	-1.61					.110	-8.86	0.91
Endorsement of succession stereotypes	-1.21	1.10	-1.10					.274	-3.38	0.96
Candidate age x Organisational culture	2.51	1.51	1.66					.098	-0.47	5.49
						1.35	1,156	.247		
						-0.97	1,156	.120		
Candidate age x Succession endorsement	0.70	0.69	1.03					.306	-0.65	2.06
Organisational culture x succession endorsement	1.32	0.71	1.84					.067	-0.09	2.73

Items	B	SE	t	R ²	ΔR ²	F	df	p	LCI	UCI
Candidate age x Organisational culture x Succession endorsement	-0.82	0.44	-1.84					.067	-1.70	0.06
Succession culture, low endorsement	0.82	0.45	1.82					.071	-0.07	1.70
Succession culture, high endorsement	0.57	0.44	1.28					.201	-0.31	1.45
Achievement culture, low endorsement	1.58	0.49	3.25					.001	0.62	2.55
Achievement culture, high endorsement	-0.40	0.43	-0.92					.359	-1.25	0.46
					.02	3.40	1,156	.067		
Outcome: Willingness to hire				0.25	.06	1.53	7,156	.162		
Candidate age	-1.23	2.04	-0.60					.040	0.31	13.51
Organisational culture	-3.23	2.18	-1.48					.142	-7.54	1.09
Endorsement of succession stereotypes	-0.46	0.97	-0.47					.637	-2.38	1.46
Candidate age x Organisational culture	1.93	1.33	1.45					.149	-0.70	4.56
Candidate age x Succession endorsement	0.33	0.61	0.55					.582	-0.86	1.53

Items	B	SE	t	R ²	ΔR ²	F	df	p	LCI	UCI
Organisational culture x Succession endorsement	0.78	0.63	1.24					.217	-0.46	2.03
Candidate age x Organisational culture x Succession endorsement	-0.49	0.39	-1.25					.213	-1.27	0.28
Succession culture, low endorsement	0.37	0.40	0.94					.351	-0.41	1.15
Succession culture, high endorsement	0.04	0.39	0.09					.927	-0.74	0.81
Achievement culture, low endorsement	1.26	0.43	2.92					.004	0.41	2.11
Achievement culture, high endorsement	-0.12	0.38	-0.32					.752	-0.88	0.64
					0.01	1.57	1,156	.213		

5.4.3 Discussion.

Hypothesis 4 was supported and benevolent (but not hostile) ageist attitudes and endorsement of prescriptive succession stereotypes moderated the relationship between candidate age and perceived past performance. Older candidates were viewed as having higher past performance than younger candidates when endorsement of benevolent ageist attitudes or succession stereotypes were low, but not when they were high. The same pattern of results was observed for the relationship between candidate age and willingness to hire, although not at a significant level. Holding benevolent ageist beliefs, associated with the patronising and disempowering treatment of older people (Cary et al., 2017), and beliefs that older people should cede power to younger people, encourages a discounting of the experience and achievement that otherwise tends to be associated with greater age.

There was no support for Hypothesis 5 and there was no significant interaction between candidate type and organisation type. As the effects of candidate type were previously found to be more pronounced on comparative measures (see Chapter 4), a within-participants experimental design in which comparison of candidate type and organisational culture is more salient may be needed to reveal such an interaction. Alternatively, the preference for potential may be more likely to emerge when societal context is salient than when organisational context is salient, mirroring the results of Study 8 in which a pro-youth bias in self-rated leadership potential disappeared in the presence of organisational culture cues.

A significant three-way interaction was found between candidate age, organisational culture and endorsement of succession stereotypes, supporting Hypothesis 6. When endorsement of succession stereotypes was lower there was a preference for older rather than younger candidates on measures of past performance, marginally so in the organisational

culture condition that favoured succession and significantly so in the organisational culture condition that favoured achievement. However, when endorsement of succession stereotypes was higher, both younger and older candidates were viewed as possessing equal levels of past performance in both organisational cultures. This offers some evidence for a moderating effect of organisational culture, such that older workers are more positively associated with perceived past performance when an organisation is focused on achievement rather than succession, but not when there is a high endorsement of the stereotype that older people should pass on power to younger people.

5.5 General Discussion

Across three studies, six hypotheses were tested seeking to extend the existing findings of the thesis and explore potential moderators of a pro-youth bias and the preference for potential (Study 7: Hypotheses 1-2; Study 8: Hypotheses 1-3; Study 9: Hypotheses 4-6). To extend the findings of the thesis, the effects of target age on perceived leadership potential in others were tested and replicated in self-evaluations and interacted with target gender. In exploring potential moderators, age stereotype endorsement at the level of the individual was tested, and age stereotype reinforcement at the level of the organisation, moderated the relationship between candidate age, candidate type and evaluations.

In extending the findings of the thesis beyond the pro-youth bias in evaluations of others in Chapter 4, Study 7 found evidence for a similar pro-youth bias in self-evaluations, supporting Hypothesis 1. Older workers reported lower levels of self-rated leadership potential than younger workers. Hypothesis 2 was partly supported, and exploratory intersectional analysis found different effects of age stereotype endorsement for older men and older women. Endorsement of competence stereotypes was associated with lower self-rated leadership potential for older women only, supporting a double jeopardy argument in which older women are negatively impacted by the cumulative low-competence identities of

being female and older (Duncan and Loretto, 2004). However, for older men, endorsement of warmth stereotypes was associated with lower self-rated leadership potential. It may be that older men's assumption of a high-warmth stereotype more aligned with communal stereotypes of women (Eagly & Karau, 2002), encourages them to devalue their ability in domains more associated with men such as leadership (Schein, 1973). The results have a theoretical value in finding that a pro-youth bias in perceived leadership potential in other-evaluations (Hirschfeld & Thomas, 2011) extends to self-evaluations, and that differential effects of age stereotypes at an intersectional level may underlie this relationship. They also have an applied value in highlighting that age stereotypes represent a barrier to older workers' employment choices, which must be overcome if governments are to successfully encourage older people to re-enter the workplace.

Studies 8 and 9 also tested whether organisational context moderated the relationship between candidate age, candidate type and evaluations. Specifically, it was expected that organisation-target congruence would be associated with more positive evaluations. No support was found for Hypothesis 3 and age-stereotyped organisational context did not affect self-evaluations for younger or older workers, although it did affect evaluations of the organisation, such that older workers perceived greater job fit and job appeal in the 'older' organisation. Furthermore, the pro-youth bias found in self-evaluations (Study 7) disappeared in the presence of age-stereotyped organisational cues. No support was found for Hypothesis 5 and a preference for potential was not accentuated in organisations with a focus on succession (Study 9). It may be that stereotype reinforcement, in the shape of organisational context cues, can suppress the operation of societal stereotypes which have more influence on target evaluations.

Age-stereotyped evaluations, including those concerned with potential which has been associated with youth (Posthuma & Campion, 2009), may be more likely when general

societal stereotypes are salient. This may be linked to a higher prevalence of negative age stereotypes in general news media rather than corporate media (Kroon et al., 2018). It also suggests a greater effect of stereotype embodiment, in which age stereotypes are internalised throughout the life-course and not restricted to specific life domains (Levy, 2009), than stereotype threat, which is more concerned with situation-specific external cues of age stereotypes (Bonnot & Croizet, 2011). This work has theoretical implications in indicating that age stereotype reinforcement, in the shape of organisational cues, may be less influential than internalised societal age stereotypes. This in turn has an applied value in suggesting that activity to mitigate age stereotypes and encourage greater participation of older people in the workplace may be more fruitful if targeted at a societal rather than organisational level.

Finally, results offered some support for Hypotheses 4 and 6 and there was evidence that age stereotype endorsement affected target evaluations. In Study 8, differential effects of age stereotype endorsement were found on self-evaluations at an intersectional level. In study 9, it was also found that age stereotype endorsement had a moderating effect on evaluations of others. When endorsement of benevolent ageism and prescriptive succession stereotypes was lower, older candidates were seen as significantly better past performers than younger candidates, but this effect disappeared when endorsement of ageist attitudes was higher. The same pattern of results emerged in terms of willingness to hire at a level approaching significance. When raters view older people in a patronising and protective manner, or believe that older people should pass on positions of power to younger people, they discount older workers past achievements and view them as less hireable. Furthermore, the endorsement of ageist stereotypes can interact with candidate age and organisational context to determine candidate evaluations. When endorsement of prescriptive succession stereotypes was lower, older candidates were viewed as marginally higher than younger candidates in past performance in the succession condition, but significantly so in the achievement

condition. When endorsement of prescriptive succession stereotypes was higher, younger and older candidates were viewed as equally high in past performance in both organisational contexts.

It is found that paternalistic ageism, in the form of benevolent ageist attitudes, can encourage the discounting of older target's experience and achievement. It is also found that older candidates who violate prescriptive age stereotypes of succession, are subject to backlash in which their past performance is similarly discounted. These results have a theoretical value in identifying, it would appear for the first time, that benevolent ageism can negatively impact perceptions of older workers' performance, and that a backlash against female job candidates who violate prescriptive gender stereotypes (Tyler & McCullough, 2009) also extends to older candidates who violate prescriptive age stereotypes. There is also an applied value in highlighting a need for organisations to create recruitment processes that mitigate the effects of societal age stereotypes, both positive and negative, on candidate selection.

5.5.1 Limitations and future directions.

The three studies here offer three limitations that also offer directions for future study. Firstly, Study 7 employs a cross-sectional design which reveals relationships between age, stereotype endorsement and self-rated leadership potential, but does not establish causality. It would seem reasonable to expect that attitudes toward age would precede self-evaluations of leadership potential, as supported by stereotype embodiment theory (Eagly & Karau, 2002), but it is also possible that beliefs about our own ability to lead could affect self-rated competence and warmth. Research in an experimental paradigm could more confidently allow us to isolate the underlying mechanisms behind a pro-youth bias in self-rated leadership potential.

Secondly, the results of Studies 8 and 9 suggest that societal context may have more influence on a pro-youth bias and preference for potential than organisational context, although this difference was not tested within the same experiment. A future study could extend these results by comparing the salience of societal stereotype cues and organisational stereotypes cues in leadership recruitment.

Thirdly, exploratory analysis revealed intersectional differences in the impact of age stereotypes on self-evaluations. However, gender was not manipulated in Study 9 and so it was not possible to test for the same intersectional effects on other-evaluations. The results revealed a double jeopardy effect in which the cumulative negative effect of older age with female gender resulted in lower self-rated leadership potential for older women who endorsed competence stereotypes. However, evaluations of others have previously evidenced an intersectional escape in which older women are punished less for violating prescriptive age stereotypes than older men (Martin et al., 2019). Furthermore, self-evaluations tend to be more positive than other-evaluations (Ito, 1999; Marshall et al., 1992) and raters can value potential more in themselves than others (Williams et al., 2012). Therefore, there could be a double jeopardy effect on self-evaluations and an intersectional escape on other-evaluations in terms of leadership potential. Future research testing self- versus other-evaluations employing targets of mixed age and gender, would allow us to better understand the interplay between target (self vs. other), gender (male vs. female) and age (older vs. younger) on stereotype endorsement and target evaluations.

5.6 Conclusion

Studies 7, 8, and 9 extend the research into the impact of candidate age and candidate type on leadership evaluations. Firstly, there was evidence for a pro-youth bias in self-rated leadership potential, mirroring the pro-youth bias uncovered in other-evaluations. Secondly, it was found that age stereotype endorsement moderated the effects of age on self- and other

evaluations. For self-evaluations, endorsement of age competence stereotypes negatively impacted self-rated leadership potential for older women, whereas endorsement of warmth age stereotypes negatively impacted self-rated leadership potential for older men. For other-evaluations, benevolent ageist attitudes and endorsement of prescriptive succession stereotypes were associated with the discounting of older targets' experience and past performance. Thirdly, it was found that stereotype reinforcement, in the form of organisational culture cues, did not moderate the relationship between age and self-evaluations. Furthermore, organisational context did not moderate the preference for leadership potential. Stereotype embodiment processes may be influential, such that societal context and age stereotypes internalised over the lifespan, may have more impact on a pro-youth bias and preference for potential in leadership recruitment than organisational context.

Chapter Six: Mini-meta-analysis and General Discussion

Chapter 6 synthesises results from nine studies exploring the extent to which candidate type (leadership potential vs. performance) and candidate age (younger vs. older) impact target evaluations in leadership recruitment, and interact to determine candidate preferences. It was expected that i) candidates with leadership potential would be preferred over candidates with leadership performance, ii) younger candidates would be preferred over older candidates, and iii) the preference for leadership potential will be accentuated when the candidate is younger, and attenuated when they are older.

After outlining the theoretical approach of the thesis, a mini-meta-analysis aggregates the results of quantitative experimental studies to identify the combined effect size of candidate type and candidate age on measures of performance, leadership and willingness to hire. It finds that leadership potential candidates are significantly more associated with future performance, whereas leadership performance candidates are significantly more associated with past performance, leadership, and willingness to hire. It also finds that younger candidates are significantly more associated with future performance and willingness to hire, whereas older candidates are significantly more associated with past performance. It identifies a moderating role for study design and measure type, such that biased evaluations are more likely to emerge in within-participants designs and on objective measures.

After presenting an overview of the studies conducted as part of this thesis, this chapter explores the theoretical implications of the results of this thesis. It discusses limitations of the studies and implications for practice, and highlights future directions for research. The chapter concludes by finding a preference for leadership potential over leadership performance on measures of future performance, a pro-youth bias on measures of

perceived future performance and willingness to hire, and a role for a pro-youth bias in driving the preference for leadership potential.

6.1 Theoretical approach

A small body of research has found a preference for leadership potential over leadership performance, in which candidates with leadership potential are preferred over candidates with leadership performance (Tormala et al., 2012; Sun et al., 2015). The preference for leadership potential may be influenced by demographic group membership, and Player et al. (2019) found that it presented an advantage to male but not female leadership candidates. Sun et al. (2015) also found an association between leadership potential and candidate age in China, such that the preference for leadership potential was partly driven by perceived candidate age and candidates with leadership potential were preferred partly because they were believed to be younger than candidates with leadership performance. However, the evidence for a pro-youth bias in the preference for leadership potential is mixed and Tormala et al. (2012) found no association with perceived candidate age and leadership potential in the US.

In this thesis, I explored a possible pro-youth bias in the preference for leadership potential effect. To do this, I drew on management and organisational literature (Church & Silzer, 2014; Dries & Pepermans, 2012; Marshall-Mies et al., 2000) and social psychological theory and research on leadership (Eagly, 1987; Eagly & Karau, 2002; Hirschfeld & Thomas, 2011; Sczesny, 2004) and age (Abrams et al., 2016; Cuddy et al., 2005; Fiske, 1998; Fiske et al., 2002; Gordon & Arvey, 2004; North & Fiske, 2013; Posthuma & Campion, 2009). In particular, I investigated whether role congruity theory (Eagly & Karau, 2002) could be translated into an age context and explain a pro-youth bias in perceived leadership potential. Eagly and Karau (2002) argue that the under-representation of women in leadership roles can be explained by an incongruity between female gender roles and leadership roles, as communal attributes typically associated with women fit less well with expectations of leaders than agentic attributes typically associated with men. This incongruity results in a

prejudice against women in leadership, such that women are less preferred as potential leaders and receive backlash if they do enact agentic leadership behaviours.

I theorised that role congruity theory (Eagly & Karau, 2002) could translate into an age context and that a pro-youth bias in perceived leadership potential may be driven by underlying age stereotypes. Descriptive age stereotypes position older people as high in warmth but low in competence (Fiske et al., 2002), prescriptive stereotypes of succession state that older people should cede positions of power (North & Fiske, 2013), whereas workplace age stereotypes describe older workers as low in potential (Posthuma & Campion, 2009). Therefore, incongruity between stereotypes of older workers and leadership potential, may drive a pro-youth bias in perceived leadership potential that disadvantages older candidates in leadership evaluations.

In the second chapter of this thesis I conducted a systematic literature review with two principal aims: 1) to explore empirical evidence for a pro-youth bias accentuating a preference for leadership potential, and 2) to identify any evidence for role congruity theory (Eagly & Karau, 2002) translating into an age context, with younger candidates preferred on evaluations of leadership potential due to underlying age stereotypes. This review found evidence for a lack of fit between stereotypes of leadership and stigmatised demographic groups that disadvantaged older, female, ethnic-minority, and gay candidates in evaluations of leadership potential. I incorporated these findings into a new leadership potential congruity model outlining the relationship between target demographics, perceived leadership potential, and hiring decisions, and the contextual variables that influence this relationship.

This model provided the framework for the studies conducted as part of this thesis, and I designed nine studies to test aspects of the model. Firstly, I investigated the attributes associated with leadership potential, leadership performance, younger leaders, and older

leaders, and the attributes most valued by practitioners in the recruitment of future leaders (Chapter 3). Secondly, I experimentally tested the effects of candidate type (potential vs. performance) and candidate age (younger vs. older) on leadership evaluations in an organisational recruitment context (Chapter 4). Thirdly, I tested possible moderators of the relationship between candidate type, candidate age, and leadership evaluations, including target (self and other), target gender, age stereotype endorsement, age stereotype reinforcement, and organisational context (Chapter 5).

6.2 Mini-meta-analysis

Finally, in order to integrate findings across the thesis and resolve inconsistencies in results, I carried out a meta-analysis. This is an established tool in psychological research, allowing researchers to aggregate findings from multiple studies to assess how results may generalise across the general population (Glass, 1977; Bobko & Stone-Romero, 1998). It enables a comparison of effects sizes across different studies in a way that takes into account sample size and methodological variance to increase validity (Coolican, 2009), and can offer more accurate estimates of relationships between variables than single studies (Schmidt & Hunter, 2014). Meta-analyses have been widely used in the social sciences and psychology, and in human resource management research into recruitment, selection and assessment, and performance appraisals (Stone & Rosopa, 2017). Therefore, a mini-meta-analysis was conducted to identify the combined effect size of candidate type and candidate age on leadership evaluations, focusing on measures of performance, leadership and willingness to hire. The mini-meta-analysis also explored potential moderating variables, specifically study design (within- vs. between participants) and measure type (objective vs. subjective).

6.2.1 Method.

The mini-meta analysis was carried out using Meta-essentials (Suurmond et al., 2017), a tool consisting of a series of excel workbooks that allows for the synthesis of effect sizes from different studies. This tool was selected because it has been validated through comparison of results with other established meta-analysis tools and successfully used in published social psychology research (E.g., Barreto & Hogg, 2017; van Houwelingen et al., 2018), including as a mini-meta-analysis tool to explore effects across studies within one research programme (van Houwelingen et al., 2018). It is also free to access and does not require advanced programming knowledge or skills. The analysis used Meta-essentials workbook 1, as this is suitable for any type of effect size (Suurmond et al., 2017) and the author of the tool advised that this workbook could include both continuous and binary choice data in one analysis.

The scope of the analysis included studies presented within this thesis (Studies 1 to 9) and other studies completed as part of the research programme but not included in the final thesis (Studies 10 to 13). The analysis tested the effects of two independent variables: candidate type (potential vs. performance) and candidate age (younger vs. older). It tested the effects on four dependent measures that had been tested in more than one study: past performance, future performance, leadership, and willingness to hire. In order to combine the different types of data, analytical output to be included in the meta-analysis was transformed into correlation coefficients and standard errors were calculated. See Appendix I for further detail on how data were calculated for the meta-analysis.

The data met the assumptions for meta-analysis using Meta-essentials, in that independent and dependent variables were precisely defined, the unit in which the effect is expected to occur is specified as within persons, all relevant empirical studies within the

research programme were included, all studies included were methodologically sound, and effect size measures used were comparable and in the same scale (Hak et al., 2016).

Stereotyped evaluations are more likely to emerge on objective rather than subjective measures (Biernat & Manis, 1994; Biernat & Vescio, 1993), and age-biased evaluations tend to be elicited by contexts involving direct comparison (Posthuma & Campion, 2009).

Therefore, where appropriate, the mini-meta-analysis also tested two potential moderating variables: measure type (objective vs. subjective) and study design (within- vs. between-participants). See Table 6.1 for the details of all measures and data entered into the meta-analysis.

Table 6.1

Input data for meta-analysis

Independent variable	Dependent variable	Study	<i>N</i>	Study design	Measure type	Original statistic	<i>R</i>	<i>R</i> ²	<i>SE</i>
Candidate type	Past performance								
		4	135	Within	Objective	$\chi^2(1) = 39.47, p < .001$	.54	.29	0.07
		5	166	Within	Objective	$\chi^2(1) = 70.27, p < .001$	.65	.42	0.06
		5	166	Within	Objective	$T(165) = -8.89, p < .001$	.25	.06	0.08
		9	164	Between	Subjective		.41	.17	0.07
Candidate age	Past performance								
		4	135	Within	Objective	$\chi^2(1) = 11.63, p = .001$	.29	.09	0.08
		5	166	Within	Objective	$\chi^2(1) = 18.89, p < .001$	.34	.11	0.07
		5	166	Within	Objective	$T(165) = -5.87, p < .001$	.25	.06	0.08

Independent variable	Dependent variable	Study	<i>N</i>	Study design	Measure type	Original statistic	<i>R</i>	<i>R</i> ²	<i>SE</i>
		9	164	Between	Subjective		.21	.04	0.08
Candidate type	Future performance								
		4	135	Within	Objective	$\chi^2(1) = 39.47, p < .001$	-.54	.29	0.07
		5	166	Within	Objective	$\chi^2(1) = 4.72, p = .03$	-.17	.03	0.08
		5	166	Within	Objective	$T(165) = 3.56, p < .001$	-.25	.06	0.08
		9	164	Between	Subjective		-.17	.03	0.08
Candidate age	Future performance								
		4	135	Within	Objective	$\chi^2(1) = 41.67, p < .001$	-.56	.31	0.07
		5	166	Within	Objective	$\chi^2(1) = 104.96, p < .001$	-.80	.63	0.05
		5	166	Within	Objective	$T(165) = 11.34, p < .001$	-.25	.06	0.07
		9	164	Between	Subjective		-.03	.001	0.08

Independent variable	Dependent variable	Study	<i>N</i>	Study design	Measure type	Original statistic	<i>R</i>	<i>R</i> ²	<i>SE</i>
Candidate type	Leadership								
	<i>Leadership scale</i>	4	135	Within	Subjective	$T(134) = -3.18, p = .002$	.26	.07	0.08
	<i>Best leader choice</i>	4	135	Within	Objective	$\chi^2(1) = 12.45, p < .001$	.30	.09	0.08
	<i>Best leader choice</i>	5	166	Within	Objective	$\chi^2(1) = 20.27, p < .001$	.35	.12	0.07
	<i>Best leader points</i>	5	166	Within	Objective	$T(165) = -4.55, p < .001$	.25	.06	0.07
	<i>Leadership scale</i>	9	164	Between	Subjective		.26	.07	0.08
Candidate age	Leadership								
	<i>Leadership scale</i>	4	135	Within	Subjective	$T(134) = -1.90, p = .06$	.16	.03	0.09
	<i>Best leader choice</i>	4	135	Within	Objective	$\chi^2(1) = 1.25, p = .26$	.10	.01	0.09
	<i>Best leader choice</i>	5	166	Within	Objective	$\chi^2(1) = 0.10, p = .76$	-.02	.001	0.08
	<i>Best leader points</i>	5	166	Within	Objective	$T(165) = 1.03, p = .30$	-.08	.01	0.08

Independent variable	Dependent variable	Study	<i>N</i>	Study design	Measure type	Original statistic	<i>R</i>	<i>R</i> ²	<i>SE</i>
	<i>Leadership scale</i>	9	164	Between	Subjective		.08	.01	0.08
Candidate type	Willingness to hire								
	<i>Willingness to hire scale</i>	4	135	Within	Subjective	$T(134) = -0.63, p = .53$	.05	.003	0.09
	<i>Hire choice</i>	4	135	Within	Objective	$\chi^2(1) = 0.01, p = .93$	.01	.0001	0.09
	<i>Employ choice</i>	4	135	Within	Objective	$\chi^2(1) = 0.01, p = .93$	.01	.0001	0.09
	<i>Best appt. choice</i>	4	135	Within	Objective	$\chi^2(1) = 5.40, p = .02$	.20	.04	0.08
	<i>Willingness to hire scale</i>	5	166	Within	Subjective	$T(165) = -0.76, p = .45$	.06	.004	0.08
	<i>Hire choice</i>	5	166	Within	Objective	$\chi^2(1) = 7.51, p = .006$	.21	.05	0.08
	<i>Hire points</i>	5	166	Within	Objective	$T(165) = -2.55, p = .012$	.19	.04	0.08
	<i>Employ choice</i>	5	166	Within	Objective	$\chi^2(1) = 4.38, p = .036$	.16	.03	0.08

Independent variable	Dependent variable	Study	<i>N</i>	Study design	Measure type	Original statistic	<i>R</i>	<i>R</i> ²	<i>SE</i>
	<i>Employ points</i>	5	166	Within	Objective	$T(165) = -2.59, p = .011$	.20	.04	0.08
	<i>Best appt. choice</i>	5	166	Within	Objective	$\chi^2(1) = 5.84, p = .016$	.19	.04	0.08
	<i>Best appt. points</i>	5	166	Within	Objective	$T(165) = -2.63, p = .009$	.20	.04	0.08
	<i>Willingness to hire scale</i>	6	130	Between	Subjective		.07	.01	0.09
	<i>Willingness to hire scale</i>	9	164	Between	Subjective		.38	.14	0.07
	<i>Willingness to hire scale</i>	10 *	130	Between	Subjective		.07	.01	0.09
	<i>Willingness to hire scale</i>	11 *	131	Between	Subjective		.14	.02	0.09

Independent variable	Dependent variable	Study	<i>N</i>	Study design	Measure type	Original statistic	<i>R</i>	<i>R</i> ²	<i>SE</i>
	<i>Willingness to hire scale</i>	12 *	130	Between	Subjective		-.07	.01	0.09
	<i>Willingness to hire scale</i>	13 *	130	Between	Subjective		-.02	.004	0.09
Candidate age	<i>Willingness to hire scale</i>								
	<i>Willingness to hire scale</i>	4	135	Within	Subjective	$T(134) = 0.68, p = .50$	-.06	.004	0.09
	<i>Hire choice</i>	4	135	Within	Objective	$\chi^2(1) = 12.45, p = .001$	-.30	.09	0.08
	<i>Employ choice</i>	4	135	Within	Objective	$\chi^2(1) = 13.70, p < .001$	-.32	.10	0.08
	<i>Best appt. choice</i>	4	135	Within	Objective	$\chi^2(1) = 3.92, p = .048$	-.17	.03	0.09
	<i>Willingness to hire scale</i>	5	166	Within	Subjective	$T(165) = 6.09, p < .001$	-.25	.06	0.08

Independent variable	Dependent variable	Study	<i>N</i>	Study design	Measure type	Original statistic	<i>R</i>	<i>R</i> ²	<i>SE</i>
	<i>Hire choice</i>	5	166	Within	Objective	$\chi^2(1) = 12.45, p = .001$	-.27	.08	0.07
	<i>Hire points</i>	5	166	Within	Objective	$T(165) = 7.29, p < .001$	-.25	.06	0.08
	<i>Employ choice</i>	5	166	Within	Objective	$\chi^2(1) = 13.70, p < .001$	-.29	.08	0.07
	<i>Employ points</i>	5	166	Within	Objective	$T(165) = 7.23, p < .001$	-.25	.06	0.08
	<i>Best appt. choice</i>	5	166	Within	Objective	$\chi^2(1) = 3.92, p = .048$	-.15	.02	0.08
	<i>Best appt. points</i>	5	166	Within	Objective	$T(165) = 6.16, p < .001$	-.25	.06	0.08
	<i>Willingness to hire scale</i>	6	130	Between	Subjective		-.19	.04	0.09
	<i>Willingness to hire scale</i>	9	164	Between	Subjective		.14	.02	0.08
	<i>Willingness to hire scale</i>	10 *	130	Between	Subjective		.04	.002	0.09

Independent variable	Dependent variable	Study	<i>N</i>	Study design	Measure type	Original statistic	<i>R</i>	<i>R</i> ²	<i>SE</i>
	<i>Willingness to hire scale</i>	11 *	131	Between	Subjective		-.09	.01	0.09
	<i>Willingness to hire scale</i>	12 *	130	Between	Subjective		-.03	.001	0.09
	<i>Willingness to hire scale</i>	13 *	130	Between	Subjective		.01	.0001	0.09

Note. Candidate type: 1 = potential, 2 = performance. Candidate age: 1 = younger, 2 = older. * These studies were carried out as part of this research programme but are not included as part of this thesis.

6.2.2 Results.

Past performance.

Analysis of the relationship between candidate type and past performance revealed a significant large combined effect size, $r = .47$, $SE = 0.09$, 95% CI 0.19, 0.74, 95% PI -0.10, 1.03, such that performance candidates were associated with higher perceived past performance than potential candidates. Heterogeneity tests were significant, $Q = 17.93$, $p < .001$, and a large percentage of the variance in effect sizes was associated with variance between studies ($I^2 = 83\%$). The low number of studies and range of potential moderators did not allow for meaningful subgroup analysis.

Analysis of the relationship between candidate age and past performance revealed a significant medium combined effect size, $r = .28$, $SE = 0.03$, 95% CI 0.19, 0.37, 95% PI 0.19, 0.37, such that older candidates were associated with higher perceived past performance than younger candidates. Heterogeneity tests were non-significant, $Q = 1.65$, $p = .65$, with a low percentage of the variance in effect sizes associated with variance between studies ($I^2 < 01\%$), and therefore moderation analysis was not conducted.

Future performance.

Analysis of the relationship between candidate type and future performance revealed a non-significant combined effect size, $r = -.29$, $SE = 0.09$, 95% CI -0.57, 0.00, 95% PI -0.89, 0.32. However, accompanying z -tests were significant, $z = -3.21$, $p = .001$, finding that potential candidates were more associated with perceived future performance than performance candidates. Heterogeneity tests were significant, $Q = 17.43$, $p = .001$, and a large percentage of the variance in effect sizes was associated with variance between studies ($I^2 = 83\%$). The low number of studies and range of potential moderators did not allow for meaningful subgroup analysis.

Analysis of the relationship between candidate age and future performance revealed a non-significant combined effect size, $r = -.41$, $SE = 0.17$, 95% CI $-0.95, 0.13$, 95% PI $-1.63, 0.81$. However, accompanying z -tests were significant, $z = -2.44$, $p = .007$ (one-tailed), finding that younger candidates were more associated with perceived future performance than older candidates. Heterogeneity tests were significant, $Q = 83.94$, $p < .001$, and a large percentage of the variance in effect sizes was associated with variance between studies ($I^2 = 96\%$). The low number of studies and range of potential moderators did not allow for meaningful subgroup analysis.

Leadership.

Analysis of the relationship between candidate type and leadership revealed a significant and approaching medium combined effect size, $r = .29$, $SE = 0.02$, 95% CI $0.23, 0.34$, 95% PI $0.23, 0.34$, such that performance candidates were associated with higher perceived leadership than potential candidates. Heterogeneity tests were non-significant, $Q = 1.34$, $p = .85$, with a low percentage of the variance in effect sizes associated with variance between studies ($I^2 < 01\%$), and therefore moderation analysis was not conducted.

Analysis of the relationship between candidate age and leadership revealed a non-significant combined effect, $r = .04$, $SE = 0.04$, 95% CI $-0.08, 0.16$, 95% PI $-0.14, 0.22$. Heterogeneity tests were also non-significant, $Q = 5.28$, $p = .26$, with a low percentage of the variance in effect sizes associated with variance between studies ($I^2 = 24\%$), and therefore moderation analysis was not conducted.

Willingness to hire.

Analysis of the relationship between candidate type and willingness to hire revealed a significant, small combined effect size, $r = .13$, $SE = 0.03$, 95% CI $0.07, 0.19$, 95% PI $-0.05, 0.31$, such that performance candidates were associated with higher willingness to hire than

potential candidates. Heterogeneity tests were significant, $Q = 30.98$, $p = .01$, with a medium percentage of the variance in effect sizes associated with variance between studies ($I^2 = 48\%$). This evidence of between-study variation meant that it was appropriate to carry out moderation analysis (Hak et al., 2016).

When analysis was split by subgroup based on study design (1 = within-participants; 2 = between-participants), the combined effect of candidate type on willingness to hire was significant for within-participants designs, $r = .14$, 95%CI 0.09, 0.20, but not for between-participants designs, $r = .10$, 95%CI -0.07, 0.27. When analysis was split by subgroup based on measure type (1 = objective; 2 = subjective), the combined effect of candidate age on willingness to hire was significant on objective measures, $r = .16$, 95%CI 0.10, 0.22, but not on subjective measures, $r = .09$, 95%CI -0.03, 0.21.

Analysis of the relationship between candidate age and willingness to hire revealed a significant, small combined effect size, $r = -.16$, $SE = 0.03$, 95%CI -0.23, -0.09, 95%PI -0.40, 0.08, such that younger candidates were associated with higher willingness to hire than older candidates. Heterogeneity tests were significant, $Q = 44.41$, $p < .001$, with a large percentage of the variance in effect sizes associated with variance between studies ($I^2 = 64\%$). This evidence of between-study variation meant that it was appropriate to carry out moderation analysis (Hak et al., 2016).

When analysis was split by subgroup based on study design (1 = within-participants; 2 = between-participants), the combined effect of candidate age on willingness to hire was significant for within-participants designs, $r = -.24$, 95%CI -0.29, -0.19, but not for between-participants designs, $r = -.02$, 95%CI -0.14, 0.10. When analysis was split by subgroup based on measure type (1 = objective; 2 = subjective), the combined effect of candidate age on

willingness to hire was significant on objective measures, $r = -.25$, 95% CI -0.30, -0.21, but not on subjective measures, $r = -.05$, 95% CI -0.16, 0.05.

6.2.3 Discussion.

The mini-meta-analysis revealed significant combined effects of candidate type on past performance, future performance, leadership and willingness to hire. There was evidence for a preference for potential on measures of future performance, with a medium-sized relationship between candidate type and perceived future performance that favoured leadership potential candidates. However, significance tests were ambiguous and there was significant between-study variance that merits further investigation. On all other measures there was evidence for a preference for performance. There was a large and significant relationship between candidate type and perceived past performance favouring leadership performance candidates, although there was significant variation between studies. There was a medium and significant association between candidate type and perceived leadership favouring leadership performance candidates. The effect demonstrated high homogeneity and significant prediction intervals, suggesting a meaningful and significant effect with predictive power. There was also a small but significant association between candidate type and willingness to hire that favoured leadership performance candidates, and moderation analysis suggested that this emerged in within-participants designs and objective measures.

There was also evidence for a pro-youth bias on measures of future performance and willingness to hire. There was a medium-sized relationship between candidate age and perceived future performance to the advantage of younger candidates, although significant tests were ambiguous and there was significant variation between studies. There was a small but significant relationship between candidate age and willingness to hire that favoured younger candidates, and moderation analysis found that this emerged in within-participants

studies and with objective measures. However, there was a preference for older candidates in terms of past performance. A medium-sized relationship between candidate age and past performance that favoured older candidates demonstrated homogeneity and significant prediction intervals. Younger candidates were attributed higher future performance and willingness to hire than older candidates, despite older candidates being associated with higher past performance.

The results of the meta-analysis offer some evidence for the preference for leadership potential previously identified in leadership evaluations (Tormala et al., 2012). This appears limited to measures of future performance and there was a preference for leadership performance on hiring measures. The meta-analysis identifies a limitation to the preference for leadership potential over leadership performance, echoing previous research which found that a preference for potential on evaluations of future performance did not translate into a hiring advantage (Player et al, 2019). Conversely, a pro-youth bias in perceived future performance did translate into a small advantage in willingness to hire, in line with previous research that has found a pro-youth bias in hiring decisions (E.g., Abrams et al., 2016; Posthuma & Campion, 2012) but extending this into a leadership context. Although older candidates were associated with higher past performance, younger candidates were associated with higher future performance and willingness to hire.

Analysis of the relationships between candidate type, candidate age and willingness to hire found that this was moderated by study design and measure type. There were significant relationships between leadership performance and willingness to hire, and younger candidates and willingness to hire, in within-participants designs and on objective measures, but not in between-subjects designs and on subjective measures. This appears consistent with previous research that has found that stereotyped thinking is more likely to emerge on comparative, objective measures (Biernat & Manis, 1994; Biernat & Vescio, 1993; Posthuma

& Campion, 2009). It may also reflect the subjective nature of age categorisation (Abrams et al., 2011; Swift et al., 2018) such that the influence of candidate age on evaluations is based on their *relative* age in comparison with another target. There was also evidence of significant variation between studies, particularly on measures of future performance. The limited range of studies and measures included here means that meaningful moderation analysis was not always possible, and further studies are needed to explore this variation and test whether the moderating role of study design and measure type applies to measures beyond willingness to hire.

6.3 General Discussion

6.3.1 Overview of studies.

The aim of this thesis was to explore the extent to which candidate type (leadership potential vs. performance) and candidate age (younger vs. older) impact target evaluations in leadership recruitment, and interact to determine candidate preferences. It was expected that i) candidates with leadership potential would be preferred over candidates with leadership performance, ii) younger candidates would be preferred over older candidates, and iii) the preference for leadership potential will be accentuated when the candidate is younger, and attenuated when they are older.

Studies 1 and 2.

Studies 1 and 2 were descriptive studies, exploring the attributes and tasks associated with leadership potential, leadership performance, younger leaders, and older leaders. They tested 40 attributes and 20 tasks that the literature suggested would be associated leadership potential and leadership performance (Eg. Dries & Pepermans, 2012; Marshall-Mies et al., 2000), and younger and older worker stereotypes (Posthuma & Campion, 2009; Abrams et al., 2016; North & Fiske, 2013; Spisak et al., 2014). Participants indicated the extent to which the attributes and tasks were typically associated with leadership potential, leadership performance, younger leaders, and older leaders, and also the importance of the 40 attributes to good leadership.

Leadership potential was associated with attributes aligned with learning and drive, in line with recognised predictors of leadership potential (Church & Silzer, 2014; Dries & Pepermans, 2012), but only one leadership potential tasks, succession, was more associated with potential than performance. Leadership performance was associated with attributes concerned with concrete knowledge, skills and behaviours, whereas leadership performance

tasks and most leadership potential tasks were more associated with leadership performance than potential. The attributes and tasks associated with younger and older leaders aligned with worker age stereotypes (Posthuma & Campion, 2009; Swift & Steeden, 2020). Contrary to the preference for leadership potential and pro-youth bias, the aggregate value of leadership performance attributes was higher than that for leadership potential attributes, and the attributes associated with older leaders were valued higher than those associated with younger leaders. These studies were the first to identify a gap between recognised antecedents of leadership potential and *perceived* leadership potential. They also offered evidence for a relationship between candidate type and candidate age, with an alignment between the attributes associated with leadership and younger leaders, and leadership performance and older leaders.

Study 3.

Study 3 took a qualitative approach to explore the leadership attributes most valued in future leaders. Four focus groups were run with a total of 20 participants experienced in leadership selection. Thematic analysis identified five key themes indicative of an ideal future leader: being able to form strategy and drive change, engage people, be emotionally intelligent and resilient, and fit well with organisational culture, vision and values.

The themes may offer a mixed advantage to candidates of different types and ages. Candidates with leadership potential and younger leaders may be advantaged by a focus on leaders who can drive change, whereas candidates with leadership performance and older leaders may be advantaged by a value on being strategic and able to influence others, as well as homosocial hiring tendencies. The theme of organisational fit suggests that organisational context may moderate candidate preferences, mirroring previous experimental research (Spisak et al., 2014). Furthermore, organisational fit has also been proposed as a vehicle for

unconscious bias (Knowledge@Wharton, 2015; Reynolds Lewis, 2015), and so this theme may offer a route for bias based on candidate type or age in leadership evaluations.

Studies 4-6.

Studies 4, 5 and 6 were experimental vignette-based studies, in which participants evaluated leadership candidate profiles manipulated to reflect either leadership potential or leadership performance, and either younger or older leaders. Candidate type was manipulated via scores on fictitious tests of leadership potential and leadership performance, in which candidates scored highly on one measure and averagely on the other. Candidate age was manipulated by either stated date of birth (Study 4) or photographs of candidate faces (Studies 5 and 6). Candidates were assessed on measures of performance and leadership and participants' willingness to hire.

Firstly, these studies demonstrated that the preference for leadership potential over leadership performance was restricted to measures of future performance. On measures of leadership and willingness to hire, there was a preference for leadership performance over potential. This extends previous research into the preference for potential (Tormala et al., 2012) and identifies a boundary condition suggested by previous studies (Player et al., 2019). Secondly, there was evidence for a pro-youth bias on measures of future performance and willingness to hire, despite older candidates possessing higher perceived past performance than younger candidates. These results extend previous research finding a pro-youth bias in hiring (Abrams et al., 2016) into a leadership context. Thirdly, the studies provided evidence for an interaction between candidate age and type that advantages younger candidates with potential, but not older candidates with potential. This offers initial support for a pro-youth bias accentuating the preference for leadership potential in the UK, as previously identified in China (Sun et al., 2015).

Studies 7-8.

Studies 7 and 8 explored the relationship between target age and self-rated leadership potential. Study 7 was a correlational study which explored the relationship between target age and self-rated leadership potential, investigating whether this relationship differed depending on target gender, and whether it was moderated by endorsement of age stereotypes. Study 8 similarly tested differential effect of target age between genders, this time in a quasi-experimental paradigm that tested the effects of target age and age stereotype reinforcement, in the shape of age stereotyped organisational cultures, on self-rated leadership potential and job-related attitudes.

Study 7 identified a negative relationship between target age and self-rated leadership potential, providing evidence for the first time that a pro-youth bias in evaluations of others' leadership potential (Hirschfeld et al., 2011; Sun et al., 2015), translates to self-evaluations. It also found that target age interacted with target gender and age stereotype endorsement to predict self-rated leadership potential. Endorsing competence stereotypes was negatively associated with self-rated leadership potential for older women only, suggesting that older women are disadvantaged by the additive effects of negative age and gender stereotypes (Duncan & Loretto, 2004). Endorsing warmth stereotypes was associated with lower self-rated leadership potential for older men only, which may represent negative effects of a feminisation of older people as high warmth stereotypes of women and older people align (Kite et al., 1991). However, in Study 8 target age affected job attitudes such as job appeal and job fit, but not self-rated leadership potential. Societal age stereotypes may affect self-evaluations more than organisational age stereotypes. This may reflect an ongoing internalisation of age stereotypes over the lifecourse (Levy, 2009) and a higher prevalence of negative age stereotypes in general society than corporate culture (Kroon et al., 2018).

Study 9.

Study 9 returned to other-evaluations with an experimental study investigating the impact of candidate age and candidate type on leadership evaluations, and the extent to which they were moderated by endorsement of ageist attitudes and stereotype reinforcement (organisational culture). Previous studies had found that effects of candidate type tended to emerge on measures involving direct comparison of candidates (Studies 4-6). This study employed a between-participants paradigm and subjective measures to test the extent to which effects emerged in a context without direct candidate comparison.

There was a preference for leadership potential over leadership performance on measures of future performance, which was accentuated when the candidate was younger. However, the pro-youth bias on hiring measures identified in Studies 4 to 6 reversed and older candidates were viewed as more hireable. There were less significant effects of candidate age on evaluations (compared to Studies 4-6), which may reflect the measures employed as stereotyped decision making is less likely to emerge on subjective measures (Biernat & Mamiş, 1994; Biernat & Vescio, 1993) and age bias less likely to emerge without direct comparison (Posthuma & Campion, 2009). For the first time, we also found that ageist attitudes moderated the effects of candidate age on leadership evaluations. Older candidates had higher perceived past performance and willingness to hire than younger candidates, but only when benevolent ageism and succession stereotype endorsement was lower. When the evaluator believes that older people should be protected and looked after (benevolent ageism, Cary et al., 2017) and cede positions of power to the young (North & Fiske, 2013), this can disadvantage older candidates in leadership recruitment.

6.3.2 Theoretical implications.

Leadership potential.

Research into leadership potential has sought to clarify the construct by identifying its antecedents, such as cognitive ability (Dries & Pepermans, 2012), emotional stability (Allen et al., 2014) and problem solving skills (Troth & Gyvetvey, 2014). This in turn has led to the development of models of leadership potential that both encapsulate its known antecedents and offer directions for future research (E.g., Dries & Pepermans, 2012; Church & Silzer, 2014). In parallel, a growing body of research has identified a preference for leadership potential over leadership performance, in which targets with leadership potential are evaluated more positively in a recruitment scenario than targets with leadership performance (Player et al., 2019; Tormala et al., 2012; Sun et al., 2015). The first aim of this thesis was to continue this research into the preference for leadership potential, and it contributes to this area of research in three principal ways.

Firstly, the studies here offer evidence that leadership potential is a concept which requires further refining in terms of definition and operationalisation. Participants were less likely to associate attributes with leadership potential than leadership performance, younger leaders and older leaders. The concrete tasks designed to reflect the recognised antecedents of leadership potential tended not to be identified as such. This could indicate that participants lack awareness of leadership potential as a concept, particularly in terms of the student sample employed in Study 1. Alternatively, it may suggest a gap between recognised predictors of leadership potential (Church & Silzer, 2014; Dries & Pepermans, 2012) and *perceived* leadership potential. Other ill-defined concepts in recruitment have been posited as pathways to bias, such as perceived organisational fit (Knowledge@Wharton, 2015; Reynolds Lewis, 2015), and therefore *perceived* leadership potential may present a route for

unconscious bias in leadership evaluations. As the systematic literature review in this study found evidence that leadership potential tends to be attributed to members of privileged groups, the preference for leadership potential may perpetuate a homogeneity in organisational leadership.

Secondly, this thesis finds evidence for a preference for leadership potential over leadership performance, but only on measures of future performance. Meta-analysis revealed a significant association between leadership potential and perceived future performance, with a combined medium effect across four studies. This bias did not translate into hiring preferences, and the meta-analysis instead revealed a small but significant relationship between leadership performance and willingness to hire. Whereas previous research had aggregated measures of future performance and willingness to hire (Tormala et al., 2012; Sun et al., 2015), by uncoupling these measures we demonstrate that the preference for potential effect is constrained to perceptions of future performance. This distinction has been implied in previous research (Player et al., 2019) but is foregrounded here for the first time.

Thirdly, the studies here highlight contextual variables that can moderate the relationship between candidate type and leadership evaluations. The meta-analysis revealed that candidate type preferences were more likely to emerge in within-participants studies and objective measures. Previous studies into the preference for potential effect have tended to employ within-participants paradigms (Player et al., 2019; Tormala et al., 2012 [Study 3]; Sun et al., 2015). Through testing the preference for leadership potential in between-participants paradigms (Studies 6 and 9), this thesis finds evidence that it may be reliant on social comparison processes (Festinger, 1954) and reflect stereotyped decision-making that is less likely to emerge on subjective measures (Biernat & Mamiş, 1994; Biernat & Vescio, 1993).

Age bias in leadership evaluations.

Descriptive age stereotypes offer a mix of positive and negative old-age stereotypes (Fiske et al., 2002), but older worker stereotypes are more likely to be negative than positive (Posthuma & Campion, 2009). In comparison to younger workers, older workers tend to be perceived as lower performers (Cuddy & Fiske, 2002), more resistant to change (Broadbridge, 2001), and less able to learn (Finkelstein et al., 1995). Age stereotypes have been found to affect hiring decisions to the advantage of younger workers (Abrams et al., 2016), but there is little research into age bias in a leadership context. Greater age may be more prototypical of leadership (Buengeler et al., 2016; Junker & van Dick, 2014; Kearney, 2008), and therefore it is unclear the extent to which a pro-youth bias in recruitment (Abrams et al., 2016) affects evaluations of older leadership candidates. The second aim of this thesis was to address this gap by testing whether target age affects evaluations in a leadership context. Its results offer three core contributions to our understanding of age bias.

Firstly, the meta-analysis revealed that although older candidates were associated with higher past performance, younger candidates were associated with higher future performance and hirability. Although there is evidence for an alignment between older age and leadership prototypes (Buengeler et al., 2016), these studies find for the first time that a pro-youth bias in recruitment (Abrams et al., 2016) translates into a leadership context. In fact, comparison of the effect sizes in Study 5 offers evidence that candidate age may be more influential in determining leadership evaluations than candidate type. The meta-analysis found that this pro-youth bias was more likely to emerge in within-participant studies and on objective measures. This supports research that has found that age bias is less likely to emerge without direct comparison (Posthuma & Campion, 2009), but for this first time demonstrates this in a leadership context.

Secondly, there is evidence that worker age stereotypes translate into a leadership context and drive evaluations. The attributes and tasks associated with younger and older leaders aligned with workplace age stereotypes (e.g., Posthuma & Campion, 2009; Spisak et al., 2014). Evaluations of candidates were driven by underlying age stereotypes, as candidates were perceived as more hireable because they were viewed as more competent than older candidates (Studies 5 and 6). Research has previously found an association between worker age stereotypes and recruitment evaluations (Abrams et al., 2016; Gringart et al., 2005), but this thesis finds evidence for the first time that age stereotypes drive evaluations in a leadership context.

Thirdly, there was evidence that ageist beliefs could moderate evaluations of older leadership candidates. Endorsement of descriptive age stereotypes was associated with lower self-rated leadership potential for older workers (Study 7), supporting a stereotype embodiment approach to ageing in which age stereotypes are internalised, gain relevance as we age, and negatively impact self-perceptions (Levy, 2009). Differences at an intersectional level supported a double jeopardy effect for older women, based on the additive low competency gender and age stereotypes (Duncan & Loretto, 2004), and a negative effect of high-warmth stereotype endorsement for older men that could reflect a feminisation of older people (Kite et al., 1991). Study 9 also found evidence for ageist beliefs moderating other-evaluations. Benevolent ageism was associated with lower perceived past performance for older people, suggesting that paternalistic beliefs about older people can encourage a discounting of the value of older workers' past experience. Aspects of benevolent ageism have been associated with negative consequences for older people, such as health outcomes (Langer & Rodin, 1976) and loss of self-esteem (Nussbaum et al., 2005), but this research demonstrates for the first time negative outcomes in leadership recruitment. Furthermore, higher endorsement of prescriptive succession stereotypes removed a preference for older

candidates on measures of past performance and willingness to hire. Older people can receive backlash for failing to cede resources to the young (North & Fiske, 2013) and this thesis extends this effect into leadership recruitment.

Leadership potential and age.

There is mixed evidence as to whether target age has a role to play in the preference for leadership potential. Tormala et al. (2012) found no difference in the perceived age of leadership potential and leadership performance candidate profiles. Sun et al. (2015) found that leadership potential candidates were perceived as younger than leadership performance candidates, and that leadership potential candidates were preferred over leadership performance candidates because they were perceived to be younger. Sun et al. (2015) posited that this difference in results could be explained by cultural differences, reflecting an association between youth and potential in China but not the USA. However, the role of target age in the preference for leadership potential is under-explored in research and provided the central question for this thesis: Does a pro-youth bias accentuate a preference for leadership potential?

In answering this question, firstly the results of this thesis offer evidence for an association between youth and leadership potential. The attributes associated with leadership potential and younger leaders were aligned and reflected a joint association with learning and drive (Study 1) and leadership potential candidates were perceived as younger than leadership performance candidates (Study 5). This replicates research that has found a pro-youth bias in perceived potential in general (Posthuma & Campion, 2009) and leadership potential specifically (Hirschfeld & Thomas, 2011), and extends it by associating the underlying attributes of leadership potential and younger leaders. As feedback on leadership potential impacts workers' ambition, performance and commitment (Steffans et al., 2018), this could suggest negative motivational consequences for older workers who are less associated with

leadership potential. Furthermore, the alignment between the underlying attributes associated with leadership potential and younger leaders reflect younger worker stereotypes (Posthuma & Campion, 2009; Swift & Steeden, 2020). This association lays the foundation for a role congruity approach (Eagly & Karau, 2002) in which a pro-youth bias in the preference for leadership potential is influenced by congruity between underlying stereotypes of younger workers and leadership potential.

Secondly, I find evidence for a preference for younger candidates with potential over older candidates with potential. There was a preference for leadership potential over performance on measures of future performance, but younger candidates with leadership potential were preferred over older candidates with leadership potential (Studies 4, 5 and 9). The association between youth and leadership potential would appear to advantage younger candidates in perceptions of future performance, and disadvantage older candidates. This provides further support for a role congruity approach to the pro-youth bias in the preference for leadership potential. A congruity between stereotypes of leadership potential and youth can advantage younger candidates, just as a congruity between stereotypes of leadership and age can advantage male candidates (Eagly & Karau, 2002). In this way, the findings here extend role congruity theory and demonstrate its utility in explaining age bias in leadership.

Thirdly, Study 5 found evidence for the preference for leadership potential being driven by perceived age. Candidates with leadership potential were perceived as better future performers, partly because they were perceived to be younger, despite the use of consistent candidate age cues for potential and performance candidates. This replicates the results of Sun et al. (2015) and extends this effect into a UK sample. Sun et al. (2015) argue that cultural differences could explain evidence for a pro-youth bias driving the preference for leadership potential in China (Sun et al., 2015) but not the US (Tormala et al., 2012). However, by identifying a pro-youth bias in the preference for leadership potential in the UK,

which shares an individualistic national culture with the US (Hofstede, 2001), this thesis calls this argument into question. Instead, there may be a universal, cross-cultural pro-youth bias driving the preference for potential, the size of which varies across cultures and which the relatively small sample size employed by Tormala et al. (2012; Study 3) may not have been able to detect.

Fourthly, we find evidence that the counter-stereotypical association of youth and proven performance is advantageous in recruitment. There was a consistent preference for younger performance candidates in hiring choices (Studies 4-6), suggesting an additive value of youth and performance. The association between youth and leadership potential found in Chapter 3 may mean that leadership potential is both expected and discounted in hiring decisions, such that younger performance candidates are advantaged through the unexpected association of a high-competence younger worker stereotype with proven leadership experience and performance. The same counter-stereotype advantage did not benefit older candidates: older potential candidates tended to be the least favoured candidate on hiring measures. This has theoretical implications in suggesting that although target-role stereotype incongruity can disadvantage candidates (Eagly & Karau, 2002), within-target stereotype incongruity can advantage certain candidates. Furthermore, it refines our understanding of a pro-youth bias in recruitment (Abrams et al., 2016) and worker evaluations (Posthuma & Campion, 2009).

Leadership potential congruity model.

The principal contribution of this thesis is to propose a leadership potential congruity model, a conceptual framework of the relationship between target demographics, perceived leadership potential, and recruitment evaluations (Figure 2.2). For the first time, this model incorporates results from the limited number of studies into demographic group membership and leadership potential. It synthesises research that has found a preference for leadership

potential (E.g., Sun et al., 2015; Tormala et al., 2012) with studies that find a demographic-based bias in evaluations of leadership potential (E.g., Hirschfeld & Thomas, 2011; Player et al., 2019), and associates this with underlying demographic stereotypes (E.g., Posthuma & Campion, 2009) and role congruity theory (Eagly & Karau, 2002). It therefore provides a framework to understand and explore bias in evaluations of leadership potential that was previously lacking.

The studies in this thesis offer initial support for the model. I principally test the proposed pathways between target age and evaluations and find a significant relationship between candidate age and recruitment evaluations on measures of past performance, future performance and willingness to hire (meta-analysis), driven by underlying age stereotypes (Studies 5 & 6). It also finds that possessing leadership potential provides an advantage to younger but not older candidates (Studies 4, 5 & 9) and that endorsement of age stereotypes has differential effects on self-evaluations at the intersection of age and gender (Study 7). I also test the impact of contextual factors proposed in the model such as organisational culture (Studies 8 & 9), assessment process measures (meta-analysis), and the attitudes of the evaluator (Studies 7 & 9). Overall, the studies in this thesis provide empirical support for the leadership potential congruity model. The model also includes pathways to recruitment evaluations suggested by extant research but not been tested in this thesis. Therefore, the model offers a valuable framework to drive future research into how target demographics can influence leadership recruitment, which I outline in the future directions below.

6.3.3 Limitations.

Despite the empirical findings set out in this thesis and their theoretical implications, there are limitations that need to be considered to contextualise the body of work, and to inform future research. These cover study design, manipulations, and measures.

Design.

Studies 7-9 found evidence for differing effects of societal and organisational stereotype cues, such that endorsement of societal age stereotypes affected self-evaluations for older people (Study 7), whereas organisational stereotype cues had little to no significant effect on leadership evaluations (Studies 8-9). The studies here did not directly compare and test the effects of societal and organisational stereotype cues, and study designs that directly compare the proposed moderating role of societal and organisational stereotypes would enable us to more robustly test our conclusions.

Furthermore, Study 7 demonstrated differential effects of age stereotype endorsement on self-evaluations at the intersection of age and gender, whereas Player et al. (2019) found differential effects of gender on other-evaluations of leadership potential. There is evidence that target gender affects both self- and other- leadership evaluations, but I did not include gender as a variable in the studies of other-evaluations (Studies 4, 5, 6, & 9). This meant that I was able to focus on the effects of candidate age and candidate type, but care must be taken in extrapolating the results of this thesis on other-evaluations to female or other non-male targets. Future study designs testing other-evaluations should include target gender as a variable to test whether the effects of candidate type on leadership evaluations differ at the intersection of age and gender.

Manipulations.

Firstly, the experimental studies in this thesis employed vignettes to explore leadership recruitment and hiring evaluations. Vignettes are an established tool in quantitative social psychology research to elicit participant attitudes (Erfanian et al., 2020), and participant responses to vignettes have been found to relate to real-world responses (Ganong & Coleman, 2005; 2006). Nonetheless, it is possible that vignettes may not reflect the complexity and

importance of a real-life leadership recruitment context, and field research is needed in real-world recruitment contexts to test the validity of the experimental findings here. The use of vignettes in this thesis provide the rigorous scientific foundations for future research with organisational data to test the extent to which the effects identified in this thesis generalise to “real world” recruitment attitudes.

Secondly, the results of Studies 1 and 2 suggest a gap between the recognised antecedents of leadership potential and *perceived* leadership potential and that leadership potential may be an ill-defined concept open to subjective bias. The manipulations of leadership potential employed in this thesis were scores on fictitious tests of leadership potential, and did not include detailed descriptions of leadership potential that may have been contaminated by a lack of definition over the constituent attributes of leadership potential. Furthermore, all manipulations were pilot-tested and demonstrated higher association with leadership potential than leadership performance. Nevertheless, the possibly contested and subjective nature of perceived leadership potential calls into question the validity of the manipulations of leadership potential employed.

Measures.

The candidate manipulations employed in Studies 5 and 6 were fictitious LinkedIn profiles including candidate photographs. These manipulations demonstrate ecological validity in reflecting real-world candidate materials (Ollington et al., 2013), were successfully piloted for perceived age, and were consistent in terms of candidate race and gender. Results demonstrate how an age bias can result from the use of candidate photographs in LinkedIn profiles and therefore have applied value. However, age can influence perceived attractiveness (Ebner, 2008), and target familiarity and attractiveness can affect leadership evaluations (Verhulst et al., 2010). Additional studies including measures of familiarity and

attractiveness would enable us to test whether they drive a pro-youth bias, and whether a pro-youth bias is still present when they are controlled for.

The use of single-item measures to evaluate future performance (Studies 4, 5, & 9) can also be seen as a limitation. Single-item measures in research can be appropriate in organisational research (Fisher et al., 2015), strongly correlate with scale measures (Wanous, Reichers, & Hudy, 1997), and can demonstrate equivalent predictive validity as multi-item attitude measures (Bergkvist & Rossiter, 2007). Even so, multi-item measures still tend to be viewed as more valid and reliable than single-item measures (Liu, 2004) and have been found to be higher in predictive validity than single-item measures (Diamontopoulos et al., 2012).

6.3.4 Future directions and applied implications.

The research outlined in this thesis utilises mixed methodologies to explore the impact of candidate age and candidate type on leadership evaluations. It provides new insights into the preference for leadership potential and a pro-youth bias in leadership recruitment, establishing new connections between previously unrelated strands of social psychological theory in leadership recruitment. The leadership potential congruity model offers exciting new pathways for future research.

Firstly, this model proposes that perceived leadership potential is the preserve of high-status groups, which can disadvantage members of stigmatised groups in leadership evaluations based on underlying demographic stereotypes. This conclusion is based on a consistent pattern of results across stigmatised groups of older people, women, black people, and gay people, but there are very limited studies focusing on each specific group. The preference for leadership potential effect has been found in this thesis to offer an advantage to younger but not older candidates, and has previously been associated with advantage to male but not female candidates (Player et al., 2019). The extent to which this pattern of results that

suggests an advantage to high-status groups, translates into other demographic domains needs further research. Correlational research could establish more definitively the demographic groups more associated with perceived leadership potential. Experimental research focused on specific group categories and intersectional identities is needed to demonstrate the extent to which target characteristics predict perceived leadership potential and leadership evaluations in general, and the role of underlying demographic stereotypes in driving evaluations.

Secondly, further research is needed into the role of a pro-youth bias in the preference for leadership potential effect. Experimental research addressing different intersectional identities would reflect the complexity of real-world target evaluations and develop our understanding of how target characteristics interact, exploring intersectional differences in the impact of age stereotype endorsement on evaluations. As age boundaries are subjective (Abrams et al., 2011; Swift et al., 2018), it could also test the boundaries of age bias in perceived leadership potential, for example testing to see if evaluations change for targets in their fifties or sixties, compared to targets in their seventies/eighties. Furthermore, these studies could also test the moderating contextual variables highlighted in the leadership potential congruity model. At a global level, cross-cultural studies could test the extent to which a pro-youth bias drives a preference for leadership potential in different national cultures. Studies that directly compare the impact of societal and organisational age stereotypes on leadership evaluations could explore the interaction of global and organisational moderators, and test our conclusion that societal age stereotype cues have a greater effect on leadership evaluations than organisational age stereotype cues. At an individual level, studies that directly compare self- and other-evaluations could test whether target type moderates a pro-youth bias, and reveal the effects of stereotype embodiment processes on leadership evaluations.

Thirdly, future research into the leadership potential congruity model can build and expand on the methodologies employed in this thesis. Replication studies could employ multi-item measures of future performance, and also test whether target attractiveness and familiarity drive a pro-youth bias. This would develop greater confidence in the validity and reliability of the effects of candidate type and candidate age proposed in the model and supported in this thesis. Studies that test different age profiles could explore the boundaries of age categorisation and the extent to which evaluations of older candidates depend on their relative age in comparison to other candidates or whether they belong to an “old” age group. It is also essential to employ more organisational data in exploring leadership potential and age. Experimental research paradigms may not reflect real-world complexity (Kingstone et al., 2008; Shamay-Tsoory & Mendelsohn, 2019), and therefore analysis of organisational data is needed to check and expand the evidence base for the leadership potential congruity model. For example, analysis of the demographics of employees applying for high-potential development programmes, their acceptance rate, and their future careers would enable the conclusions here to be tested longitudinally and in an organisational context.

The findings of this thesis also hold a number of applied implications. At a societal level, the United Nations has called for a removal of barriers to employment for older people (UN, 2015), and the UK Government has committed to increase the employment rate for older people (Government Office for Science, 2016). By finding a pro-youth bias in perceived leadership potential and leadership recruitment, this thesis highlights barriers to the achievement of these aims that are not explicit in extant literatures. Older people may struggle to be accepted onto organisational high-potential programmes, and be discriminated against in leadership recruitment. Furthermore, when individuals are evaluated as low in leadership potential by others, this negatively affects their ambition, performance, and commitment at work (Steffans et al., 2018). Therefore, age bias in perceived leadership

potential may have group-level effects in demotivating older workers. These barriers must be recognised and overcome if governments are to meet the challenges of an ageing population.

At an organisational level, the results here offer clear routes for employers to mitigate unconscious bias in leadership recruitment. The effects of candidate type and candidate age on leadership evaluations were moderated by the study design and the measure type, such that bias was less likely to emerge in between-participants paradigms and on subjective measures, both of which involve comparing candidates. Therefore, recruitment processes that involve individual candidate evaluations and minimise candidate comparisons could minimise unconscious bias and improve optimal candidate selection. Furthermore, the finding that ageist attitudes can encourage more negative evaluations of older candidates' past performance, pinpoints ageist attitudes as an important area to address. Unconscious bias training can reduce implicit age bias, but there are few unconscious bias training tools that focus on age bias (Atewologun et al., 2018). The results here highlight the need for the development of unconscious bias training tools focused on age bias that can be used in organisations to reduce the effects of implicit age bias in recruitment and evaluations of leadership potential. Finally, as far as I know these are the first studies to identify age-bias in evaluations of fictitious LinkedIn profiles. As LinkedIn profiles with facial photographs are a widely used tool in recruitment (Ollington et al., 2013), this is an ecologically valid manipulation and suggests that organisations need to take greater care when using LinkedIn for recruitment.

At an individual level, this thesis identifies and highlights barriers that older workers may experience in gaining meaningful work and opportunities in the workplace. In this way, it has an applied value in making older workers more aware of the challenges they may face and suggests some actions older workers could take to address these challenges. The meta-analysis found a consistent effect of candidate age on perceived past performance, such that

older candidates were associated with higher past performance than younger candidates. As performance candidates were more associated with willingness to hire than potential candidates, this could present an advantage for older candidates to leverage in recruitment. By emphasising strong past performance, older candidates could capitalise on an advantageous age bias and boost their recruitment chances.

6.4 Conclusion

Two key challenges for organisations are to identify effective future leaders and manage an increasingly age-diverse workforce, and the results of this thesis find a link between perceived leadership potential and candidate age. It finds a preference for leadership potential over performance on measures of future performance, but that candidates with leadership performance are preferred on hiring measures. There is also evidence for a pro-youth bias in terms of perceived future performance and willingness to hire, underpinned by worker age stereotypes, translating role congruity theory (Eagly & Karau, 2002) into an age context. Crucially, it demonstrates an association between leadership potential and youth that drives the preference for leadership potential. The leadership potential congruity model provides an evidence-based framework to understand the barriers to older workers in leadership recruitment and direct future research.

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Appendix A.

Ethics Approval Codes For Each Study

Study	Ethics Approval ID
Study 1	201715120740344763
Study 2	201915731279616053
Study 3	201815179380284921
Study 4	201815313237725041
Study 5	201915469689715499
Study 6	201915542132535733
Study 7 *	201815166219564878
Study 8 *	201815166219564878
Study 9	202015853135476447

Notes. * Study 7 and 8 were covered by the same ethical approval.

Appendix B.

Systematic Literature Review Search Protocol

Overview of steps:

1. Initial database search
2. Relevant classifications and language filters
3. Screen by title
4. Dedupe
5. Screen by abstract
6. Screen by full text
7. Inter-rater consensus
8. Risk of bias assessment

Key information:

Research question:

Does a pro-youth bias accentuate a preference for leadership potential in organisational leadership selection and assessment?

Eligibility criteria:

- Participants over the age of 18
- Empirical quantitative/qualitative research
- Published in a peer-reviewed journal
- Published in English
- Psychological perspective
- Studies on human populations
- Studies focused on leadership potential or future leadership ability
- Studies that assess the impact of target age or other demographic characteristics

Search strategy:

- Databases: PsychINFO, Academic Search Complete, & PLOS One
- Search terms:
 - Leadership potential
 - Preference for potential
 - Youth bias

Step One: Initial database search

1. Do separate searches on the following terms:
 - Leadership potential
 - Preference for potential
 - Youth bias
 - *In PsychInfo and Academic Search Complete, search elements of the search term both together and separately*
 - *In Plos One, search as complete phrases due to the large number of irrelevant search results when searched separately*
2. Do separate searches on the following databases:
 - PsychInfo
 - Academic Search Complete
 - PLOS One (use the advanced search function)
3. Include the following search criteria:
 - Publication type – peer reviewed journal (not applicable to PLOS One)
 - Population group – human (PsychInfo only)
 - Language – English (not applicable to PLOS One)
 - Published date – up to January 2018 (not applicable to PLOS One)

Step Two: Relevant classifications and language filters

1. Filter results to show relevant classifications only
 - This is not possible for Academic Search Complete
 - For PsychInfo, include the following classifications: management and management training, industrial and organisational psychology, organisational behaviour, group and interpersonal processes, social processes and social issues, occupational and employment testing, personnel management and selection and training, social psychology, personality psychology, social perception and cognition, personnel evaluation and job performance, military psychology, personality scales and inventories, personality traits and processes, neuropsychology and neurology, cognitive processes
 - For PLOS One, filter by subject area to show only ‘Psychology’

Step Three: Screen by title

1. Review all results by title only
2. In each database, select all items that relevant to the research question. If in doubt, keep it
3. Export selected cases into a CSV file, and save as an excel file (PsychInfo and Academic Search Complete only)
 - For PLOS One, you cannot export results, so manually enter the title, authors and date into the spreadsheet, and copy and paste the abstract
4. Collate results into one spreadsheet and title it ‘All results_step three’

Step Four: Dedupe

1. Copy the existing spreadsheet and title it ‘All results_step four’
2. Add filters, and order the ‘author’ column A-Z
3. Remove all duplicates

Step Five: Screen by abstract

1. In excel, copy the existing worksheet and name it 'All results_step five'
2. Add a new column called 'Keep or reject'. In this you record whether you keep or reject the paper
3. Review each item by abstract only
4. Retain all items that appear relevant to the research question. If in doubt, keep it
5. For all items removed, add to the spreadsheet the reason for the exclusion.

Step Six: Screen by full text

1. Create a copy of the step five worksheet, named 'All results step six'
2. Delete all entries marked 'Reject' from step five
3. Then delete the contents of the 'Keep or reject' column. You now record in this whether you keep or reject the paper at stage six
4. Read the full text of each item
5. Retain all items that relevant to the research question and appear to meet the eligibility criteria. If in doubt, keep it
6. For all items removed, add to the spreadsheet the reason for the exclusion

Step Seven: Inter-rater consensus

1. Output from all researchers is combined into one worksheet
2. Independently, researchers review the full text to score each article '0' if no obvious relevance; '0.5' if partly relevant; '1' if relevant
3. Researchers meet and review together every article scored '0.5' by any researcher, and agree to jointly rescore as '0' or '1'
4. All articles scored '0' are removed
5. All articles scored '1' are collated by the lead researcher

Step Eight: Risk of bias assessment

1. Each reviewer independently scores each article against the following criteria:
 - Selection bias: Are there systematic differences in the baseline characteristics of any groups being compared?
 - Performance bias: Are there systematic differences between any groups in how they were treated, including exposure to factors other than the interventions of interest?
 - Detection bias: Are there systematic differences between how outcomes are measured for different groups?
 - Reporting bias: Are there systematic differences between reported and unreported findings?
 - Other bias: Is there evidence of any other bias not already covered?
2. Each criterion is scored 1 if a bias existed, 0.5 if unsure, and 0 if no evidence of bias
3. Reviewers meet and discuss any article with a positive score until agreement is reached on whether to include or exclude the article

Appendix C.

Participant demographics for each study.

Study 1.

Gender: 19 males and 55 females.

Age: Mean 19.38 ($SD = 1.52$), Range 18 – 25

Ethnic origin:

Asian Indian – 1

Asian Pakistani – 1

Asian Bangladeshi – 1

Asian Chinese – 3

Asian (other) - 4

Black Caribbean – 1

Black African – 12

Black Other 3

Mixed race – 2

White European – 8

White UK/Irish – 27

White other – 6

Study 2.

Gender: 19 males, 60 females, and 1 non-binary.

Age: Mean 33.26 ($SD = 10.15$), Range 19 – 59.

Ethnic origin:

Asian Indian – 2

Asian Pakistani – 1

Asian Chinese – 1

Asian (other) - 1

Black Caribbean – 1

Black African – 2

Mixed race – 1

White British – 71

Study 3.

Gender: 4 males and 16 females.

Age: Mean 44.85 ($SD = 7.40$), Range 32 – 60

Ethnic origin:

White European – 3

White UK/Irish – 16

White other – 1

Length of involvement in leadership selection:

3-5 years – 3

5-10 years – 5

10 years + - 12

Study 4.

Gender: 58 males, 76 females, and 1 other

Age: Mean 22.12 ($SD = 10.14$), Range 18 – 66

Ethnic origin:

Asian Indian – 2

Asian Pakistani – 2

Asian Chinese – 4

Asian (other) - 2

Black Caribbean – 1

Black African – 7

Mixed race – 8

White European – 3

White UK/Irish – 105

White other – 1

Highest level of education:

High school or equivalent – 65

Vocational / technical school – 9

Some college – 40

College graduate – 12

Master's degree – 3

Professional degree – 2

Other – 4

Study 5.

Gender: 69 males, 95 females, 1 transgender, and 1 did not identify as female, male, or transgender

Age: Mean 34.59 ($SD = 9.40$), Range 18 – 60

Ethnic origin:

Asian Indian – 2

Asian Chinese – 1

Black African – 2

Mixed race – 3

White European – 16

White UK/Irish – 141

White other – 1

Highest level of education:

High school or equivalent – 20

Vocational / technical school – 5

Some college – 24

College graduate – 70

Master's degree – 25

Doctoral degree – 6

Professional degree – 15

Other – 1

Study 6.

Overall.

Gender: 69 males and 61 females.

Age: Mean 40.33 ($SD = 14.93$), Range 20 – 64.

Ethnic origin:

Asian Indian – 1

Asian Pakistani – 1

Asian Bangladeshi - 1

Asian other – 1

Black Caribbean - 1

Black African – 1

Mixed race – 5

White European – 8

White UK/Irish – 109

White other – 2

Highest level of education:

High school or equivalent – 18

Vocational / technical school – 17

Some college – 26

College graduate – 34

Master's degree – 21

Doctoral degree – 4

Professional degree – 8

Other – 2

Younger age group.

Gender: 35 males and 30 females.

Age: Mean 25.89 ($SD = 3.03$), Range 20 – 30

Ethnic origin:

Asian Indian – 1

Asian Pakistani – 1

Asian Bangladeshi - 1

Asian other – 1

Black Caribbean - 1

Black African – 1

Mixed race – 4

White European – 3

White UK/Irish – 50

White other – 2

Highest level of education:

High school or equivalent – 5

Vocational / technical school – 5

Some college – 11

College graduate – 19

Master's degree – 16

Doctoral degree – 2

Professional degree – 5

Other – 2

Older age group.

Gender: 34 males and 31 females.

Age: Mean 54.77 ($SD = 4.08$), Range 50 – 64.

Ethnic origin:

Mixed race – 1

White European – 5

White UK/Irish – 59

Highest level of education:

High school or equivalent – 13

Vocational / technical school – 12

Some college – 15

College graduate – 15

Master's degree – 5

Doctoral degree – 2

Professional degree – 3

Study 7.

Overall.

Gender: 128 males and 124 females.

Age: Mean 40.67 ($SD = 15.72$), Range 18 – 71

Ethnic origin:

Asian Indian – 4

Asian Pakistani – 3

Asian Bangladeshi - 3

Asian Chinese – 3

Black African – 2

Mixed race – 2

White European – 33

White UK/Irish – 198

White other – 3

Missing – 1

Younger age group.

Gender: 63 males and 63 females.

Age: Mean 25.54 ($SD = 3.16$), Range 18 – 31.

Ethnic origin:

Asian Indian – 2

Asian Pakistani – 3

Asian Bangladeshi - 3

Asian Chinese – 3

Black African – 2

Mixed race – 2

White European – 11

White UK/Irish – 99

White other – 1

Older age group.

Gender: 65 males and 61 females.

Age: Mean 55.80 ($SD = 4.98$), Range 50 – 71.

Ethnic origin:

Asian Indian – 2

White European – 22

White UK/Irish – 99

White other – 2

Missing – 1

Study 8.

Overall.

Gender: 49 males and 140 females

Age: Mean 40.97 ($SD = 15.17$), Range 18 – 65.

Ethnic origin:

Asian Indian – 1

Asian Pakistani – 3

Black Caribbean – 1

Black African – 2

Mixed race – 5

White European – 28

White UK/Irish – 147

White other – 3

Younger age group.

Gender: 28 males and 65 females.

Age: Mean 26.05 ($SD = 3.08$), Range 18 – 31.

Ethnic origin:

Asian Pakistani – 2

Black Caribbean – 1

Black African – 1

Mixed race – 4

White European – 14

White UK/Irish – 70

White other – 1

Older age group.

Gender: 21 males and 75 females.

Age: Mean 55.43 ($SD = 4.16$), Range 50 – 65.

Ethnic origin:

Asian Indian – 1

Asian Pakistani – 1

Mixed race – 1

White European – 14

White UK/Irish – 77

White other – 2

Study 9.

Gender: 49 males and 115 females.

Age: Mean 34.19 ($SD = 11.36$), Range 18 – 72.

Ethnic origin:

Asian Indian – 2

Asian Other – 1

Black African – 2

Black Caribbean – 2

Mixed race – 1

White British – 152

White Irish – 2

White other – 2

Highest level of education:

Secondary education – 15

Vocational / technical school – 26

Higher education (i.e. Bachelors degree) – 58

Higher education (i.e., Master's degree) – 24

Higher education (i.e., Doctoral degree) – 6

Secondary education (i.e., A-levels or equivalent) – 28

Teaching degrees (i.e., PGCE) – 2

Any other professional degrees – 4

No formal qualifications – 1

Appendix D.

Information Sheet for Focus Groups.

School of Psychology

Keynes College

University of Kent

Canterbury, CT2 7NP

Study Information Sheet

Title of Project:	Leadership Selection Focus Groups	Ethics Approval Number:	201815179380284921
Investigator(s):	Ben Steeden Supervisors: Professor Georgina Randsley de Moura and Dr Hannah Swift	Researcher Email:	Bws3@kent.ac.uk

Aims of the Study:

The aim of these focus groups is to get a better understanding of the leadership attributes that selectors look for when selecting individuals for leadership positions.

Eligibility Requirements:

Experience of leadership selection and assessment in organisations.

What you will need to do and time commitment:

The aim is for each session to last one hour, going up to a maximum of 90 minutes. No preparation is needed. In the session, participants are asked to share their views on what they look for in leadership selection, in groups of about five people. Sessions are recorded and the researcher will produce a full typed transcript of each session. Participant data will be anonymised in the written transcript. Not time commitment is needed before or after the focus group.

Risks/Discomforts involved in participating:

None are predicted.

Confidentiality of your data:

Any responses you provide will be treated confidentially. Any publication resulting from this work will report only aggregated findings or fully anonymised examples that will not identify you.

Only members of the research team will have access to any personal information that may identify you, which will be stored separately from your other responses and securely. Any such identifying information will be removed and destroyed as soon as possible after necessary data processing has been completed – for example, records from separate files

merged, or audio recordings transcribed. Once fully anonymised, the responses you provide may be used by the research team, shared with other researchers, or made available in an online data repository.

Details of any payments:

Participants will not receive a payment for participating, but will get a small gift of chocolates for taking part.

Additional information:

Remember that participation in this research study is completely voluntary. Even after you agree to participate and begin the study, you are still free to withdraw at any time and for any reason. Please note that once your data have been included in published analysis or data repositories, **it cannot be withdrawn**.

If you would like a copy of this information sheet to keep, please ask the researcher. If you have any complaints or concerns about this research, you can direct these, in writing, to the Chair of the Psychology Research Ethics Committee by email at: psychethics@kent.ac.uk. Alternatively, you can contact us by post at: Ethics Committee Chair, School of Psychology, University of Kent, Canterbury, CT2 7NP.

Appendix E.

Consent Form for Focus Groups.

CONSENT FORM

Name of researcher: Ben Steeden

Supervised by Professor Georgina Randsley de Moura and Dr Hannah Swift

Centre for Group Processes, School of Psychology, University of Kent

Please tick the following boxes if you agree:

1. I confirm that I have read and understand the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.
2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason.
3. I understand that my data will be treated confidentially and any publication resulting from this work will report only data that does **not** identify me.
4. I understand that my anonymised responses may be shared with other researchers or made available in online data repositories.
5. I freely agree to take part in this study.

Name of participant

Date

Signature

If you would like a copy of this consent form to keep, please ask the researcher. If you have any complaints or concerns about this research, you can direct these, in writing, to the Chair of the Psychology Research Ethics Committee by email at:

psychethics@kent.ac.uk. Alternatively, you can contact us by post at: Ethics

Committee Chair, School of Psychology, University of Kent, Canterbury, CT2 7NP.

PARTICIPANT INFORMATION

1. What is your age?

2. What is your gender?

Male

Female

Other

3. Using the British government's survey categories from the 2001 census, which ethnic origin or descent describes you best?

Indian

Pakistani

Chinese

Asian – other

Black – Caribbean

Black – African

Black – other

Mixed race

White – European

White – UK/Irish

White – other

4. What is your occupation?

5. How long have you been involved in leadership selection and assessment?

0-2 years

3-5 years

5-10 years

10 years+

6. What type of leaders do you work with (tick all that apply)

Junior Leaders
(leaders of teams)

Senior Leaders
(leaders of leaders)

Executive Leaders
(leaders of organisations)

Appendix F.

Focus Group Script.

Date:	Time:	Location:
-------	-------	-----------

Facilitator:	
Participants present:	

Introduction

- My name is Ben Steeden and I am carrying out research into leadership assessment and selection
- Have you all received the information sheet? Any questions?
- This focus group will last about 1 hour
- I will ask you about your views on leadership selection, and I really want to hear all your responses. There are no right or wrong answers – just tell me what you think.
- I am recording the session with this Dictaphone, and I will later write up a transcript of the conversation
- In the transcript, you will each be referred to by your initials, so the data will be anonymised. The anonymised data may be shared with other researchers, and may be incorporated into my thesis and submitted for publication
- Please also respect each other's confidentiality
- Your participation is voluntary, so you can contact me at any point, using the contact details on the information sheet, and withdraw your data
- Any questions? If not, and if you are happy to, please could you sign this consent form (*hand out consent form*)

Ground rules

- I will be transcribing this conversation, so speak clearly and try not to talk over each other!
- Phones off please
- I want everyone to have the opportunity to talk
- There are no right or wrong answers – say what you think!

Icebreaker

- Can we all go round and introduce ourselves – just our name and our experience of leadership selection
- I will later erase this bit from the recording to ensure anonymity

Questions:

	Addressed Please ✓	Order (e.g. 1,2)
What are you looking for when you are selecting future leaders? What traits, skills and knowledge?		
What type of person do you think best fits your idea of a future leader? Who looks like a leader to you?		
How important is experience to you when recruiting leaders? What experience are you looking for?		
Overall, what are your best tips for selecting future leaders? What people tend to succeed when they go into a leadership position?		

Exercises	Addressed Please ✓	Order (e.g. 1,2)
Individually, score this set of leadership traits in terms of what you think is most important when selecting future leaders. <i>Handout 40 cards and scoring scale sheet to each person</i>		
As a group, agree a score for what you think are the most important leadership traits when selecting future leaders. <i>Handout one scoring log sheet to the group</i>		

Debrief:

- Here is a debrief to set out the reason for the focus groups and information on the wider research (hand out debrief form)
- Any questions?
- Thank you very much and goodbye!

Appendix G.

Focus Group Debrief.

FOCUS GROUP DEBRIEF

Leadership selection and assessment

Thank you very much for your participation in this focus group.

The focus group is interested in understanding how people who work in leadership selection evaluate different types of leadership candidate and make hiring decisions. The output will be compared to the output from a survey, in which respondents assessed the same set of leadership attributes you scored. Both sets of output will inform candidate profiles used in later studies.

This research investigates the leadership attributes associated with older leaders (aged 50 and over), younger leaders (aged 30 and under), leadership potential (the ability to perform in future, wider, more diverse leadership roles), and leadership performance (proven performance in a leadership role). Participants in future studies will evaluate and choose between different types of leadership candidate. We anticipate that participants will prefer candidates with leadership potential, and this preference will be accentuated when the candidate is younger.

Any information that you have provided is completely confidential and will be analysed anonymously. If you have any questions or concerns about the research, please contact the researcher or research supervisor using the contact details below.

If you would like to withdraw your data from analysis at any point, please contact the University of Kent, School of Psychology office on **01227 823961**. You do not have to give a reason for your withdrawal.

Once again, I would like to thank you for your valuable contribution to this research. Your participation is greatly appreciated.

Yours faithfully,

Ben Steeden

Researcher contact details:

Ben Steeden

Email: bws3@kent.ac.uk

Tel: 01227 823181

Supervisor contact details:

Professor Georgina Randsley de Moura

Email: g.r.de-moura@kent.ac.uk

Tel: 01227 827226

If you have any serious concerns about the ethical conduct of this study, please inform the Chair of the Psychology Research Ethics Panel (via the Psychology Office) in writing, providing a detailed account of your concerns.

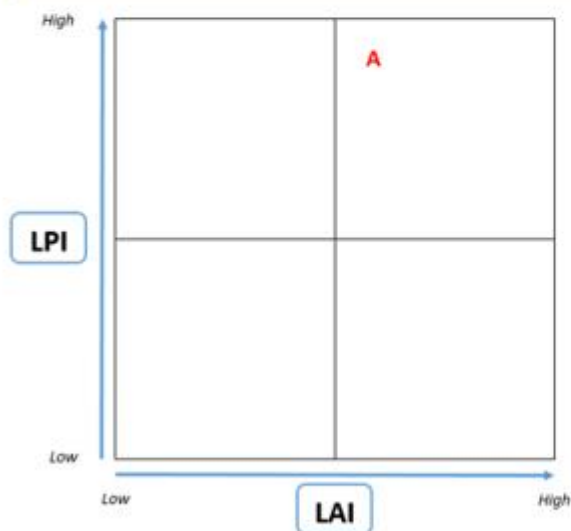
Appendix H.

Fictitious LinkedIn Profiles Used in Studies 5 and 6.

Candidate A – Younger, Leadership Potential.



Job Testing



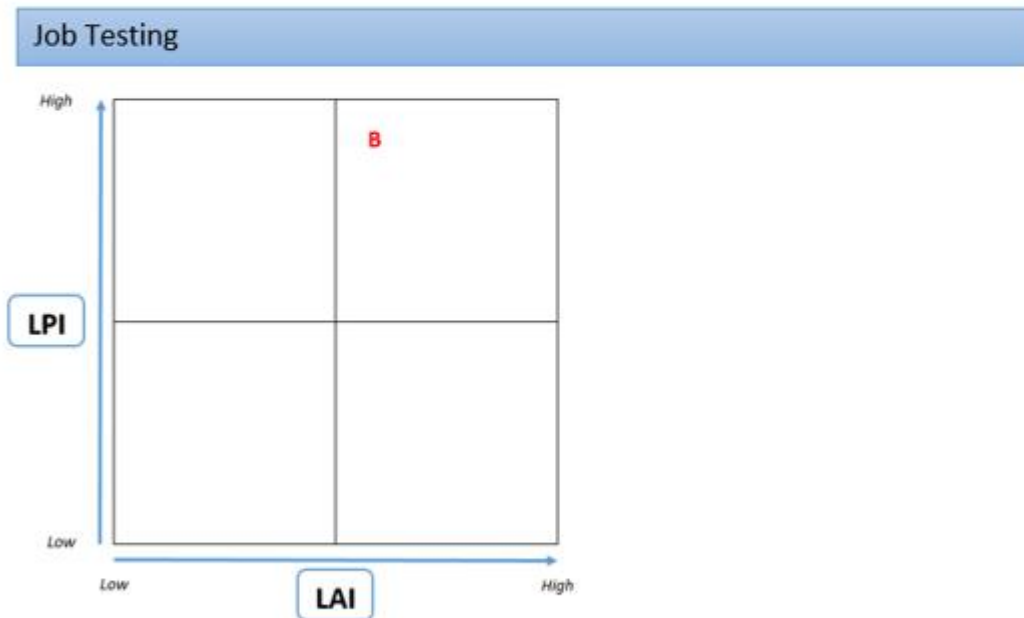
Preliminary job testing has found the candidate to be in the top 5% on the **Leadership Potential Index (LPI)**.

The **Leadership Potential Index** gauges leadership potential, defined as an individual's predicted leadership in the near future.

Candidate B – Older, Leadership Potential.



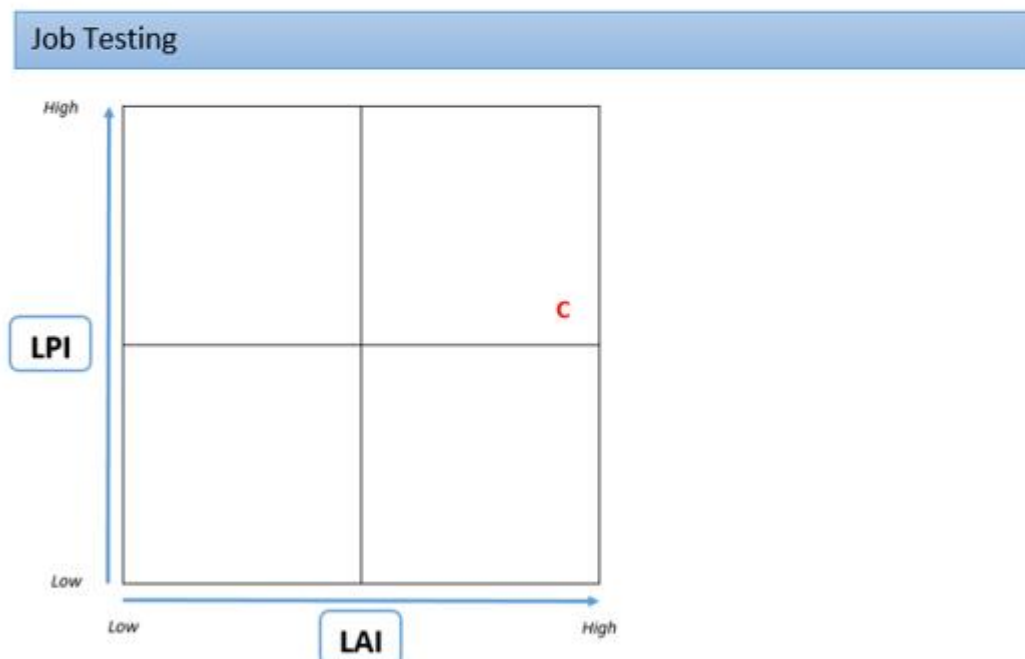
Candidate B.



Preliminary job testing has found the candidate to be in the top 5% on the **Leadership Potential Index (LPI)**.

The **Leadership Potential Index** gauges leadership potential, defined as an individual's predicted leadership in the near future.

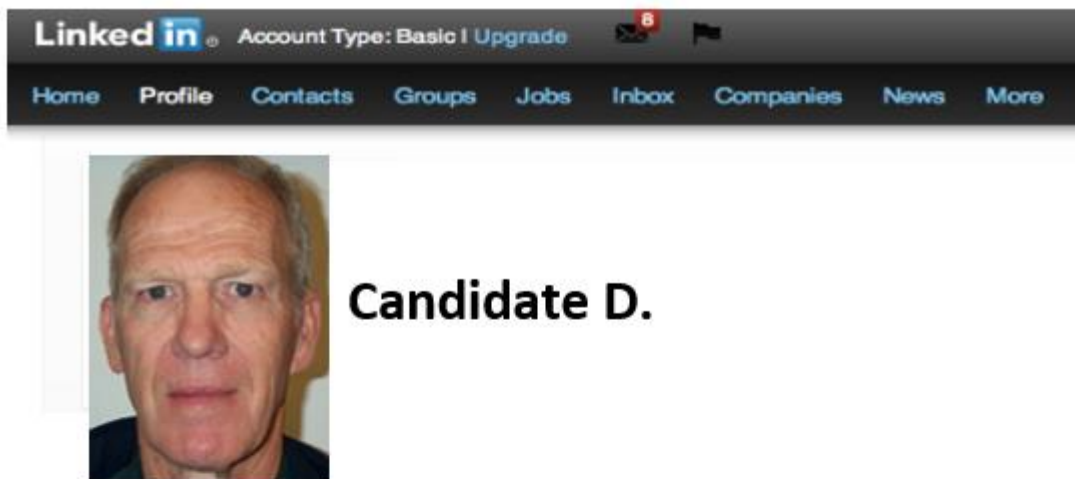
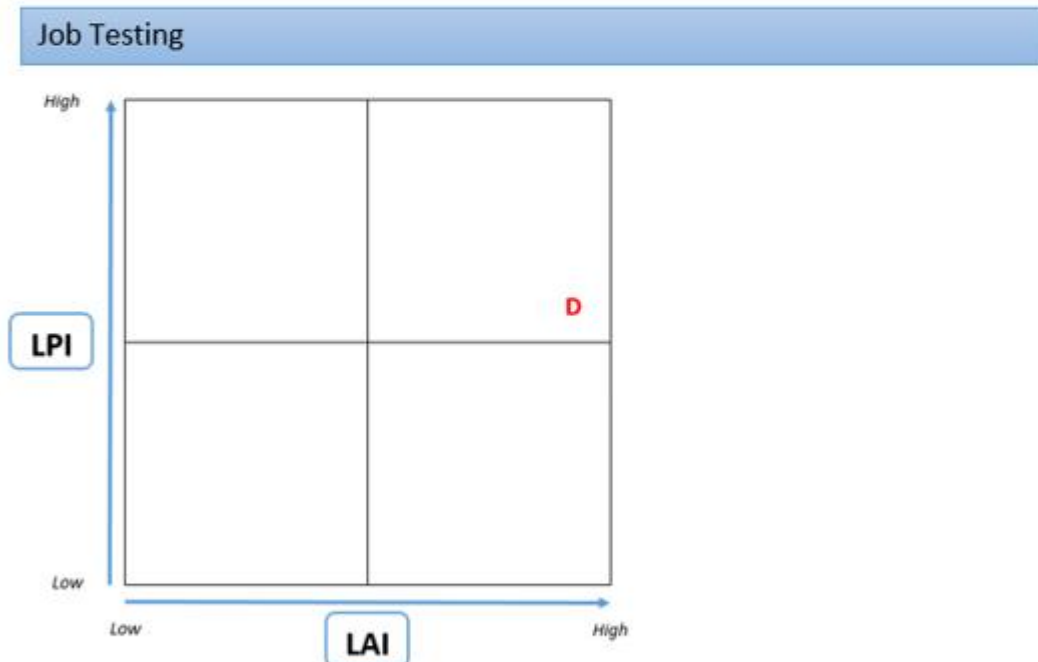
Candidate C – Younger, Leadership Performance.

Preliminary job testing has found the candidate to be in the top 5% on the **Leadership Achievement Inventory (LAI)**.

The **Leadership Achievement Inventory (LAI)** gauges leadership achievement, defined as an individual's observed (ie, actual) leadership performance at the current stage of their career.

Candidate D – Older, Leadership Performance.

Preliminary job testing has found the candidate to be in the top 5% on the **Leadership Achievement Inventory (LAI)**.

The **Leadership Achievement Inventory (LAI)** gauges leadership achievement, defined as an individual's observed (ie, actual) leadership performance at the current stage of their career.

Appendix I.

Details of How Data Were Calculated for the Meta-analysis

For continuous within-participants measures, a paired-samples *t*-test was carried out and the correlation coefficient was calculated based on the *t*-test *p*-value and sample size using an online effect size calculator for meta-analysis (Wilson, online software). Results from chi-square analysis were converted into correlation coefficients using an online effect size calculator (Ellis, 2009) which employed an established formula for transforming chi-square tests to effect sizes for meta-analysis (Rosenberg, 2010):

$$r = \sqrt{\frac{\chi^2_{(1)}}{n}},$$

Correlations calculated from chi-square results that favoured potential or younger candidates were prefixed with a minus sign to denote a negative correlation. Standard errors for correlations were calculated using a formula which is appropriate for studies in which $n \geq 100$ (CoderGuy123, 2017; Cohen & Cohen, 2003):

$$se_r = \sqrt{\frac{1 - r^2}{n - 2}}$$