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**The Structure and Development of Self-Regard: Entitlement and Self-Esteem in New  
Zealand**

Samantha Anne Stronge

A thesis submitted in fulfilment of the requirements for the degree of Doctor of Philosophy  
in Psychology, The University of Auckland, 2018.

## Abstract

Two debates within the narcissism literature remain unresolved. Firstly, the direction and strength of the association between narcissism and self-esteem is unclear. There is a growing consensus that this association differs across individuals, but little research is aimed at capturing this heterogeneity. Secondly, the ‘narcissism epidemic’ suggests that entitled and narcissistic attitudes are on the rise in younger generations, yet the evidence for the epidemic remains contentious. The present thesis used novel analytic techniques and seven annual waves of representative data from the New Zealand Attitudes and Values Study to provide new perspectives on these two debates. Study 1 ( $N = 6,471$ ) used Latent Profile Analysis to identify five profiles with differing associations between psychological entitlement and self-esteem to form a parsimonious structure of self-regard. Study 2 ( $N = 14,481$ ) followed up on these profiles longitudinally, using Latent Transition Analysis to measure movement from one profile to another over the course of a year. Self-regard was generally quite stable, and largely moved towards higher self-esteem and lower entitlement over time. However, the direction and strength of this longitudinal change differed across profiles. Study 3 ( $N = 10,412$ ) investigated change in entitlement over six years and across the adult lifespan using Cohort-Sequential Latent Growth Models. Results showed that entitlement follows a steady negative trend across age. There was no evidence for increasing entitlement over time among younger generations or ‘millennials’. Overall, this thesis identified heterogeneity within self-esteem and narcissism, and indicated that treating these constructs as unidimensional obscures significant and important variation between individuals. Furthermore, entitlement is not highly prevalent in New Zealand, self-regard is largely stable and appears to follow normative developmental patterns across the lifespan, and no evidence is found of increasing entitlement in younger generations. Collectively, these studies contribute new understandings to on-going debates within the narcissism literature.

## Acknowledgements

I would like to first acknowledge and thank my supervisors Chris Sibley and Danny Osborne, who have taught me a great deal and supported me from the very beginning of my journey into the depths of postgraduate study to the blessed end. I am lucky to have had supervisors who are so encouraging and genuine and am delighted to continue working with them on many interesting research projects to come.

This thesis would not exist without the love and support of my family. You can't choose your family but I would have picked them anyway. Thank you for making my postgraduate years not only possible, but also fun.

Cheers to my pals, who I love; may you achieve your outsized millennial dreams of enough money to live on, a place to belong, and maybe, one day, a dog. You deserve more of everything.

Finally, I give the most heartfelt thanks to my fellow postgrad students who have made every single day more enjoyable; Yanshu who is the best human; Lara who taught me to demand the best; Nicole, Lucy, Emily, Carol, Correna, Emerald, Carly, Joaquin, and Nikhil to name a few friends old and new; my wonderful co-authors Alexandra, Petar, and Chris; and the army of summer scholars, volunteers, and honours students who keep the NZAVS running.

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### Comment on Publications

This thesis is based on the three papers listed below. Two of these papers are published while another is a manuscript submitted for publication. The papers are re-printed here with minor editing and formatting to maintain consistency in terminology. These papers will be referred to as Study 1, Study 2, and Study 3, and form Chapter Four, Chapter Five, and Chapter Six respectively.

Stronge, S., Cichocka, A., Sibley, C.G. (2016). Narcissistic Self-Esteem or Optimal Self-Esteem? A Latent-Profile Analysis of Self-Esteem and Psychological Entitlement. *Journal of Research in Personality, 63*, 102-110. doi: 10.1016/j.jrp.2016.06.016

Stronge, S., Cichocka, A., & Sibley, C.G. (2018). The Stability of Self-Regard: A Latent Transition Analysis of Psychological Entitlement and Self-Esteem. *Manuscript submitted for publication.*

Stronge, S., Milojev, P., & Sibley, C.G. (2018). Are people becoming more entitled over time? Not in New Zealand. *Personality and Social Psychology Bulletin, 44*(2), 200-213. doi: 10.1177/0146167217733079

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Graduate Centre  
The ClockTower – East Wing  
22 Princes Street, Auckland  
Phone: +64 9 373 7599 ext 81321  
Fax: +64 9 373 7610  
Email: postgraduate@auckland.ac.nz  
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Nature of contribution  
by PhD candidate

I was the lead author of the paper, proposed the model, wrote the manuscript for publication, and conducted the analyses.

Extent of contribution  
by PhD candidate (%)

75%

### CO-AUTHORS

Name	Nature of Contribution
Dr. Chris Sibley	Thesis supervisor. Provided feedback on manuscript drafts, suggested the analytic technique, and offered suggestions for the framing of the manuscript.
Dr. Aleksandra Cichocka	Provided feedback on manuscript drafts, and suggested additional analyses.

### Certification by Co-Authors

The undersigned hereby certify that:

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- ❖ that the candidate wrote all or the majority of the text.

Name	Signature	Date
Chris Sibley		30/11/2017
Aleksandra Cichocka		30/11/2017

## Co-Authorship Form

Graduate Centre  
The ClockTower – East Wing  
22 Princes Street, Auckland  
Phone: +64 9 373 7599 ext 81321  
Fax: +64 9 373 7610  
Email: [postgraduate@auckland.ac.nz](mailto:postgraduate@auckland.ac.nz)  
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Nature of contribution by PhD candidate	I was the lead author for these papers, proposed the model, conducted the analyses, and wrote the manuscript for publication.	
Extent of contribution by PhD candidate (%)	75%	

### CO-AUTHORS

Name	Nature of Contribution
Dr. Chris Sibley	Thesis supervisor. Provided feedback on manuscript drafts, suggested the analytic technique and assisted with analysis.
Dr. Aleksandra Cichocka	Provided feedback on manuscript drafts.

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Chris Sibley		30/11/2017
Aleksandra Cichocka		30/11/2017

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Graduate Centre  
The ClockTower – East Wing  
22 Princes Street, Auckland  
Phone: +64 9 373 7599 ext 81321  
Fax: +64 9 373 7610  
Email: [postgraduate@auckland.ac.nz](mailto:postgraduate@auckland.ac.nz)  
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Chapter 6: Stronge, S., Milojev, P., & Sibley, C.G. (2017). Are people becoming more entitled over time? Not in New Zealand. *Personality and Social Psychology Bulletin*. doi: 10.1177/0146167217733079

Nature of contribution by PhD candidate	I was the lead author for this paper, proposed the model, conducted the analyses, and wrote the manuscripts for publication.	
Extent of contribution by PhD candidate (%)	75%	

### CO-AUTHORS

Name	Nature of Contribution
Dr. Chris Sibley	Thesis supervisor. Provided feedback on manuscript drafts, suggested the analytic technique, and offered suggestions for the framing of the manuscript.
Dr. Petar Milojev	Provided feedback on the manuscript and assisted with analyses.

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- ❖ that the candidate wrote all or the majority of the text.

Name	Signature	Date
Chris Sibley		30/11/2017
Petar Milojev		30/11/2017

**CHAPTER ONE**

## Introduction

*“The journey from immaturity to maturity is ... a movement from narcissism to connection”*

- Vaillant (as cited in Gregoire, 2013)

## Preface

The idea that ‘young people these days’ are increasingly disrespectful, entitled, and selfish has been popular for generations (Freeman, 1922; Lasch, 1979; Twenge, 2006; Twenge & Campbell, 2009a; Wolfe, 1976). The latest iteration of this idea is the ‘narcissism epidemic’, also known as the ‘age of entitlement’ (Twenge & Campbell, 2009a), or ‘Generation Me’ (Twenge, 2006). This theory argues that younger generations are becoming increasingly narcissistic, concurrent with rising individualism and decreasing social connection (e.g., Putnam, 2000). Twenge and Campbell (2009a) illustrate this new epidemic with a story of Allison, an Atlanta teen who appeared on a reality TV show. Allison wanted one of the main streets in Atlanta to be shut down for her sixteenth birthday party, and when told that the hospital would need that street for ambulance access, she replied “They can wait one second. Or they can just go around!” (Twenge & Campbell, 2009a, Chapter 6, Section 3, para. 13).

Allison is the embodiment of the narcissism epidemic – although perhaps not in the way intended. As an adult, Allison describes her birthday as having little to do with her; it was her father’s party, her father wanted the street to be shut down, and she wanted to be like him (Dombek, 2016). Allison is now a relationship and family therapist who runs a charitable foundation that helps disadvantaged children succeed in school (Dombek, 2016). At sixteen years old, Allison was described as having “almost sociopathic narcissism” (Twenge & Campbell, 2009a, Chapter 6, Section 3, para. 13), and yet, not only is there far more to the story of her narcissistic behaviour, it has in no way impeded her ability to grow into a

responsible and empathetic adult. This story parallels a continuing debate in the narcissism literature: do older generations view younger generations as more entitled because they are, in fact, increasingly more entitled over time? Or are such views merely a function of age – younger generations appear more entitled *because* they are young, but grow out of it with time? The answer to these questions have important implications for how these young generations will be viewed and treated by both themselves and others (Trzesniewski & Donnellan, 2010).

The second debate concerns the structure of narcissism itself. In particular, the role that self-esteem plays within narcissism is still contentious (Miller, Lynam, Hyatt, & Campbell, 2017a), and has led to debates about how narcissism should be defined (Cain, Pincus, & Ansell, 2008). So far the answer is, as Miller et al. (2017a) put it, “it depends” (p. 292). A growing body of work suggests that some narcissists have high self-esteem while others do not; at the same time, the self-esteem literature observes that some people with high self-esteem are narcissistic while others are not (e.g., Kernis, 2003; Wink, 1991). The two literatures have slowly drawn to the same conclusion: high self-regard is not uniformly the same for everyone, nor is it uniformly good. But what subtypes might exist? How do they present in a population? How common are they? How do they develop over time? How do their personalities, relationships, and health differ? Examinations of narcissism and self-esteem that treat these constructs as unidimensional obscure the significant heterogeneity that exists within them, and leave many questions unanswered.

In sum, there are two debates this thesis aims to resolve through the use of novel analytic techniques and representative data. The first aim is to identify the heterogeneity that exists within narcissism and self-esteem, and demonstrate how these different forms of self-regard may be qualitatively different from one another and develop differently over time. The second aim is to measure change in narcissism over time, while also measuring

developmental changes in narcissism across the lifespan. Three studies investigate these aims, utilising data from the New Zealand Attitudes and Values Study (NZAVS), a nationally representative longitudinal study of New Zealanders. Throughout, narcissism is measured as psychological entitlement, a core facet of narcissism (Krizan & Herlache, 2017). Study 1 and Study 2 will use cross-sectional and longitudinal mixture modelling techniques to identify profiles with different levels of psychological entitlement and self-esteem, investigating common patterns in the ways that New Zealanders view themselves, who they are, and how their self-regard develops. Study 3 will track change in entitlement longitudinally and across the lifespan using latent growth models to untangle developmental and cohort effects.

The current chapter will provide a brief overview of the definitions, history and measurement of narcissism, entitlement, and self-esteem, which inform the on-going debates in the literature (e.g., Pincus & Lukowitsky, 2010). The rest of the thesis will present an overview of research regarding the two central debates (Chapter Two), detail the methodologies used in all three studies (Chapter Three), present the studies themselves (Chapter Four, Chapter Five, Chapter Six), and conclude with a general discussion and some directions for future research (Chapter Seven). It is important to note that the key construct measured in these studies is psychological entitlement, not narcissism per se. Entitlement is a core facet of narcissism that drives much of the associated maladaptive behaviour (e.g., Campbell, Bonacci, Shelton, Exline, & Bushman, 2004; Krizan & Herlache, 2017; Moeller, Crocker, & Bushman, 2009). However, entitlement on its own is not as well researched as narcissism as a whole, so research on narcissism will be reviewed throughout this thesis alongside the research that focuses in on entitlement. Those who measure highly in narcissism or entitlement will be referred to as narcissists for simplicity (e.g., Bianchi, 2014; Foster & Campbell, 2007) and narcissism and self-esteem combined are referred to by the overarching term of self-regard (Baumeister & Vohs, 2001; Pulver, 1970).

## **Defining Self-Regard**

### *History*

Narcissism is an old construct with a very long history (see Levy, Ellison, & Reynoso, 2011) that is felt today in the diverging definitions of narcissism. As with all comprehensive works on narcissism, we begin with the story of Narcissus (Ovid, 1958). Narcissus was a beautiful young man with many love-struck suitors, but he repeatedly rejected every single one. When a god of revenge heard the prayers of one of these spurned admirers, Narcissus was cursed so that he would feel the same heartbreak as they had – “may he love himself alone, and yet fail in that great love!” (Dombek, 2016, Chapter 6, Section 1, para. 2). Narcissus caught sight of his own reflection in a still pool of water and, as with all those before, fell in love. Consumed by his own image, he wasted away and died. This ancient tale still holds many parallels with the way narcissism is viewed today – self-absorption that is a cause of significant distress for oneself and for others (Levy et al., 2011).

With its roots firmly embedded in Greek mythology, the first use of the term ‘narcissism’ in psychological research was by Havelock Ellis who labelled cases of sexual self-interest and intense self-absorption as narcissism (Ellis, 1898). Understandings of narcissism as a psychological construct, then, are rooted in psychoanalysis. The construct of narcissism was rapidly adopted by multiple theorists to describe excessive self-love (Levy et al., 2011). Although modern day conceptions of narcissism sometimes suggest that narcissism reflects fragility, emptiness, or defensiveness, these early accounts often focused on narcissism as part of a developmental process, sitting within the normal spectrum of behaviour (Campbell, 2001; Levy et al., 2011; Murray, 1938; Reich, 1949). Most notably, Freud (1931/1950) began to describe narcissism as a ‘libidinal type’, or personality trait, of someone who is focused on self-preservation above all else. Freud proposed that narcissism

was a normal personality type that was neither fragile nor empty inside, but represented the pinnacle of the 'survival instinct'. Narcissists were described as having high self-regard, but little concern for others.

From there, theoretical accounts of narcissism diverge somewhat between Kohut (1971, 1977) and Kernberg (1975). Kernberg suggested that cold, dismissive, and inconsistent parenting leads children to form a grandiose self-representation as an attempt to live up to parental expectations. Negative self-representations are split off and pushed away to leave an outward grandiosity and an inner emptiness. In contrast, Kohut considered narcissism to be a normal stage of development throughout childhood, where children mirror the admiration given to them by their parents in order to understand their own competence and power. Kohut suggested that narcissism should diminish over time as children mature and integrate this grandiosity into their personality in a moderated way. Pathology only results when this developmental process goes awry (Kohut, 1977).

In recent years, interest in narcissism has grown exponentially with an increase in both public interest and psychological research into narcissism, entitlement, and self-esteem (Cain et al., 2008; Campbell et al., 2004; Miller et al., 2017a; Twenge & Campbell, 2001; Twenge & Campbell, 2009a; Wolfe, 1976), but definitions of narcissism today are still impacted by these historical accounts. Kernberg's (1975) theory that grandiosity is a mask for deep-seated insecurities forms the basis of much of the modern clinical research into narcissism, where narcissism is described as 'pathological' and is associated with significant distress and difficulty functioning (Miller & Campbell, 2008; Pincus et al., 2009). In contrast, social-personality research conceptualises narcissism as a dimensional personality trait that is sometimes described as 'normal' (Freud, 1931/1950), although high levels of this trait may reflect pathological narcissism (e.g., Boldero, Higgins, & Hulbert, 2015; Grubbs & Exline, 2016; Krizan & Herlache, 2017; Miller & Campbell, 2008). In this thesis, narcissism is

approached from the social-personality perspective, treating narcissism as an individual differences variable that is distributed within the general population and follows normative developmental patterns. However, the clinical view of narcissism is still important to the current research as the divide between the two perspectives impacts upon the two central debates.

### *Narcissism*

Turning from historical perspectives to modern depictions of narcissism, a useful starting point comes from the Diagnostic and Statistical Manual V (DSM V) which defines Narcissistic Personality Disorder (NPD) as “a pervasive pattern of grandiosity, need for admiration, and lack of empathy” (American Psychiatric Association, 2013, p. 645). While the focus of this thesis is on narcissism as a personality trait rather than as a disorder, this definition provides an important baseline on which to build as the most widely used measure of narcissism in the social-personality literature (the Narcissistic Personality Inventory or NPI; Raskin & Terry, 1988) was created to test the NPD criteria in the DSM III. Beyond this broad definition, narcissism is associated with a wide range of attitudes and behaviours, including a sense of self-importance, grandiose fantasies of success and power, the expectation of special favours, exploitativeness and a lack of empathy for others, selfishness, and hostile responses to criticism, failure, or indifference (Emmons, 1987; Raskin & Terry, 1988; Ronningstam, 2009).

To simplify, the most common defining behaviours of narcissism can be pared down to positive intrapersonal functioning such as high self-esteem, accompanied by negative interpersonal functioning such as aggression, antagonism, and entitlement (Derry, Ohan, & Bayliss, 2017; Foster, McCain, Hibberts, Brunell, & Johnson, 2015; Moeller et al., 2009). Narcissists have an unrealistically inflated sense of self, report high self-esteem and

wellbeing, are self-confident, and feel superior to others (Campbell & Foster, 2007; Raskin & Terry, 1988; Sedikides, Rudich, Gregg, Kumashiro, & Rusbult, 2004; Wink, 1991). However, an inflated self-view needs something to prop it up, leading narcissists to seek validation from others (Campbell & Foster, 2007; Morf & Rhodewalt, 2001). Interpersonally, narcissists make a good impression on others in the short-term as they appear confident and sociable, but after sustained contact the impression turns sour (Paulhus, 1998). As narcissists use others to maintain their grandiose self-image and retaliate with hostility and vindictiveness to perceived slights, interpersonal relationships wear thin over time (e.g., Back et al., 2013; Dickinson & Pincus, 2003; Morf & Rhodewalt, 2001).

Many structural models of narcissism follow these two broad dimensions of a positive self-view combined with antagonist behaviour towards others. In a ‘minimalist account’, Paulhus (2001) described narcissism as a combination of high extraversion and low agreeableness known as the ‘disagreeable extravert’. Similarly, narcissism has been described in terms of high agency and low communion (Bradlee & Emmons, 1992; Campbell, Rudich, & Sedikides, 2002; Giacomin & Jordan, 2014; Miller & Campbell, 2010; Paulhus, 2001, 2002) where narcissists view themselves positively in terms of agentic traits (i.e., status, dominance), but are unconcerned with communal traits (i.e., interpersonal skills; Bradlee & Emmons, 1992; Brown & Zeigler-Hill, 2004; Campbell et al., 2007; Miller et al., 2012a). Narcissism has also been described as consisting of self-enhancing, assertive behaviours, and self-protective, antagonistic behaviours (Back et al., 2013). Finally, Brown, Budzek, and Tamborski (2009; also see Tamborski, Brown, & Chowning, 2012) suggest that narcissism can be broken down into grandiosity and entitlement, with grandiosity reflecting high intrapersonal functioning and entitlement reflecting poor interpersonal functioning.

However, it has become increasingly clear over time that not all narcissists view themselves positively; while some suggest narcissism is the peak of the survival instinct

(Freud, 1931/1950), others suggest it is a mask for inner vulnerability (Kernberg, 1975). More recently, this inconsistency has been dealt with by treating narcissism as two subtypes, dimensions, or phenotypic expressions (Rose, 2002; Wink, 1991). As described above, the traditional notion of a narcissist is a subtype labelled grandiose narcissism; self-aggrandizing narcissists with an overly positive self-view, a sense of entitlement, and an open need for admiration (Pincus et al., 2009; Wink, 1991). In contrast, vulnerable narcissists are characterised by their low self-esteem (Bosson et al., 2008; Rose, 2002). While this may seem a counterintuitive description of narcissism, vulnerable narcissists are also exploitative, have a high sense of entitlement, and enjoy the “special” status that comes with their self-sacrificing, long-suffering pain (Bosson et al., 2008; Pincus et al., 2009; Wink, 1991). That is, vulnerable narcissists tend to have both negative intrapersonal and interpersonal functioning (Derry et al., 2017). Although most research still focuses on grandiose narcissism, these subtypes have gone a long way in combining the clinical and social-personality views of narcissism and untangling the relationship between narcissism and self-esteem (Miller et al., 2017a).

What is the motivation behind such antagonistic behaviour among narcissists? Some process models suggest that narcissists aim to achieve and maintain high self-esteem and a grandiose self-image (Back et al., 2013; Baumeister & Vohs, 2001; Emmons, 1987; Morf & Rhodewalt, 2001) via external validation from the social realm. Alternatively, it has been suggested that narcissists have no real goal in mind: they may be ‘addicted’ to self-esteem (Baumeister & Vohs, 2001) or impulsive (Vazire & Funder, 2006). Narcissism may also arise simply from a meeting of the right conditions of high agency and little care for others, maintained by the rewarding rush of self-esteem (Campbell & Foster, 2007). In short, many theories suggest that narcissism has an addictive quality and is self-maintaining, but

ultimately self-defeating as interpersonal relationships break down (Morf & Rhodewalt, 2001).

It has also been suggested that narcissists are narcissists because *it works* – their willingness to exploit others is an adaptive trade-off that likely translates into real world success even at the expense of losing social ties (Campbell, 2001; Campbell, Bush, & Brunell, 2005; Grubbs & Exline, 2016; Orth & Luciano, 2015; Morf & Rhodewalt, 2001). Those low in narcissism may gain from their cooperativeness and low aggression, but lose out on opportunities by failing to exploit others (Ashton & Lee, 2007, 2009; Campbell, 2001; Campbell, Bush, & Brunell, 2005; Grubbs & Exline, 2016; Orth & Luciano, 2015; Morf & Rhodewalt, 2001). This means that narcissism and entitlement are almost always disadvantageous to others, and even the advantages to the narcissist may fade over time (Campbell et al., 2005; see Campbell & Buffardi, 2008 for a review). In sum, narcissism is generally considered to be damaging to oneself and to others and is fairly resistant to change (e.g., Campbell et al., 2005; Moeller et al., 2009; Morf & Rhodewalt, 2001).

### *Measuring Narcissism*

The NPI is the most common measure of narcissism, with 77% of research using this measure as of 2008 (Cain et al., 2008). Although the studies in this thesis do not use the NPI, its widespread use means that it has formed much of our current understanding of narcissism. The NPI is therefore central to the debate regarding narcissism and self-esteem (e.g., Rosenthal & Hooley, 2010), and impacts upon the debate regarding the narcissism epidemic as well (e.g., Roberts, Edmonds, & Grijalva, 2010; Twenge & Foster, 2010; Twenge et al., 2008a). Originally conceived as a measure for a general construct of narcissism (Raskin & Hall, 1979), the NPI was later refined to a seven-factor structure consisting of authority, exhibitionism, superiority, entitlement, exploitativeness, self-sufficiency, and vanity (Raskin

& Terry, 1988). Several alternative factor structures of the NPI have been identified (Emmons, 1984, 1987; Corry et al., 2008; Kubarych, Deary, & Austin, 2004; Ackerman et al., 2011) but most research uses either the seven-factor structure or the mean score of the total NPI; both are considered appropriate measures of narcissism (Ackerman, Donnellan, & Robins, 2012; Boldero et al., 2015; Kubarych et al., 2004; Raskin & Terry, 1988).

Although the NPI is based upon the DSM criteria, it is generally considered to measure 'normal' or nondistressed narcissism consistent with the social-personality view of narcissism (Miller & Campbell, 2008; Pincus et al., 2009; Pincus & Lukowitsky, 2010), and both the DSM and the NPI tend to lean towards the grandiose side of narcissism rather than the vulnerable side (Ackerman et al., 2011; Miller & Campbell, 2008; Pincus & Lukowitsky, 2010; Wright & Edershile, 2017). Research that measures NPI narcissism therefore *largely* reflects grandiose narcissism. However, the NPI still has a strong correlation with measures of pathological narcissism (Miller & Campbell, 2008; Samuel & Widiger, 2008). There are also several other measures of narcissism that are relatively commonly used within the literature (e.g., Back et al., 2013; Hendin & Cheek, 1997; Pincus et al., 2009; Rosenthal, Hooley, & Steshenko, 2007). However, for simplicity, narcissism will simply be referred to as grandiose or vulnerable throughout the thesis rather than discussing each individual measure (see Krizan & Herlache, 2017; Miller et al., 2014 for a summary).

Before moving to definitions of other constructs of self-regard, it is important to note that neither 'normal' social-personality narcissism nor 'pathological' clinical narcissism necessarily reflect NPD (Miller & Campbell, 2010; Pincus & Lukowitsky, 2010). Some social-personality models do place NPD on the same dimension as trait narcissism (Aslinger, Manuck, Pilkonis, Simms, & Wright, in press; Krizan & Herlache, 2017), and self-report measures such as the NPI (.54-.59; Miller, Gaughan, Pryor, & Campbell, 2009; Miller, Gentile, Wilson, & Campbell, 2013a; Miller et al., 2014) and measures of pathological

narcissism (.20-.52; Miller et al., 2013a; Miller, Lynam, & Campbell, 2016) correlate highly with NPD. Importantly, however, they do not correlate highly enough to be an accurate indicator of NPD. Those who have been diagnosed with NPD are likely to score highly on self-report measures of trait narcissism, but not all those who score highly on trait narcissism measures will necessarily meet the criteria for diagnosis with NPD. As a personality disorder, NPD is best assessed by diagnostic interviews conducted by clinicians (e.g., Pincus & Lukowitsky, 2010). Accordingly, this thesis will largely refrain from drawing conclusions about the relation between trait narcissism and NPD.

### ***Psychological Entitlement***

As mentioned previously, the specific construct measured in the current research is psychological entitlement. The American Psychiatric Association (2013) defines entitlement as “unreasonable expectations of especially favourable treatment or automatic compliance with his or her expectations” (p. 669). Entitlement in the NPI is defined as “the expectation of special privileges over others and special exemptions from normal social demands” (Raskin & Terry, 1988, p. 890). Campbell et al. (2004) similarly define psychological entitlement as “a stable and pervasive sense that one deserves more and is entitled to more than others” (p. 31); a sense that is global, pervasive, and experienced across situations.

Entitlement is described as the core defining aspect of narcissism within recent theoretical models (e.g., Krizan & Herlache, 2017; Miller et al., 2017a; Wright & Edershile, 2017). Entitlement also emerges as a clear and consistent factor of narcissism in a number of factor structures of the NPI (Ackerman et al., 2011; Corry et al., 2008; Kubarych et al., 2004; Raskin & Terry, 1988; Wetzel et al., 2017). Entitlement often demonstrates negative associations with outcomes such as self-esteem even as the other facets in the NPI may be positively associated with the same outcome. As such, entitlement is generally regarded as

the core maladaptive facet of narcissism (Ackerman et al., 2011; Brown et al., 2009; Corry et al., 2008; Emmons, 1987; Krizan & Herlache, 2017; Rose, 2002; Zeigler-Hill & Besser, 2013). It is also often described as ‘socially toxic’ (Ackerman et al., 2011; Trzesniewski et al., 2008b) as it drives the negative interpersonal behaviours associated with narcissism (Ackerman et al., 2011; Bradlee & Emmons, 1992; Campbell et al., 2004; Moeller et al., 2009; Reidy, Zeichner, Foster, & Martinez, 2008; Tamborski et al., 2012; van Dijk & De Cremer, 2006; Zeigler-Hill & Besser, 2013). In short, entitlement is a narrow construct of narcissism that is uniformly maladaptive (e.g., Moeller et al., 2009), while the broad construct of narcissism encompasses both entitlement and a range of other facets that can be relatively adaptive such as leadership and self-sufficiency (e.g., Raskin & Terry, 1988).

Entitlement is therefore an excellent measure of the particular kinds of narcissistic behaviours that are of interest to both researchers and the public, with phrases such as “a sense of entitlement” common in media coverage, accompanied by the popular belief that entitlement is growing over time (Campbell et al., 2004; Lessard, Greenberger, Chen, & Farruggia, 2011). This construct avoids some of the thornier arguments about whether narcissism should be conceptualised as partially adaptive or not (e.g., Rosenthal & Hooley, 2010; discussed in the next chapter) by reflecting a facet that is widely recognised as the socially toxic core of narcissism (Ackerman et al., 2011; Brown et al., 2009; Krizan & Herlache, 2017). Measuring change in psychological entitlement provides a clear test of whether *maladaptive* narcissistic behaviours are on the rise over time, given that less concerning aspects of the NPI, such as assertiveness, may drive the apparent increase (Donnellan, Trzesniewski, & Robins, 2009; Trzesniewski, Donnellan, & Robins, 2008a, 2008b). Furthermore, entitlement is widely acknowledged as the ‘common core’ of different subtypes of narcissism, with high entitlement found within both grandiose and vulnerable narcissism (Ackerman et al., 2011; Brown & Brunell, 2017; Derry et al., 2017; Dickinson &

Pincus, 2003; Krizan & Herlache, 2017; Krizan & Johar, 2012; Pincus et al., 2009; Wink, 1991; Zeigler-Hill & Besser, 2013), allowing both to be measured.

The measure used in this thesis is the Psychological Entitlement Scale (PES; Campbell et al., 2004), a scale created to replace and improve upon the entitlement subscale of the NPI. While the NPI subscale appears to capture the maladaptive side of narcissism, it has poor internal reliability, poor test-retest reliability, and is not intended to be used on its own (Ackerman & Donnellan, 2013; Campbell et al., 2004; del Rosario & White, 2005; Pryor, Miller, & Gaughan, 2008). The PES, however, measures entitlement as a stand-alone trait, is well validated, and predicts relevant narcissistic behaviours such as competitiveness, selfishness in romantic relationships, retaliating against ego-threats with aggression, and allocating resources to oneself (Campbell et al., 2004). The PES correlates positively with all measures of narcissism, both vulnerable and grandiose, and all measures of entitlement, including the NPI entitlement subscale (Ackerman & Donnellan, 2013; Brown et al., 2009; Campbell et al., 2004; Lessard et al., 2011; Miller et al., 2013a; Miller, Price, & Campbell, 2012b; Moeller et al., 2009; Pryor et al., 2008).

### ***Self-Esteem***

Self-esteem has proven to be easier to define than narcissism, although early research sometimes conflated the two (Baumeister, Smart, & Boden, 1996). Self-esteem is defined as a sense of self-worth that is both global and stable (Rosenberg, 1965; Heppner & Kernis, 2011), or an individual's "subjective evaluation of his or her worth as a person" (Orth & Robins, 2014, p. 381). Self-esteem is contrasted to narcissism by a *lack* of a sense of superiority or negative view of others: "whether the individual considers [them]self adequate – a person of worth – not whether [they] consider [them]self superior to others" (Rosenberg, 1965, p. 62). Some definitions of self-esteem include a focus on competence, with self-

esteem arising from performing well in domains that are important to the individual (Mruk, 2013), and others describe self-esteem as the interplay between competence and worth: successfully living in a worthy manner (Heppner & Kernis, 2011; Mruk, 2013). The Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965) is the most commonly used measure of self-esteem in narcissism research. Accordingly, both the scale and its definition of self-esteem as a global sense of self-worth are employed in the current research.

## **Summary**

Narcissism as a personality trait is a collection of facets ranging from adaptive (assertiveness and leadership) to maladaptive (entitlement, exploitativeness, and vanity; Raskin & Terry, 1988). Of these facets, entitlement stands out as a uniformly negative quality (Ackerman et al., 2011) that drives the interpersonal antagonism at the heart of narcissism (Moeller et al., 2009). This antagonism means that narcissism is disadvantageous to others as narcissists are willing to exploit other people for personal gain, as well as disadvantageous to the narcissist themselves as they lose social ties over time (Campbell et al., 2005; Morf & Rhodewalt, 2001; Paulhus, 1998). Modern understandings of narcissism suggest that it consists of at least two subtypes, grandiose and vulnerable narcissism (Bosson & Weaver, 2011). Both share a common core of high entitlement, antagonism, and aggression (Miller et al., 2017a). However, grandiose narcissists have a positive view of the self while vulnerable narcissists take a negative view (Derry et al., 2017; Rose, 2002). These subtypes have helped to reconcile two historical views of narcissism – the clinical view of narcissism as a cover for inner fragility and the social-personality view of narcissism as straightforward grandiosity – by recognising the heterogeneity within narcissism.

**CHAPTER TWO**

## **Literature Review**

Having given a general overview to narcissism, psychological entitlement, and self-esteem, research relating more specifically to the studies in this thesis will be reviewed in the current chapter. The aim of this literature review is to address two debates in the narcissism literature. The first debate regards the direction and strength of the association between narcissism and self-esteem, which ties into the structure and definition of narcissism itself. The second debate regards whether narcissism is increasing over time, and how concerned we need to be about entitled and selfish behaviour in young generations. As the studies presented in this thesis are unchanged published papers and manuscripts, later chapters will necessarily involve some repetition of the material here. However, this chapter presents the broader and more comprehensive review of research.

### **The Structure and Heterogeneity of Self-Regard**

We turn now to the first debate that this thesis aims to address: the role that self-esteem plays in defining narcissism. Despite the exact nature of this relationship being investigated for quite some time, untangling these two concepts remains an active area of research (e.g., Krizan & Herlache, 2017; Miller et al., 2017a) – determining how self-esteem and narcissism are related, whether self-esteem *should* be related to narcissism, whether the self-esteem reported by narcissists is genuine, and investigating the grandiose and vulnerable expressions of narcissism (e.g., Bosson et al., 2008; Brown & Zeigler-Hill, 2004; Jordan, Spencer, Zanna, Hoshino-Browne, & Correll, 2003; Miller & Campbell, 2008; Miller et al., 2011a; Miller et al., 2017b; Rosenthal & Hooley, 2010). While the narcissism literature attempts to organise inconsistent findings, the self-esteem literature has run up against its own paradoxical findings. High self-esteem – traditionally viewed as a healthy and positive sense of self – can sometimes be highly dependent on external validation, fluctuate wildly

over time, or predict antisocial outcomes such as increased aggression (Jordan & Zeigler-Hill, 2013). Just as narcissism is defined by its relationship with self-esteem, self-esteem can also be defined with respect to its association with narcissism.

One approach is to recognise that *qualitatively* different subtypes or expressions of both narcissism and self-esteem may exist, even at similar *quantitative* levels. Heterogeneity within narcissism and self-esteem is not a new idea (e.g., Bushman & Baumeister, 1998; Emmons, 1984, 1987; Raskin & Terry, 1988; Salmivalli, Kaukianen, Kaistaniemi, & Lagerspetz, 1999). Yet, it is only more recently that research has begun to emphasise the importance of capturing this heterogeneity (e.g., Baumeister, Campbell, Kruger, & Vohs, 2003; Cain et al., 2008; Crowe, LoPilato, Campbell, & Miller, 2016a; Eromo & Levy, 2017; Jordan, Logel, Spencer, Zanna, & Whitfield, 2009; Kernis, 2003; Krizan & Herlache, 2017; Miller et al., 2017a). For example, Krizan and Herlache (2017) state that “it is shortsighted to consider narcissism as a unitary or isolated trait... theorizing about narcissistic individuals based on assessments of single traits [is] limited in applicability to actual people” (p. 9). High scores in entitlement alone may indicate narcissism, but not what expression or subtype of narcissism, and these subtypes have highly divergent behaviour and outcomes (Dickinson & Pincus, 2003; Miller et al., 2011a; Samuel & Widiger, 2008; Wink, 1991). This includes but is not limited to the grandiose and vulnerable narcissism subtypes introduced in Chapter One. Similarly, Jordan et al. (2009) suggest that “high self-esteem is heterogeneous; ... not all people with high self-esteem are psychologically equivalent” (p. 2). High scores in self-esteem indicate high self-regard, but the self-esteem reported by narcissists and the self-esteem reported by non-narcissists represent qualitatively different views (Eromo & Levy, 2017; Heppner & Kernis, 2011; Jordan et al., 2009; Kernis, 2003; Raskin & Terry, 1988).

Most research to date uses variable-centered approaches that look for a relationship between variables with the underlying assumption that this relationship will be homogenous

across the population. That is, it is assumed that the association between narcissism and self-esteem is the same for all individuals (Laursen & Hoff, 2006; Muthén & Muthén, 2000; Rosato & Baer, 2012); narcissism and self-esteem have a small positive association (Brown & Zeigler-Hill, 2004), therefore narcissists generally have higher self-esteem, and people with high self-esteem are more narcissistic. In contrast, a person-centered approach has the underlying assumption that a population is heterogeneous and aims to describe *differences* in this association across individuals. That is, some people with high self-esteem may be narcissists, while others with high self-esteem are not (Laursen & Hoff, 2006; Muthén & Muthén, 2000; Rosato & Baer, 2012).

Research into these different subtypes of self-regard is on the rise (e.g., Crowe et al., 2016a; Jordan et al., 2009; Pincus et al., 2009), but few have investigated these subtypes from a person-centered approach (see Crowe et al., 2016a; Salmivalli et al., 1999; Wetzel, Leckelt, Gerlach, & Back, 2016 for exceptions). Osborne and Sibley (2017) argue that person-centered approaches are preferable to variable-centered approaches when the theoretical background focuses on the existence and prevalence of different ‘types’ of people. Yet there is a lack of person-centered research in psychological research in general, even as many theories predict types of people who are qualitatively different in some way from other types of people (Laursen & Hoff, 2006; Osborne & Sibley, 2017). With both the narcissism and self-esteem literatures theorising subtypes of self-regard (e.g., Kernis, 2003; Miller et al., 2011a), person-centered approaches are particularly relevant as well as intuitive, and their absence from the field leaves many unanswered questions.

It is important to note that person-centered approaches are intended to be complementary to variable-centered approaches rather than a replacement (Laursen & Hoff, 2006; Rosato & Baer, 2012). Narcissism and self-esteem are generally viewed as dimensional constructs, and there is no evident ‘cut-off’ where one might be labelled a narcissist (Foster &

Campbell, 2007; Heppner & Kernis, 2011), so variable-centered approaches are also applicable. Used together, the two approaches provide a more comprehensive view of personality and developmental processes (Laursen & Hoff, 2006). While variable-centered approaches describe general trends in a way that is useful (e.g., narcissism is associated with interpersonal antagonism and low agreeableness), person-centered approaches can also describe heterogeneity in a way that is useful (e.g., narcissists can hold positive and negative self-views). Measuring the ways in which relationships *differ* across individuals is essential to understanding various forms of self-regard and their divergent behaviours, personalities, and psychosocial outcomes (e.g., Dickinson & Pincus, 2003; Miller et al., 2011a).

One way to identify common subtypes using a person-centered approach is to use Latent Profile Analysis (LPA), a form of mixture modelling (Collins & Lanza, 2009; Osborne & Sibley, 2017). LPA has similarities to variable-centered approaches like factor analysis in that both approaches aim to identify an underlying latent variable that explains the covariation between indicator variables. However, as a person-centered approach, LPA assumes that this latent variable is *categorical* rather than continuous and so identifies a set of subgroups rather than a single dimensional factor (Collins & Lanza, 2009; Osborne & Sibley, 2017). LPA identifies groups where individuals are similar to each other within the group, but the groups are different to one another (Collins & Lanza, 2009; Muthén & Muthén, 2000; Rosato & Baer, 2012). For example, it is possible (and likely) that some people are entitled and have high self-esteem and therefore will be grouped together, while others have high self-esteem and low entitlement and so will form a separate group. The goal of LPA is to identify the most parsimonious set of groups (or profiles) that still explains heterogeneity in the population (Collins & Lanza, 2009); a large enough number of groups to capture the ways in which people differ from one another, but a small enough number of groups to be practically useful.

Once the number of subgroups has been selected based upon several measures of model fit, the probability of belonging to each group for each participant is estimated. That is, rather than assigning participants to one particular group (as true subgroups with clear boundaries are unlikely), LPA estimates how well each participant fits within each profile and the likelihood that they are misclassified. Misclassification can then be adjusted for when investigating potential predictors and outcomes of group membership such as gender, personality, or psychological distress (Collins & Lanza, 2009; Osborne & Sibley, 2017). In short, a participant is never assumed to be a particular ‘type’ of person, instead, LPA estimates how similar they are to each of the identified common types. LPA is therefore an improvement upon other person-centered approaches such as cluster analysis or moderation (see Osborne & Sibley, 2017 for a review).

Study 1 and Study 2 will use mixture modelling to identify groups that share similar levels of self-esteem and psychological entitlement. Self-esteem and entitlement serve as parsimonious markers of the intrapersonal and interpersonal functioning that defines narcissism (e.g., Derry et al., 2017). Study 1 will use LPA to identify an exploratory, cross-sectional structure of self-regard in a large national panel study. While several subtypes of entitlement, narcissism, and self-esteem have been identified (e.g., Crowe et al., 2016a; Kernis, 2003; Wink, 1991), LPA can investigate whether they will emerge as clear groups in a nationally representative sample, how prevalent they are, and who forms these subtypes using predictors of age, gender, and personality. Study 2 will use Latent Transition Analysis (LTA), a longitudinal extension of LPA that tests how people move from one group to another across time (Collins & Lanza, 2009). Study 2 will therefore aim to replicate the structure identified in Study 1, and extend upon it by examining differences not only in the mean levels of self-regard, but also the ways in which they develop over time.

In hypothesising subtypes of self-regard we are interested in *high* self-regard and high narcissism in particular, as that is where questions of the age of entitlement arise. There are (at least) three possible combinations of high self-regard: high entitlement and high self-esteem, high entitlement and low self-esteem, and low entitlement and high self-esteem. As will be reviewed in the following sections, all three of these patterns map clearly onto previously identified theoretical subtypes of narcissism, entitlement, and self-esteem. Of course, many potential patterns in self-esteem and entitlement may exist when taking into account quantitative differences, that is, moderate or low levels of self-regard, but these largely lack a theoretical background.

Although identifying the structure of self-regard is the focus of Studies 1 and 2, this topic is also highly relevant to our understanding of the narcissism epidemic and how narcissism may be changing over time. Trzesniewski et al. (2008a) point out that “an increase in the full-scale NPI may be a ‘bad’ thing or a ‘good’ thing, or neither... because two people with the same NPI score might have very different patterns of behaviour and social outcomes” (Trzesniewski et al., 2008a, p. 911). Without having a clear understanding of what narcissism is or what its real-world consequences may be, a rise in NPI scores is difficult to interpret. Furthermore, LPA can provide an estimate of the prevalence of high entitlement as the pervasiveness of the ‘age of entitlement’ (Twenge & Campbell, 2009a) is yet unknown. LTA also informs the narcissism epidemic debate, by assessing not only whether entitlement is increasing, but for whom.

The following sections will review research into the relationship between narcissism and self-esteem and the various theoretical subtypes that have been proposed. It is important to note that there are many different suggested subtypes of high self-esteem and narcissism, and these are collapsed together where they may produce similar patterns of self-esteem and entitlement. While many of these subtypes share nomological networks, correlate moderately,

and overlap theoretically, this is not to suggest that they are the exact same thing. Important differences have been documented and should not be glossed over (e.g., Back et al., 2013; Bosson et al., 2008; Crowe et al., 2016a; Lessard et al., 2011). However, it is also worth noting that narcissism research struggles with the “jingle-jangle” fallacy, where very similar constructs are labelled differently and therefore treated as different, even though they may be subsumed within the same model (Krizan & Herlache, 2017; Pincus & Lukowitsky, 2010; Pulver, 1970). The goal of LPA is parsimony – explaining the variation between people as simply as possible – and providing a useful, basic structure of self-regard to complement research that investigates these various theorised subtypes separately (Collins & Lanza, 2009; Laursen & Hoff, 2006; Wetzel et al., 2016). Demonstrating that theoretical subtypes of narcissism and self-esteem can emerge clearly from an exploratory analysis of a nationally representative sample is an excellent test of the practicality of such subtypes, and will go a long way towards our understanding of self-regard at a population level.

### *Narcissism and Self-Esteem*

To begin: do narcissists *really* like themselves? Research has consistently found a small to moderate positive association between NPI narcissism and self-esteem (Ackerman et al., 2011; Boldero et al., 2015; Brown et al., 2009; Brown & Zeigler-Hill, 2004; Brunell & Fisher, 2014; Campbell et al., 2007; Donnellan et al., 2005; Emmons, 1987; Geukes et al., 2017; Giacomini & Jordan, 2014; Horvath & Morf, 2010; Lessard et al., 2011; Maxwell, Donnellan, Hopwood, & Ackerman, 2011; Miller & Campbell, 2008; Pincus et al., 2009; Raskin & Terry, 1988; Rose, 2002; Rosenthal & Hooley, 2010; Rosenthal, Montoya, Ridings, Rieck, & Hooley, 2011; Trzesniewski et al., 2008a; Zeigler-Hill & Besser, 2013; Zuckerman & O’Loughlin, 2009), suggesting that narcissists do indeed have high self-esteem. Even entitlement, the consistently maladaptive core of narcissism, can predict higher self-esteem (Brown et al., 2009; Campbell et al., 2004). Yet, this relationship is unusually weak given

that narcissism is often defined by a positive view of the self (Bosson & Weaver, 2011), with an average correlation of around .26 (see Brown & Zeigler-Hill, 2004).

There are several suggested explanations for this weak relationship. Some argue that the weak positive association between narcissism and self-esteem arises from narcissists struggling to mask their negative, non-conscious view of the self, in line with clinical theory (Bosson et al., 2008; Morf & Rhodewalt, 2001). Others argue that the weak relationship is merely an artefact of measurement issues with the NPI (Rosenthal & Hooley, 2010). More recently, growing adoption of the grandiose and vulnerable subtypes has begun to resolve some of the inconsistent findings (Miller et al., 2017a), although debate still continues even within these subtypes (e.g., Pincus & Roche, 2011). This section reviews the different theoretical and empirical approaches to the relationship between narcissism and self-esteem.

#### *Implicit Self-Esteem and Social Desirability*

The first question to examine is whether grandiose narcissist's reported self-esteem is genuine. If not, the positive association between narcissism and explicit self-esteem may in fact be negative, and explained by social desirability or self-presentation motives. The mask model argues this point, suggesting that narcissists use their grandiose behaviour to hide an inwardly vulnerable self (Brown & Bosson, 2001; Brown & Brunell, 2017; Jordan et al., 2009; Kernberg, 1975; Kohut, 1977; Morf & Rhodewalt, 2001; Tracy & Robins, 2003). The mask model predicts that grandiose narcissists have discrepant self-esteem levels, where their high explicit self-esteem comes with the caveat of low implicit self-esteem (Brown & Bosson, 2001). In contrast, the explicit model suggests that grandiose narcissists' high self-esteem is just that, reflecting both high explicit and implicit self-esteem (Miller et al., 2017a).

This 'grandiose but vulnerable' self-concept (Morf & Rhodewalt, 2001) is one of the reigning views of narcissism historically and fits with the experiences of clinicians (Pincus et al., 2009). However, it has struggled to find support empirically in more recent research

(Bosson et al., 2008; Pilch & Hyla, 2017). Most measures of narcissism are in fact positively associated with emotional stability (i.e., low vulnerability; Samuel & Widiger, 2008; Sedikides et al., 2004), and narcissism and entitlement are both negatively associated with social desirability (Sedikides et al., 2004; Trzesniewski et al., 2008a) and self-deception (Rose, 2002). Furthermore, while some studies found narcissism was highest among those with discrepant self-esteem (e.g., Bosson, Brown, & Zeigler-Hill, 2003; Gregg & Sedikides, 2010; Jordan et al., 2003; Zeigler-Hill, 2006), a meta-analysis found no overall association (Bosson et al., 2008; also see Brown & Brunell, 2017). At most, grandiose narcissists may have neutral self-views of themselves communally (i.e., morality, interpersonal skills; Campbell, Bosson, Goheen, Lakey, & Kernis, 2007; Paulhus, 2002), but there is no evidence of negative self-views. There is, however, some evidence that different implicit measures used across the literature are non-equivalent (Bosson et al., 2008; Campbell et al., 2004, 2007; Gregg & Sedikides, 2010), so future research may begin to uncover more support for the mask model.

Several studies have attempted to examine this question further by using the bogus pipeline procedure, where participants are manipulated into believing they can be caught in a lie by using, for example, fake lie detectors. Myers and Zeigler-Hill (2012) found that narcissistic women reported lower levels of self-esteem in the bogus pipeline condition than the control. However, Brunell and Fisher (2014) found that grandiose narcissists did not report different levels of self-reported explicit self-esteem even when they believed they could be caught out by a lie detector, while Brown and Brunell (2017) found that grandiose narcissists actually reported higher self-esteem. Interestingly, vulnerable narcissists do not appear to be lying about their low self-esteem either, as vulnerable narcissists who believed they could be caught lying reported even lower self-esteem (Brown & Brunell, 2017). Overall, while research into the mask model shows some mixed support and is on-going

(Bosson et al., 2008), there is currently little evidence that the high self-esteem reported by grandiose narcissists is a mask or non-genuine.

### *Removing Self-Esteem from the Definition of Narcissism*

Having established that self-esteem *is* consistently associated with grandiose narcissism, a further concern is whether self-esteem *should* be considered a defining element of grandiose narcissism (Pincus & Roche, 2011; Rosenthal & Hooley, 2010). In particular, it has been suggested that the consistent positive association between NPI narcissism and self-esteem (Brown & Zeigler-Hill, 2004) is actually an artefact of a poorly constructed narcissism measure (Rosenthal & Hooley, 2010; Rosenthal et al., 2011). Rosenthal and Hooley (2010) argue that a form of narcissism with high self-esteem veers away from narcissism as it has been defined and understood in decades of clinical work. Although the NPI is not used in this thesis, it is important to address this point as Studies 1 and 2 propose to measure a subtype analogous to grandiose narcissism using high self-esteem as a marker.

In support of this argument, Rosenthal and colleagues (2011; also see Ackerman et al., 2012; Rosenthal & Hooley, 2010) demonstrated that a number of items in the NPI tend to be endorsed by those who are low in narcissism, because these items were strongly related to self-esteem. Furthermore, the associations between narcissism and psychological health can be explained by this subset of ‘self-esteem’ items (Rosenthal & Hooley, 2010; Rosenthal et al., 2011). This finding mirrors other research that shows self-esteem mediates the relationship between NPI narcissism and psychological health (Rose, 2002; Sedikides et al., 2004). Rosenthal and Hooley (2010) therefore suggest that the NPI is a measure of narcissism *and* self-esteem, conflated together in a way that renders the scale uninterpretable. In fact, Rosenthal and Hooley describe social-personality conceptions of narcissism as ‘the tail wagging the dog’, with the definition of the construct driven by the assessment tool –

narcissism is described as a form of grandiose inflated self-esteem *because* that is what the NPI measures. In sum, it is argued that narcissism should not be associated with self-esteem, as it is atheoretical, an artefact of measurement issues, is not a defining characteristic of narcissism, and does not match up with clinical depictions of narcissists as vulnerable or distressed (Pincus et al., 2009; Rosenthal & Hooley, 2010; Rosenthal et al., 2011).

However, later research did not support Rosenthal and Hooley's (2010) conclusion, with Miller, Maples, and Campbell (2011b) finding that most of the items in the NPI are related to both self-esteem and entitlement, suggesting that it is in fact measuring some form of narcissism (also see Ackerman et al., 2011; Cain et al., 2008; Pincus et al., 2009). Furthermore, Miller et al. (2017a) argue that the NPI does not measure non-distressed narcissism as argued by Rosenthal and Hooley (2010). Grandiose narcissists may not report low self-esteem or high psychological distress, but they do cause distress to those around them, and their interpersonal functioning is impaired (Campbell et al., 2004; Derry et al., 2017; Dickinson & Pincus, 2003; Miller, Campbell, & Piconis, 2007; Miller et al., 2011a; Moeller et al., 2009). Moreover, the NPI correlates with a number of maladaptive outcomes (e.g., Dickinson & Pincus, 2003; Miller et al., 2011a), and measures of NPD (Maxwell et al., 2011; Miller et al., 2009; Miller et al., 2013a). In short, even though the high self-esteem associated with NPI narcissism brings some adaptive qualities, NPI narcissism is still associated with distress and difficulty functioning and so does not stray too far from clinical descriptions of narcissism (Miller et al., 2017a).

In fact, several theorists have argued that it makes sense for narcissism to include elements of self-esteem as the two share considerable theoretical overlap (e.g., Brown et al., 2009; Campbell, 2001; Geukes et al., 2017; Miller et al., 2011b; Orth et al., 2016). How can one say they are superior to others and not also report themselves to be a person of worth? The same argument has been made within the self-esteem literature, with Jordan and Zeigler-

Hill (2013) pointing out that anyone with a positive sense of self in any form will measure highly on the RSES (Rosenberg, 1965) as it is designed to be a *global* measure of positive self-evaluation. Of course, this self-esteem may not be genuine, stable, or implicit (Kernis, 2003; Miller et al., 2011b; Rose, 2002; to be discussed in more detail in this chapter), but an association between grandiose narcissism and self-esteem scales simply reflects consistency in a narcissists self-image. While there are still concerns about the validity of the NPI (Rosenthal & Hooley, 2010) and it is not the goal of this thesis to defend it, the idea that narcissism can be related to high self-esteem is well-supported both theoretically and empirically (Brown & Zeigler-Hill, 2004; Miller et al., 2011b).

How can we reconcile this with the clinical view of ‘grandiose but vulnerable’ narcissism? Campbell (2001) has suggested that perhaps clinical accounts of vulnerability in narcissism occur because only a small subset of narcissists attend therapy: those whose narcissism is failing them. Their attempts at grandiosity have been foiled by environmental factors and repeated experiences of failure have made them fragile, or ‘failed narcissists’; alternatively, we might call these vulnerable narcissists (Back et al., 2013; Campbell, 2001; Wetzel et al., 2016). This idea has been borne out by later research that found that vulnerability, rather than grandiosity, leads narcissists to seek treatment (Ellison, Levy, Cain, Ansell, & Pincus, 2013; Miller et al., 2017a; Pincus et al., 2009). To summarise, the high self-esteem reported by narcissists appears genuine, and is theoretically sound. The conflicting views of narcissism and its relationship with self-esteem, then, are best explained by recognising multiple subtypes of narcissism.

### *Subtypes of Narcissism*

The idea that narcissism has heterogeneous relationships with self-esteem has been around for decades (Emmons, 1984, 1987; Kernberg, 1975; Kohut, 1977; Raskin & Terry,

1988), but only expanded upon more recently. Wink (1991) was the first to empirically test these subtypes of narcissism. Using six different narcissism scales, they demonstrated that narcissism could be separated into two uncorrelated factors named vulnerability-sensitivity and grandiosity-exhibitionism. Since then, these dimensions of narcissism have been widely used and are well supported empirically (e.g., Miller et al., 2011a; Pincus et al., 2009; Pincus & Roche, 2011; Rose, 2002). The dimensions of narcissism overlap primarily in their high sense of entitlement and antagonistic interpersonal style (Miller et al., 2011a). They are also both impulsive (Miller et al., 2013a; Wink, 1991), aggressive, (Pincus et al., 2009), concerned with their image and social standing (Krizan & Herlache, 2017), have low empathy, and experience interpersonal distress (Pincus et al., 2009).

However, they still diverge considerably in their personalities, interpersonal approaches, romantic relationships, psychopathology, and behaviours (Derry et al., 2017; Dickinson & Pincus, 2003; Krizan & Johar, 2012; Maxwell et al., 2011; Miller et al., 2011a; Miller et al., 2012a; Pincus & Lukowitsky, 2010; Pincus & Roche, 2011; Rohmann, Neumann, Herner, & Bierhoff, 2012; Rose, 2002). Grandiose narcissism is associated with sociability, arrogance, self-enhancement, dominance, and pursuit of social status and power (Derry et al., 2017; Krizan & Herlache, 2017; Miller et al., 2011a; Pincus & Roche, 2011; Rohmann et al., 2012), and grandiose narcissists are described by others as aggressive, immodest, self-centered, self-indulgent, and egotistical (Wink, 1991). In contrast, vulnerable narcissism is associated with social avoidance, hypersensitivity, anxiety, shame, feelings of inadequacy, and defensiveness (Derry et al., 2017; Krizan & Herlache, 2017; Miller et al., 2011a; Pincus & Roche, 2011; Rohmann et al., 2012), and vulnerable narcissists are described by others as emotional, anxious, bitter, and moody (Wink, 1991).

By separating out these dimensions of narcissism the relationship between narcissism and self-esteem becomes stronger (approximately .5 for each dimension; Derry et al., 2017),

as the weak positive association conceals two opposing relationships. Grandiose narcissism has a consistently positive association with self-esteem (Brookes, 2015; Brown & Brunell, 2017; Brunell & Fisher, 2014; Crowe, Carter, Campbell, & Miller, 2016b; Derry et al., 2017; Foster et al., 2015; Krizan & Johar, 2012; Krizan & Herlache, 2017; Maxwell et al., 2011; Rohmann et al., 2012; Rose, 2002; Zeigler-Hill & Besser, 2013; cf. Pincus & Roche, 2011), while vulnerable narcissism has a consistently negative association with self-esteem (Brookes, 2015; Brown & Brunell, 2017; Derry et al., 2017; Krizan & Johar, 2012; Krizan & Herlache, 2017; Maxwell et al., 2011; Miller et al., 2017b; Rohmann et al., 2012; Rose, 2002; Zeigler-Hill & Besser, 2013). As Study 1 and Study 2 propose to use self-esteem and entitlement as markers of subtypes of narcissism, it is important to note that even as grandiose and vulnerable narcissism share a core of high entitlement, they are clearly differentiated by their levels of self-esteem. In fact, Cain et al. (2008) suggest that “subjective reports of positive or negative self-esteem appear to be a primary characteristic differentiating narcissistic grandiosity and narcissistic vulnerability” (p. 643).

More recently it has been proposed that grandiose and vulnerable narcissism may actually reflect *states* rather than *traits* (Back et al., 2013; Giacomini & Jordan, 2014; Miller et al., 2011a; Miller et al., 2017a; Pincus & Lukowitsky, 2010; Pincus, Cain, & Wright, 2014; Ronningstam, 2009; Wright, Lukowitsky, Pincus, & Conroy, 2010). For example, when an attempt at grandiose self-enhancement fails, a narcissist may experience low self-esteem and shame (Wright et al., 2010). Fluctuation between grandiosity and vulnerability has been observed in both clinicians and lay people’s ratings of grandiose and vulnerable narcissists, with grandiose narcissists fluctuating towards vulnerability more than vice versa (Gore & Widiger, 2016; Hyatt et al., 2017). However, the stability of grandiose and vulnerable narcissism over time has not yet been extensively researched, something Study 2 aims to rectify.

Besides grandiose and vulnerable narcissism, a number of two-factor structures of narcissism have been repeatedly identified, where one factor is associated with high self-esteem, and the other is associated with low self-esteem (Bosson & Weaver, 2011). The NPI has been used to measure ‘adaptive’ or ‘healthy’ forms of narcissism associated with high self-esteem and extraversion, often consisting of the authority and self-sufficiency subscales, and ‘maladaptive’ forms associated with low self-esteem, neuroticism, and introversion, consisting of the entitlement, exhibitionism, and exploitativeness subscales (Ackerman et al., 2011; Barry, Frick, & Killian, 2003; Barry, Grafeman, Adler, & Pickard, 2007; Bushman et al., 2009; Clarke, Karlov, & Neale, 2015; Corry, Merritt, Mrug, & Pamp, 2008; Horton, Bleau, & Drwecki, 2006; Kubarych et al., 2004; Salmivalli et al., 1999; Wetzel et al., 2016; 2017).

Similar subtypes emerge in the small amount of research that has used person-centered approaches to identify subtypes of narcissism (also see Salmivalli et al., 1999). Wetzel et al. (2016) used latent class analysis to identify four subtypes of narcissism; high narcissists, low narcissists, and two moderate groups. These moderate groups had similar quantitative levels of narcissism but differed qualitatively, with one group primarily using self-promotion to boost self-esteem while the other group both promoted themselves and lashed out at others, leading to low self-esteem. Thus, even structures of narcissism that do not directly map to grandiose and vulnerable narcissism identify a two-factor structure, with a maladaptive form of narcissism associated with low self-esteem and a relatively adaptive form of narcissism associated with high self-esteem.

Finally, two modern models of narcissism have been proposed that aim to integrate grandiose and vulnerable narcissism together into a single structural model (Krizan & Herlache, 2017; Miller et al., 2017a). These models converge considerably in their triarchic structure, and identification of core and peripheral components of narcissism (Wright &

Edershile, 2017). Krizan and Herlache (2017) and Miller et al. (2017a) both describe narcissism as having a core of interpersonal antagonism, but variation towards either grandiosity or vulnerability. Firstly, the Narcissistic Spectrum Model proposes that entitlement forms the anchor of narcissism, from which the spectrum stretches to grandiosity on one pole, and vulnerability on the other (Krizan & Herlache, 2017). Narcissists display entitlement and self-importance but also grandiosity and vulnerability to different degrees. Krizan and Herlache (2017) supported this model with a factor analysis of multiple narcissism scales that showed a three-factor model of grandiosity, vulnerability, and entitlement had the best fit.

Miller et al. (2017a) similarly argue that narcissism can be thought of as a single construct, rather than two weakly related descriptions of grandiose and vulnerable narcissism. They suggest that narcissism can be defined centrally by high interpersonal antagonism, or low agreeableness (Miller & Campbell, 2008). Differences in extraversion, neuroticism, and self-esteem are peripheral traits of narcissism that serve as markers for different subtypes or expressions such as grandiose and vulnerable narcissism (Miller et al., 2017a). Low agreeableness and high extraversion represent grandiose narcissism, and low agreeableness and high neuroticism represent vulnerable narcissism. Indeed, Krizan and Herlache (2017) showed moderate positive associations between their factor structure of grandiosity and extraversion, and vulnerability and neuroticism. Accordingly, Wright and Edershile (2017) argue that these two structural models are essentially the same; as with other models, both predict two subtypes of narcissism, one relatively adaptive, and one less so.

### *Subtypes of Psychological Entitlement*

It is important to demonstrate that psychological entitlement, a narrower facet of narcissism, contains similar subtypes as narcissism as a whole as it is the construct measured in the current research. Indeed, Crowe et al. (2016a) point out that given the heterogeneity

identified within narcissism, treating entitlement as a unidimensional construct is equally problematic. Just as narcissism has an unusually weak relationship with self-esteem that conceals opposing relationships (e.g., Rose, 2002), entitlement is not clearly related to self-esteem either. Some researchers have found that the PES scale has a small positive association with self-esteem (Campbell et al., 2004; Brown & Brunell, 2017) whereas others found no association (Brown et al., 2009; Brown & Brunell, 2017; Brunell & Fisher, 2014; Krizan & Johar, 2012; Lessard et al., 2011; Tamborski et al., 2012). Similarly, the NPI entitlement subscale has been found to be unrelated to self-esteem (Emmons, 1987; Maxwell et al., 2011; Rose, 2002; Strelan, 2007) or to have a small negative association (Ackerman & Donnellan, 2013; Ackerman et al., 2011; Maxwell et al., 2011; Trzesniewski et al., 2008a; Zeigler-Hill & Besser, 2013). This suggests that entitlement, like the broader construct of narcissism, may have a vulnerable side (Crowe et al., 2016a; Miller et al., 2011a).

Several different two-component models of entitlement have been proposed. Firstly, Lessard et al. (2011) demonstrated that entitlement can be organised into exploitative entitlement and non-exploitative entitlement. Non-exploitative entitlement describes the belief that you deserve positive outcomes, but not that you should exploit others to achieve those outcomes. Lessard and colleagues show that this form of entitlement is positively associated with work orientation (i.e., working hard and getting the job done), extraversion, and self-esteem (Ackerman & Donnellan, 2013). In contrast, exploitative entitlement describes someone who both expects positive outcomes and believes they have the right to exploit others in order to get what they want. This form of entitlement is negatively associated with self-esteem, work orientation, agreeableness, and social commitment, and positively associated with neuroticism and anxiety (Ackerman & Donnellan, 2013; Lessard et al., 2011). Essentially, these individuals want more without being willing to put the work in. Perhaps most relevant to the current research, psychological entitlement was unrelated to

self-esteem overall. However, when entitlement was separated into distinct constructs, self-esteem correlated positively with one dimension and negatively with the other (Lessard et al., 2011).

Crowe et al. (2016a) similarly hypothesised a split in entitlement, along the lines of the grandiose-vulnerable distinction made in narcissism. However, the two subtypes of entitlement they identified in their cluster analysis varied mostly by their levels of neuroticism, and hence were labelled emotionally stable and emotionally vulnerable entitlement. These types did not have a clear association with grandiose and vulnerable narcissism, suggesting they do not map clearly to these constructs despite sharing similar nomological networks (Crowe et al., 2016a). Yet, once again, self-esteem was a marker of different subtypes, with emotionally stable entitlement having high self-esteem, and emotionally vulnerable entitlement having low self-esteem. Emotionally stable entitlement was also associated with high extraversion, low neuroticism, and low agreeableness relative to controls, while emotionally vulnerable entitlement was associated with lower agreeableness, conscientiousness, and openness, and higher neuroticism and extraversion. Taken together, these studies suggest that significant heterogeneity exists within psychological entitlement as it does in narcissism, with one form considerably more vulnerable and maladaptive than the other. Importantly, subtypes of entitlement are likely to have similarly divergent associations with self-esteem even as they may differ from grandiose and vulnerable subtypes of narcissism (Crowe et al., 2016a; Lessard et al., 2011; also see Ackerman & Donnellan, 2013).

### *Summary of Narcissism and Self-Esteem*

Conflicting theories have arisen throughout narcissism's long history, with the clinical view suggesting narcissism is only a cover for inward vulnerability, while the social-

personality view suggests narcissism is straightforward grandiosity that *should* be associated with high self-esteem. In this way, narcissism's relationship with self-esteem is important to defining narcissism as a whole, yet the weak relationship between narcissism and self-esteem supports neither theory clearly. Research into the mask model, social desirability effects, and dishonesty do not appear to reconcile these contrasting views. Neither do the concerns about the NPI, while valid, fully address the issue. Currently, recognising the heterogeneity within narcissism and the two 'types' of narcissists that may exist provides the best explanation as to the weak and varied relationship narcissism (or entitlement) has with self-esteem.

Across different models and measures, two subtypes of narcissistic self-regard are consistently identified (e.g., Corry et al., 2008; Krizan & Herlache, 2017; Lessard et al., 2011), and will be referred to as grandiose and vulnerable narcissism for simplicity. Grandiose narcissism has been variously defined in terms of agency (Paulhus, 2001, 2002), extraversion (Miller et al., 2017a), and adaptiveness (Ackerman et al., 2011; Clarke et al., 2015), while vulnerable narcissism has been defined by its low agency (Paulhus, 2001, 2002), avoidance-orientation and reactivity (Krizan & Herlache, 2017), neuroticism (Miller et al., 2017a), and maladaptiveness (Ackerman et al., 2011; Clarke et al., 2015). However, across different models, a consistent marker of grandiose narcissism is that it is associated with high self-esteem, while vulnerable narcissism is associated with low self-esteem (e.g., Brown & Brunell, 2017; Krizan & Johar, 2012). In fact, several researchers note that self-esteem is one of the most common defining characteristics of grandiose and vulnerable narcissism (Bosson et al., 2008; Cain et al., 2008; Crowe et al., 2016a; Derry et al., 2017; Foster et al., 2015; Miller et al., 2017a), as well as stable and vulnerable forms of entitlement (Crowe et al., 2016a; Lessard et al., 2011).

In sum, years of research suggest that a person-centered approach to the structure of self-regard is likely to identify two narcissistic subtypes (e.g., Miller et al., 2011a; Rose,

2002; Wink, 1991). These subtypes should be defined by their shared high entitlement (Krizan & Herlache, 2017; Rosenthal & Hooley, 2010), compared to low levels of entitlement in other groups. These narcissistic subtypes should then be further distinguishable from one another by their disparate levels of self-esteem, with one having high explicit self-esteem reflecting grandiose self-enhancement, and the other having low self-esteem reflecting vulnerability (e.g., Krizan & Johar, 2012; Rose, 2002). These subtypes may share similar quantitative levels of narcissism, or entitlement, yet differ qualitatively in their self-regard, personalities, attitudes, and behaviours (e.g., Miller et al., 2011a; Samuel & Widiger, 2008; Wink, 1991). Identifying such heterogeneity is essential to understanding how narcissism can be defined, how it presents in the population, and how it develops over time.

### *Self-Esteem and Narcissism*

Just as research into narcissism has begun to identify heterogeneous subtypes differentiated by self-esteem, research from the self-esteem literature has identified similar subtypes within self-esteem that may be differentiated by narcissism. The idea that self-esteem is uniformly adaptive was challenged in early research after reviews demonstrated that not only was self-esteem generally not associated with positive outcomes such as academic or occupational success, it also predicted negative outcomes such as aggression and discrimination (Baumeister et al., 2003, 2005; Jordan, Spencer, & Zanna, 2005; Jordan & Zeigler-Hill, 2013). These relationships were due, at least in part, to high self-esteem being equated with narcissism (Baumeister et al., 1996; Baumeister et al., 2003). More recently, these paradoxical findings have led to growing recognition that 'high self-esteem' reflects a fairly heterogeneous concept and group of individuals, one which may reflect healthy self-esteem and another that may reflect grandiose narcissism (Baumeister et al., 2003; Heppner & Kernis, 2011; Jordan & Zeigler-Hill, 2013; Jordan et al., 2009; Kernis, 2003).

As with narcissism, self-esteem tends to be separated into two broad adaptive and maladaptive forms, labelled with the overarching terms of 'secure' or 'optimal' self-esteem versus 'fragile' self-esteem (Kernis, 2003; Zeigler-Hill, 2006). Three common themes of optimal self-esteem were identified by Kernis (2003; also see Heppner & Kernis, 2011), who suggested that self-esteem may be a) congruent or discrepant, b) true or contingent, and c) stable or unstable. Optimal self-esteem represents someone who likes themselves but does not see themselves as above others, who experiences some emotional ups and downs but without their global sense of self-worth taking a hit, who has healthy interpersonal relationships, and who rarely makes use of self-promotion (Kernis, 2003).

In contrast, those with fragile self-esteem are easily threatened, make use of self-enhancement strategies even at the expense of their interpersonal relationships, and have self-worth that fluctuates considerably or is more dependent on external events (Jordan et al., 2009; Kernis, 2003). That is, fragile self-esteem coincides somewhat with narcissism. Grandiose narcissists may have high self-esteem, but as it is unrealistic, it is maintained instead by self-enhancement and external validation, much like fragile self-esteem (e.g., Ackerman et al., 2011; Bosson & Prewitt-Freilino, 2007; Bosson et al., 2008; Brown & Bosson, 2001; Jordan & Zeigler-Hill, 2013). Vulnerable narcissists may also have fragile self-esteem as fragile self-esteem can be high or low (Jordan et al., 2003; Zeigler-Hill, 2006), but the focus here is largely on high self-esteem. This section reviews the two different conceptions of optimal and fragile self-esteem, as they provide useful distinctions between the high self-regard reported by grandiose narcissists, and the high self-regard reported by non-narcissists with high self-esteem.

The first form of fragile self-esteem is discrepant or defensive self-esteem where explicit self-esteem is high but implicit self-esteem is low, similar to the mask model of narcissism (Bosson et al., 2008; Brown & Bosson, 2001). As reviewed earlier, those with high

explicit self-esteem but low implicit self-esteem tend to measure higher in grandiose forms of narcissism (Zeigler-Hill, 2006), act more defensively (Jordan et al., 2003), and use self-enhancement (Bosson et al., 2003). Discrepant self-esteem differs from the mask model in that discrepant self-esteem also encapsulates those with high implicit self-esteem and low explicit self-esteem (Jordan et al., 2009). This may predict vulnerable narcissism, as one's external experiences continually fail to match up with their high implicit self-image (Bosson & Prewitt-Freilino, 2007). However, as the mask model lacks consistent empirical support as of yet, so does the link between narcissism and discrepant self-esteem (Bosson et al., 2008).

Optimal and fragile self-esteem may also be distinguished from one another by their temporal stability. Typically, stability refers to the magnitude of fluctuations in state self-esteem across a short time-period such as a week (Kernis, 2005). Those with stable self-esteem are largely unaffected by day-to-day positive and negative experiences, whereas those with unstable self-esteem experience large fluctuations in self-worth and may react with anger and hostility to negative feedback (Heppner & Kernis, 2011; Kernis, 2005). Similarly, narcissists are often described as having unstable self-esteem (Bosson et al., 2008; Geukes et al., 2017), and narcissists' self-esteem and wellbeing fluctuate more following negative interpersonal events (Zeigler-Hill & Besser, 2013; Zuckerman & O'Loughlin, 2009).

Finally, optimal and fragile self-esteem differ in the extent to which they are contingent. Contingent self-esteem is a self-evaluation that is dependent on meeting external standards or receiving approval (Crocker & Knight, 2005; Jordan & Zeigler-Hill, 2013). It is defined as fragile self-esteem because self-worth is only attained when certain standards are met, and feelings of shame and worthlessness may follow if they are not met (Jordan & Zeigler-Hill, 2013). Those with highly contingent self-esteem tend to act defensively or use self-enhancement (Heppner & Kernis, 2011), and contingent self-esteem is positively associated with entitlement (Ackerman et al., 2011). Furthermore, narcissism is often defined

by its dependence on external validation (e.g., Bosson et al., 2008; Krizan & Herlache, 2017; Morf & Rhodewalt, 2001).

The connection between fragile self-esteem and narcissism has also been made theoretically by Tracy, Cheng, Robins, and Trzesniewski (2009), who labelled the two subtypes of self-esteem genuine self-esteem and narcissistic self-aggrandizement. Tracy and Robins (2003; also see Tracy et al., 2009) suggest that narcissism can tie together the different forms of fragile self-esteem; narcissism is associated with defensive and discrepant self-esteem, which then encourages contingent self-esteem, which, in turn, contributes to unstable self-esteem. That is, someone may be quite insecure internally, but work to keep their self-esteem inflated – for example, due to pressure from overbearing and over-expectant parents. Therefore, they begin to seek external validation to maintain their positive sense of self, and as their self-esteem becomes contingent on external factors, it may start to fluctuate over time and become unstable. This theoretical model is supported by research showing that these various forms of fragile self-esteem are all positively associated with one another (Heppner & Kernis, 2011; Zeigler-Hill, 2006).

Although definitions of fragile self-esteem fit theoretically with definitions of narcissism, it is important to note that a meta-analysis found no clear associations between narcissism and discrepant, unstable, or contingent self-esteem (Bosson et al., 2008). However, this may be due to the idea that narcissists likely have fragile self-esteem, but not everyone with poorly anchored self-esteem is a narcissist (Bosson et al., 2008; Okada, 2010); fragile self-esteem may be high or low (Jordan et al., 2003; Zeigler-Hill, 2006). The point is not to suggest that narcissism and fragile self-esteem are the same thing, but to argue that optimal high self-esteem can and should be distinguished from other forms of high self-regard such as narcissism and fragile self-esteem. Optimal self-esteem is sometimes conflated with grandiose or ‘normal’ narcissism. Ackerman and Donnellan (2013), for example, define

normal entitlement as grounded in reality and based upon real accomplishments, which is the definition of self-esteem given by Mruk (2013). While self-esteem levels may be similar across these subgroups, they diverge in the exploitation of others, interpersonal antagonism, and entitlement that narcissists use to maintain said self-esteem, causing both personal distress and distress to others as they do so (e.g., Ackerman & Donnellan, 2013; Crowe et al., 2016a; Dickinson & Pincus, 2003; Grubbs & Exline, 2016). It is important to emphasise that secure, genuine, or optimal self-esteem is self-esteem *unaccompanied by entitlement*, and the associated behaviours of defensiveness (Jordan et al., 2003; Salmivalli et al., 1999), aggression (Bushman et al., 2009), and callousness towards others (Lessard et al., 2011).

In sum, self-esteem is a heterogeneous concept as much as narcissism and entitlement with a two-component approach to self-esteem consistently supported (Kernis, 2003). In contrast to genuine or secure self-esteem, fragile self-esteem can be defensive, unstable, and contingent and shares theoretical overlap with narcissism (e.g., Ackerman et al., 2011; Tracy et al., 2003). Thus, entitlement can serve as a marker of different subtypes of self-esteem, as self-esteem accompanied by high entitlement is likely to be contingent, unstable, and possibly discrepant (e.g., Bosson et al., 2008; Heppner & Kernis, 2011; Jordan et al., 2003; Zeigler-Hill & Besser, 2013). In describing a parsimonious structure of high self-regard, the literature suggests that two subtypes should be identified; high self-esteem, and high self-esteem maintained by high entitlement. The high self-esteem, high entitlement profile fits with the earlier hypothesised group of grandiose narcissists. However, we add to the two suggested narcissistic groups a profile with healthy self-esteem, unaccompanied by disagreeableness, hostility, and entitlement.

### *Summary of Heterogeneity in Self-Regard*

In short, the answer to the questions, “is narcissism a genuine expression of grandiosity, or is it a mask for deep vulnerability?” and “is high self-esteem healthy, or can it be over-inflated?” is “it depends” (Miller et al., 2017a). These different conceptions are all supported by the data, but across different groups of people (e.g., Baumeister et al., 2003; Brunell & Fisher, 2014; Jordan et al., 2003; Kernis, 2003). High self-regard is not the same for everyone, with different subtypes associated with qualitatively different psychosocial outcomes and personalities (Kernis, 2003; Miller et al., 2011a). Person-centered approaches, then, are an ideal way to measure the relationships between narcissism and self-esteem (Laursen & Hoff, 2006) as the literature increasingly calls for recognition of the heterogeneity within these constructs (e.g., Eromo & Levy, 2017; Jordan et al., 2009; Kernis, 2003; Krizan & Herlache, 2017; Miller et al., 2017a). The first aim of this thesis is to use person-centered approaches to identify the common ways in which entitlement and self-esteem, and the associations between them, differ across a nationally representative sample.

To do so, Study 1 and Study 2 will use mixture-modelling to identify the minimal number of groups that can still clearly account for the variation across people in self-regard. Psychological entitlement and self-esteem are used as markers of the various theorised subtypes. Psychological entitlement is used as it is a) present in all narcissists and b) not present in non-narcissists (Ackerman et al., 2012; Krizan & Herlache, 2017; Miller et al., 2017a; Pincus et al., 2009; Wink, 1991). Therefore, entitlement differentiates between secure forms of high self-esteem, and fragile, defensive, or narcissistic forms of high self-esteem; it may also distinguish low self-esteem from vulnerable narcissism (Jordan et al., 2003; Tracy et al., 2009; Wink, 1991). At the same time, self-esteem can serve as a marker of different narcissistic subtypes, with divergent levels of self-esteem found between grandiose and vulnerable subtypes of narcissism (Cain et al., 2008; Rose, 2002), as well as grandiose and

vulnerable subtypes of entitlement (Ackerman & Donnellan, 2013; Crowe et al., 2016a; Lessard et al., 2011). Measuring levels of entitlement and self-esteem together is a concise way of measuring the heterogeneity that exists within self-regard, and is capable of providing parsimonious representation of the many theorised subtypes, dimensions, or expressions of narcissism, entitlement, and self-esteem. As Paulhus (2001) explains of their ‘minimal’ accounts of narcissism, “to the extent that a parsimonious model can explain the same data it is logically to be preferred over a more complex model” (p. 228).

In Study 1, it is expected that two narcissistic groups will be identified; both high in entitlement, but with high and low levels of self-esteem. Those with low self-esteem fit the conception of vulnerable narcissists (Brown & Brunell, 2017; Rose, 2002), while the high entitlement, high self-esteem group fits the conception of grandiose narcissists (Foster et al., 2015; Rose, 2002) or fragile self-esteem (Jordan et al., 2003). Another group with similarly high self-esteem but low entitlement should be identified, fitting the conception of secure or optimal self-esteem (Kernis, 2003). Demonstrating that these subtypes emerge clearly in an exploratory analysis in a representative sample, using predictions from both the narcissism and self-esteem literatures, will go a long way in supporting the practical validity of these subtypes and building a basic structure of self-regard. Furthermore, Study 1 will assess the prevalence of each of these groups using data weighted to the census, as it is yet unknown how common grandiose and vulnerable forms of narcissism are in the population, or secure forms of self-esteem. With Twenge and Campbell (2009a) suggesting we are living in the age of entitlement, an estimate of how common these attitudes are in a nationally representative sample is essential.

Study 2 will replicate and extend upon Study 1, using person-centered approaches longitudinally – that is, assessing not only heterogeneity in *levels* of entitlement and self-esteem, but also in their *development* over time. This allows for much needed research into,

for example, whether grandiose and vulnerable subtypes of narcissism are stable traits or transitory states (Crowe et al., 2016a; Miller et al., 2011a; Ronningstam, 2009). Study 2 will also begin to address the narcissism epidemic by examining whether longitudinal change in narcissism is the same for everyone. If narcissism is increasing, it may do so for some people and not others; for example, narcissism may increase most in those who are already high in narcissism (Caspi, Roberts, & Shiner, 2005; Twenge, 2009). However, as alluded to in the preface of this thesis, the narcissism epidemic is far from an established theory.

### **Narcissism over Time and across the Lifespan**

We move now to the second debate within the narcissism literature: whether or not narcissism is on the rise over time. This belief can be traced back to the 1970's (Lasch, 1979), with Tom Wolfe's (1976) essay in *New York* magazine labelling the 1970's the "Me decade" following decades of rising wealth in America. Christopher Lasch's (1979) book *The Culture of Narcissism* similarly described a rise in pathological narcissism post-World War II, as a way of dealing with the anxieties of modern life and the decline of the family unit. Despite these theories linking to relatively recent sociocultural changes, they may be a part of a much older trend (Arnett, 2013; Freeman, 1922; Trzesniewski & Donnellan, 2010); teachers in 400BC lamented the loss of the good old days of 600-500BC, complaining about young people's "luxury, bad manners, contempt for authority, [and] disrespect to elders" (Freeman, 1922, p. 74).

These ideas have undergone somewhat of a renaissance lately, after a 2008 meta-analysis demonstrated increasing NPI narcissism scores in college students from the late 1970's onwards (Twenge, Konrath, Foster, Campbell, & Bushman, 2008a). In their book *The Narcissism Epidemic*, Twenge and Campbell (2009a) document the continuation of the changes described by Lasch (1979) and Wolfe (1976) across the past few decades, bringing

us to the resultant 'narcissism epidemic' or 'age of entitlement'. However, this trend of increasing narcissism is theorised to be limited to younger generations; those born in the 1970's, 1980's, and 1990's, labelled 'Generation Me' (Twenge, 2006), and the millennial generation (born 1982-2004; Bump, 2014) in particular. Since then, academic interest in the topic has grown rapidly and the idea of a narcissism epidemic has captured the minds of the media and the general public (e.g., Black, 2012; Campbell et al., 2004; Lessard et al., 2011; Remes, 2016; Singal, 2017; Stein, 2013; Williams, 2016). Yet, the research behind the narcissism epidemic is far from conclusive. Even as there is continuing support for the conclusions of the original meta-analysis (Stewart & Bernhardt, 2010; Twenge & Foster, 2010; Twenge et al., 2008a), the idea has also seen numerous challenges both theoretically and empirically (e.g., Roberts et al., 2010; Trzesniewski et al., 2008b).

While the narcissism epidemic theory is contested, one clear and well-supported finding is that younger cohorts are more entitled and narcissistic than older cohorts. Research consistently finds a negative, largely linear association between age and narcissism (Berenson, Ellison, & Clasing, 2017; Foster et al., 2003; Hill & Roberts, 2012; Roberts et al., 2010; Wilson & Sibley, 2011), and age and entitlement (Foster, Campbell, & Twenge, 2003; Hill & Roberts, 2012; Wilson & Sibley, 2011). Most notably, Foster et al. (2003) used a large, multicultural internet sample and found a negative correlation between NPI narcissism and age across the entire lifespan, with the difference between the youngest cohort and the oldest cohort reaching a full standard deviation. Similarly, two representative New Zealand samples found that both psychological entitlement and NPI narcissism were negatively associated with age, with the strength of the correlation comparable to that found by Foster et al. (2003; Wilson & Sibley, 2011). Overall, it is well established that younger age cohorts are generally more entitled than older age cohorts.

However, it is the *cause* of this age difference that is up for debate. Firstly, these results may arise from younger generations becoming increasingly self-centered and entitled over time as a result of sociocultural changes, as predicted by the narcissism epidemic theory (e.g., Twenge, 2006; Twenge & Campbell, 2009a). Alternatively, it may be that younger people are more entitled than older people simply *because* they are young and have not yet matured; as they grow older, they too will become less entitled (Roberts et al., 2010; Terracciano, 2010). Twenge and Foster (2010) label this first viewpoint the generational differences model, where a changing culture impacts on individual-level personality development leading to generational differences over time. The second view is labelled the generational similarities model, proposing that individual level personality traits and development have not changed across the generations (Twenge & Foster, 2010). These opposing viewpoints therefore suggest the cause for the negative cross-sectional relationship between entitlement and age (Wilson & Sibley, 2011) is either cohort effects or developmental effects respectively.

There also remains the question of whether period effects play a role. Period effects describe the impact of sociocultural changes upon people of all ages (Terracciano, 2010; Twenge & Campbell, 2009a). While a cohort effect describes a sociocultural change impacting upon a single birth cohort (usually younger cohorts), a period effect describes a societal shift that impacts upon everybody in a similar way (Terracciano, 2010; Twenge, Carter, & Campbell, 2016). There is good reason to believe that only younger generations may be impacted by widespread sociocultural changes; young adulthood is a period of life that is particularly impressionable and involves an increased sensitivity to the social environment, with identity, personality, and attitude formation at their peak during these years (Arnett, 2015; Caspi et al., 2005; Giuliano & Spilimbergo, 2014; Henry & Sears, 2009; Krosnick & Alwin, 1989; Miller & Sears, 1986; Osborne, Sears, & Valentino, 2011; Roberts,

Walton, & Viechtbauer, 2006; Stewart & Healy, 1989). Personality change occurs more in emerging adulthood (18-25) than in any other period of life, including adolescence (Arnett, 2000; Roberts et al., 2006). Nonetheless, in the case of the narcissism epidemic both proponents and critics have suggested a potential period effect, wherein people of all ages are becoming increasingly narcissistic (Terracciano, 2010; Twenge & Campbell, 2009a).

To summarise, longitudinal change in narcissism may be impacted by cohort effects, period effects, and developmental effects. However, with almost the entirety of the research in the area conducted among high school and college students (e.g., Trzesniewski et al., 2008b; Twenge et al., 2008a), neither period effects nor developmental change have been tested (Terracciano, 2010). Meanwhile, the research examining cohort effects provides evidence both for and against the narcissism epidemic (e.g., Trzesniewski et al., 2008b; Twenge et al., 2008a). Study 3 aims to contribute to this debate as the first research to use a sample that is representative across the lifespan, and by using the novel analytic technique of Cohort-Sequential Latent Growth Models to assess cohort, period, and developmental effects (Preacher, Wichman, Mac, Callum, & Briggs, 2008; Prinzie & Onghena, 2005).

Latent growth models will be described in more detail in Chapter Six, but in short, they estimate an underlying latent growth factor that explains the consistent way each individual's entitlement changes over time (Preacher et al., 2008). Study 3 estimates a growth curve of entitlement across six years for each participant, and data is weighted so that participants who have completed more annual waves (and so have less missing data) contribute more to the estimate of the overall growth curve. By stitching together multiple six-year growth curves from a large heterogeneous sample with a wide range of ages, a growth curve across the adult lifespan can be estimated. The shorter growth curves can also be compared to one another, allowing for comparison of the strength and direction of changing entitlement across different generational cohorts. Thus, Cohort-Sequential Latent

Growth Models allow for the assessment of developmental change, while also assessing the magnitude of cohort and period effects. Study 3 is therefore able to test the proliferation of theories regarding increasing narcissism, or lack thereof, head-to-head. This section of the thesis will document the various theoretical approaches that would predict either increasing narcissism across recent generations, or unchanging narcissism, in line with the generational differences and similarities hypotheses. Additionally, the theoretical and empirical evidence for and against cohort, developmental, or period effects is examined.

### ***Theoretical Approaches***

#### *Individualism*

Individualism is a worldview associated with the belief that a positive sense of self, being valued as unique, and personal success are basic human endeavours (Oyserman, Coon, & Kemmelmeier, 2002). The central thesis of the narcissism epidemic theory is that individualism is rising over time in Western countries, facilitating increases in individualistic constructs such as self-esteem and narcissism (Twenge et al., 2008a; Twenge & Campbell, 2001; Twenge & Campbell 2009b). Just as children born in Japan and the United States are born into different cultures and endorse different cultural values, children born in different generations have different cultural values too (Twenge, 2008; Twenge, Zhang, & Im, 2004). Put more simply, “the past is a foreign country” (Hartley, 1953, p. 1). Small cultural shifts over time create a feedback loop, such that each generation acts in a way that is a slight exaggeration of the generation that came before, creating an uninterrupted linear trend (Twenge et al. 2008a; Twenge & Campbell, 2009b). Twenge (2008) argues that sociocultural changes are an important influence on personality, one that is often neglected as little cross-generational research is conducted. Accordingly, Twenge (2013b) suggests that the cross-sectional negative association between age and narcissism is most likely measuring a

generational difference and that these changes are evidence that the sociocultural environment impacts upon personality development (see also Twenge, 2008; Twenge et al., 2008a).

In fact, a number of theorists have commented on the movement away from community and strong social ties in the Western world (e.g., Bellah, Madsen, Sullivan, Swidler, & Tipton, 1985; Lasch, 1979; Putnam, 2000; Twenge, 2006; Twenge & Campbell, 2009a). As social structures and traditions decline, people turn to themselves instead (Putnam, 2000; Twenge & Campbell, 2009a). Globally, societies are moving towards large, complex, urban environments, and subsequently, greater individualism and independence (Greenfield, 2009). Increasing wealth is also a contributor to increasing individualism (Allen et al., 2007; Diener & Diener, 2009; Greenfield, 2009; Park, Twenge, & Greenfield, 2014), and GDP has grown considerably over the last few decades in Western countries (Allen et al., 2007). In particular, individualism is on the rise in the United States, where much of the narcissism epidemic research is conducted (DeWall, Pond, Campbell, & Twenge, 2011; Twenge, Campbell, & Gentile, 2012). Likewise, both wealth and a preference for individualistic values are on the rise over the last few decades in New Zealand (i.e., the country in which the current thesis takes place; Allen et al., 2007). Overall, there is evidence of growing individualism in Western countries.

Theoretically, the association between individualism and narcissism finds support, with Paris (2014) suggesting that if decision making processes are based on what is good for oneself rather than what is good for others, then strongly held individualistic values may encourage narcissism. However, little research has been conducted to support this association empirically, besides Foster et al. (2003) who found that NPI narcissism was higher in individualistic countries relative to collectivist countries (also see Roberts & Helson, 1997). The lack of research into this association leaves some concerns. For one, self-esteem is

similarly theoretically linked to individualism, but no association has been found between the two (Diener & Diener, 2009; Schmitt & Allik, 2005). Additionally, the link between narcissism and individualism may be explained by a third variable; wealth is associated with individualism (Allen et al., 2007; Park et al., 2014), and so is narcissism (Bianchi, 2014; Piff, 2014). In sum, individualism appears to be on the rise and would predict rising levels of narcissism, however, the theory lacks empirical support as of yet.

### *Early Development and Parenting*

One of the central arguments of the narcissism epidemic is that it arises from changes in parenting such as being overpermissive (Twenge, 2006, 2008; Twenge & Campbell, 2009a; Twenge & Foster, 2010). This view is often repeated in the media (Firestone, 2013), and is consistent with older theories that propose overindulgent, permissive parenting as a cause of narcissism (Kohut, 1977). Indeed, grandiose narcissism has been found to be related to very permissive or lax parenting, coupled with overvaluation from parents (Horton et al., 2006; Miller et al., 2017a; Wetzel & Robins, 2016). Movement towards more permissive parenting styles over the last few decades has been reported (Casamassimo, Wilson, & Gorss, 2002; Zervides, & Knowles, 2007), and so might predict increasing narcissism over time. However, narcissism is more strongly predicted by factors that go beyond overpermissive parenting, such as psychological control (which involves guilt-tripping and inconsistent warmth; Horton et al., 2006), parental invalidation of a child's thoughts and feelings (Huxley & Bizumic, 2017), and parental hostility (Wetzel & Robins, 2016).

### *Self-Esteem Movement*

Finally, another central argument of the narcissism epidemic is that it has been caused by the self-esteem movement (Twenge & Campbell, 2009a; Twenge et al., 2008a). In the book *Generation Me*, Twenge (2006) stated that “the self-esteem movement has created an

army of little narcissists” (p. 223). The self-esteem movement was an educational programme that began in the 1970’s and continued throughout the next few decades, focused on promoting self-esteem in children above all else via grade inflation and participation trophies (Baumeister et al., 2005; Mathews, 1988; Mecca, Smelser, & Vasconcellos, 1989; Singal, 2017; Storr, 2017; Twenge et al., 2008b). The self-esteem movement was particularly popular in California, with legislation passed that implemented self-esteem programs in schools state-wide, but the movement also occurred globally (Heppner & Kernis, 2011; Little, 2017; Singal, 2017; Storr, 2017). Twenge (2013a) suggests that attempts to increase self-esteem actually increased narcissism and entitlement instead by emphasising to children that they are a special person, for example. This idea has also been picked up by the media, with several articles linking the self-esteem movement to the narcissism epidemic (Little, 2017; Remes, 2016; Sanchez, 2017; Singal, 2017).

Over time, the self-esteem movement was judged to have little positive impact on children with many of the interventions unsupported by empirical research, and so it slowly lost support (Baumeister et al., 2005; Heppner & Kernis, 2011). Research consistently found that complimenting children on their ability rather than hard work (e.g., Gunderson et al., 2013; Henderlong & Lepper, 2002; Mueller & Dweck, 1998) can undermine their motivation and task performance in the future. Similarly, Forsyth, Lawrence, Burnette and Baumeister (2007) showed that grades became worse when self-esteem interventions were given to already failing students. However, a meta-analysis found that self-esteem interventions generally have positive results with a large effect size (O’Mara, Marsh, Craven, & Debus, 2006), and self-esteem interventions are still recommended today (e.g., Humphrey, 2004; Sowislo & Orth, 2013; Swann, Chang-Schneider, & McClarty, 2007), as low self-esteem is associated with a host of psychosocial problems (Donnellan, Trzesniewski, Robins, Moffitt, & Caspi, 2005; Rosenthal & Hooley, 2010; Sowislo & Orth, 2013). While self-esteem may

not be particularly helpful, neither is it particularly harmful (Brummelman, Thomaes, & Sedikides, 2016). Most importantly, there is no empirical evidence that links the self-esteem movement to narcissism (Trzesniewski et al., 2008a).

Beyond the self-esteem movement in education, self-esteem has been linked to rising levels of narcissism over time more generally. Twenge and Campbell (2001, 2009a; also see Gentile, Twenge, & Campbell, 2010) suggest that the sociocultural shift towards viewing self-esteem and self-expression as important values may link to rising narcissism, particularly as research suggests that both narcissism and self-esteem are on the rise concurrently (Gentile et al., 2010; Twenge & Campbell, 2001, 2008; Twenge et al., 2016). However, this finding is contentious as other research has reported no change in self-esteem over time (Orth, Trzesniewski, & Robins, 2010; Trzesniewski et al., 2008a; Trzesniewski et al., 2010). Furthermore, self-esteem and narcissism develop in opposite directions across the lifespan (Wilson & Sibley, 2011), with self-esteem increasing across age (Bleidorn et al., 2016; Orth et al., 2010; Robins & Trzesniewski, 2005; Robins, Trzesniewski, Tracy, Gosling, & Potter, 2002; Twenge & Campbell, 2001; von Soest, Wagner, Hansen, & Gerstorf, 2017) and narcissism decreasing (e.g., Foster et al., 2003). This would make a link between rising self-esteem and narcissism somewhat unusual, and indeed, no link has been found between self-esteem and narcissism longitudinally (Orth & Luciano, 2015; Zuckerman & O'Loughlin, 2009).

Thus, the self-esteem movement, both in children's education and as a more general movement towards individualistic values, predicts increasing narcissism over time. However, research is needed to demonstrate these links empirically. Overall, the three main suggested causes of the narcissism epidemic – rising individualism, changes in parenting, and the self-esteem movement – would predict rising narcissism over time. All of these theories suggest a cohort effect where narcissism is on the rise among younger generations due to recent

sociocultural changes. Additionally, Twenge and Campbell (2009a) suggest that this cohort effect may spread to a period effect over time, impacting at older and older ages as the wider culture becomes increasingly individualistic and narcissistic. However, all three of these theories lack sound empirical evidence linking them to narcissism as of yet.

### *Economic Conditions*

An alternative approach to the narcissism epidemic predicts both rising and falling levels of narcissism. It has been suggested that the economic conditions present at impressionable times such as childhood (Allen et al., 2007) or emerging adulthood can impact upon the development of narcissism (Bianchi, 2014). Therefore, this theory predicts a cohort effect, with research showing that recessions can have a lasting effect upon emerging adults' attitudes while having little effect on older adults (Bianchi, 2014; Giuliano & Spilimbergo, 2014). This is because young adults are the most likely to be impacted by a recession in terms of unemployment, pay rates, and access to tertiary education (Bianchi, 2014).

Those who experience a recession during emerging adulthood should be more inclined towards prioritising others above the self, and presumably less narcissistic (Bianchi, 2014; Giuliano & Spilimbergo, 2014; Leckelt et al., 2016). In contrast, people who have their basic needs taken care of have the freedom to be more self-focused (Bianchi, 2014). In line with this, cross-sectional research has found a small positive relationship between income and narcissism (Foster et al., 2003; Piff, 2014). Similarly, Park et al. (2014) investigated changes in the values of high school students using measures from the 1970's, pre-GFC (2004-2006), and post-GFC (2008-2010). They demonstrated that materialism and attitudes of superiority increased up to the GFC, while environmentalism and concern for others decreased in tandem with economic growth. Post-recession, all trends reversed.

Looking at narcissism specifically, Bianchi (2014) demonstrated that more difficult economic conditions (measured as youth unemployment rates) were associated with lower lifetime levels of narcissism across two samples. This relationship was only significant for those between the ages of 18 to 25, and not older age cohorts (Bianchi, 2014; see Bianchi, 2015, Fletcher, 2015 for a discussion of the robustness of these results). Bianchi (2014) points out that the data reported by Twenge et al. (2008a) were collected from the end of a recession onwards, through decades of economic growth, suggesting that recent increases in narcissism may have an economic explanation. Furthermore, these results suggest that narcissism should now be cycling downwards after the Global Financial Crisis (GFC) experienced worldwide in 2008. Leckelt and colleagues (2016) supported Bianchi's (2014) findings with a meta-analysis across five studies; however, their results indicated that gender might be an important moderator as the association was found for men only. Leckelt and colleagues proposed that men's identities are more strongly linked to their income and employment status, and are therefore more sensitive to economic change. These results indicate that narcissism may cycle up and down across different generations of men (and downwards from 2008 onwards), but remain relatively stable across time for women.

In terms of mechanisms behind this effect, it is important to note that self-esteem was not found to be associated with economic conditions (Bianchi, 2014; Park et al., 2014). This suggests that trends towards lower narcissism during recessions are not explained by a loss of confidence and self-worth; rather, they may reflect increasing collectivist attitudes as people pull together in tough times. Similarly, this suggests that rising narcissism during economic growth reflects not just a positive self-view, but the belief that one is better than others and deserves to have more. In line with this, social class has been found to be associated with narcissism, but mediated by a higher sense of entitlement (Piff, 2014). This may indicate

system-justification processes that allow privileged individuals to feel entitled to their relative advantage (Jost & Banaji, 1994).

Overall, there is good empirical and theoretical support for the idea that narcissism is associated with wealth, class, and employment status and fluctuates over time with changing economic conditions. Of course, the theories of rising individualism causing rising narcissism (e.g., Twenge, 2008, 2013b; Twenge et al., 2008a) and economic changes causing cycling narcissism (Bianchi, 2014) are not necessarily at odds with each other; changing economic conditions simply provide a logical cause for changing levels of individualism (Allen et al., 2007; Greenfield, 2009; Park et al., 2014). However, the theories differ in that economic changes suggest cycles of high and low narcissism, as opposed to a steady increase (Twenge et al., 2008a). While Twenge and Campbell (2009a; also see Twenge, 2013a) recognise the impact of the recession, they suggest it will only mitigate the narcissism epidemic for a few years, while still continuing onwards and upwards. In contrast, Bianchi's (2014) research suggests that, in data measured post-recession as in this thesis, narcissism should be decreasing. As the impact of economic conditions is formative, higher or lower levels of narcissism persist across the lifespan (Bianchi, 2014) so narcissism levels are not expected to bounce back among those who were emerging adults at the time of an economic downturn (or upturn). Essentially, economic theories predict a 'bump' among those aged approximately 24-31 today, as they were emerging adults just before the GFC.

### *Theories of Personality Development*

This thesis now turns to theoretical approaches that suggest narcissism is *not* changing over time. Rather, the differences in narcissism across age cohorts are argued to represent developmental differences. Narcissism has long been conceptualised by clinical theorists as a normal aspect of development (Elkind, 1967; Freud, 1931/1950; Kernberg, 1975; Kohut,

1977), where egocentrism is high in childhood and adolescence, but fades over time (Carlson & Gjerde, 2009; Elkind, 1967). In particular, Kohut (1971, 1977) predicted that narcissism would gradually decrease across the lifespan as a part of a natural developmental process. This section summarises theories of normative personality development that discuss change in personality traits as a whole, and would similarly predict steadily decreasing narcissism across the lifespan.

Personality traits can be considered to be both stable and changeable over time (Roberts et al., 2006). Rank-order consistency is generally high, that is, people within a group maintain their relative placement to each other over time (Roberts et al., 2006; Specht, Egloff, Schmukle, 2011). Rank-order consistency increases with age, with personality at its most stable in middle-age, before dropping again (Caspi et al., 2005; Milojev & Sibley, 2014; Specht et al., 2011). The same U-shaped function of rank-order stability has been demonstrated in honesty-humility (analogous to low narcissism); this suggests that narcissism is likely to show a similar pattern of high rank-order stability across the lifespan, but particularly in middle-age (Milojev & Sibley, 2014). Similarly, Foster et al. (2003) found the most variability in narcissism amongst the youngest (under 15) and oldest (over 60) cohorts in their sample. It seems that there is unlikely to be change in the rank-order consistency of narcissism; those who are narcissists should remain relatively narcissistic across the lifespan (Orth & Luciano, 2015).

More relevant to the questions addressed in this thesis is the concept of normative change in narcissism across the lifespan. This describes average mean-level change where a group as a whole changes in the same ways over time, even as they retain their relative levels of a trait as compared to one another. For example, older adults are on average more agreeable and conscientious, and less extraverted, open, and neurotic compared to younger adults (Caspi et al., 2005; Roberts et al., 2006; Specht et al., 2011; see Marsh, Nagengast, &

Morin, 2012 for a review). These normative changes in personality traits are at odds with the personality profile of a narcissist (Samuel & Widiger, 2008), and age differences in narcissism appear to mirror this with lower narcissism and entitlement found in older age (e.g., Foster et al., 2003; Wilson & Sibley, 2011). Thus, normative change explains the negative cross-sectional association between age and entitlement as a developmental effect.

Some theories of personality suggest this normative change across the lifespan occurs because of ‘intrinsic maturation’ or maturation that is biologically driven (McCrae & Costa, 2008). But while there is certainly evidence that personality traits are influenced by genetics (Vernon, Villani, Vickers, & Harris, 2008), they are more strongly influenced by the environment (Caspi et al., 2005; Roberts et al., 2006). In line with this, many theories suggest that major life events and changing social roles also drive normative change in personality (Foster et al., 2003; Roberts et al., 2006; Specht et al., 2011). When a group of people experience the same general life events such as employment, marriage, and having children, personality tends to change in similar ways across the lifespan and normative change occurs (Caspi et al., 2005).

The first of these theories, the maturity principle, suggests that people move towards psychological maturity as they age (Caspi et al., 2005). People on average become more agreeable, conscientious, and emotionally stable across time (Caspi et al., 2005; Roberts et al., 2006) because they require these skills in order to become a more productive and involved member of society (Caspi et al., 2005). Accordingly, narcissism should decrease across the lifespan as it is counter-productive to this goal (e.g., Campbell et al., 2004). Social investment theory (Roberts & Wood, 2006) similarly suggests that universal changes in personality traits across the lifespan are a result of universal tasks such as finding a long term partner, maintaining stable employment, and having children. Personality change occurs through the expectations that come with these age-graded social roles; parent, student,

employee, and so on. Violating or meeting the expectations of these roles will be met in turn with punishment or rewards, guiding behaviour and changing personality in consistent ways (Roberts et al., 2006). Roberts et al. (2010) argue that these roles are more important than the effects of generational change, and support their theory by demonstrating that the negative trend in narcissism across age becomes stronger when participants are organised into age-graded roles such as student, parent, or grandparent.

Foster et al. (2003) likewise proposed the reality principle model for narcissism, theorising that experiences of objective failure throughout the lifespan (failed romance, career setbacks, declining health and so on) puncture any over-inflated self-evaluations that do not reflect reality, and lead to decreasing narcissism as people age. These various theories are supported by Ronningstam, Gunderson, and Lyons (1995), who followed 20 patients diagnosed with NPD across the course of three years and found that levels of narcissism decreased significantly across this time period with 60% no longer reaching the criteria required for NPD diagnosis. Factors that led to decreased narcissism included genuine achievement that reduced the need for false grandiosity, deep and meaningful relationships, and experiences of disillusionment where failure and rejection forced a more realistic self-view.

While multiple theories suggest decreasing narcissism across the lifespan, these trends appear to reverse in older age – an effect that Marsh et al. (2012) refer to as “la dolce vita” or “the sweet life”. From the late 60’s onwards, conscientiousness decreases while agreeableness and self-esteem increase as responsibilities and roles change (Marsh et al., 2012; von Soest et al., 2017). After a life filled with responsibility and important interpersonal roles such as maintaining a career and supporting a family, people use this time of life to focus on themselves. Accordingly, narcissism may decrease across age up until the late 60’s, and then begin to increase again (Foster et al., 2003).

It is important to note that selection effects – the impact of the person upon their environment – may also occur (Specht et al., 2011). Indeed, Ronningstam et al. (1995) found that 40% of participants remained highly narcissistic, indicating that these processes may not occur for everyone. Those who are particularly narcissistic may in fact show *increased* levels of narcissism over time (Zuckerman & O’Loughlin, 2009); if experiences of failure are not recognised as such, or if people have little regard for fitting into their social roles, then there is no reason for personality to change. But on average, multiple theories suggest that normative experiences and the adoption of roles throughout the lifespan predict decreasing levels of narcissism and entitlement over time, as it is not conducive to a healthy and connected life (Caspi et al., 2005; Foster et al., 2003; Roberts & Wood, 2006). These theories predict that younger age-cohorts are more entitled than older age-cohorts, but as a result of developmental changes, with no sign of cohort or period effects.

### *Stereotypes and Perception Biases*

If age differences in narcissism are a result of developmental changes, then a related question must be addressed. How may we explain the continuing perception, generation after generation (e.g., Lasch, 1979; Twenge, 2006), that selfishness and entitlement are on the rise? Firstly, media coverage may perpetuate this belief (Dovidio, Hewstone, Glick, & Esses, 2010). Interest in narcissism has grown as rapidly within the media as within academia (Singal, 2017; Stein, 2013; Williams, 2016), and in New Zealand as much as the United States (Black, 2012; Little, 2017; Remes, 2016). Technological developments such as social media also make narcissistic behaviour more accessible for both the performers and the audience (Trzesniewski & Donnellan, 2010). Generalising about younger generations based upon one’s own experiences is a stereotype, and as with all stereotypes, it may be influenced by particularly self-centered individuals (Arnett, 2013; Trzesniewski & Donnellan, 2010). Furthermore, confirmation bias may come into play and stop recognition of stereotype-

inconsistent information (Fyock & Stangor, 1994; Sedikides & Strube, 1997; Todd, Galinsky, & Bodenhausen, 2012).

However, the most likely explanation for this perception is that when older generations compare themselves to younger generations and judge them to be more entitled, they are in fact correct (e.g., Foster et al., 2003). Comparing yourself repeatedly to young people, where ‘young people’ remain roughly the same age (i.e., 18-25), but ‘yourself’ continues to age and mature, will inevitably lead to the correct *perception* of change over time. However, it may lead to the incorrect *attribution* of that change to others rather than to the self (Eibach, Libby, & Gilovich, 2003). Older adults assess the gap between their current personality as it has developed across a lifetime (as they have earned a living, established a career, settled down with partners, and had children), and the personalities of ‘young people’ – teenagers and twenty-somethings who are just approaching such responsibilities (Trzesniewski & Donnellan, 2009; Roberts et al., 2010). This idea can be illustrated somewhat crudely by the quote: “I keep getting older, they stay the same age” (Linklater, 1993).

Research suggests that people often mistake changes within themselves for changes happening in the external world (Eibach et al., 2003). For example, people who have started earning more money are more likely to believe that freedom is increasing, while people who have recently become parents perceive crime to be on the rise. Eibach et al. (2003) suggests that because change in the self is so gradual and often nonsalient, any perceived change is attributed to a changing world. In particular, perceptions of change in the world are likely to be negative – things aren’t what they used to be. Normative changes throughout the lifespan, such as declining physical and mental health, becoming a parent, or the loss of familiarity with pop culture and music all tend to produce the appearance of a worsening society (Eibach et al., 2003). In sum, people are not particularly likely to make accurate comparisons between

themselves and younger generations, comparisons are likely to be negative, and the resultant stereotypes are likely to be confirmed by traditional and social media. Thus, theories of personality development can predict that narcissism is not changing while still accounting for the perception that narcissism is on the rise.

### ***Longitudinal Research***

There are therefore several theoretical approaches that may predict change in narcissism across generational cohorts, change in narcissism for all age cohorts, and change across the lifespan (e.g., Arnett, 2013; Bianchi, 2014; Roberts et al., 2010; Twenge, 2013a; Twenge & Campbell, 2009a). In terms of empirical research, however, the main focus has been on measuring changes across generational cohorts. Cross-temporal meta-analysis was developed to untangle cohort and developmental effects, by measuring narcissism in multiple samples from different birth cohorts at the same age (Twenge & Campbell, 2001). By measuring a very narrow age range, developmental effects are controlled for (but not investigated) and any change in narcissism is attributable to sociocultural changes (which may be either cohort effects or period effects; see Twenge, 2013a; Trzesniewski & Donnellan, 2010 for a review).

The first research to examine change in narcissism was by Twenge et al. (2008a), who used cross-temporal meta-analysis to measure narcissism in multiple samples of US college students across several decades. The earliest data point of this research was from the original construction of the NPI (Raskin & Hall, 1979), so while the rise in narcissism is theorised to have begun before 1979 (Twenge et al., 2008a), there is no earlier comparable measure of narcissism. Results demonstrated a linear increase in NPI narcissism from 1979 to 2006, with scores increasing by a third of a standard deviation. This meta-analysis was the catalyst for much of the following research. However, when Trzesniewski, Donnellan and Robins

(2008b) compared NPI narcissism scores among Californian college students from 1979 to 2007, they found a weak decline in NPI narcissism. Trzesniewski et al. (2008b) also found no change over time in self-enhancement in a separate representative sample of US high school students from the Monitoring the Future (MTF) project.

In response, Twenge et al. (2008b) re-examined the meta-analysis by Twenge et al. (2008a) and similarly found that narcissism was not on the rise in Californian colleges, however, it was increasing in non-Californian samples. They suggested that the lack of change in narcissism actually reflected an increasing proportion of Asian-American students with low levels of narcissism entering the Californian student population and lowering the overall mean. This was later supported by Twenge and Foster (2008), who reanalysed Trzesniewski et al.'s (2008b) data and demonstrated that NPI scores increased among all ethnicities from 2002 to 2007 (when data on ethnicity were available), but the trend appeared non-significant overall as the proportion of Asian students increased over time. However, when this analysis was in turn expanded upon by Donnellan, Trzesniewski, and Robins (2009) to cover 1996 to 2008, they found much smaller effect sizes across all ethnic groups. They argued that the small overall positive association between time and narcissism was too small to be meaningful, as results fell below the threshold of even a small effect size.

Roberts et al. (2010) then conducted another meta-analysis by folding previous meta-analyses together with additional unpublished data, and again found the trend across time was non-significant. However, Twenge and Foster (2010) argued that the largest sample in this analysis came from a university campus (UC Davis) with particularly low narcissism scores; as the data were collected from different campuses at different years, campus and year were confounded and so the results were not accurate. That is, over time, data collection switched from more narcissistic campuses to less narcissistic campuses, creating the appearance of a

non-significant trend. Once campus effects were controlled for, an increase was found in college students NPI scores over time once again (1982-2008; Twenge & Foster, 2010).

In other samples, findings are just as mixed, with Stewart and Bernhardt (2010) finding that narcissism was higher among recent undergraduate students (2004-2008) compared to pre-1990 undergraduates, but Trzesniewski and Donnellan (2010) finding no increases in egotism, self-enhancement, individualism, self-esteem in the MTF dataset of high school students from 1976 to 2006. In more recent research in a separate sample, a meta-analysis among US undergraduates (1990-2013) found no significant change in NPI narcissism over time (Grijalva et al., 2015). Finally, also in a separate sample, Wetzel et al. (2017) compared mean differences in NPI narcissism across cohorts of college students from the 1990's, 2000's, and 2010's, and found a decrease in narcissism over time. This decrease persisted across all ethnic groups, genders, and campuses and when accounting for measurement noninvariance. Perhaps most noteworthy is that the decline in narcissism was consistent from 1992 onwards – not just since the GFC, as may be predicted by theories linking narcissism to economic conditions (Bianchi, 2014; Twenge, 2013b). However, the most pronounced decline occurred after 2008 (Wetzel et al., 2017).

Overall, there are mixed findings in regards to whether narcissism is increasing, staying the same, or even decreasing, with powerful meta-analyses available to support all conclusions. Before moving on to a discussion of how these conflicting results may have arisen, some research has estimated how entitlement, specifically, may be changing over time by splitting the NPI into its seven subscales. However, entitlement on its own shows no clearer pattern of results than does the NPI scale as a whole. When no change over time was found in the overall NPI, the entitlement subscale showed a small increase over time (Trzesniewski et al., 2008b); where increases in the NPI were found the entitlement subscale showed no change over time (Twenge & Foster, 2010). Donnellan et al. (2009) found no

change in either the overall NPI or the entitlement subscale and Wetzel et al. (2017) found that entitlement both increased and decreased across time. As discussed in the introductory chapter, the entitlement subscale has very low reliability and is not generally intended to be used as a separate measure, which may account for the variability within these results (e.g., Brown et al., 2009).

### ***Methodological Concerns***

With much of the research used to support or challenge the narcissism epidemic theory coming from overlapping data (Trzesniewski et al., 2008b; Twenge et al., 2008a), why are the results so different? An important point is that there are differences in the analytical techniques used to assess change over time, which may impact upon both the effect sizes and directions of the effect (Trzesniewski & Donnellan, 2010; Twenge & Foster, 2008). As the current research utilises a different analytic technique altogether, no commentary will be made here on this particular point, however it is worth noting that it may explain some of the inconsistencies (see Trzesniewski & Donnellan, 2010; Twenge & Foster, 2010 for a discussion). Of more relevance to this thesis are the concerns raised about representative samples, interpretations of the NPI scale, and questions about effect sizes (Donnellan et al., 2009; Trzesniewski et al., 2008a; Twenge et al., 2008a; Twenge & Foster, 2008). These concerns will be reviewed in the following section.

### ***Sampling and Generalisability***

There have been multiple criticisms of the samples used by Twenge et al. (2008a) in their meta-analysis, with the same data used by Roberts et al. (2010) and Twenge and Foster (2010) in subsequent updated meta-analyses. Trzesniewski et al. (2008a; also see Arnett, 2013; Trzesniewski & Donnellan, 2009, 2010) argue that even meta-analyses are not representative if the input is made up of small convenience samples. Firstly, these samples may have a self-selection bias towards higher narcissism as students choose to participate in

narcissism-related studies. Secondly, Trzesniewski et al. (2008b) note that students at four-year colleges only represent about a quarter of the people in the 18 to 24 age range. While they point out that their own sample of college students is likely not representative either, those results are replicated in a representative sample of high school students (Trzesniewski et al., 2008b).

These criticisms are part of a much broader debate about making generalisations from American college student samples (Henrich, Heine, & Norenzayan, 2010). Arnett (2013) note that college students are wealthier, whiter, and more highly educated than the non-college students in the same age cohort. Furthermore, the positive association between narcissism and wealth (e.g., Piff, 2014) brings into question the representativeness of college students' narcissism levels in times of increasing economic inequality (Roser & Ortiz-Ospina, 2017; World Wealth and Income Database, 2016) and increasing college costs (Davidson, 2015). Some research has indeed found that college students are more individualistic (Henrich et al., 2010) and more narcissistic than the general population (Stewart & Bernhardt, 2010). These findings suggest that meta-analyses of college students are not representative of an entire birth cohort.

This can be seen when following Twenge and Foster's (2008, 2010) claim that students from UC Davis are outliers, as their NPI scores are low ( $M = 15.24$ ) compared to means in Twenge et al.'s (2008a) meta-analysis ( $M = 17.65$ ). As an aside, this raises serious questions as to why a Californian campus would have unusually low narcissism scores if it sits at the heart of the self-esteem movement, a theorised cause of the narcissism epidemic. However, more importantly, their NPI scores are actually not unusually low, with a mean of around 15 found consistently in nearly all other research (Campbell et al., 2010; Donnellan et al., 2009; Foster et al., 2003; Raskin & Terry, 1988; Roberts et al., 2010; Trzesniewski et al., 2008b; Wilson & Sibley, 2011, cf. Horton et al., 2006). The mean in Twenge et al.'s (2008a)

data is actually unusually high (see Roberts et al., 2010), lending credence to the theory that college students who choose to participate in studies about narcissism are more narcissistic than the rest of the student population (Trzesniewski et al., 2008a). Suffice it to say, sampling issues have created a disconnect in the literature and a representative and heterogeneous sample is sorely needed; this limitation will be addressed by Study 3.

### *Effect Size and Interpretation*

Concerns have also been raised regarding the effect sizes obtained in meta-analyses and the real-world impact such effect sizes could have. Similar to Hyde's (2005) call for careful consideration to be placed on the magnitude of gender differences, Trzesniewski and Donnellan (2010; also see Trzesniewski et al., 2008a) argue for moderation in narcissism research. Hyde (2005) demonstrated that significant effects that reach the threshold of a small effect size (and not all do; Cohen 1988) still mean that the vast majority of the distributions for men and women overlap. Hyde argued that reporting significant effects that have little real world meaning only adds to stereotypes that are harmful to women. Trzesniewski and Donnellan (2010, 2014; also see Arnett, 2013; Macky, Gardner, & Forsyth, 2008) similarly propose that cohort differences may have much greater within-cohort variability than between-cohort variability and should not be the basis for generational stereotypes (Trzesniewski & Donnellan, 2010).

Mean NPI scores indicate that the average student endorsed 39% of the items in a narcissistic direction in Raskin and Terry's (1979) sample, and 38% in Trzesniewski et al.'s (2008b) sample thirty years later (in a 40-item scale; Donnellan et al., 2009; Trzesniewski & Donnellan, 2010). In Twenge et al.'s (2008) sample with the largest effect size across the various studies, the average student endorsed 43% of the NPI items in a narcissistic direction. The increase of a third of a standard deviation in narcissism over time works out to college students endorsing roughly 2 more items (Twenge et al., 2008a). In short, this does not

appear to be a large generational difference. However, one claim that has yet to be investigated is whether these small average changes are amplified at the high ends of the distribution; while most young people are not particularly narcissistic, more young people are now reaching the highest levels of narcissism (Twenge, 2009). The person-centered research proposed for Studies 1 and 2 will begin to investigate this question.

A further issue is interpreting what the endorsement of two more items on the NPI scale actually means (Trzesniewski et al., 2008a, 2008b; Arnett, 2013). As discussed in the first half of this chapter, the NPI is considered to measure a mix of adaptive and maladaptive content, which some commenters have suggested conflates both narcissism and self-esteem (Ackerman et al., 2011; Ackerman et al., 2012; Brown et al., 2009; Rosenthal & Hooley, 2010). Rosenthal and Hooley (2010; cf. Miller et al., 2011b) demonstrated that some of the items in the NPI are quite normative; they may describe narcissists, but they may also describe non-narcissists with high self-esteem. A high mean score on the NPI therefore may or may not indicate high narcissism. While this point is contended by Miller et al. (2011b), it is still widely accepted that facets of the NPI such as leadership and self-sufficiency are nowhere near as maladaptive as facets such as entitlement or exploitativeness (Ackerman et al., 2011; Raskin & Terry, 1988).

Research that has attempted to measure change in the facets individually finds no consistent patterns of change (Donnellan et al., 2009; Trzesniewski et al., 2008b; Twenge & Foster, 2010; Wetzel et al., 2017), perhaps related to the poor internal reliability of the NPI subscales (Ackerman & Donnellan, 2013; del Rosario & White, 2005). What is clear is that change (or lack thereof) in the NPI as a whole may represent multiple processes. In sum, even when increases in narcissism are found over time, they may not be particularly strong, and may represent both positive and negative self-views. Study 3 aims to contribute the first longitudinal research that does not use the NPI, but instead measures the ‘socially toxic’

entitlement core of narcissism that clearly represents antagonistic and maladaptive behaviours (e.g., Campbell et al., 2004).

### *Gender*

Gender may also be a moderating factor that impacts upon the interpretation of changing narcissism. Gender differences in self-regard are consistent, with men scoring higher than women in grandiose narcissism (Berenson et al., 2017; Brunell & Fisher, 2014; Corry et al., 2008; Foster et al., 2003; Miller & Campbell, 2008; Tschanz, Morf, & Turner, 1998; Wilson & Sibley, 2011), entitlement (Ackerman et al., 2011; Campbell et al., 2004; Foster et al., 2003; Holtzman, Vazire, & Mehl, 2010; Wilson & Sibley, 2011), and self-esteem (Diener & Diener, 2009; Kling, Hyde, Showers, & Buswell, 1999; Orth et al., 2010; Twenge & Campbell, 2001). The gender difference in narcissism has also been observed in meta-analysis, with an effect size of around .26 (Grijalva et al., 2015).

Although this difference would be characterised as small (Hyde, 2005; Grijalva et al., 2015), a cross-sectional difference does raise questions about how narcissism may develop differently over time for men and women. New Zealand research found that the cross-sectional association between narcissism and age differed by gender, with a sharper initial decrease in narcissism and entitlement for women than for men (Wilson & Sibley, 2011). Wilson and Sibley (2011) concluded that men appear to 'lag behind' women in terms of decreasing narcissism by about 10 to 15 years (Wilson & Sibley, 2011). Although Grijalva et al. (2015) did not find any interactions between gender and narcissism across age or birth cohorts in their meta-analysis, there is no research examining longitudinal change in narcissism outside of college-aged samples. Clearer gender differences may emerge for those older than 20, as will be investigated in Study 3.

The consistent gender difference in narcissism has also led to the suggestion that, where increases in narcissism have been found, they may simply reflect women's scores increasing as they come more in line with men's (Arnett, 2013; Donnellan et al., 2009; Twenge et al., 2008a). As equality increases and gender roles change, women should increase in traits traditionally considered to be masculine such as assertiveness, confidence, or leadership (Arnett, 2013; Berenson et al., 2017; Trzesniewski et al., 2008a). In support of this idea, both Twenge et al. (2008a) and Twenge and Foster (2010) noted that the gender difference in narcissism narrowed over time. However, these results should be interpreted with caution, as research that measured gender was not always available and was therefore less powerful and less representative (Twenge et al., 2008a). This theory is worth exploring further, then, as the interpretation of an overall trend of increasing narcissism becomes less concerning if it is only driven by adaptive increases in women (Trzesniewski et al., 2008a). Study 3 will model separate growth curves for men and women in order to investigate gender differences in the development of narcissism over time.

### ***Summary of Narcissism over Time***

The idea that society is steadily worsening has been around for several decades, but this idea has found a new popularity since Twenge and colleagues (2008a) published their cross-temporal meta-analysis showing increasing narcissism over the past few decades. However, the question of whether narcissism is truly on the rise is still up for debate. Robust data support *both* viewpoints (Trzesniewski et al., 2008b; Twenge et al., 2008a), a number of concerns regarding sampling, measures, and analytic strategies have been raised (e.g., Trzesniewski et al., 2008a, 2008b), and the theoretical mechanisms behind the narcissism epidemic have not been well tested (Trzesniewski et al., 2008a). The idea of a narcissism epidemic is far from settled, even as it appears to be widely accepted as fact by the public (Remes, 2016; Stein, 2013). Broad generalisations about young people and young generations

can impact upon the way they are treated in their education and occupations, making it important to continue to investigate the issue.

There are several gaps in the literature that Study 3 aims to investigate. Firstly, the vast majority of psychological research is conducted within the United States and within samples of college students (Arnett, 2008). These samples may not be representative of college students themselves (Stewart & Bernhardt, 2010; Trzesniewski et al., 2008a), of non-college students in the United States (Henrich et al., 2010; Arnett, 2008), or of other Western contexts (Henrich et al., 2010). Furthermore, the narcissism epidemic has been discussed both as a cohort effect that occurs only in younger generations such as millennials, but also as a period effect that may be impacting upon older adults (Terracciano, 2010; Twenge & Campbell, 2009a; Twenge et al., 2008a; Trzesniewski et al., 2008b), and a short-lived effect that does not extend beyond college ages (Arnett, 2010; Terracciano, 2010). With no research beyond the age range of 18 to 25, it is difficult to make claims either way. The current research will expand upon previous research by using a large, nationally representative panel sample from a novel context that is heterogeneous in terms of age.

In addition to examining period effects, this research aims to test, for the first time, both cohort effects predicted by the narcissism epidemic and developmental effects predicted by theories of personality development (Caspi et al., 2005; Roberts & Wood, 2006; Twenge & Foster, 2010; Twenge et al., 2008a). Both of these approaches provide explanations for the well-documented negative association between age and narcissism (Foster et al., 2003; Wilson & Sibley, 2011). The narcissism epidemic theory suggests that much, or all, of this relationship is due to narcissism increasing over time as younger generations grow up in an increasingly individualistic society (Twenge & Campbell, 2009a). Alternatively, theories of personality development such as the maturity principle (Caspi et al., 2005) or social investment theory (Roberts & Wood, 2006) propose that narcissism is naturally high among

the young, but decreases through normative experiences and role changes across the lifespan. Cultural change over time is just one of the impacts on personality development (Twenge, 2008), and developmental patterns of continuity and change across the lifespan also need to be taken into account (Roberts et al., 2010). The analytic technique and representative sample used in Study 3 allows for these two theories to be tested together.

Finally, Study 3 will also attempt to address some of the methodological concerns that have been raised, namely, by using a measure of psychological entitlement rather than the NPI. The mean score of the NPI has been criticised as uninterpretable, as it may measure both self-esteem and narcissism together (Brown et al., 2009; Rosenthal & Hooley, 2010; Rosenthal et al., 2011). Measuring psychological entitlement ensures that only the maladaptive elements of narcissism will be estimated (Ackerman et al., 2011), providing a clear test of the narcissism epidemic. The adaptiveness of some facets of the NPI has similarly led to the suggestion that rising narcissism may simply reflect changing gender roles, as women become more assertive and move into positions of leadership over the decades (Arnett, 2013; Trzesniewski et al., 2008a). Study 3 will estimate separate models for men and women, so as to investigate potential gender differences in the way that entitlement develops over time.

### **New Zealand Context**

As most narcissism research has been conducted within the United States (and largely within California), it is important to establish how relevant extant research may be to informing hypotheses within New Zealand, and vice versa how generalisable the conclusions of this thesis may be to research in other contexts. In terms of mean levels of self-regard, New Zealand and the United States are fairly similar. While Foster et al. (2003) found that mean levels of narcissism and entitlement were slightly higher in the United States than other

world regions such as Asia and the Middle East, they were not significantly different from other Western and individualist cultures such as New Zealand. Both New Zealand and North American samples of young adults reported a mean NPI score of approximately 15 (from the full 40-item scale; Foster et al., 2003; Wilson & Sibley, 2011). New Zealanders may have lower levels of self-esteem than North Americans (Bleidorn et al., 2016; Diener & Diener, 2009; Schmitt & Allik, 2005), however, on the world scale they are still quite comparable (Diener & Diener, 2009; Schmitt & Allik, 2005). As Western nations, New Zealand and the United States appear to put relatively similar emphasis upon high self-regard.

The theorised conditions that would lead to a narcissism epidemic are also present in the New Zealand context, as well as globally. New Zealand has slightly lower levels of individualism than the United States (Diener & Diener, 2009; Oyserman et al., 2002), but is still rated as a highly individualistic culture worldwide (Allen et al., 2007; Diener & Diener, 2009; Hofstede, 1980). Similarly, the self-esteem movement began in California (Singal, 2017; Storr, 2017; Trzesniewski et al., 2008b) but spread rapidly across the United States and to other countries such as Britain, Australia (Storr, 2017), and New Zealand (Little, 2017; MacDonald, 2016). As both New Zealand and the United States are wealthy, Western, English-speaking nations, it is possible that they share similar trends in the development of self-regard. Indeed, Twenge and Campbell (2009a) have predicted that the narcissism epidemic should spread worldwide from the epicentre of the United States (see also Twenge, 2009).

Yet, there are important differences across cultural contexts. While the United States is generally considered to be highly individualistic and narcissistic with values of fame, fortune and excess (Campbell et al., 2010; Henrich et al., 2010; Oyserman et al., 2002; Twenge & Campbell, 2009a), New Zealand values typically emphasise humility and egalitarianism. Sibley, Hovard and Liu's (2011a) exploratory factor analysis identified liberal

democratic values as one of the most important facets of New Zealand's national character, describing concepts such as egalitarianism, meritocracy, friendliness, respect, and approachability. Along these lines, New Zealand struggles with the concept of 'Tall Poppy Syndrome', a common practice of 'cutting down' any New Zealanders who stand out too much or are not self-effacing enough about their success (Woodhams, 2015). Tall Poppy Syndrome has been argued to occur to such a degree that it holds back New Zealand's success in business (Kirkwood, 2007) and the entertainment industry (Gibson, 2015; Stuff, 2017).

In sum, both similarities and differences exist between New Zealand and the United States, and it is difficult to know to what extent these may impact on the development of self-regard. What is clear is that the public *believe* that the narcissism epidemic is occurring in multiple contexts. There is considerable media coverage of the narcissism epidemic in New Zealand (Black, 2013; Hanson, 2017; Little, 2017; MacDonald, 2016; Remes, 2016), as well as worldwide (e.g., Black, 2012; Remes, 2016; Stein, 2013; Singal, 2017; Williams, 2016). Given that the narcissism epidemic has been adopted and endorsed in such a widespread fashion, and with Twenge and Campbell (2009a) arguing that the narcissism epidemic is spreading worldwide, it is important to test the applicability of the theory in novel contexts. With the vast majority of the data in previous research collected from Californian college students (see Twenge & Foster, 2010), this thesis will present the first research examining the narcissism epidemic outside of the single cultural context of the United States.

### **Summary of Research**

This thesis aims to address two on-going debates in the narcissism literature using powerful, representative data and novel analytic techniques. The first debate regards the nature of the relationship between narcissism and self-esteem, which ties in to a much larger

debate about how narcissism may be defined: fragile or grandiose, adaptive or maladaptive, normal or pathological (e.g., Miller et al., 2011b; Pincus et al., 2009). There is an increasing awareness that treating narcissism, entitlement, or self-esteem as unidimensional impedes a complete understanding of these constructs (Kernis, 2003; Krizan & Herlache, 2017; Bosson & Weaver, 2011). Numerous models theorise different ‘types’ of people with heterogeneous forms of narcissism and self-esteem (Cain et al., 2008; Heppner & Kernis, 2011), and these different subtypes have qualitatively different personalities, behaviours, and outcomes (Crowe et al., 2016a; Kernis, 2003; Miller et al., 2011a). Research that takes a person-centered approach, assuming heterogeneity in the relationship between narcissism and self-esteem across the population, is needed.

The second debate regards the narcissism epidemic, and whether narcissism is indeed increasing over the decades among younger generations (Twenge & Campbell, 2009a; Twenge et al., 2008a). While some research continues to find evidence for the narcissism epidemic (Twenge & Foster, 2010), a growing body of research reports no evidence of changing levels of narcissism (Donnellan et al., 2009; Roberts et al., 2010; Trzesniewski et al., 2008b; Wetzel et al., 2017). The inconsistent findings in the literature may arise from a series of methodological concerns (e.g., Trzesniewski et al., 2008a). Of these, the largest concerns are the lack of representative data (Arnett, 2013; Trzesniewski et al., 2008a), and the inability to test key predictions of cohort effects, developmental effects, and period effects without longitudinal data across the adult lifespan (Roberts et al., 2010; Terracciano, 2010). Despite the continuing debate and contrasting evidence, the belief that younger generations are more selfish and entitled than ever is promoted by the media, endorsed by the public (e.g., Remes, 2016; Stein, 2013), and accepted as fact in academia (e.g., Levy et al., 2011).

This thesis aims to address these two debates across three studies. Study 1 will use Latent Profile Analysis to identify a structure of self-regard consisting of common patterns in mean levels of self-esteem and entitlement. The aim is to identify profiles where people view themselves in similar ways within the group, but in different ways to other groups, thus identifying heterogeneity in the two constructs (Collins & Lanza, 2009). A review of research suggests that these profiles will provide parsimonious coverage of previously theorised subtypes of narcissism, entitlement, and self-esteem. Study 2 will use Latent Transition Analysis to examine how these profiles are both stable and changeable over time, by identifying the probability of moving from one profile to another profile across the course of a year (Muthén & Muthén, 2000). Study 2 can therefore demonstrate the replicability of the profiles identified in Study 1, and identify heterogeneity not only in levels of self-esteem and entitlement, but in the ways that self-regard develops over time. These results will speak to both the structure of self-regard, as well as to concerns about the narcissism epidemic. Study 3 will investigate the narcissism epidemic in full using Cohort-Sequential Latent Growth Models. Study 3 aims to address a major gap in the literature by estimating developmental effects across the course of six years, while also estimating the impact of cohort effects or period effects using data from across the lifespan. Together, these three studies will provide new perspectives on central debates within the narcissism literature.

**CHAPTER THREE**

## **Methodology**

This chapter presents an overview of the participants, sampling procedure, and measures used throughout the three studies. Further details pertaining to each of the individual studies, their samples, and their analytic strategies are presented in more detail within their respective chapters. This may entail some repetition of the information presented here, such as sampling information. However, this chapter gives a comprehensive overview of the common methodology that underlies all three papers and compiles the sample details and measures used within one location. The differences between the entitlement measure used in Study 1 (Chapter Four) and the entitlement measure used in Studies 2 and 3 (Chapters Five and Six) is also documented to aid interpretations of results across studies.

Additionally, this chapter presents descriptive statistics for entitlement and self-esteem such as personality and psychosocial correlates in order to provide a basic understanding of self-regard in New Zealand. The adaptive and maladaptive sides to narcissism (Ackerman et al., 2011), entitlement (Crowe et al., 2016a), and self-esteem (Baumeister et al., 2003) make it important to document their nomological networks so that the results from the following studies can be interpreted in context. For example, these results can support the labelling of a pattern of low entitlement and high self-esteem in Study 1 as ‘optimal’ self-esteem if self-esteem is demonstrated to be an adaptive and positive trait. Furthermore, as the entitlement and self-esteem measures are short-form measures adapted from longer scales, it is useful to demonstrate that these measures replicate commonly found associations from previous research.

### **Sampling Procedure and Sample Details**

The three studies presented in the following chapters all use data from the New Zealand Attitudes and Values Study (NZAVS). The NZAVS is a nationally representative

20-year longitudinal panel study that began data collection in 2009, measuring social attitudes, personality, and health outcomes using annual postal questionnaires (NZAVS, 2017). This section details the initial sampling and booster sampling employed throughout the duration of the study. In total, seven waves of data are utilised in this thesis: Time 1 (2009), Time 2 (2010), Time 3 (2011), Time 4 (2012), Time 5 (2013), Time 6 (2014), and Time 7 (2015). Study 1 uses data from Time 1, Study 2 uses data from Times 6 and 7, and Study 3 uses data from Times 1 through 6 of the NZAVS.

The Time 1 (2009) NZAVS contained responses from 6,518 participants sampled from the 2009 New Zealand electoral roll. Enrolment is compulsory for all eligible voters. The electoral roll is publicly available for scientific research and in 2009 contained 2,986,546 registered voters. This represented all citizens over 18 years of age who were eligible to vote regardless of whether they chose to vote, barring people who had their contact details removed due to specific case-by-case concerns about privacy. The sample frame was split into three parts. Sample Frame 1 constituted a random sample of 25,000 people from the electoral roll (4,060 respondents). Sample Frame 2 constituted a second random sample of a further 10,000 people from the electoral roll (1,609 respondents). Sample Frame 3 constituted a booster sample of 5,500 people randomly selected from meshblock area units of the country with a high proportion of Māori, Pacific Nations, and Asian peoples (671 respondents).

Statistics New Zealand (2013) define the meshblock as “the smallest geographic unit for which statistical data is collected and processed by Statistics New Zealand. A meshblock is a defined geographic area, varying in size from part of a city block to large areas of rural land. Each meshblock abuts against another to form a network covering all of New Zealand including coasts and inlets, and extending out to the two hundred mile economic zone. Meshblocks are added together to ‘build up’ larger geographic areas such as area units and urban areas. They are also the principal unit used to draw-up and define electoral district and

local authority boundaries.” Meshblocks were selected using ethnic group proportions based on 2006 national census data. A further 178 people responded but did not provide contact details and so could not be matched to a sample frame. In sum, postal questionnaires were sent to 40,500 registered voters or roughly 1.36% of all registered voters in New Zealand. The overall response rate (adjusting for the address accuracy of the electoral roll and including anonymous responses) was 16.6%.

The Time 2 (2010) NZAVS contained responses from 4,442 participants. The Time 2 (2010) NZAVS retained 4,423 from the initial Time 1 (2009) NZAVS sample of 6,518 participants, and included an additional 20 respondents who could not be matched to the Time 1 participant database (a retention rate of 67.9% over one year). From this wave onwards, participants were posted a copy of the questionnaire, with a second postal follow-up two months later if they had not responded. Participants who provided an email address were also emailed and invited to complete an online questionnaire if they preferred.

The Time 3 (2011) NZAVS contained responses from 6,884 participants (3,918 retained from one or more previous waves, 2,962 new additions from booster sampling, and 4 unmatched participants or unsolicited opt-ins). The Time 3 (2011) NZAVS retained 3,915 from the initial Time 1 national probability sample (a 60.1% retention rate over two years). A further three participants who joined at Time 2 were also retained. To boost sample size at Time 3 and compensate for sample attrition, a booster sample was recruited through an unrelated survey posted on the website of a major New Zealand newspaper in 2011. A total of 3,208 participants registered an initial expression of interest in being contacted to participate in the NZAVS via this survey. Participants in this non-random booster sample were emailed an invitation to participate in an online version of the NZAVS, and those who did not respond to the email were also sent a postal version of the questionnaire. A total of 2,962 participants completed the questionnaire when subsequently contacted (92.4%). This

yielded a total sample size for the Time 3 (2012) NZAVS of 6,884 (3,915 retained from Time 1, 3 additions retained from opt-ins at Time 2, 2,962 recruited from the newspaper website at Time 3, and 4 opt-ins at Time 3).

The Time 4 (2012) NZAVS contained responses from 12,182 participants (6,807 retained from one or more previous waves, 5,108 new additions from booster sampling, and 267 unmatched participants or unsolicited opt-ins). The sample retained 4,053 participants from the initial Time 1 (2009) NZAVS of 6,518 participants (a retention rate of 62.2% over three years). The sample retained 5,762 participants from the full Time 3 (2011) sample (a retention rate of 83.7% from the previous year). Non-respondents were emailed a follow-up reminder email approximately two months later. Three attempts were then made using each provided phone number (typically home and cell phone) to contact non-respondents to encourage participation. These attempts were made on separate days, approximately one week apart. When possible, a phone message was left for each phone number after the third attempt. Participants were also posted a pamphlet outlining recent findings from the study mid-way through the year. Finally, participants were posted a Season's Greetings from the NZAVS research team, and informed that they had been automatically entered into a bonus seasonal grocery voucher prize draw for a total pool of \$NZ 1,000. Participants were informed that the draw would happen automatically and winners contacted. The Season's Greetings card also asked participants to contact the NZAVS (online, email or phone) if any of their contact details had changed before the prize draw was conducted. These additional materials are presented by Huang, Greaves, and Sibley (2014) in an online NZAVS technical report. These procedures (phoning, emailing, prize draws, and Season's Greetings cards) were followed in all subsequent waves of data collection.

To boost sample size at Time 4 and increase sample diversity for subsequent waves, five independent booster samples using different sample frames were also conducted. Booster

sampling was conducted without replacement (i.e., all people included in previous sample frames were identified and removed from the electoral roll before generation of the new sample frames). The first sample frame consisted of a randomly selected sample of 20,000 people from the 2012 New Zealand Electoral Roll. A total of 2,429 participants responded to this booster sample (response rate = 12.33% when adjusting for the 98.5% accuracy of the 2012 electoral roll). The second sample frame consisted of a regional booster of 10,000 people randomly selected from people listed in the 2012 Electoral Roll who lived in the Auckland region. A total of 890 participants responded to this booster sample (adjusted response rate = 9.04%). The Auckland region was oversampled because it is the fastest growing and most ethnically diverse region of the country with an increasing number of Asian and Pacific peoples in particular. The questionnaire used for this Auckland sample was longer than the standard NZAVS questionnaire, and contained additional unrelated questions that are not included in the NZAVS dataset (these related to the use of community facilities). Exit interviews conducted during Time 5 indicated that the longer length of this questionnaire may have contributed to the low response rate in this case.

The third sample frame consisted of 3,000 people randomly selected from the 2012 Electoral Roll who lived in the Christchurch region. A total of 332 participants responded to this booster sample (adjusted response rate = 11.24%). The Christchurch region was oversampled because it has experienced significant hardship and change due to the Christchurch earthquakes of 2010 and 2011 with many people moving out of the region (Statistics New Zealand, 2013) and problems with mail delivery with some city zones being placed under restricted entry due to safety concerns and considerable infrastructure destroyed).

The fourth sample frame consisted of 9,000 respondents selected from meshblock area units across the country that were moderate-to-high in deprivation according to the index

developed by Salmond, Crampton and Atkinson (2007). Regions with levels of deprivation were selected using scores on the decile-ranked NZ Deprivation index from 6-10, with 10 being the most deprived). This sample frame used scaled weighting so that people in increasingly deprived regions were increasingly more likely to be selected (with random sampling of people within regions that had a given level of deprivation). The scaling factor was as follows:  $n_i = n_{base} * weight_i$ , where  $n_{base} = 600$ , and  $weight_i$ , ranged from 1 to 5 and increased by 1 for each one-unit increased in deprivation score. Thus, 600 people were randomly selected from regions with a deprivation score of 6, 1,200 people were randomly selected from regions with a deprivation score of 7, and so on. This sampling strategy was designed to increase the representativeness of the sample across regions with different levels of deprivation, as the NZAVS showed increased an attrition rate in increasingly more deprived regions over the first three years of the study. A total of 767 participants responded to this booster sample (adjusted response rate = 8.65%). The fifth sample frame consisted of 9,000 people randomly selected from those who indicated on the 2012 Electoral Roll that they were of Māori ethnicity (ethnic affiliation as Māori is listed on the roll, but other ethnic affiliations are not). A total of 690 participants responded to this booster sample (adjusted response rate = 7.78%). The questionnaire administered to the Māori booster sample included questions specifically designed for Māori.

The Time 5 (2013) NZAVS contained responses from 18,264 participants (10,502 retained from one or more previous waves, 7,581 new additions from booster sampling, and 181 unmatched participants or unsolicited opt-ins). The sample retained 3,934 participants from the initial Time 1 (2009) NZAVS of 6,518 participants (a retention rate of 60.4% over four years). The sample retained 9,844 participants from the full Time 4 (2011) sample (a retention rate of 80.8% from the previous year). A yearly pamphlet summarizing key research findings published during the current wave of the study was posted to participants.

To boost sample size and increase sample diversity for subsequent waves, two booster samples were also conducted by selecting people from the New Zealand electoral roll. As with previous booster samples, sampling was conducted without replacement (i.e., all people included in previous sample frames were identified and removed from the 2014 roll). The first sample frame consisted of 70,000 people aged from 18-60 randomly selected from the 2014 New Zealand Electoral Roll. The New Zealand Electoral Roll contains participants' date of birth (within a one-year window), and the frame was limited to people who were 60 or younger due to our aim of retaining participants for the following 15 years. A total of 7489 participants responded to this booster sample (response rate = 10.9% when adjusting for the 98.6% accuracy of the 2014 electoral roll). The second sample frame consisted of 1,500 people who were listed in the Electoral Roll as being of Māori ancestry and who were between 18-60 years of age. A total of 92 participants responded to this booster sample (response rate = 6.2% adjusting for electoral roll accuracy).

The Time 6 (2014) NZAVS contained responses from 15,822 participants (15,740 retained from one or more previous waves, and 82 unmatched participants or unsolicited opt-ins). The sample retained 3,727 participants from the initial Time 1 (2009) NZAVS of 6,518 participants (a retention rate of 57.2% over five years). The sample retained 14,875 participants from the full Time 5 (2012) sample (a retention rate of 81.5% from the previous year). Participants were emailed an online pamphlet containing a series of video interviews with the researchers summarizing different research findings.

The Time 7 (2015) NZAVS contained responses from 13,944 participants (13,879 retained from one or more previous waves, and 65 unmatched participants or unsolicited opt-ins). The sample retained 3,344 participants from the initial Time 1 (2009) NZAVS of 6,518 participants (a retention rate of 51.3% over five years). The sample retained 12,550

participants from the full Time 6 (2014) sample (a retention rate of 79.3% from the previous year).

### **Participant Details**

All time points of the NZAVS have been compared to census data to test for representativeness of the sample (Sibley, 2014a). The NZAVS tends to oversample women, New Zealand Europeans, and Māori, and undersample men, Asian, and Pacific peoples. People in their 50's are also slightly oversampled as are people from wealthier regions, while people in their 20's and from more deprived regions are undersampled. The most dramatic sampling bias is in terms of gender (approximately 60% women). Gender and ethnicity sampling biases are controlled for in Study 1, using sample weights (for more details, see Sibley, 2014b). Case-by-case participant details are given within each of the three individual studies, as they use different waves of data, and not all participants complete all measures at all time points.

### **Measures**

Throughout the seven time points, self-esteem was assessed using an abridged, three-item version of Rosenberg's Self-Esteem Scale (Rosenberg, 1965). At Time 1 (2009), psychological entitlement was assessed using an abridged, three-item version of the Psychological Entitlement Scale (Campbell et al., 2004). The three items for each measure were selected as they were the highest loading items on their respective latent factors (Campbell et al., 2004; Rosenberg, 1965). In later waves of the NZAVS, (Time 2- Time 7, 2010 - 2015), psychological entitlement was assessed using two of the original three items assessed at Time 1, as this item reduced the reliability of the measure (more detail below).

All items were administered within the greater NZAVS battery of questions, using the following instructions: "This part of the questionnaire measures your feelings about yourself.

Please circle the number that best represents how accurately each statement describes you.” Items were rated on a scale ranging from 1 (very inaccurate) to 7 (very accurate). Self-esteem was assessed using the following three items: “[I] on the whole am satisfied with myself”, “[I] take a positive attitude toward myself”, and “[I] am inclined to feel that I am a failure” (reverse scored). Reliability was high and consistent across the time points for self-esteem. Using Cronbach’s Alpha reliability estimates, the three-item self-esteem measure was reliable at Time 1 (.70), Time 2 (.75), Time 3 (.77), Time 4 (.77), Time 5 (.78), Time 6 (.80), and Time 7 (.80). However, the self-esteem measure is only used in Study 1 (Time 1) and Study 2 (Times 6 and 7).

Psychological entitlement at Time 1 (2009) was assessed using the following three items: “[I] feel entitled to more of everything”, “[I] deserve more things in life”, and “[I] demand the best because I’m worth it”. Reliability for the three-item psychological entitlement scale at Time 1 (2009) was .68. This measure is used in Study 1. Subsequent analysis demonstrated that removal of the “[I] demand the best because I’m worth it” item would improve the reliability of the scale. Removing this item lead to a reliability estimate of .71 at Time 1 (2009). The following waves of measurement (and further descriptives in this chapter) therefore assessed psychological entitlement using the two-item scale, as questionnaire space is at a premium in large-scale longitudinal panel studies. Psychological entitlement at Time 2 - Time 7 (2010 - 2015) was therefore assessed using the two items “[I] feel entitled to more of everything” and “[I] deserve more things in life”. Following Eisinga, Grotenhuis, and Pelzer (2013), the Spearman-Brown reliability estimate is reported as it is a more accurate estimate of reliability for two-item measures, although these estimates did not generally differ from the Cronbach’s Alpha reliability estimates. Results showed that the psychological entitlement measure was appropriately reliable at Time 2 (.71), Time 3 (.71),

Time 4 (.71), Time 5 (.70), Time 6 (.72), and Time 7 (.73). This measure is used in Studies 2 and 3.

## **Descriptives**

Table 3.1 presents means, standard deviations and correlations for psychological entitlement and self-esteem from Time 1 to Time 7. Entitlement has a small, negative association with self-esteem across all time points. The distributions across the sample of psychological entitlement and self-esteem at Time 6 are presented in Figure 3.1. As relatively social desirable and undesirable traits respectively, the mean for self-esteem is high and the distribution negatively skewed, whereas the mean for psychological entitlement is low and the distribution positively skewed.

## ***Comparing Psychological Entitlement Measures***

Short-form scales can be associated with some methodological difficulties such as being more prone to Type I and Type II errors (Credé, Harms, Niehorster, & Gaye-Valentine, 2012; Krueger, Emons, & Sijtsma, 2013), however, they are a necessary trade-off for large scale longitudinal studies. Furthermore, as discussed in Chapter Two, there is a dire need for research using representative samples with data from across the lifespan. The aim of this chapter is not to argue that the short-form measure of entitlement used in the following studies is as good as longer measures (Eisinga et al., 2003), but to demonstrate that it is an appropriate measure of entitlement. This chapter will also document the ways in which the current measure may differ from other measures, so that full consideration can be given to the comparison of results across research.

Table 3.1

*Means, standard deviations, and correlations for psychological entitlement (2-item scale) and self-esteem at all time points*

	Psychological Entitlement		Self-Esteem		Entitlement/SE correlation	Test-retest correlations for Psychological Entitlement					
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>r</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
Time 1 (2009)	2.82	1.43	5.15	1.19	-.132	-					
Time 2 (2010)	2.92	1.38	5.21	1.18	-.175	.622	-				
Time 3 (2011)	2.83	1.31	5.23	1.19	-.223	.592	.647	-			
Time 4 (2012)	2.88	1.36	5.22	1.19	-.168	.584	.615	.604	-		
Time 5 (2013)	2.82	1.33	5.22	1.21	-.177	.560	.591	.584	.627	-	
Time 6 (2014)	2.71	1.29	5.24	1.20	-.196	.587	.593	.599	.628	.649	-
Time 7 (2015)	2.66	1.28	5.24	1.20	-.224	.555	.582	.575	.620	.636	.678

*Note.* All correlations are significant at  $p < .001$ .

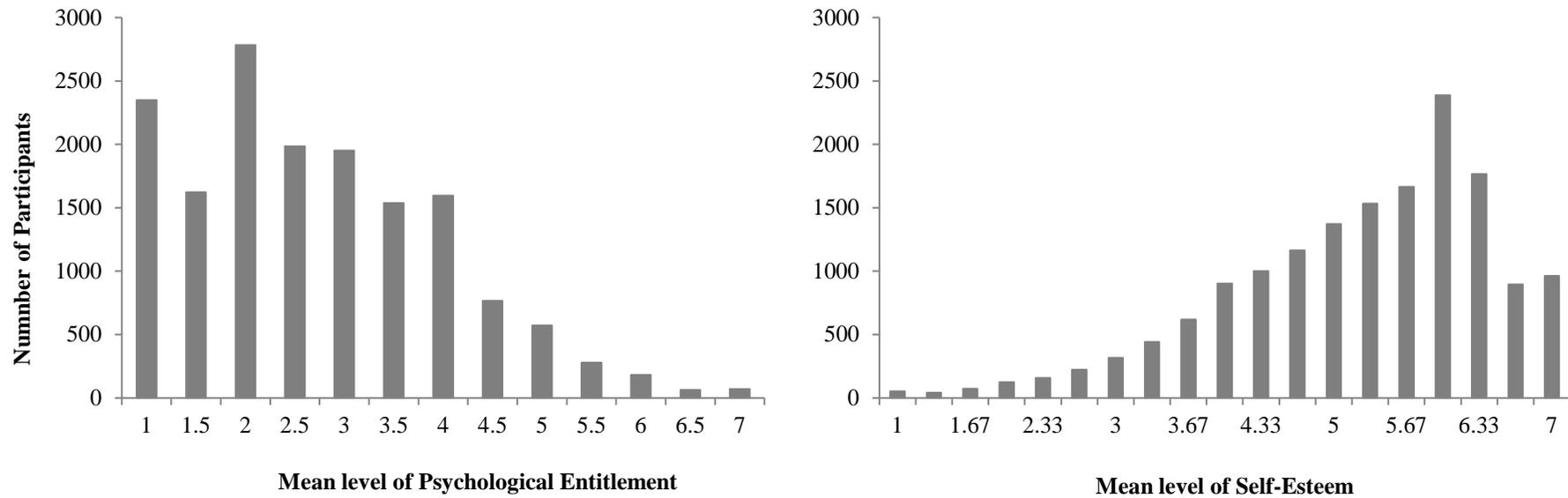


Figure 3.1. Distribution of mean levels of psychological entitlement and self-esteem across participants ( $N = 15,761$ ) measured at Time 6 (2014)

Firstly, this entitlement measure has been used in a number of prior studies (Milojev & Sibley, 2016; Wilson & Sibley, 2011). Wilson and Sibley (2011) demonstrated that there are some differences between the NPI and psychological entitlement in New Zealand, with one sample completing the NPI and another sample completing the abridged-PES measure. With the NPI, men's narcissism showed the largest decreases across older age cohorts, while women's narcissism decreased more rapidly across younger age cohorts. In contrast, the abridged-PES showed entitlement decreased more rapidly among younger cohorts for both men and women (Wilson & Sibley, 2011). However, the two scales worked broadly in the same way (i.e. both showed negative trends of a similar strength across age). While a longer measure would likely have produced stronger results, the abridged-PES appeared to be an appropriate marker of entitlement, with results comparable to the full NPI even across different samples.

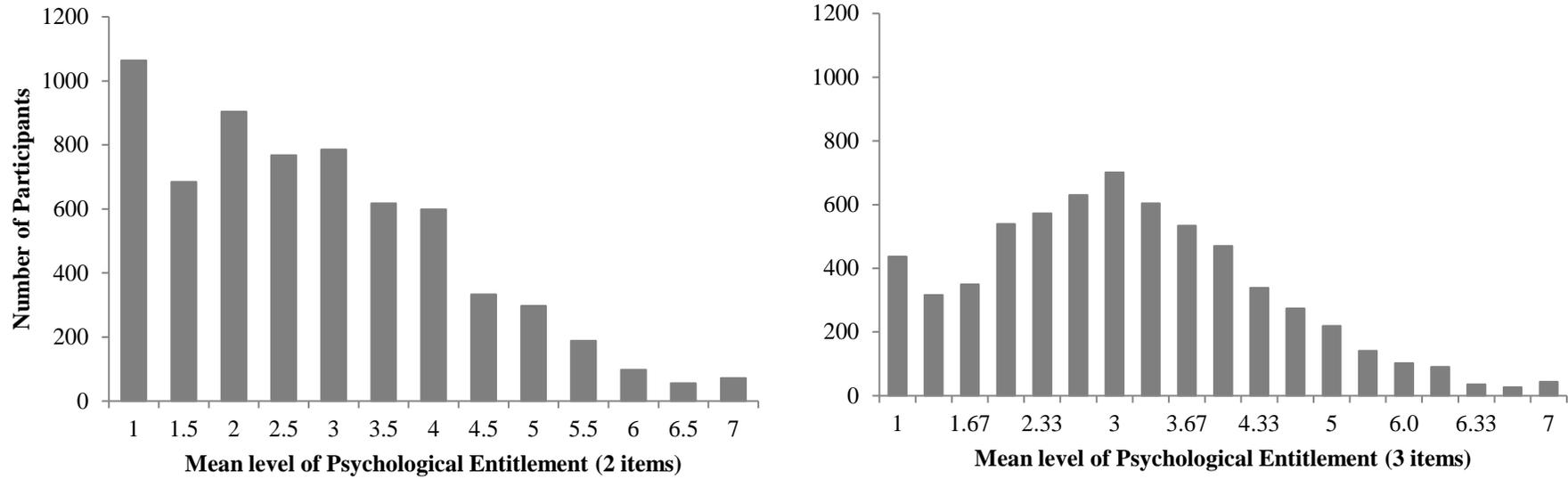
Secondly, the abridged measure is comparable to the full length measure developed by Campbell et al. (2004). The means and standard deviations for the items used in the abridged-PES are very close to those attained by Campbell et al. (2004, Table 3.1): “[I] demand the best because I’m worth it” ( $M = 3.69$ ,  $SD = 1.73$ ;  $M_{Campbell} = 3.77$ ,  $SD_{Campbell} = 1.76$ ), “[I] feel entitled to more of everything”,  $M = 2.47$ ,  $SD = 1.47$ ;  $M_{Campbell} = 2.71$ ,  $SD_{Campbell} = 1.41$ ), “[I] deserve more things in life” ( $M = 3.15$ ,  $SD = 1.75$ ;  $M_{Campbell} = 3.17$ ,  $SD_{Campbell} = 1.57$ ). The two items used in Study 2 and Study 3 are the highest loading items from Campbell et al. (2004), suggesting they tap into psychological entitlement quite well; correspondingly, as a socially undesirable trait, they also have relatively low means compared to other items in the PES. Thus, the mean of the two-item scale is likely to be lower than means of the full length PES reported in other research. Test-retest reliability in the abridged-PES (see Table 3.1) is also comparable to the retest reliability reported by Campbell et al. (2004); yearly test-retest correlations range from .60 - .68 in the abridged-PES, while

Campbell et al. (2004) found a test-retest reliability of .70 across two months. Across six years, test-retest reliability was .55 for the abridged-PES.

### ***Two-item vs. three-item measures***

As the item “[I] demand the best because I’m worth it” was removed from the NZAVS questionnaire after Time 1, it is important to be clear on what kind of comparisons can be drawn between Study 1, which uses the three-item measure, and Studies 2 and 3, which use the two-item measure. At Time 1, the mean of the three-item measure was slightly higher ( $M = 3.11$ ,  $SD = 1.30$ ) than the two-item measure ( $M = 2.82$ ,  $SD = 1.43$ ), and the three-item measure of entitlement was also more weakly correlated with self-esteem ( $r = -.028$ ,  $p = .024$ ) than the two item measure ( $r = -.132$ ,  $p < .001$ , see Table 3.1). Both these analyses and the content of the item suggest that this measure may have been tapping into self-esteem in addition to entitlement. As such, the 3-item measure shows a less skewed distribution than the 2-item measure (see Figure 3.2) and may be more in line with the full length PES scale (Campbell et al., 2004). Combined with sample weighting in Study 1, the 3-item measure provides an excellent baseline estimate of levels of psychological entitlement in New Zealand.

On the other hand, the two-item measure may be tapping into a slightly more vulnerable side of entitlement, in contrast to the full length PES which tends to lean towards grandiosity (Ackerman & Donnellan, 2013; Krizan & Johar, 2012; Miller et al., 2013a) and correlate positively with self-esteem (Campbell et al., 2004). In using the two-item measure, Study 2 and Study 3 may be able to tap into narcissistic vulnerability better than the three-item measure. However, overall, results from the three studies should be comparable as the two measures of entitlement were, of course, highly correlated ( $r = .91$ ,  $p < .001$ ).



*Figure 3.2.* Distribution of mean levels of psychological entitlement across participants ( $N = 6,468$ ) measured at Time 1 (2009), using a two-item scale and a three-item scale

## **Antecedents and Outcomes associated with Narcissism, Entitlement, and Self-Esteem**

Here, the common associations that narcissism (grandiose and vulnerable), psychological entitlement, and self-esteem have with personality, demographics, interpersonal relationships and psychological health are reviewed. Then, the measures of entitlement and self-esteem used in the current research are similarly analysed. Firstly, this allows for comparison between the nomological networks of the current measures and those used in previous research. Additionally, subtypes of narcissism, entitlement, and self-esteem are often discussed in terms of their relative adaptiveness (e.g., Ackerman et al., 2011; Crowe et al., 2016a; Kernis, 2003), making it important to establish the outcomes associated with the current entitlement and self-esteem measures. In particular, the personality profiles of grandiose narcissism, vulnerable narcissism and optimal self-esteem are of interest, to assist with the labelling of latent profiles identified in Study 1 and Study 2. Finally, research into changing narcissism over time has proven difficult to interpret due to the mix of adaptive and maladaptive traits associated with the NPI (Trzesniewski et al., 2008a), so these analyses aim to demonstrate that the entitlement scale is indeed measuring the maladaptive core of narcissism. Throughout, it is important to note that the distinction made between predictors and outcomes of self-regard is for conceptual clarity rather than a claim of causality, as much of the previous research as well as the current chapter use cross-sectional techniques.

### ***Personality***

In terms of FFM personality (McCrae & Costa, 2008), a grandiose narcissist is most often described as a combination of high extraversion and low agreeableness, leading to their description as a ‘disagreeable extravert’ (Paulhus, 2001). This finding has been replicated by a number of researchers, mostly using the NPI (Ackerman et al., 2011; Bradlee & Emmons, 1992; Brown et al., 2009; Campbell et al., 2010; Crowe et al., 2016b; Foster et al., 2015; Lee

& Ashton, 2005; Hill & Roberts, 2012; Miller & Campbell, 2008; Miller & Maple, 2011; Miller et al., 2011a, 2012b; Paulhus & Williams, 2002; Samuel & Widiger, 2008; Trzesniewski et al., 2008a; Vernon et al., 2008).

The links with other aspects of the FFM are slightly less consistent, but some research has identified that grandiose narcissists report lower neuroticism (Bradlee & Emmons, 1992; Crowe et al., 2016b; Derry et al., 2017; Foster et al., 2015; Hill & Roberts, 2012; Miller & Campbell, 2008; Miller & Maple, 2011; Miller et al., 2012b; Trzesniewski et al., 2008a), higher conscientiousness (Miller & Campbell, 2008; Miller et al., 2012b; Trzesniewski et al., 2008a), and higher openness to experience (Foster et al., 2015; Hill & Roberts, 2012; Miller & Maple, 2011; Paulhus & Williams, 2002; Trzesniewski et al., 2008a). A review and meta-analysis found that grandiose narcissism was related to lower agreeableness, higher extraversion, and lower neuroticism (O'Boyle, Forsyth, Banks, Story, & White, 2015). In contrast, vulnerable narcissists are defined by their high neuroticism alongside low agreeableness (Derry et al., 2017; Houlcroft, Bore, & Munro, 2012; Miller & Maple, 2011; Miller et al., 2011a, 2017b). Vulnerable narcissism also tends to be associated with introversion, and although less consistent, lower openness and conscientiousness (Miller & Maple, 2011; Miller et al., 2017b).

Entitlement, as the maladaptive aspect of narcissism (e.g., Ackerman et al., 2011) may show more adverse relationships than NPI narcissism as a whole. As with narcissism, entitlement is consistently negatively associated with agreeableness (Ackerman & Donnellan, 2013; Bradlee & Emmons, 1992; Brown et al., 2009; Corry et al., 2008; Crowe et al., 2016a; Hill & Roberts, 2012; Miller et al., 2012b; Pryor et al., 2008; Samuel & Widiger, 2008; Trzesniewski et al., 2008a), and may even account for the entire narcissism-agreeableness relationship (Strelan, 2007). However, entitlement tends to be unrelated to extraversion (Ackerman et al., 2011; Ackerman & Donnellan, 2013; Brown et al., 2009; Campbell et al.,

2004; Miller et al., 2012b; cf. Corry et al., 2008; Hill & Roberts, 2012), suggesting that some highly entitled people are extraverted while others are not; perhaps reflecting the entitlement core of grandiose and vulnerable narcissism. Entitlement is also positively associated with neuroticism (Ackerman et al., 2011; Brown et al., 2009; Campbell et al., 2004; Hill & Roberts, 2012), reflecting a more vulnerable side than grandiose narcissism. Finally, entitlement has also been found to be negatively associated with conscientiousness (Hill & Roberts, 2012; Trzesniewski et al., 2008a).

In comparison, the personality profile of someone with high self-esteem is low neuroticism, high agreeableness, high extraversion, high openness, and high conscientiousness (Brown et al., 2009; Campbell et al., 2002; Musek, 2007; Schmitt & Allik, 2005). A useful way to view this pattern is as ‘The Big One’ (Musek, 2007), a general factor of personality that sits above the FFM consisting of high Conscientiousness, Agreeableness, Extraversion, Openness, and low Neuroticism (or high Emotional Stability); measuring high on the general factor personality trait indicates a more prosocial personality. Thus, high self-esteem tends to be associated with a highly prosocial personality (Musek, 2007; Schmitt & Allik, 2005), vulnerable narcissism is associated with an antisocial personality (Miller et al., 2017b), and grandiose narcissism consists of a mix of prosocial and antisocial personality traits (e.g., Ackerman et al., 2011).

### ***Outcomes***

As discussed in Chapters One and Two, grandiose narcissism tends to be defined by its associations with higher wellbeing and difficulties with interpersonal functioning (Derry et al., 2017). Extant research has found that grandiose narcissism is associated with aggression and antagonism (Bushman & Baumeister, 1998; Donnellan et al., 2005; Miller et al., 2011a, 2013a; Rosenthal & Hooley, 2010; Rosenthal et al., 2011; Tracy et al., 2009; Trzesniewski et

al., 2008a; Wink, 1991), increased reactivity to negative interpersonal events (Zuckerman & O'Loughlin, 2009), and lower relationship satisfaction (Tracy et al., 2009). Grandiose narcissism is also associated with higher wellbeing (Krizan & Herlache, 2017; Sedikides et al., 2004), although this relationship appears to be entirely attributable to their high self-esteem (Brown et al., 2009; Orth et al., 2016; Rosenthal & Hooley, 2010; Sedikides et al., 2004; Zuckerman & O'Loughlin, 2009). Grandiose narcissism either has small positive associations with better mental health or no association with mental health (Brown et al., 2009; Rosenthal et al., 2011; Sedikides et al., 2004; Tracy et al., 2009; Watson, Sawrie, Greene, & Arredondo, 2002; Wink, 1991). However, grandiose narcissism can be associated with disinhibition, low self-control, and high impulsivity (Miller et al., 2013a, 2013b; Tracy et al., 2009; Vazire & Funder, 2006; Wink, 1991).

Vulnerable narcissists have the same difficulties with interpersonal functioning as grandiose narcissists as they both share a common core of entitlement (e.g., Ackerman et al., 2011; Moeller et al., 2009), however their low self-esteem provides no compensatory benefits as it does for grandiose narcissists (Derry et al., 2017; Sedikides et al., 2004). Vulnerable narcissists are less satisfied with their relationships (Krizan & Herlache, 2017), insecurely attached (Miller et al., 2011a, 2017b; Rohmann et al., 2012), fear interpersonal interaction, and lack confidence in their own ability to maintain a relationship (Dickinson & Pincus, 2003), but can also be aggressive (Houlcroft et al., 2012; Miller et al., 2013b). Vulnerable narcissism is also associated with higher negative affect, depression, anxiety, generalised psychological distress, lower positive affect, lower self-control, and poorer wellbeing (Miller et al., 2011a, 2013b, 2017b; Watson et al., 2002; Wink, 1991).

Similarly, entitlement is related to higher hostility, manipulativeness, retaliation, interpersonal conflict, aggression, and anti-social behaviour (Ackerman & Donnellan, 2013; Ackerman et al., 2011; Brown et al., 2009; Campbell et al., 2004; Lessard et al., 2011;

Moeller et al., 2009; Reidy et al., 2008; Strelan, 2007), and has been proposed as the driving force behind the interpersonal difficulties experienced by narcissists (e.g., Moeller et al., 2009; Reidy et al., 2008). Entitlement is also related to poorer mental health (Brown et al., 2009), anxiety, psychological distress (Grubbs & Exline, 2016), psychopathy and machiavellianism (Ackerman et al., 2011), and poorer subjective wellbeing (Trzesniewski et al., 2008a).

In contrast, self-esteem tends to be negatively related to aggression, hostility, anti-social behaviour, and rejection sensitivity (Donnellan et al., 2005; Lessard et al., 2011; Rosenthal & Hooley, 2010; Tracy et al., 2009), and positively associated with perceived social support (Tracy et al., 2009) and relationship satisfaction (Erol & Orth, 2017; Orth, Robins, & Widaman, 2012). Higher self-esteem is associated with better mental health, lower depression, and lower anxiety (Brown et al., 2009; Orth et al. 2012, 2016; Rosenthal & Hooley, 2010; Rosenthal et al., 2011; Sowislo & Orth, 2013; Tracy et al., 2009). Self-esteem is also associated with optimism, happiness, positive affect, lower negative affect, and less stress (Giacomin & Jordan, 2014; Rosenthal & Hooley, 2010).

To summarise, similar to the associations with personality, self-esteem shows a positive and prosocial pattern of associations in terms of interpersonal functioning, wellbeing, and psychological health. Grandiose narcissism shows a mix, with positive associations with wellbeing and negative associations with interpersonal functioning, and vulnerable narcissism shows uniformly negative associations with psychological health, wellbeing, and interpersonal functioning. Psychological entitlement is less well-researched than narcissism, but is clearly related to interpersonal difficulties.

## Testing Associations

Multiple regression was used to test a similar network of associations in the current research, between age, gender, psychosocial outcomes, and personality and both self-esteem and psychological entitlement (2-item measure). These regression models were run using data from Time 6 (2014), as this time point is used within both Study 2 and Study 3, has one of the largest samples sizes available out of the time points, uses recent data, and has all relevant measures available.

## Materials

Deprivation was measured using the New Zealand Deprivation Index, a decile-ranked index coded from 1 (most affluent regions) to 10 (most deprived regions) using aggregate census information about the residents of meshblocks (Salmond et al., 2007).

The Five-Factor Model of personality was measured using the 20-item Mini-IPIP6 (Donnellan, Oswald, Baird, & Lucas, 2006). Each trait is measured using 4 items rated from 1 (very inaccurate) to 7 (very accurate) and averaged to give scale scores for Extraversion ( $\alpha = .75$ ), Agreeableness ( $\alpha = .71$ ), Conscientiousness ( $\alpha = .67$ ), Neuroticism ( $\alpha = .71$ ), and Openness to Experience ( $\alpha = .70$ ).

Psychological distress was assessed using the Kessler-6 scale (Kessler et al., 2010). The scale is rated on a scale from 0 (none of the time) to 4 (all of the time), with items such as “During the last 30 days, how often did you feel hopeless?” ( $\alpha = .85$ ).

Life satisfaction was measured using two items adapted from the Satisfaction with Life scale (Diener, Emmons, Larsen & Griffin, 1985). Responses were rated on a scale from 1 (strongly disagree) to 7 (strongly agree): “I am satisfied with my life” and “In most ways, my life is close to ideal” ( $\alpha = .82$ ).

Social support was measured using three items adapted from Cutrona and Russell's (1987) Social Provisions Scale, on a scale from 1 (very inaccurate) to 7 (very accurate): "There are people I can depend on to help me if I really need it", "There is no one I can turn to for guidance in times of stress" (reverse-coded), "I know there are people I can turn to when I need help" ( $\alpha = .81$ ).

Self-control was assessed using a two-item measure adapted from Tangney, Baumeister, and Boone (2004). Responses were rated on a scale from 1 (strongly disagree) to 7 (strongly agree): "In general, I have a lot of self-control" and "I wish I had more self-discipline" (reverse-coded;  $\alpha = .59$ ).

Self-rated physical health was measured using three items adapted from the Short-Form Subjective Health Scale (Ware & Sherbourne, 1992). The first item asks "In general, would you say your health is..." and is rated on a scale from 1 (poor) to 7 (excellent). The other items are measured on a scale from 1 (strongly disagree) to 7 (strongly agree): "I seem to get sick a little easier than other people" (reverse-coded) and "I expect my health to get worse" (reverse-coded;  $\alpha = .61$ ).

### ***Predictors***

The associations between demographic and personality variables and both entitlement and self-esteem are presented in Table 3.2. Psychological entitlement was negatively associated with age, suggesting entitlement is higher among younger participants as has been found previously (e.g., Wilson & Sibley, 2011). Entitlement was also positively associated with gender, suggesting entitlement is higher among men than women as would be expected (e.g., Grijalva et al., 2015). Entitlement was positively associated with extraversion and neuroticism, but was negatively associated with agreeableness, conscientiousness, and openness to experience as found in previous research (Ackerman et al., 2011; Campbell et al.,

2004; Trzesniewski et al., 2008a). Higher levels of deprivation and religiosity were weakly but positively associated with higher levels of entitlement. Having a partner was associated with lower levels of entitlement as would be expected (e.g., Tracy et al., 2009), but being employed was not significantly associated with entitlement.

Table 3.2

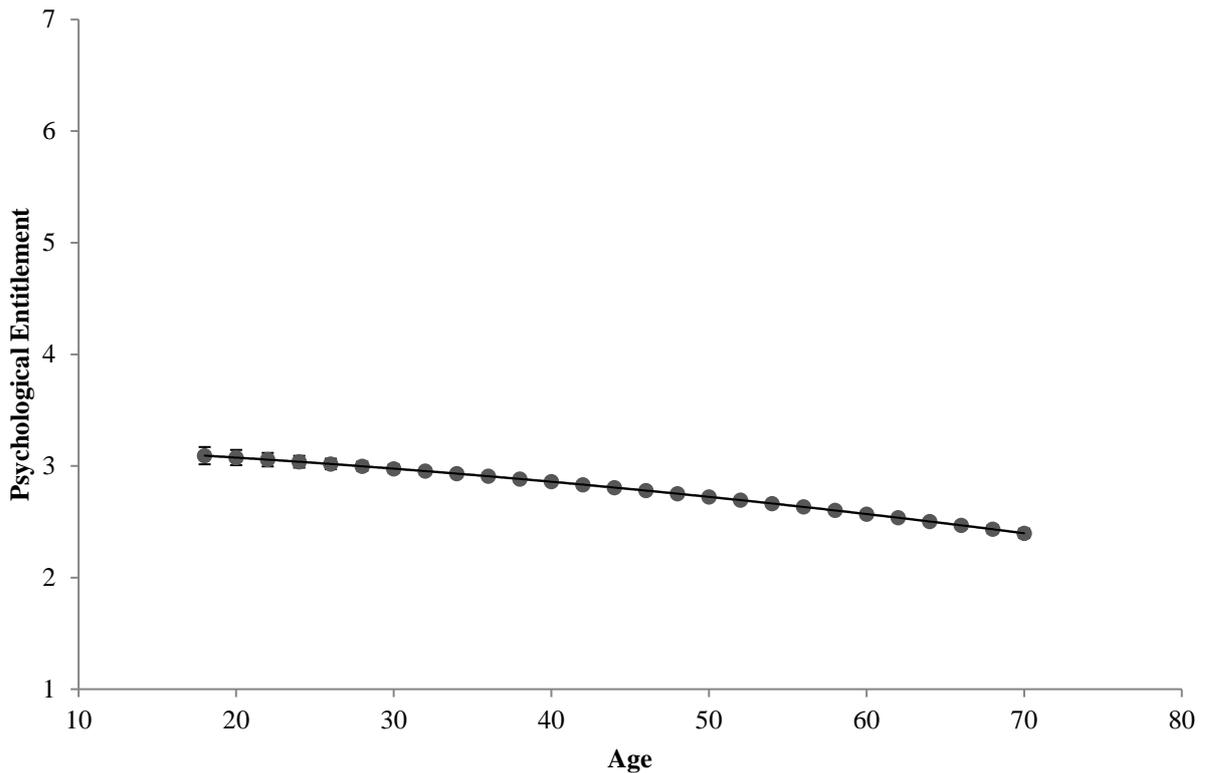
*Regression models investigating associations between demographic and personality predictors of psychological entitlement and self-esteem*

	Psychological Entitlement				Self-Esteem			
	<i>b</i>	<i>se</i>	$\beta$	<i>t</i>	<i>b</i>	<i>se</i>	$\beta$	<i>t</i>
Gender	.238	.022	.089	10.648**	-.014	.017	-.006	-.851
Age	-.013	.001	-.144	-15.690**	.004	.001	.044	5.875**
Parent	.095	.027	.032	3.577**	.044	.020	.016	2.191*
Partner	-.164	.025	-.055	-6.654**	.204	.019	.073	10.907**
Employed	.028	.025	.009	1.109	.138	.019	.048	7.305**
Religious	.057	.021	.022	2.755*	.029	.016	.012	1.887
Deprivation	.030	.004	.065	8.251**	-.001	.003	-.003	-.411
Extraversion	.137	.009	.123	15.171**	.180	.007	.174	26.374**
Agreeableness	-.260	.012	-.191	-22.351**	.051	.009	.040	5.812**
Conscientiousness	-.061	.010	-.048	-6.011**	.180	.008	.152	23.447**
Neuroticism	.199	.009	.171	21.021**	-.560	.007	-.517	-78.055**
Openness	-.050	.010	-.042	-5.147**	.052	.007	.047	7.088**

*Note.*  $N = 14,678$ . \*  $p < .05$ , \*\*  $p < .001$ .

A separate regression was run to test the associations between both linear and quadratic age on entitlement as changing entitlement across the lifespan is investigated in Study 3. Entitlement had a negative association with linear age ( $b = -.014$ ,  $se = .001$ ,  $p < .001$ , 95% *CI* [-0.016, -0.013]). The quadratic effect of age (age \* age) was also significant ( $b = .000$ ,

$se = .008, p = .024, 95\% CI [.000, .000]$ ), although not particularly strong, suggesting the relationship is largely linear. The negative association across age was plotted by solving the regression parameter at conditional values of age (every two years from 18 to 70) and is presented in Figure 3.3. As in previous research, entitlement displayed a steady negative trend across age cohorts (e.g., Foster et al., 2003).



*Figure 3.3.* Cross-sectional quadratic association between age and psychological entitlement ( $N = 15,753$ ) at Time 6 (2014). Slopes represent predicted values derived by solving regression parameters at conditional values of age (18-70), and error bars represent 95% confidence intervals

In contrast, self-esteem was positively associated with age such that older participants had higher levels of self-esteem than younger participants, consistent with previous research (Robins & Trzesniewski, 2005; Robins et al, 2002). No significant association between gender and self-esteem was found; this is inconsistent with previous research that has found that men have higher self-esteem, however the difference is usually quite small (Kling et al.,

1999; Orth et al., 2010). Self-esteem was positively associated with extraversion, conscientiousness, openness to experience, agreeableness, and had a negative association with neuroticism, following the pro-social pattern of the Big One personality trait (Musek, 2007; Schmitt & Allik, 2005). Being a parent weakly but positively predicted higher self-esteem. Having a partner and being employed were associated with higher self-esteem, but levels of deprivation and religiosity were not significantly related to self-esteem. The causality of these relationships is questionable, but the associations are in the same direction as in previous research (e.g., Erol & Orth, 2017).

### ***Outcomes***

The associations between health and wellbeing outcomes and both entitlement and self-esteem were also explored and are presented in Table 3.3. Psychological entitlement was consistently related to poorer health and wellbeing; there was a positive association between entitlement and generalised psychological distress as measured by the Kessler-6 scale, and negative associations with life satisfaction, social support, self-control, and self-rated physical health. For self-esteem, the associations with health and wellbeing were reversed. There was a negative association with psychological distress, and positive associations with life satisfaction, social support, self-control, and self-rated physical health. These results fit well with those found in previous research finding that self-esteem is generally adaptive (e.g., Orth et al., 2012) while psychological entitlement is generally maladaptive (Campbell et al., 2004; Moeller et al., 2009). The associations are fairly weak for psychological entitlement, but previous research suggests this should be the case as the links between narcissism and wellbeing are mediated by self-esteem (e.g., Sedikides et al., 2004).

Overall, the associations found within the current research line up well with previous research and show the predicted associations with age, gender, personality, and psychosocial

outcomes. Although associations are separated conceptually into predictor and outcomes, causality may be bidirectional (e.g., Zuckerman & O'Loughlin, 2009) and it is not the aim of this thesis to establish this here. Rather, the aim is to firstly support the applicability of the short-form measures used in the following studies by demonstrating they align with previous results. The entitlement and self-esteem measures have the expected associations and appear to be tapping into their respective constructs appropriately. The largest difference between the current research and previous research (e.g., Campbell et al., 2004) is that the entitlement measure is slightly more vulnerable rather than grandiose, with a low mean and a small negative association with self-esteem.

Secondly, subtypes of entitlement, narcissism, and self-esteem in the literature are often defined by their relative adaptiveness and their personality profiles, and this chapter has demonstrated self-esteem is consistently associated with adaptive personality traits and psychosocial outcomes, while entitlement is consistently associated with maladaptive personality traits and psychosocial outcomes. This allows for profiles identified in Study 1 and Study 2 with differing levels of self-esteem and entitlement to be labelled as grandiose, vulnerable, or optimal with confidence and empirical support. The labels for subtypes are often value-laden (e.g., optimal, genuine, normal; Ackerman & Donnellan, 2013; Kernis, 2003; Orth et al., 2016), but these results do demonstrate that self-esteem is a positive and socially desirable form of self-regard, while psychological entitlement is largely not. This thesis will continue to use these terms for consistency with the wider literature. Finally, in terms of Study 3, this chapter demonstrates that entitlement is indeed a negative personality trait taps into the heart of concerns about rising narcissism.

Table 3.3

*Regression models investigating associations between psychological entitlement and self-esteem and psychosocial outcomes*

	Life Satisfaction				Social Support			
	<i>b</i>	<i>se</i>	$\beta$	<i>t</i>	<i>b</i>	<i>se</i>	$\beta$	<i>t</i>
Psychological Entitlement	-.099	.006	-.109	-16.452**	-.110	.006	-.135	-17.655**
Self-Esteem	.587	.006	.600	90.865**	.332	.007	.378	49.284**
	Psychological Distress				Subjective Health			
	<i>b</i>	<i>se</i>	$\beta$	<i>t</i>	<i>b</i>	<i>se</i>	$\beta$	<i>t</i>
Psychological Entitlement	.058	.003	.116	17.533**	-.084	.007	-.093	-11.931**
Self-Esteem	-.318	.004	-.593	-89.566**	.358	.008	.369	54.444**
	Self-Control							
	<i>b</i>	<i>se</i>	$\beta$	<i>t</i>				
Psychological Entitlement	-.066	.008	-.065	-8.470**				
Self-Esteem	.454	.008	.415	54.444**				

*Note.*  $N = 14,678$ . \*\*  $p < .001$ .

### **Bridging Statement**

The following three chapters each present a study using the methodology, sampling, and measures presented in Chapter Three. Chapter Four presents the first of these studies. As reviewed in Chapter Two, research into the association between self-esteem and narcissism has produced conflicting results, potentially caused by hidden subgroups that exhibit distinctly different associations. Study 1 aims to identify these subgroups using a Latent Profile Analysis of psychological entitlement and self-esteem, and data from a nationally representative panel study ( $N = 6,471$ ). This chapter is the author's copy of a manuscript published in the *Journal of Research in Personality*. The paper is replicated here as published, with only minor formatting changes to maintain consistency across the thesis. As such, some material may be a repetition of the material reviewed within Chapter Two. *Mplus* syntax for the analysis conducted in Study 1 is presented in Appendix B (Supplementary File 3). The research was supported by a Templeton World Charity Foundation Grant (ID: 0077). Please see:

Stronge, S., Cichocka, A., Sibley, C.G. (2016). Narcissistic Self-Esteem or Optimal Self-Esteem? A Latent-Profile Analysis of Self-Esteem and Psychological Entitlement. *Journal of Research in Personality*, 63, 102-110. doi: 10.1016/j.jrp.2016.06.016

**CHAPTER FOUR**

## **Narcissistic Self-Esteem or Optimal Self-Esteem? A Latent Profile Analysis of Self-Esteem and Psychological Entitlement**

Narcissists are defined by their extremely positive self-image, grandiosity, and sense of entitlement (e.g., Ackerman et al., 2011; Bosson et al., 2008; Morf & Rhodewalt, 2001). Both the psychological literature and popular conceptions of narcissism are concerned with whether this inflated self-view is a reflection of genuine confidence and excessive self-esteem, or whether the self-aggrandizing behaviour exists in order to bolster a sense of self that is in fact, quite fragile (e.g., Bosson et al., 2008; Brummelman, Thomaes, & Sedikides, 2016). Put another way: does narcissism mean you don't like yourself? Extant research shows a positive relationship between narcissism and self-esteem (Brown & Zeigler-Hill, 2004), but differing conceptions of narcissism and entitlement make this association more complicated than first appears. Given this positive relationship, a related question then arises: is it possible to have high self-esteem without being narcissistic? Rising concerns about the 'narcissism epidemic' and 'culture of entitlement' have been attributed to the 'self-esteem movement' (e.g., Baumeister, Campbell, Krueger, & Vohs, 2003; Twenge & Campbell, 2009a) – the idea that everyone is special and deserves a trophy (Beck, 2013). This research employs a Latent Profile Analysis and analyses data from a national probability sample within New Zealand in 2009, in order to investigate whether those with high entitlement necessarily have high self-esteem, and whether high self-esteem is sufficient to display high entitlement.

The concepts of self-esteem and narcissism share some clear overlap, as both involve positive self-evaluation (Brummelman et al., 2016; Orth & Luciano, 2015). The narcissist's self-view, however, is inflated and unrealistically positive (Campbell & Foster, 2007). Morf & Rhodewalt (2001) describe the narcissistic self-view as grandiose, but unable to stand on its own. Narcissists therefore require constant external support, attention, and admiration for their self-esteem to be maintained, often at the expense of their interpersonal relationships

(Byrne & O'Brien, 2014; Morf & Rhodewalt, 2001; Sedikides, Rudich, Gregg, Kumashiro, & Rusbult, 2004). In fact, it has been argued that narcissists are 'addicted to self-esteem' (Baumeister & Vohs, 2001). In particular, narcissists display high entitlement – a global tendency towards feelings of superiority and deservingness (Bosson et al., 2008; Campbell, Bonacci, Shelton, Exline, & Bushman, 2004). In contrast, the positive self-view of someone with high self-esteem is more realistic (Brummelman et al., 2016; Horvath & Morf, 2010; Mruk, 2013). High self-esteem is not associated with interpersonal problems, entitlement, or superiority, and those with high self-esteem are not so dependent on others to regulate their self-view (Kernis, 2003; Horvath & Morf, 2010; Mruk, 2013; Rosenberg, 1965). One important avenue for research assessing the links between self-esteem and narcissism, then, is to identify and disentangle potential subpopulations who may show high narcissism and high self-esteem from those who show low narcissism and high self-esteem. Latent Profile Analysis (LPA) provides a method for doing precisely this.

### **Latent Profile Analysis**

LPA allows us to group participants together into probability-based profiles where individuals grouped within a profile score similarly across measures. Rather than examining the relationships between variables, and assuming this relationship holds for everyone, LPA focuses on the relationships between individuals and their different patterns of responses (Collins & Lanza, 2009). It does so by modelling a latent categorical factor, consisting of a set of latent profiles, underlying the variation in individual responses to the continuous observed variables. The aim of a Latent Profile Analysis is to identify the number of profiles that best fits the data while still maintaining parsimony (Collins & Lanza, 2009).

This analysis is particularly suited to self-esteem and psychological entitlement as we do not expect there to be only a simple linear relationship; rather, we might expect some

participants to score highly across both measures, others low across both measures, and still others to measure high on one measure but low on another. That is, it seems likely that one could be a narcissist who reports high self-esteem, but we do not necessarily expect everyone with high self-esteem to be a narcissist (e.g., Brummelman et al., 2016). Additionally, previous research shows an overall positive relationship between self-esteem and narcissism (Bosson et al., 2008), so some people may score very low on both measures while others may score very high on both measures. As research into the relationship between self-esteem and narcissism has shown some conflicting results (e.g., Bosson et al., 2008), an LPA can identify the different combinations of high or low entitlement and self-esteem participants might have, answering questions about the structure of self-concept. LPA provides a novel approach to the research area and can provide new insights into the correlational relationship between self-esteem and entitlement by unpacking it into separate, perhaps contrasting, patterns.

### **Self-Esteem and Narcissism**

Our first question considers whether or not high self-esteem is a necessary condition for high entitlement. The relationship between explicit self-esteem and narcissism has been found to have a small to moderate positive relationship in meta-analysis (Brown & Zeigler-Hill, 2004), reviews (Morf & Rhodewalt, 2001; Sedikides et al., 2004), and recent research (Ackerman et al., 2011; Brown, Budzek, & Tamborski, 2009). Narcissists are often outgoing, have a good opinion of themselves, and enjoy leadership positions (e.g., Ackerman et al., 2011; O'Boyle, Forsyth, Banks, Story, & White, 2015). Yet, their dependence on validation from others and high entitlement suggests that narcissists might not be psychologically healthy (e.g., Campbell & Foster, 2007; Morf & Rhodewalt, 2001; Vazire & Funder, 2006; Zeigler-Hill & Besser, 2013).

One concern raised regarding the positive relationship between narcissism and self-esteem is that measures of narcissism tend to tap into a blend of maladaptive and adaptive traits, and the adaptive traits overlap considerably with self-esteem measures (e.g., Zeigler-Hill & Besser, 2013). Some argue that by defining adaptive traits as part of narcissism, measures of narcissism such as the Narcissistic Personality Inventory (NPI) are also directly measuring self-esteem which therefore accounts for narcissism's relationship with positive psychosocial outcomes (Brown et al., 2009; Rosenthal & Hooley, 2010). When separating out maladaptive elements of narcissism such as Entitlement/Exploitativeness, research shows weak or even negative relationships with self-esteem (Ackerman et al., 2011; Clarke, Karlov, & Neale, 2015; Zeigler-Hill & Besser, 2013). Thus, the moderate positive relationship found between narcissism and self-esteem (Brown & Zeigler-Hill, 2004) may be concealing some of the negative consequences of narcissism.

One study found that narcissism is beneficial to mental health, but only as long as it is associated with high self-esteem (which may not always be the case; Sedikides et al., 2004). Recently, researchers have been calling for a move towards using individual facets of narcissism rather than thinking of narcissism as a single overarching factor (Clarke et al., 2015; Zeigler-Hill & Besser, 2013). Narcissism can be conceptualised as two distinct dimensions, with contrasting relationships with self-esteem: grandiose/overt narcissism which is largely adaptive and measured using the NPI, and vulnerable/covert narcissism, which is largely maladaptive and measured using the Pathological Narcissism Inventory (PNI; Cain, Pincus, & Ansell, 2008; Miller et al., 2011a; Pincus et al., 2009; Rose, 2002; Wink, 1991). These dimensions have been identified in both clinical and social areas of research (Cain et al., 2008), and form separate factors consistently across measures (Clarke et al., 2015).

The grandiose or overt narcissist is characterised by an overall sense of superiority, accompanied by arrogance and self-absorption (Bosson et al., 2008), and as such is expected to have high self-esteem. Meanwhile, the vulnerable or covert narcissist is characterised by low self-esteem and self-reported inferiority. Yet, the vulnerable narcissist still has grandiose fantasies, a tendency towards being exploitative and high feelings of entitlement (Bosson et al., 2008; Wink, 1991). Correlational research supports this conception of narcissism, finding a positive link between self-esteem and grandiose narcissism, and a negative link between self-esteem and vulnerable narcissism (Cain et al., 2008; Brookes, 2015; Foster et al., 2008; Miller et al., 2011a; Pincus et al., 2009; Rose, 2002). However despite accounting for these distinct dimensions, there are still some inconsistencies in the literature. Some research has found a negative relationship between vulnerable narcissism, but no relationship between grandiose narcissism and self-esteem (Zeigler-Hill & Besser, 2013) and other research has found negative correlations with both types of narcissism and self-esteem (Barnett & Womack, 2015).

We argue that it is therefore important to use LPA to examine this relationship as it may identify profiles with differing associations between entitlement and self-esteem, and potential additional profiles not yet considered. Based on the dimensions of narcissism, which share a common core of entitlement (Brown et al., 2009; Horvath & Morf, 2010; Pincus et al., 2009; Pryor, Miller, & Gaughan, 2008; Maxwell, Donnellan, Hopwood, & Ackerman, 2011; Miller et al., 2011a) but report divergent explicit levels of self-esteem, we can expect to identify two different narcissistic profiles within this research. We hypothesise that we will find one profile that is high on both entitlement and explicit self-esteem (representing grandiose narcissism), and another profile that is high on entitlement but low on explicit self-esteem (representing vulnerable narcissism). Overall, this would suggest that having high self-esteem is not a necessary condition for being high in entitlement.

### **Optimal versus Narcissistic Self-Esteem**

Our second question then asks if high self-esteem is a sufficient condition for high entitlement. Self-esteem and entitlement are only weakly positively correlated (Brown et al., 2009; Campbell et al., 2004), and this relationship may differ when considering optimal, genuine or authentic self-esteem (Kernis, 2003). Optimal self-esteem is characterised by a lack of defensiveness, strong interpersonal relationships (Kernis, 2003), and a realistic positive self-evaluation (Mruk, 2013), all of which suggests low levels of psychological entitlement. As such, we can expect to identify an *optimal* self-esteem profile consisting of those who score high on explicit self-esteem but show no signs of entitlement.

Conversely, optimal self-esteem is sometimes contrasted with the high self-evaluation reported by narcissists (Bosson et al., 2008; Byrne & O'Brien, 2014), which may be untruthful, defensive, or conditional on reactions from others (Kernis, 2003). This form of self-evaluation has previously been labelled as fragile, unstable (Kernis, 2003), defensive (Jordan, Spencer, Zanna, Hoshino-Browne, & Correll, 2003) or narcissistic self-esteem (Campbell & Foster, 2007). Thus, the concept of *narcissistic* self-esteem matches our earlier hypothesis regarding grandiose narcissists – those who report high self-esteem but who also display high entitlement in order to support this self-view. Overall, because high self-esteem does not necessarily reflect a genuinely positive self-view, we can expect to find two distinct profiles with high self-esteem but differing levels of entitlement. This would suggest that high self-esteem is not a sufficient condition for high entitlement.

### **Demographic Predictors**

In addition to identifying profiles, Latent Profile Analysis also allows us to treat these profiles as a categorical variable, and covariates can be used to test if the profiles differ as a function of certain characteristics. For example, we can test whether men are more likely to

belong to a particular profile than women. Previous research has found the relationships between self-esteem and narcissism and demographic factors to be remarkably consistent. Entitlement and narcissism tend to be higher in men (Campbell et al., 2004; Clarke et al., 2015), as well as negatively associated with age (Foster, Campbell, & Twenge, 2003; Wilson & Sibley, 2011). A recent meta-analysis also found that men tend to be more narcissistic than women, and that this difference remained stable across time and different age groups (Grijalva, et al., 2015). Another meta-analysis has shown that men tend to be consistently higher in self-esteem, although the difference is small (Kling, Hyde, Showers, & Buswell, 1999). As such, we would expect that belonging to high entitlement, high self-esteem groups will be associated with being young and being male, compared to those with high self-esteem and low entitlement.

### **Personality Predictors**

Grandiose narcissists have been described primarily as ‘disagreeable extraverts’ (Paulhus, 2001), with research consistently finding that narcissism is associated with higher extraversion and lower agreeableness (O’Boyle et al., 2015; Holtzman, Vazire, & Mehl, 2010; Miller et al., 2011a; Miller, Gentile, & Campbell, 2013b; Paulhus & Williams, 2002; Samuel & Widiger, 2008). These results mirror the idea that narcissists tend to be manipulative, and require an audience for their self-aggrandizing (Morf & Rhodewalt, 2001; O’Boyle et al., 2015). A meta-analysis also reported that narcissism was positively associated with openness and conscientiousness, and negatively associated with neuroticism (O’Boyle et al., 2015). Vulnerable narcissism shares the negative association with agreeableness, but is also negatively associated with extraversion and positively associated with neuroticism (see Crowe, LoPilato, Campbell, & Miller, 2016a; Miller et al., 2011a). However, positive relationships have been found between neuroticism and both dimensions of narcissism (O’Boyle et al., 2015).

We expect that a high self-esteem and low entitlement profile (i.e., the optimal self-esteem) will most likely be characterised by socially desirable personality traits such as high extraversion, high agreeableness, and low neuroticism. Relative to the optimal self-esteem profile, the high self-esteem/high entitlement grandiose narcissist profile should be characterised by higher neuroticism and lower agreeableness, but not necessarily differ in extraversion. The high entitlement/low self-esteem profile of vulnerable narcissists, on the other hand, is likely to show lower agreeableness, higher neuroticism, and lower extraversion than the optimal self-esteem profile.

### **Overview**

This research aims to identify profiles of relationships between self-esteem and entitlement. Due to the distinct dimensions of narcissism, we expect to find two groups of people high in entitlement: one with high self-esteem and one with low self-esteem, representing grandiose and vulnerable narcissists respectively (Cain et al., 2008). We also aimed to identify whether having high self-esteem is a sufficient condition for being highly entitled. Reflecting conceptions of optimal self-esteem – a self-view that is positive but realistic, and lacking defensiveness – we also hypothesise we will find a group who are as high on self-esteem as the grandiose narcissists, but do not report high entitlement (Kernis, 2003). Essentially, we suggest that self-esteem is not a sufficient condition for entitlement, nor is high self-esteem necessary to be high in entitlement.

In addition to identifying these profiles, Latent Profile Analysis also provides information on a little-addressed topic – the prevalence of high entitlement and high self-esteem. While mean levels of narcissism may be increasing (Twenge, 2013a; cf. Trzesniewski & Donnellan, 2010), and clinical measures of Narcissistic Personality Disorder put the prevalence at around 6% (Stinson et al. 2008), we have little idea of what ‘entitlement

culture' actually means, and how common psychological entitlement is within a sample-weighted nationally representative sample. Moreover, this analysis may also identify groups that have not been previously discussed in the literature. For example, a positive relationship between self-esteem and narcissism suggests that while some are high on narcissism and self-esteem, others are low on both self-esteem and narcissism, indicating a very negative self-view. This is the first time LPA has been used in this area, and will provide novel information on what the structure of people's self-concept looks like in a sample-weighted national panel study by teasing apart the correlational relationship between self-esteem and entitlement.

## **Method**

### **Sampling Procedure**

The Time 1 (2009) NZAVS contained responses from 6,518 participants sampled from the 2009 New Zealand electoral roll. The electoral roll is publicly available for scientific research and in 2009 contained 2,986,546 registered voters. This represented all citizens over 18 years of age who were eligible to vote regardless of whether they chose to vote, barring people who had their contact details removed due to specific case-by-case concerns about privacy. In sum, postal questionnaires were sent to 40,500 registered voters or roughly 1.36% of all registered voters in New Zealand. The overall response rate (adjusting for the address accuracy of the electoral roll and including anonymous responses) was 16.6%.

### **Materials**

Self-esteem was measured using three items adapted from Rosenberg's (1965) Self Esteem Scale, on a scale from 1 (very inaccurate) to 7 (very accurate): "[I] on the whole am satisfied with myself", "[I] take a positive attitude toward myself", and "[I] am inclined to feel that I am a failure" (reverse-coded) ( $\alpha = .70$ ). This is a widely used measure of self-

esteem, and is considered a good measure for distinguishing self-esteem from narcissism (Rosenthal & Hooley, 2010, Brown & Zeigler-Hill, 2004).

Psychological entitlement was measured using three items from the Psychological Entitlement Scale (Campbell et al., 2004): “[I] feel entitled to more of everything”, “[I] deserve more things in life”, and “[I] demand the best because I’m worth it” ( $\alpha = .70$ ). Responses were rated on a scale from 1 (very inaccurate) to 7 (very accurate). The items selected were the three highest loading items from the confirmatory factor analysis conducted on the Psychological Entitlement Scale by Campbell et al. (2004).

The Five-Factor Model of personality was measured using the 20-item Mini-IPIP6 (Donnellan, Oswald, Baird, & Lucas, 2006). Each trait is measured using 4 items rated from 1 (very inaccurate) to 7 (very accurate) and averaged to give scale scores for extraversion ( $\alpha = .71$ ), agreeableness ( $\alpha = .66$ ), conscientiousness ( $\alpha = .65$ ), neuroticism ( $\alpha = .64$ ), and openness to experience ( $\alpha = .67$ ).

## **Participants**

Analyses were run for participants who provided full responses to our measures of self-esteem, psychological entitlement, and personality ( $N = 6,471$ ). The sample was 40.5% male ( $n = 2,620$ ) and 59.5% female ( $n = 3,851$ ). Eighteen percent of the sample indicated they were of Māori ethnicity, 4% were of Pacific ethnicity, and 5% were of Asian ethnicity, and 82% were New Zealand European. Some participants reported they were of multiple ethnicities. The mean age of the sample was 47.91 ( $SD = 15.72$ ).

## **Results**

### **Descriptive statistics**

Sample weighted estimates of entitlement ( $M = 3.11$ ,  $SD = 1.30$ ) and self-esteem ( $M = 5.15$ ,  $SD = 1.19$ ) were uncorrelated at the bivariate level ( $r_{(6463)} = -.006$ ,  $p = .651$ ). Indeed, it is

noteworthy just how close to  $r = .00$  this correlation was. We additionally tested for a non-linear relationship between entitlement and self-esteem, which was also non-significant ( $b = -.024$ ,  $se = .013$ ,  $t = -1.865$ ,  $p = .062$ ). Crucially, these non-significant relationships do not preclude the possibility that there may be distinct subgroups within the population with different low/high combinations of entitlement and self-esteem, and for whom these two traits may be negatively correlated, or positively correlated. Means, standard deviations, and correlations for all variables are presented in Appendix A (Supplementary Table A1).

### **Model Estimation**

We conducted a Latent Profile Analysis using *Mplus* 7.30 examining different combinations of low/moderate/high psychological entitlement and self-esteem. Estimates were weighted using standard NZAVS post-stratification sample weights, which adjusted for sample biases in gender and ethnicity (see Sibley, 2014b for more details). We also included gender and age as predictors of profile membership using the three-step weighting approach. This allowed us to examine the extent to which these demographic factors were linked with increased or decreased odds of being in one profile relative to another (as per a multinomial regression), without the demographic information itself affecting the estimation of the latent profiles.

### **Model Selection**

We considered solutions that ranged from 3-7 profiles, given that we hypothesised at least three profiles, but parsimony is lost with each additional profile. We opted for a five-profile model as our preferred solution. The five-profile model was a better fit to the data than the three and four profile models, but more parsimonious than the six and seven profile models which simply distinguished between finer and finer distinctions of the other previously identified profiles (with lines parallel to those of the five-profile solution, but

slightly lower or higher in their intercept) rather than any qualitatively distinct profiles in their own right. The Vuong-Lo-Mendell-Rubin likelihood ratio test indicated that a five-profile solution performed significantly better than a four-profile solution ( $LRT = 66.36, p = .03$ ; adjusted  $LRT = 63.93, p = .033$ ; see Lo, Mendell, & Rubin, 2001). However, a six-profile solution did not significantly improve on the preferred five-factor model ( $LRT = 79.10, p = .10$ ; adjusted  $LRT = 76.20, p = .109$ ). Means of self-esteem and entitlement for all solutions are presented in Appendix A (Supplementary Table A2).

Table 4.1

*Model fit for the different profile solutions of the Latent Profile Analysis*

	AIC	BIC	Entropy
Three Profiles	42276	42344	0.581
Four Profiles	42109	42197	0.639
Five Profiles	42048	42157	0.672
Six Profiles	41975	42104	0.648
Seven Profiles	41928	42077	0.673

Note: BIC = Bayesian Information Criterion; AIC = Akaike Information Criterion

The preferred five-profile model approached reasonable fit, with entropy = .672. Entropy values range from 0 to 1.0, where a high value indicates a lower classification error. An entropy value of close to 1.0 (and typically above .70 - .80) indicate that there is a clear separation of profiles, or in other words, that the model clearly separates the data into distinct profiles (Collins & Lanza, 2009). Entropy, the Bayesian Information Criterion (BIC), and the Akaike Information Criterion (AIC) for different solutions are presented in

Table 4.1 (see Akaike, 1987; Schwarz, 1978). The probability (averaged across participants) that a participant belonged to a given profile for our preferred five-profile solution ranged from .69 to .83. These values indicate that there was only a small average likelihood of misclassification. The classification likelihoods for the five profiles are shown in Table 4.2.

Table 4.2

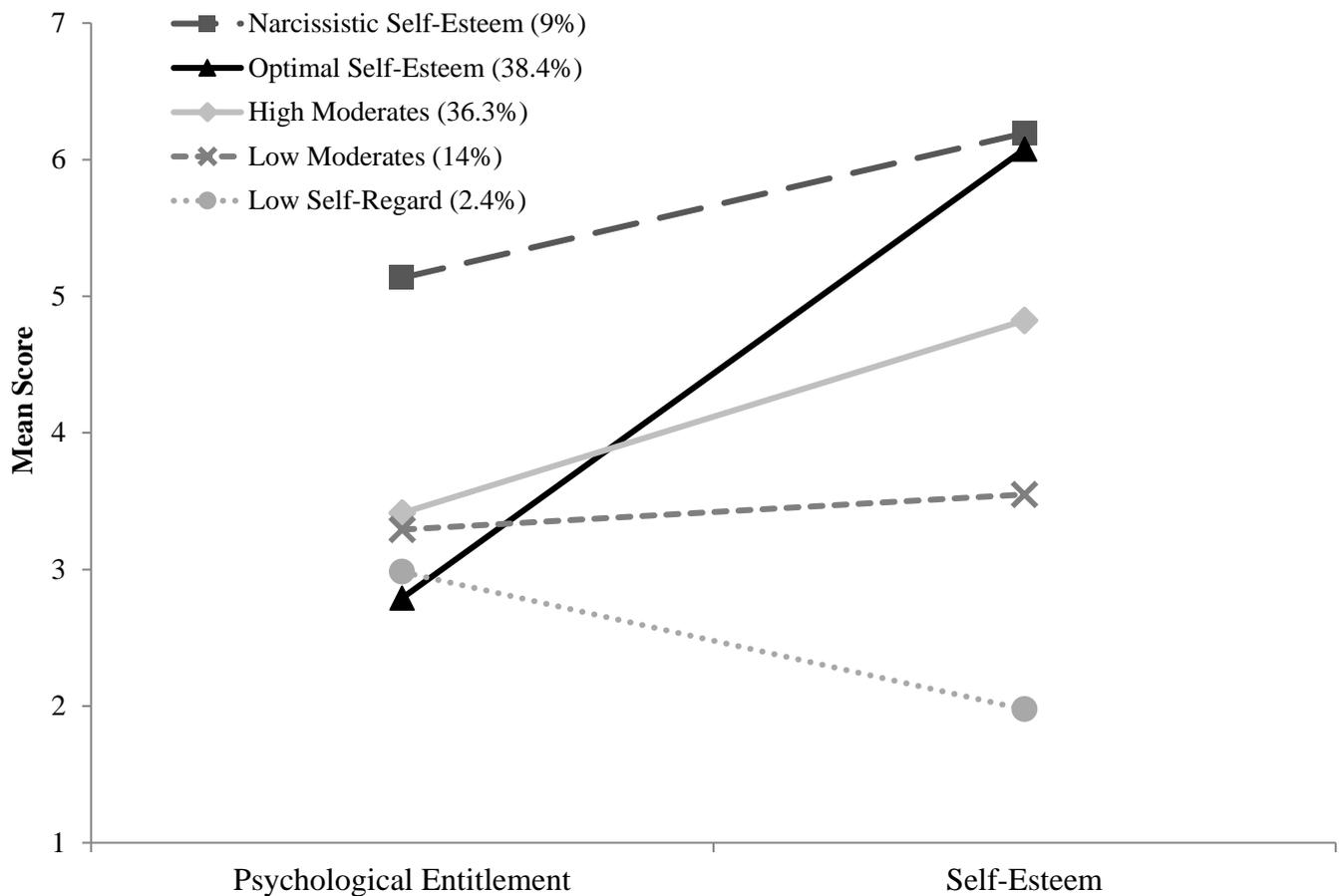
*Average latent profile probabilities for most likely latent profile membership (row) by latent profile (column).*

	1	2	3	4	5
1. Low moderates	0.835	0.043	0.000	0.122	0.000
2. Low self-regard	0.185	0.815	0.000	0.000	0.000
3. Optimal self-esteem	0.000	0.000	0.812	0.113	0.075
4. High moderates	0.112	0.000	0.117	0.748	0.023
5. Narcissistic self-esteem	0.000	0.000	.218	0.091	0.690

## Profiles

Estimated mean levels of psychological entitlement and self-esteem for each of the five profiles are presented in Figure 4.1. The preferred solution identified four profiles where people report similar levels across both traits. This included a low self-regard profile (2%), a low-moderate self-regard profile (14%), a high-moderate self-regard profile (36%), as well as a grandiose narcissistic self-esteem profile (9%) with high entitlement and high self-esteem. We also identified a clear ‘cross-over’ profile of people who were low in entitlement but high in self-esteem. Our weighted sample estimate indicated that this profile represented 38% of the New Zealand population. We label this profile optimal self-esteem, in line with the idea

of having high self-esteem that is unaccompanied by entitlement or an exaggerated sense of self-worth, in contrast to the grandiose narcissistic self-esteem profile (Byrne & O'Brien, 2014; Campbell et al., 2007; Kernis, 2003). We did not, however, identify a clear vulnerable narcissistic self-esteem profile that would have high entitlement but low self-esteem.



*Figure 4.1.* Mean scores of Psychological Entitlement and Self-Esteem for the five profiles identified by Latent Profile Analysis

These results clearly indicate that those high in entitlement consistently have high self-esteem. However, the vast majority of people with high self-esteem do not show high levels of entitlement. Combined, our analysis indicated that roughly 47% of people have high

self-esteem overall, and of those with high self-esteem, 81% are not narcissistic. Thus, high self-esteem is a necessary, but not sufficient, condition of high entitlement. That is, people's self-concept seems to be structured in such a way that being high in entitlement requires that you also have high self-esteem, but having high self-esteem does not necessarily involve being entitled. The five-profile solution also identifies a small yet important segment of the population labelled the low self-regard profile that report both low entitlement and low self-esteem.

### **Demographic Differences**

Results from the three-step weighted multinomial logistic regression model assessing gender, age, and personality differences in the likelihood of profile membership are presented in Table 4.3 (Lanza, Tan, & Bray, 2013). Crucially, this approach allowed us to estimate odds ratios and logits that were weighted to adjust for misclassification in profile membership. The optimal self-esteem profile was used as the reference profile in this analysis, and thus all results reflect gender and age differences between this profile and each of the other profiles. The same analysis using narcissistic self-esteem as the reference profile is presented in Appendix A (Supplementary File 1).

Looking first at differences between the narcissistic self-esteem profile and the reference profile (optimal self-esteem) in Table 4.3, results indicated that men were more likely to be high in both entitlement and self-esteem (grandiose narcissistic self-esteem) relative to women. However, gender did not predict membership in the low self-regard, low moderate, or high moderate profiles relative to the optimal self-esteem profile. Thus, being male predicted increased likelihood of belonging to the only profile that was high in entitlement, but did not differentiate membership to any other profiles. In contrast, age predicted decreased likelihood of membership in all profiles (low self-regard, low moderate,

high moderate and narcissistic self-esteem) relative to membership in the optimal self-esteem profile. Thus, age predicted increased likelihood of reporting high self-esteem but low entitlement across the board.

### **Personality Differences**

Results assessing personality differences in the likelihood of profile membership are also presented in Table 4.3. Results showed that belonging to the low moderate profile relative to the optimal self-esteem profile was predicted by all five personality traits. Essentially, belonging to the low moderate profile was related to a less socially desirable personality pattern of lower extraversion, lower agreeableness, lower conscientiousness, higher neuroticism, and lower openness. The high moderate profile showed the exact same pattern, although the effect for neuroticism was about twice as weak. Interestingly, results differed when comparing to the low self-regard profile. While lower extraversion, lower conscientiousness, and particularly higher neuroticism were all predictive of belonging to the low self-regard profile, there were no differences in openness or agreeableness. Most importantly, belonging to the narcissistic self-esteem profile relative to the optimal self-esteem profile was predicted by lower agreeableness, but not lower extraversion, as shown in Table 4.3. Belonging to the narcissistic self-esteem profile was also predicted by higher neuroticism, but these profiles did not differ on any other traits.

Table 4.3

*Results of the distal multinomial logistic regression with the auxiliary variables of gender, age, and personality using parameterisation on the optimal self-esteem profile as the reference category.*

	<i>b</i>	<i>se</i>	<i>z</i>	<i>p</i>	<i>OR</i>
<b>Low self-regard</b>					
Gender	-.122	.221	-.550	.583	0.89
Age	-.037	.008	-.4596	.000	0.96
Extraversion	-.704	.155	-4.555	.000	0.49
Agreeableness	-.109	.140	-0.783	.433	0.90
Conscientiousness	-.825	.122	-6.765	.000	0.44
Neuroticism	2.475	.160	15.516	.000	11.88
Openness	.106	.126	0.838	.402	1.11
<b>Low moderates</b>					
Gender	-.121	.125	-.969	.333	0.89
Age	-.033	.004	-7.798	.000	0.97
Extraversion	-.498	.075	-6.661	.000	0.61
Agreeableness	-.246	.091	-2.699	.007	0.78
Conscientiousness	-.547	.074	-7.345	.000	0.58
Neuroticism	1.856	.107	17.392	.000	6.40
Openness	-.173	.074	-2.323	.020	0.84
<b>High moderates</b>					
Gender	.100	.1010	.996	.319	1.11
Age	-.014	.003	-4.173	.000	0.99
Extraversion	-.175	.057	-3.091	.002	0.84
Agreeableness	-.393	.068	-5.805	.000	0.68
Conscientiousness	-.397	.057	-6.959	.000	0.67
Neuroticism	1.127	.077	14.700	.000	3.09
Openness	-.224	.057	-3.943	.000	0.80
<b>Narcissistic self-esteem</b>					
Gender	.612	.235	2.610	.009	1.84
Age	-.039	.007	-5.841	.000	0.96
Extraversion	.293	.158	1.858	.063	1.34
Agreeableness	-.670	.148	-4.519	.000	0.51
Conscientiousness	.194	.155	1.250	.211	1.21
Neuroticism	.850	.231	3.670	.000	2.34
Openness	-.233	.141	-1.650	.099	0.79

## Discussion

We employed Latent Profile Analysis to assess the psychological structure of people's self-concept in a national probability sample of over 6,000 New Zealanders. We investigated whether having high self-esteem is a sufficient condition to also display a high sense of entitlement, and whether being entitled means you necessarily have high self-esteem. As hypothesised, our results identified two profiles that measured high in self-esteem. The first of these, the grandiose narcissistic self-esteem profile, also measured high in entitlement. In contrast, the optimal self-esteem profile (which constituted the largest part of the sample) was low on entitlement. We did not, however, identify a high entitlement, low self-esteem profile, which could be an indicator of a vulnerable narcissism profile (Wink, 1991). The LPA also identified a profile that measured low on both measures of self-regard, labelled the low self-regard profile. Finally, two separate profiles were identified with middling self-esteem and entitlement, although one profile had noticeably higher self-esteem than the other. These profiles were labelled the low moderates and high moderates, respectively.

One question driving this research concerned the 'culture of entitlement' and whether having high self-esteem means one is also entitled. We hypothesised that we would identify two clearly different profiles with high self-esteem. Our results support this hypothesis, first identifying a profile with high self-esteem and low entitlement. Based on conceptions of self-esteem as being optimal for some, and narcissistic for others, this profile was labelled 'optimal self-esteem' to represent high self-esteem that is unaccompanied by defensiveness or entitlement (Jordan et al., 2003; Kernis, 2003; Byrne & O'Brien, 2014). We then identified another profile with high self-esteem, but also high entitlement. This profile was labelled 'narcissistic self-esteem', reflecting the idea of the narcissistic self-concept being dependent on reinforcement from others (Morf & Rhodewalt, 2001). Similarly, Campbell and colleagues

(2007) describe narcissistic self-esteem as feeling good, but only when the social environment is cooperative.

Importantly, these results show that while there is certainly a group of people who have high self-esteem and are highly entitled, the narcissistic self-esteem profile only accounted for 9% of the census-weighted sample in New Zealand, while all the remaining profiles measured low and relatively similar on entitlement (below the midpoint of the scale). Even the vast majority of people who were high in self-esteem were the lowest in entitlement, as the optimal self-esteem group accounted for approximately 38% of the sample. If we look purely at those who scored high in self-esteem, less than 20% also scored high in entitlement. These results suggest that entitlement is not highly prevalent, and more importantly, that self-esteem is not a sufficient condition for a sense of entitlement – not only is it possible for people to have high self-esteem but not feel entitled, it is *likely* that someone high in self-esteem is unentitled.

Building on the narcissism literature, we expected to identify two profiles that scored high on entitlement, but with alternately high and low self-esteem (Cain et al., 2008). The narcissistic self-esteem profile could certainly represent grandiose narcissists, as they measured high on entitlement, and high on explicit self-esteem. However, we found little evidence for a group of vulnerable narcissists within our sample, who are defined by their low self-esteem, as well as their high entitlement. This may reflect the idea that fragile narcissists are high in entitlement (e.g., Pincus et al., 2009; Miller et al., 2011a), but they conceal their narcissistic tendencies in favour of false modesty and humility (Bosson et al., 2008). It could be possible that vulnerable narcissists who are concealing their narcissism actually fit into the low self-regard profile. Nonetheless, our results show no clear evidence of a profile high in entitlement and low in self-esteem. This suggests that reporting high self-esteem is in fact a necessary condition for displaying high entitlement.

Two ‘moderate’ profiles also were identified who measured near the midpoint of the scale on both measures. One displayed slightly higher self-esteem than entitlement. Their self-esteem measured as above the midpoint of the scale, and their entitlement was below the midpoint, suggesting reasonably healthy wellbeing. This high moderate profile might essentially be a less exaggerated version of the optimal self-esteem profile. Comparatively, the low moderates show the same levels of entitlement, but lower self-esteem. They sit below the midpoint of the scale for both measures of self-regard. Following on from this profile is the low self-regard profile, consisting of people who measured even lower on self-esteem and entitlement. The existence of this profile raises concerns. While only a small segment of the population (approximately 2%) their low self-regard across the board indicates that those belonging to this profile could be at risk of poor psychological health and adjustment, and externalising problems (Donnellan, Trzesniewski, Robins, Moffitt, & Caspi, 2005; Harter, 1993; Swann, Chang-Schneider, & McClarty, 2007).

These results provide an interesting test of the health of New Zealand self-evaluation. Nearly 40% of the sample has very high self-esteem and very low entitlement, showing optimal self-esteem was the most commonly reported self-evaluation among New Zealanders. Additionally, we discovered that 91% of the sample reported low psychological entitlement, indicating that New Zealand is not particularly high in entitlement, and ‘entitlement culture’ may not be much of a concern in this context. The ‘true New Zealander’ is defined in part as someone with liberal and democratic values such as being friendly, tolerant and inclusive, environmentally friendly, and getting ahead based on your own merits (Sibley, Hovard, & Liu, 2011a). ‘Tall Poppy Syndrome’ is also part of New Zealand culture – the tendency to ‘cut down’ those who stand out and are successful (Kirkwood, 2007). Thus, New Zealand society has a particular focus on expressing humility and low deservingness. Cross-cultural replication may therefore show significantly different proportions of the

population sitting within the narcissistic self-esteem and optimal self-esteem profiles; however, we would expect that the *structure* of self-concept (i.e., the profiles identified here) would remain the same across Western contexts.

### **Demographics**

Age was a consistent predictor of what profile one belongs to, in that older people are more likely to belong to the optimal self-esteem profile, and younger people were more likely to belong to any of the other profiles, all with lower self-esteem and/or higher entitlement. These results fit nicely with research showing that self-esteem increases across age, while entitlement decreases across age (Foster et al., 2003, Wilson & Sibley, 2011), so older people are more likely to belong to a high self-esteem, low entitlement profile. However, this effect of age was small for all profiles.

Men were more likely to be in the narcissistic self-esteem profile as compared to the optimal self-esteem profile. In fact, men were 1.8 times more likely to belong to this profile as compared to women. This means women are more likely to have high self-esteem but low entitlement, while men are more likely to have high self-regard overall. This fits with research consistently showing that men tend to have higher levels of narcissism and self-esteem than women (Campbell et al., 2004; Clarke et al., 2015; Foster, Campbell, & Twenge, 2003). Interestingly, this was the only profile difference predicted by gender. Despite women having lower self-esteem and narcissism overall in extant research, women were not more likely to be in the low self-regard or low moderate profiles, relative to the optimal self-esteem profile. This suggests that membership of these profiles with particularly negative self-evaluation could be related to more clinical explanations such as mental illness.

## Personality Differences

Relative to other profiles, the optimal self-esteem profile is characterised by a socially desirable personality pattern of high conscientiousness, agreeableness, extraversion, openness, and low neuroticism. It draws interesting parallels to the ‘Big One’ personality trait proposed by Musek (2007) – a single factor personality structure that shares this pattern of Five Factor Model personality scores and is associated with high wellbeing, including high self-esteem. However, while the low self-regard profile is also predicted by lower conscientiousness, lower extraversion, and higher neuroticism, it does not differ from the optimal self-esteem profile in terms of agreeableness or openness. This suggests that the low self-regard profile is likely not a group of vulnerable narcissists hiding their narcissistic tendencies, as they would most likely be characterised by low agreeableness (e.g., Pincus et al., 2009).

The narcissistic self-esteem profile shares many of the socially desirable traits with the optimal self-esteem profile, as they do not differ in terms of extraversion, openness or conscientiousness. However, belonging to the narcissistic self-esteem profile is predicted by lower agreeableness, reflecting the idea of narcissists as being ‘disagreeable extraverts’ (Paulhus, 2001). Interestingly, membership of this profile is also predicted by higher neuroticism relative to the optimal self-esteem profile, yet they report similar levels of self-esteem to those with optimal self-esteem. This could potentially indicate that reported self-esteem is somewhat inflated, although we do not test this here. Alternatively, this high neuroticism may provide some evidence that our ‘missing’ vulnerable narcissists have been folded into the narcissistic self-esteem profile. Generally, we would expect grandiose narcissists to score low on neuroticism. However, Crowe and colleagues (2016a) identified a group of high entitlement, high neuroticism individuals which appeared to be characterised by a mix of grandiose and vulnerable narcissism.

Nonetheless, overall, the narcissistic self-esteem profile shows the blend of socially desirable and undesirable personality traits that match descriptions of grandiose narcissists as leaders with high reported wellbeing, yet interpersonal difficulties (Bosson et al., 2008; Morf & Rhodewalt, 2001; Rosenthal & Hooley, 2010). In contrast, the optimal self-esteem profile consists of those with 'genuine' wellbeing and a socially desirable personality pattern. Generally, the personality patterns support our conception of and distinction between the five profiles.

### **Strengths and Future Directions**

Using a Latent Profile Analysis, we have identified five different profiles with different relationships between entitlement and self-esteem, as well as different mean levels of self-regard. These profiles may provide some insight into the prevalence of entitlement, considering concerns about 'entitlement culture', as well as illustrating the many complicated and contrasting relationships between self-esteem and entitlement. While there was one clear profile that was high in entitlement, the rest of the profiles clustered low on the entitlement scale, indicating that entitlement is not particularly prevalent (see Trzesniewski & Donnellan, 2010). Interestingly, the self-esteem scores of these profiles varied from one end of the self-esteem scale to the other. As such, it is not surprising that results are varied when looking for correlational relationships between self-esteem and narcissism. In this research, there was almost no correlational relationship between entitlement and self-esteem ( $r = -.006$ ). However, using LPA to unpack this correlational relationship indicated that approximately 40% of the sample showed a negative association between self-esteem and entitlement, while the remaining 60% show roughly equal levels of self-esteem and entitlement. These contrasting profiles may be driving the slight positive association found previously (e.g., Bosson et al., 2008). Thus, this research demonstrates there are many more patterns or structures of self-concept than identified in extant research.

From here, we raise questions about how membership in a certain profile may change over time. Recent research suggests that both high narcissism and low self-esteem can lead to the experience of stressful life events, which in turn cause low self-esteem (Orth & Luciano, 2015). Therefore, belonging to the low self-regard profile or the narcissistic self-esteem profile may be related to low self-esteem over time. If belonging to the low self-regard profile is consistent over time, it raises concerns about a small segment of the population and their risk of significant psychological distress. Alternatively, this may be a transitional profile that many people fall into at some point within their life-span, perhaps after experiencing negative life events, but move out of over time. Similarly, while the narcissistic self-esteem profile currently has high self-esteem, they may not in the future (Orth & Luciano, 2015), particularly considering that narcissists' self-esteem is more reactive to external events and shows more fluctuation (Morf & Rhodewalt, 2001). Finally, there remains the question of whether membership in the narcissistic self-esteem profile is growing over time, as narcissism has been found to be increasing in some research (Twenge, 2013a), but remaining stable in others (Trzesniewski & Donnellan, 2010). These questions pave the way for a latent transition model, which allows us to test for changes in profile membership over time.

### **Limitations**

One limitation to this research is that our nationally representative panel study did not include an implicit measure of self-esteem, and so our interpretation of the results is limited to the ways in which people self-report their self-esteem. This 'mask' model of narcissism, wherein high explicit self-esteem among narcissists is suggested to be merely a cover for the deep insecurities and low implicit self-esteem, has seen support in some studies, but not in others (see Bosson et al., 2008, for a review). What our results tell us is that highly entitled people are *consistent* in their positive view and representation of themselves, and previous research suggests that these reports are genuine (Sedikides et al., 2004). We suggest that both

groups do in fact view themselves positively, but in different ways. For our narcissistic self-esteem group, the positive self-view is accompanied by a sense of entitlement and the resultant set of behaviours and outcomes (e.g., Brummelman et al., 2016). High self-esteem therefore looks different in this group than in the optimal self-esteem group. Brummelman and colleagues (2016) have proposed a similar theory, where those with high self-esteem and those with high narcissism both have positive self-evaluations, but high self-esteem means seeing oneself as worthy while narcissism means seeing oneself as superior to others.

The fact that we do not identify a profile of vulnerable narcissists may relate to our measure of entitlement. Ackerman and colleagues (2011) and Pryor and colleagues (2008) suggest that the NPI entitlement subscale (which shows consistent negative relationships with self-esteem) captures more vulnerability than the Psychological Entitlement Scale (PES). Thus, the PES is potentially not tapping into vulnerability enough for the vulnerable narcissists group to emerge as a profile. Arguably, entitlement and self-esteem on their own might not be enough to clearly distinguish this group. Vulnerable narcissists may not diverge from other groups on these measures, but may differ on others. Future research could include different measures of narcissism, such as the PNI. In this case, we might expect to see a vulnerable narcissists profile with low or middling entitlement and self-esteem scores, but distinguished from other groups by their high scores on narcissistic vulnerability. Our ability to detect this profile could also be limited by the use of our 3-item short-form adaptation of the PES – a necessary evil for large scale studies such as the NZAVS. Overall, these results support arguments that the PES taps into a more grandiose, and potentially adaptive, form of narcissism, and as such we reserve remarking too much upon the lack of a vulnerable narcissism profile.

## Conclusion

Findings of rising levels of narcissism and self-esteem raise concerns over the ‘narcissism epidemic’, and a ‘culture of entitlement’ (Twenge, 2013a). This research answers questions about the structure of self-concept at the explicit level, by investigating the variety of ways in which one’s self-views can be related to a sense of entitlement. Self-esteem was not found to be sufficient cause for being entitled; however, having high self-esteem did appear to be a necessary condition for high entitlement. Put more simply: you can have high self-esteem and not be a narcissist, but you cannot be a narcissist without high self-esteem (or at least, *reporting* high self-esteem in order to maintain consistency). Overall, the vast majority of our sample did not display high levels of entitlement, and the largest group in the sample had low levels of entitlement and high self-esteem, indicating healthy wellbeing is the most common self-view within New Zealand. While the question remains open about whether membership in the narcissistic profile is increasing over time, as of 2009, entitlement does not seem to be a great cause of concern. What is concerning, however, are the smaller segments of the sample with consistently negative self-views who may be at great risk of psychological distress.

### **Bridging Statement**

Study 1 begins by setting an important foundation for this thesis, namely, identifying common subtypes of entitlement and self-esteem. These subtypes provide parsimonious coverage of various expressions of narcissism and self-esteem conceptualised in the literature, such as optimal self-esteem and grandiose narcissism. Self-regard has long been recognised to contain significant heterogeneity (e.g., Kernis, 2003; Krizan & Herlache, 2017), and yet is often investigated in terms of linear associations that may obscure the multitude of patterns that exist within self-regard. These results demonstrate the additional information that may be gained from using person-centered and categorical approaches, as people with the same quantitative scores on a single construct differed in qualitative ways. Consistent with previous research (Brown & Zeigler-Hill, 2004; Brunell & Fisher, 2014), highly entitled people do seem to like themselves. But importantly, people who like themselves should not be conflated with narcissists – it is possible, and in fact likely, that those with high self-esteem are not entitled at all. These results have begun to build a picture of the structure of self-regard within New Zealand.

With Study 1 as a base, in Study 2 the stability and longevity of this structure of self-regard is demonstrated by measuring the same profiles a) longitudinally across the course of one year, and b) in data collected five years after Study 1. Firstly, Study 2 aims to replicate Study 1 and demonstrate the identified structure of self-regard holds longitudinally. Secondly, Study 2 aims to investigate whether heterogeneity exists not only in levels of self-regard, but also in the ways that self-regard may develop over time. Latent Transition Analysis is used to identify profiles with differing levels of self-esteem and entitlement, and the likelihood of transition between these profiles across one year is tracked in a large national panel study ( $N = 12,481$ ). The following chapter is the author's copy of a manuscript submitted for publication, with co-authors as acknowledged below. As such, some of the

material reviewed in this chapter may be repetitive of the material reviewed in Chapter 2.

*Mplus* syntax for the analysis conducted in Study 2 is presented in Appendix B

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**CHAPTER FIVE**

## **The Stability of Self-Regard: A Latent Transition Analysis of Psychological Entitlement and Self-Esteem**

Recent findings suggest that levels of self-esteem and narcissism are rising in younger generations as they grow up in an increasingly individualistic society (see Twenge, 2013a for a review, cf. Hamamura & Septarini, 2017; Stronge, Milojev, & Sibley, 2018; Trzesniewski, Donnellan, & Robins, 2008b; Wetzel et al., 2017), sparking interest in tracking change in self-regard over time. However, the mix of adaptive and maladaptive outcomes associated with both self-esteem and narcissism (e.g., Ackerman et al., 2011; Baumeister, Smart, & Boden, 1996) make it difficult to interpret what increasing self-regard actually means. Two people with the same level of narcissism may show very different behaviours and outcomes, as may two people with the same level of self-esteem (Jordan, Logel, Spencer, & Zanna, 2009; Trzesniewski et al., 2008b; Wetzel, Leckelt, Gerlach, & Back, 2016).

In fact, the narcissism and self-esteem literatures view these constructs as multi-dimensional and heterogeneous (e.g., Baumeister, Campbell, Krueger, & Vohs, 2003; Orth, Robins, Meier, & Conger, 2016). Recently, research has begun to identify different ‘types’ of narcissism and self-esteem (Crowe, LoPilato, Campbell, & Miller, 2016a; Lessard, Greenberger, Chen, & Farruggia, 2011; Stronge, Cichocka, & Sibley, 2016; Wetzel et al., 2016), as linear associations can obscure the diverse patterns of self-regard and the different ways self-regard may develop over time. One way of distinguishing between these subtypes of high self-regard is to measure levels of self-esteem and narcissism simultaneously (Baumeister et al., 2003; Cichocka, Dhont, & Makwana, 2017; Marchlewska, & Cichocka, 2016; Orth, Robins, Meier, & Conger, 2016; Stronge et al., 2016). Building upon cross-sectional research that identified multiple profiles of self-regard consisting of differing levels of self-esteem and psychological entitlement (Stronge et al., 2016), the current research aims

to track change in self-regard longitudinally across one year (2014-2015) using Latent Transition Analysis in a national panel study of New Zealand adults.

### **Subtypes of Self-Esteem, Narcissism, and Entitlement**

While high self-esteem is generally considered to have a positive impact on many aspects of life (e.g., Orth, Robins, & Widaman, 2012), early research identified that high self-esteem was also associated with a number of maladaptive behaviours such as aggression (Baumeister et al., 1996). Multiple forms of high self-esteem were subsequently identified, in order to separate the high self-regard captured by self-esteem from the high self-regard captured by narcissism (Baumeister et al., 2003; Kernis, 2003). These conceptions label one type of self-esteem as ‘genuine’, ‘optimal’, ‘secure’ or ‘authentic’ (Byrne & O’Brien, 2014; Jordan, Spencer, Zanna, Hoshino-Browne, & Correll, 2003; Kernis, 2003; Mruk, 2013). This type of self-esteem is assumed to be stable over time, rooted in reality, and is associated with positive psychosocial outcomes.

In comparison, another form of self-esteem is labelled ‘fragile’, ‘defensive’, ‘contingent’, or ‘narcissistic’, or is simply measured as narcissism (Campbell & Foster, 2007; Jordan et al., 2003; Kernis, 2003). This form of self-esteem tends to fluctuate over time, is dependent on approval from others, reflects high defensiveness, and is associated with poor psychosocial outcomes (Byrne & O’Brien, 2014; Campbell & Foster, 2007; Kernis, 2003; Mruk, 2013). In sum, two types of high self-regard are identified: those with high self-esteem, and those with high self-esteem accompanied by a sense of entitlement. When investigating subtypes of self-esteem, we would expect two groups; one with high levels of self-esteem and low entitlement, and one with high levels of self-esteem and high entitlement.

In the narcissism literature, research has similarly identified that different facets of narcissism have opposing relationships with self-esteem (Ackerman et al., 2011; Zeigler-Hill & Besser, 2013). It has been suggested that narcissism may consist of two different subtypes (see Bosson et al., 2008; Cain et al., 2008; Rose, 2002; Wink, 1991) with a common core of high entitlement (Brown & Brunell, 2017; Brown, Budzek, & Tamborski, 2009; Krizan & Herlache, 2017). One subtype of narcissism is defined by its high self-esteem and grandiose behaviour, labelled grandiose narcissism, and another is defined by its low self-esteem and emotional instability, labelled vulnerable narcissism (Brown & Brunell, 2017; Clarke, Karlov, & Neale, 2015; Crowe et al., 2016a; Krizan & Herlache, 2017; Miller et al., 2011a; Maxwell, Donnellan, Hopwood & Ackerman, 2016; Pincus et al., 2009; Rohmann, Neumann, Herner, & Bierhoff, 2012; Zeigler-Hill & Besser, 2013). Grandiose narcissism therefore shares a similar pattern as fragile self-esteem – high entitlement and high self-esteem – but can also be distinguished from vulnerable narcissism, which predicts a pattern of high entitlement and low self-esteem.

Overall, the research suggests that measuring high self-esteem on its own does not tell us much about what that high self-esteem means; a measure of entitlement is needed to distinguish grandiose narcissists from those with optimal self-esteem, as well as to differentiate vulnerable narcissists from those with simply low self-esteem (Baumeister et al., 2003; Jordan et al., 2003). Similarly, entitlement on its own is not necessarily a good marker of high self-regard, with grandiose and vulnerable narcissists taking contrasting view of the self (Crowe et al., 2016a; Lessard et al., 2011; Wink, 1991). Measuring both entitlement and self-esteem is essential in order to distinguish between heterogeneous forms of self-regard that may be similarly high on a single construct, but diverge in terms of their personality, behaviour, and psychosocial outcomes (e.g., Baumeister et al., 2003; Brummelman et al., 2016; Kernis, 2003; Miller et al., 2011a; Stronge et al., 2016).

## **Latent Profile Analysis and Latent Transition Analysis**

These subtypes have previously been investigated using Latent Profile Analysis (LPA; Stronge et al., 2016; also see Wetzel et al., 2016). LPA groups individuals together who have similar response patterns across measures, in this case, mean levels of psychological entitlement and self-esteem. It models a latent categorical factor, with a set of latent profiles that are assumed to underlie the variation in responses to the observed variables (Collins & Lanza, 2009). Stronge et al. (2016) identified five different profiles with differing levels of entitlement and self-esteem. At the high end of self-evaluation, a profile was identified with high self-esteem and high entitlement (labelled Narcissistic Self-Esteem and representative of grandiose narcissists), as well as a profile with high self-esteem but low entitlement (labelled Optimal Self-Esteem; Kernis, 2003). However, Stronge et al. (2016) did not identify a high entitlement, low self-esteem group representing vulnerable narcissists. A small group with low self-esteem and low entitlement was identified, labelled Low Self-Esteem. Finally, there were two distinct moderate profiles with similarly low levels of entitlement, but the High Moderates had self-esteem scores above the midpoint of the scale, while the Low Moderates had self-esteem below the midpoint of the scale.

The current research aims to expand upon Stronge et al. (2016) by measuring profiles of self-esteem and entitlement longitudinally from 2014 to 2015, using Latent Transition Analysis. Latent Transition Analysis (LTA) is similar to Latent Profile Analysis, but allows for the estimation of transitions between profiles over time. The prevalence of each latent profile is estimated at each time point, as well as the probabilities of transitioning from one profile to all other profiles from one time point to the next (Collins & Lanza, 2009). This allows us to test how the structure of self-regard holds and changes longitudinally across one year. We aim firstly to replicate the profiles identified by Stronge et al. (2016), which may provide robust evidence for the structure of self-regard among New Zealanders. More

importantly, we aim to track longitudinal change in self-regard while also taking into account the heterogeneity of self-regard; if entitlement and self-esteem consist of qualitatively different subtypes, it stands to reason that they may develop differentially over time.

### **Development of Entitlement and Self-Esteem over Time**

In measuring longitudinal change in self-esteem and entitlement, we would expect small amounts of normative change—change in mean levels. However changes in the rank-order — change in levels of self-regard *relative* to others — are unlikely (Roberts, Walton, & Viechtbauer, 2006). Cross-sectional research suggests that self-esteem is generally higher at older ages (Bleidorn et al., 2016; Orth et al., 2010), while narcissism generally decreases across the lifespan (Foster, Campbell, & Twenge, 2003; Wilson & Sibley, 2011). We may then see some small shifts towards higher self-esteem, lower entitlement profiles. However, the rank-order stability of trait self-esteem is high over time (see Orth, 2017, for a review), so those profiles defined by high, moderate, or low self-esteem are unlikely to show shifts towards vastly different levels of self-regard.

The stability of narcissism is less clear. Low rank-order stability was found for Narcissistic Personality Disorder (Hopwood et al., 2013), and significant daily variations were found in state narcissism (Giacomin & Jordan, 2014), but other research found high stability in trait narcissism (Orth & Luciano, 2015). Although entitlement levels may be stable, the self-esteem levels of highly entitled people are likely unstable (Orth & Luciano, 2015). Self-regulatory models propose that narcissistic behaviours take place as they help to create or maintain self-esteem, yet these strategies are often self-defeating in the long-term as interpersonal relationships are sacrificed, leading to lower self-esteem (Baumeister & Vohs, 2001; Morf & Rhodewalt, 2001; Orth & Luciano, 2015). However, these processes occur across longer time spans. In the short-term, as self-esteem among narcissists can be unstable

and is more reactive to external events (Kernis, 2003; Morf & Rhodewalt, 2001; Orth & Luciano, 2015, cf. Bosson et al., 2008), it may fluctuate in both directions; that is, between grandiose and vulnerable narcissism (e.g., Gore & Widiger, 2016; Hyatt et al., 2017; Ronningstam, 2009; Wright & Edershile, 2017).

Finally, the causal link between self-esteem and narcissism is still understudied. It is a popular belief that an overly-positive sense of self will lead to narcissism, and it has been suggested that rising narcissism over time may be linked to a concurrent rise in self-esteem over time (Twenge & Campbell, 2001; Twenge, 2013a, 2013b). There is no evidence as of yet that high self-esteem is linked longitudinally to higher narcissism (Orth & Luciano, 2015). However, it is worth examining whether self-regard profiles show different patterns of change over time. For example, self-esteem may not transition to higher entitlement over time on average, but it may do so for those with very high levels of self-esteem.

### **Summary and Hypotheses**

While plenty of extant research has investigated whether narcissism and self-esteem are increasing over time (Hamamura & Septarini, 2017; Orth, 2017; Trzesniewski et al., 2008b; Twenge, Konrath, Foster, Campbell, & Bushman, 2008a), we still lack a clear picture of what high self-worth actually means. High self-regard is heterogeneous and different nomological networks, outcomes, and behaviours are often found across various subtypes of self-esteem and narcissism (e.g., Crowe et al., 2016a; Kernis, 2003; Miller et al., 2011a). Using Latent Transition Analysis, the current research aims to identify profiles of self-regard consisting of different levels of self-esteem and psychological entitlement, and to track changes in these profiles over one year. We expect to identify a profile representing grandiose narcissists (high entitlement, high self-esteem), optimal self-esteem (low entitlement, high self-esteem), and low self-regard (low self-esteem, low entitlement).

Additionally, although Stronge et al. (2016) did not identify a profile of vulnerable narcissists (high entitlement, low self-esteem), given the strength of the research behind this type of narcissism (Pincus et al., 2009) it is worth considering the possibility that this profile could be present in the sample. Based upon Stronge et al.'s (2016) results, we also expect to see profiles with similar patterns as those with high self-regard, but at more moderate levels.

## **Method**

### **Sampling Procedure**

This research uses two time points measured at Time 6 (2014) and Time 7 (2015) of the New Zealand Attitudes and Values Study. The initial Time 1 NZAVS sampled from the New Zealand electoral roll, which is publicly available for scientific research and as of 2009 contained 2,986,546 registered voters. This represented all citizens over 18 years of age who were eligible to vote regardless of whether they chose to vote, barring people who had their contact details removed due to specific case-by-case concerns about privacy. In sum, postal questionnaires were sent to 40,500 registered voters or roughly 1.36% of all registered voters in New Zealand. The overall response rate (adjusting for the address accuracy of the electoral roll and including anonymous responses) was 16.6%.

The Time 6 NZAVS contained responses from 15,822 participants (15,740 retained from one or more previous waves, and 82 unmatched participants or unsolicited opt-ins). The sample retained 3,727 participants from the initial Time 1 (2009) NZAVS of 6,518 participants (a retention rate of 57.2% over five years). The Time 7 NZAVS contained responses from 13,944 participants (13,879 retained from one or more previous waves, and 65 unmatched participants or unsolicited opt-ins). The sample retained 3,344 participants from the initial Time 1 (2009) wave (a retention rate of 51.3% over five years). The sample

retained 12,550 participants from the full Time 6 sample (a retention rate of 79.3% from the previous year).

Participants were posted a copy of the questionnaire, with a second postal follow-up two months later. Participants who provided an email address were also emailed and invited to complete an online version if they preferred. The study offered a prize draw for participation, non-respondents were emailed and phoned multiple times, and all participants were posted a Season's Greetings card from the NZAVS research team and informed that they had been automatically entered into a bonus seasonal grocery voucher prize draw. At Time 6, participants were emailed an online pamphlet containing a series of video interviews with the researchers summarising different research findings. For more details, see Sibley (2014c).

### **Participants**

Of the participants who completed the measures of psychological entitlement and self-esteem at both Time 6 and Time 7 ( $N = 12,481$ ), 37% were male ( $n = 7,839$ ) and 63% were female ( $n = 4,615$ ). Participants were aged between 18 and 95 ( $M = 50.84$ ,  $SD = 13.82$ ) at Time 6. Ninety-three percent of the participants identified as New Zealand European, 12% identified as Māori, 3% identified as Pacific, and 4% identified as Asian, with some participants identifying as multiple ethnicities.

### **Materials**

Self-esteem was measured using three items adapted from Rosenberg's (1965) Self Esteem Scale, on a scale from 1 (very inaccurate) to 7 (very accurate): "[I] on the whole am satisfied with myself", "[I] take a positive attitude toward myself", and "[I] am inclined to feel that I am a failure" (reverse-coded) ( $\alpha_{\text{Time 6}}$  and  $\alpha_{\text{Time 7}} = .80$ ).

Psychological entitlement was measured using two items from the Psychological Entitlement Scale (Campbell et al., 2004): “[I] feel entitled to more of everything”, and “[I] deserve more things in life” ( $\alpha_{\text{Time 6}} = .71$ ;  $\alpha_{\text{Time 7}} = .73$ ). Responses were rated on a scale from 1 (very inaccurate) to 7 (very accurate).

Table 5.1

*Means, standard deviations, and correlations for psychological entitlement and self-esteem at both time points*

	1.	2.	3.	4.
1. Entitlement (Time 6)				
2. Self-Esteem (Time 6)	-.207			
3. Entitlement (Time 7)	.678	-.187		
4. Self-Esteem (Time 7)	-.179	.753	-.229	
Mean (SD)	2.65 (1.27)	5.26 (1.20)	2.62 (1.27)	5.26 (1.20)

*Note.*  $N = 12,481$ . All correlations are significant at  $p < .001$ .

Means, standard deviations, and correlations for psychological entitlement and self-esteem at Time 6 and Time 7 are presented in Table 5.1. The one year test-retest correlation was .68 for psychological entitlement and .75 for self-esteem. The entitlement measure in the current research differs from the measure employed by Stronge et al. (2016), which included an additional item “[I] demand the best because I’m worth it”. While Stronge et al. (2016) found that entitlement and self-esteem were uncorrelated, the constructs are negatively correlated here. The content of the removed item, and the negative correlation between entitlement and self-esteem, suggests that the 2-item measure used in the current research may tap into a more vulnerable side of entitlement.

All covariates were measured at Time 6. The Five-Factor Model of personality was measured using the 20-item Mini-IPIP6 (Donnellan, Oswald, Baird, & Lucas, 2006). Each trait is measured using 4 items rated from 1 (very inaccurate) to 7 (very accurate) and averaged to give scale scores for Extraversion ( $\alpha = .75$ ), Agreeableness ( $\alpha = .71$ ), Conscientiousness ( $\alpha = .67$ ), Neuroticism ( $\alpha = .71$ ), and Openness to Experience ( $\alpha = .70$ ).

Psychological distress was measured using the Kessler-6 scale (Kessler et al., 2010). Each item asks participants to rate how often they experienced psychological distress using a scale from 0 (none of the time) to 4 (all of the time). The scale includes 6 items such as “During the last 30 days, how often did you feel hopeless?” ( $\alpha = .85$ ).

Satisfaction with personal relationships was measured using a single item from the Personal Wellbeing Index (Cummins, Eckersley, Pallant, van Vugt, & Misajon, 2003). The scale asks participants to rate their level of satisfaction with various aspects of their life, including “Your personal relationships”, on a scale from 0 (completely dissatisfied) to 10 (completely satisfied).

## Results

### Analysis

Analyses were conducted using *Mplus* 7.40 (Muthén & Muthén, 1998-2015). We conducted a Latent Transition Analysis assessing the stability of latent profiles of entitlement and self-esteem over a one-year period, from 2014 to 2015. A one-year period was selected as multiple time points rapidly increase model complexity. Latent Transition Analysis models the probability that an individual belongs to a particular latent profile at the second time point, given membership in a particular profile at the first time point (Collins & Lanza, 2009); thus, we estimate the probability of transitioning from each profile to every other

profile, as well as the probability of remaining within the same profile across the course of a year.

Our *a priori* hypothesis was for a five-profile solution (Stronge et al., 2016).

However, given that Stronge et al.'s (2016) analysis was conducted using a slightly different measure and sample, we conducted LPA's at Time 6 and Time 7 to test four, five, and six-profile solutions. Fit indices for these models, including the Vuong-Lo-Mendell-Rubin likelihood ratio test (see Lo, Mendell, & Rubin, 2001) and Bootstrapped Likelihood Ratio Test (McLachlan & Peel, 2000), are presented in Appendix A (Supplementary File 2 and Supplementary Table A3). At Time 6, a six-profile solution was preferred. At Time 7, results were mixed, but as the Bootstrapped Likelihood Ratio Test tends to perform best (Nylund, Asparouhov, & Muthén, 2007) a six-profile solution was preferred.

Table 5.2

*Model fit for the different profile solutions of the Latent Transition Analysis*

	AIC	aBIC	Entropy
Four Profiles	146211	146325	0.874
Five Profiles	143944	144106	0.867
Six Profiles	142444	142661	0.864

Note: AIC = Akaike Information Criterion; aBIC = Adjusted Bayesian Information Criterion

We also compared the relative fit indices of four, five, and six-profile solutions for the Latent Transition Analysis (see Collins & Lanza, 2009), presented in Table 5.2. To conduct the Latent Transition Analysis, we simultaneously estimated profile solutions in the repeated panel sample of people who completed all relevant measures at both Time 6 and Time 7. We

constrained the intercepts for entitlement and self-esteem within each profile to be equal to the intercepts in the corresponding profile at each time point, so that we estimated the same latent profiles at both time points. All three profile solutions demonstrated reasonable model fit, but there was a slight inflection point in the relative fit indices of the LTA at the five-profile solution. Additionally, the six-profile solution preferred by the LPA's simply adds a profile exactly parallel to an existing profile, but with lower means overall. Given the *a priori* hypothesis from Stronge et al. (2016), the relative fit indices of the LTA's, and the goal of parsimony, a five-profile solution was selected. The constrained five-profile model provided an excellent fit to the data (entropy = .867, AIC = 143944, BIC = 144227;  $N = 12,481$ ). Note that entropy should be above .7-.8 to indicate a clear separation of the profiles (Collins & Lanza, 2009). The means and proportions of the five profiles from the LPA's and LTA are presented in Table 5.3. The LTA means differs slightly from the LPA means' at both time points; as Collin and Lanza (2009) note, the best-fitting model at a single time point is not necessarily the best-fitting model across all points of measurement.

Table 5.3

*Means levels of psychological entitlement and self-esteem (constrained to equality at both time points), and proportions of each profile at Time 6 and Time 7. Entitlement and self-esteem are measured on scales from 1-7.*

	Latent Transition Analysis				Latent Profile Analysis (Time 6)			Latent Profile Analysis (Time 7)		
	Entitlement	Self-Esteem	Proportion (Time 6)	Proportion (Time 7)	Entitlement	Self-Esteem	Proportion (%)	Entitlement	Self-Esteem	Proportion (%)
Optimal Self-Esteem	1.88	6.11	42.8	42.9	1.83	5.85	49.1	1.76	5.86	48.3
Narcissistic Self-Esteem	4.03	5.63	18.8	18.6	5.52	5.63	3.9	5.37	5.45	5.2
Vulnerable Self-Regard	4.21	3.78	9.1	9.0	4.48	3.27	4.3	4.44	3.17	4.7
Moderate Self-Regard	2.33	4.66	23.8	23.8	3.60	5.23	32.8	3.50	5.18	31.7
Low Self-Esteem	2.28	2.70	5.6	5.7	2.12	3.41	10.1	2.08	3.37	10.1



*Figure 5.1.* Five profile solution for the Latent Transition Analysis. Percentages represent the percentage of the sample within each profile at Time 6 (2014).

The five-profile LTA solution is presented in Figure 5.1. There was a clear separation between profiles in terms of levels of entitlement, with two clustering at relatively high levels at the midpoint of the scale, and three clustering at low levels. Of the high entitlement profiles, one had high levels of self-esteem and so was labelled narcissistic self-esteem (19.5%) as in Stronge et al. (2016). The other had relatively low levels of self-esteem, slightly below the midpoint of the scale, and so was labelled vulnerable self-regard (9.5%). Of the low entitlement profiles, the majority of participants (41.9%) also had the highest level of self-esteem, forming a clear optimal self-esteem profile. A single moderate profile

(moderate self-regard, 23.4%) was identified instead of two (high and low moderates; Stronge et al., 2016), forming a less exaggerated version of the optimal self-esteem profile, with entitlement below the mid-point of the scale and self-esteem above it. Finally, a small profile with low entitlement and low self-esteem was identified and labelled low self-regard (5.7%). The LPA's conducted at Time 6 and Time 7 identified similar profiles as the LTA (presented in Figure 5.2).

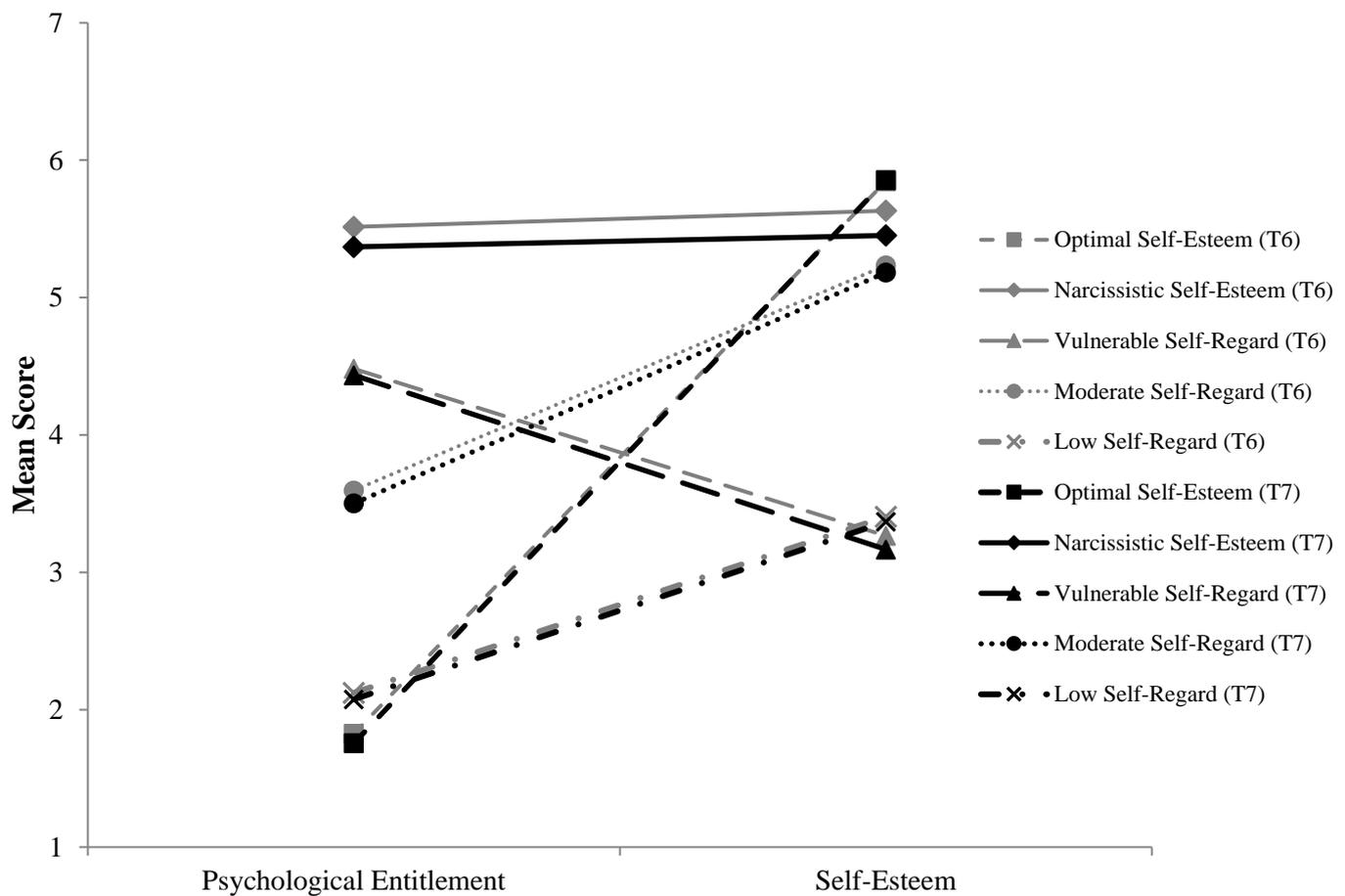


Figure 5.2. Five profile solution for the Latent Profile Analyses at Time 6 and Time 7.

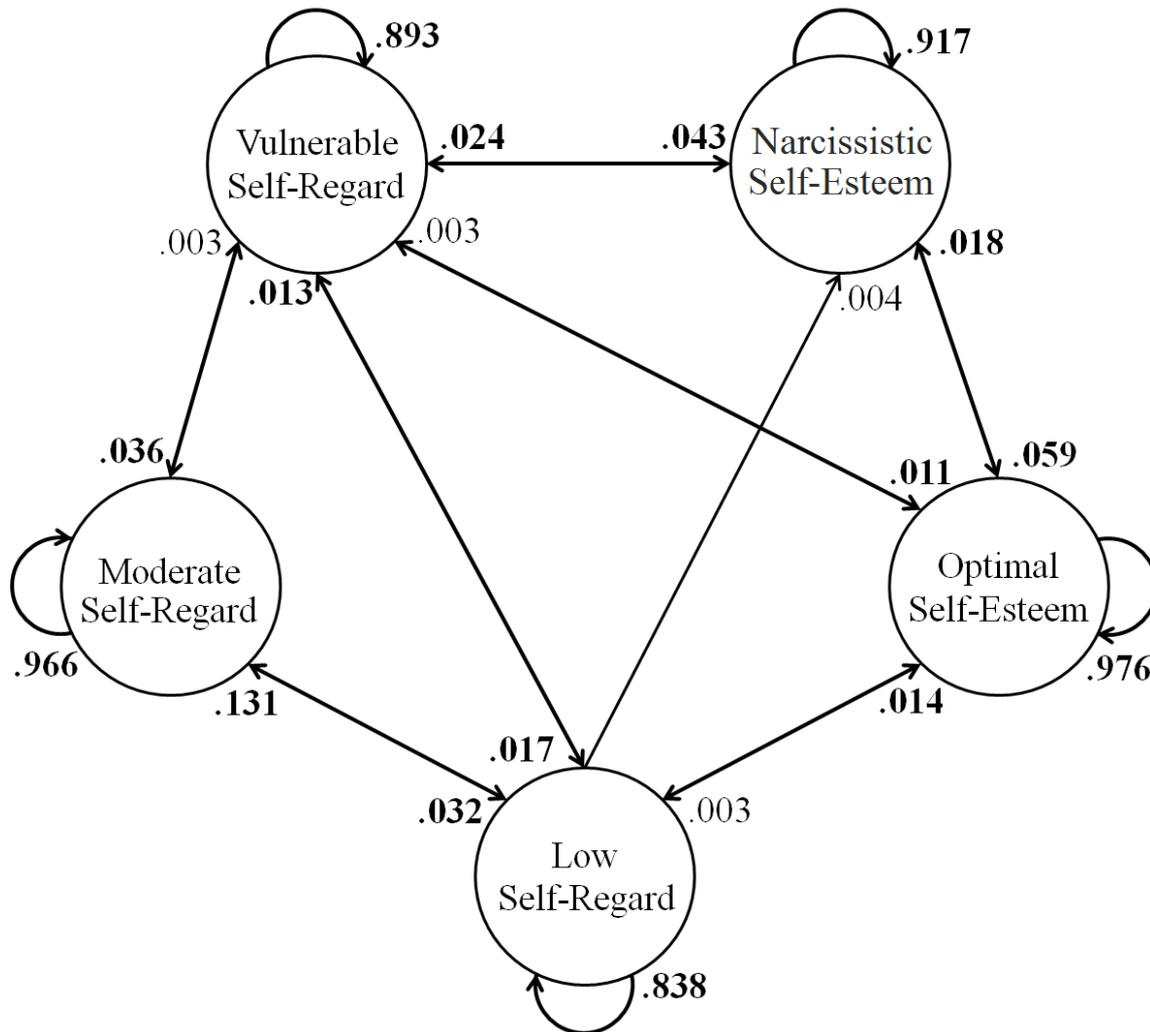


Figure 5.3. Markov chain model showing transition probabilities for the five-profile model between Time 6 (2014) and Time 7 (2015). Transition probabilities above .01 (1%) are bolded, and transition probabilities of .000 are not presented.

### Latent Transitions

The latent transition probabilities for moving from any given latent profile to another across the course of one year are presented in Table 5.4, and are also presented as a Markov model in Figure 5.3. The estimates of profile stability over time are represented by the circular arrows for each profile leading back to itself. As shown in Table 5.4, profile membership was generally quite stable over time. The optimal self-esteem profile was the most stable, with the probability of remaining within this profile after one year sitting at .976.

The moderate profile was similarly stable, with a probability of .966 of remaining within the profile. The narcissistic self-esteem and vulnerable self-regard profiles had probabilities of .917 and .893 respectively. Finally, the low self-regard was the least stable, with a probability of .838 of remaining in this profile. Despite relative differences in stability, this model suggests that profile membership was stable over time, and people's self-regard was unlikely to shift across the course of a year.

Table 5.4

*Transition probabilities for change in profile membership across one year (2014 – 2015).*

		Time 7				
		Optimal	Narcissistic	Vulnerable	Moderate	Low
Time 6	Optimal self-esteem	.976	.018	.003	.000	.003
	Narcissistic self-esteem	.059	.917	.024	.000	.000
	Vulnerable self-regard	.011	.043	.893	.036	.017
	Moderate self-regard	.000	.000	.003	.966	.032
	Low self-regard	.014	.004	.013	.131	.838

However, there were some transitions of note between profiles, highlighted in bold in Figure 5.3 if the probability was above .01 (or 1% probability). The most likely transition (.131) was from the low self-regard profile into the moderate self-regard profile, a profile with slightly higher self-esteem. As the low self-regard profile was the least stable, it also had a small chance of transitioning to the optimal self-esteem profile (.014) or the vulnerable self-regard profile (.013), but it was unlikely to transition to the narcissistic self-esteem profile. The vulnerable self-regard profile was similarly relatively unstable and had some probability

of transitioning anywhere: low self-regard (.017), moderate self-regard (.036), optimal self-esteem (.011), and most notably, the similarly entitled narcissistic self-esteem profile (.043). The moderate self-regard profile had a small probability of transitioning down to low self-esteem (.032), but otherwise was unlikely to change. The narcissistic self-esteem profile could transition to vulnerable self-regard (.024), but it was most likely to transition towards optimal self-esteem (.059). In turn, the optimal self-esteem profile had a small probability of transitioning towards narcissistic self-esteem although this was less than half as likely (.018), and optimal self-esteem had no other likely transitions. As seen in Table 5.4 and Figure 5.2, the rest of the transitions sat beneath a one percent probability of occurring. Overall, net transition into the high entitlement profiles (vulnerable and narcissistic self-esteem) sat at .041, while net transition out of those profiles sat at .123.

### **Demographic, Social and Personality Predictors**

We additionally used a three-step weighted multinomial logistic regression model in a Latent Profile Analysis at Time 6 to assess likelihood of belonging to each profile predicted by gender, age, personality, satisfaction with personal relationships, and levels of psychological distress (Lanza, Tan, & Bray, 2013). The LPA allows us to treat the profiles as a categorical latent variable and examine how demographic variables predict increased or decreased odds of belonging in one profile relative to another profile. Results using both optimal self-esteem and narcissistic self-esteem as reference profiles are presented in Table 5.5. The odds ratios we estimated are weighted to adjust for misclassification in profile membership. Results will be largely discussed using the optimal self-esteem reference profile as it is the most common pattern of self-regard, however comparing narcissistic self-esteem to vulnerable self-regard also provides useful information. Finally, results using the remaining profiles as the reference profile are presented in Appendix A (Supplementary Table A4). It is important to note that the LPAs at both time points differ slightly from the

LTA, so these results are intended only as support for the conception and labelling of these profiles. In particular, the moderate self-regard profile had higher entitlement in the cross-sectional analysis compared to the longitudinal analysis and appears to be a less exaggerated narcissistic self-esteem profile as opposed to a less exaggerated optimal self-esteem profile as in the LTA. These results should be interpreted with caution, particularly for the moderate self-regard profile.

Firstly, higher psychological distress, higher neuroticism, and less satisfaction with relationships predicted that participants would belong to all profiles relative to the optimal self-esteem profile, which therefore suggests that the optimal self-esteem profile is the most psychologically healthy profile. Participants were more likely to belong to the narcissistic self-esteem profile, relative to the optimal self-esteem profile, if they were men, younger, more extraverted, less agreeable, more conscientious, and more neurotic. Relative to the optimal self-esteem profile, people were more likely to belong to the vulnerable self-regard profile if they were younger, less agreeable, less conscientious, less open, and more neurotic. Belonging to the moderate self-regard profile relative to the optimal self-esteem profile was predicted by being male, younger, more extraverted, less agreeable, less conscientious, more neurotic, and less open. Finally, belonging to the low self-regard profile relative to the optimal self-esteem profile was predicted by being younger, less extraverted, less agreeable, less conscientious, and more neurotic. Belonging to the vulnerable self-regard profile relative to the narcissistic self-esteem profile was predicted by lower extraversion, lower conscientiousness, higher neuroticism, lower openness, higher psychological distress, and less satisfaction with personal relationships; gender and age did not differentiate between entitled profiles.

Table 5.5

*Results from the distal multinomial logistic regression with the auxiliary variables (gender, age, personality, K-6 psychological distress, and satisfaction with personal relationships) at Time 6, using optimal self-esteem and narcissistic self-esteem as reference profiles.*

	<i>Optimal self-esteem reference profile</i>				<i>Narcissistic self-esteem reference profile</i>			
	<i>b</i>	<i>se</i>	<i>z</i>	<i>OR</i>	<i>b</i>	<i>se</i>	<i>z</i>	<i>OR</i>
<i>Narcissistic self-esteem</i>								
Gender	.529	.125	4.245	1.70**				
Age	-.022	.004	-5.529	0.98**				
Extraversion	.563	.064	8.854	1.76**				
Agreeableness	-.578	.066	-8.782	0.56**				
Conscientiousness	.129	.063	2.051	1.14*				
Neuroticism	.262	.078	3.363	1.30*				
Openness	.015	.063	0.235	1.02				
Kessler-6	1.197	.159	7.532	3.31**				
Satisfaction with Relationships	-.130	.035	-3.700	0.88**				
<i>Vulnerable self-regard</i>								
Gender	.079	.149	0.533	1.08	-.449	.189	-2.372	0.64*
Age	-.020	.005	-4.267	0.98**	.002	.006	0.252	1.00
Extraversion	-.118	.060	-1.961	0.89	-.681	.087	-7.857	0.51**
Agreeableness	-.643	.074	-8.639	0.53**	-.066	.097	-0.677	0.94
Conscientiousness	-.398	.065	-6.165	0.67**	-.526	.088	-6.009	0.59**
Neuroticism	1.553	.086	18.011	4.73**	.290	.116	11.170	1.34**
Openness	-.219	.063	-3.496	0.80**	-.234	.089	-2.645	0.79*
Kessler-6	2.343	.125	18.818	10.41**	1.147	.206	5.562	3.15**
Satisfaction with Relationships	-.432	.027	-15.966	0.65**	-.302	.043	-6.987	0.74**
<i>Moderate self-regard</i>								
Gender	.354	.061	5.805	1.42**	-.175	.133	-1.311	0.84
Age	-.017	.002	-8.217	0.98**	.004	.004	0.991	1.00
Extraversion	.184	.026	7.112	1.20**	-.378	.067	-5.678	0.69**
Agreeableness	-.475	.034	-14.033	0.62**	.103	.068	1.504	1.11
Conscientiousness	-.155	.030	-5.258	0.85**	-.284	.067	-4.249	0.75**
Neuroticism	.435	.033	13.168	1.54**	.173	.083	2.069	1.19*
Openness	-.126	.027	-4.646	0.88**	-.141	.067	-2.083	0.87*
Kessler-6	.826	.067	12.242	2.28**	-.371	.172	-2.161	0.69*
Satisfaction with Relationships	-.177	.016	-11.201	0.84**	-.047	.037	-1.266	0.95

*Low self-regard*

Gender	-.113	.111	-1.022	0.89	-.641	.156	-4.103	0.53**
Age	-.004	.004	-1.057	1.00	.018	.005	3.495	1.02**
Extraversion	-.412	.047	-8.861	0.66**	-.974	.075	-12.929	0.38**
Agreeableness	-.134	.066	-2.020	0.87*	.444	.087	5.104	1.56**
Conscientiousness	-.347	.053	-6.535	0.70**	-.475	.077	-6.172	0.62**
Neuroticism	1.343	.068	19.801	3.83**	1.080	.099	10.909	2.94**
Openness	-.097	.051	-1.887	0.91	-.112	.078	-1.439	0.89
Kessler-6	1.910	.095	20.056	6.75**	.714	.181	3.936	2.04**
Satisfaction with Relationships	-.353	.023	-15.587	0.70**	-.223	.039	-5.695	0.80**

*Note.* Gender coded as 0 for women, 1 for men; Kessler-6 measured on a scale from 0 to 4; personality on a scale from 1 to 7, and satisfaction with personal relationships on a scale from 1 to 10.

## Discussion

Both the narcissism and the self-esteem literatures are beginning to emphasise that high self-regard is heterogeneous (e.g., Jordan et al., 2003; Kernis, 2003; Crowe et al., 2016a; Rose, 2002). The association between self-esteem and narcissism is complicated, as diverse relationships between the two may be present at the same time but among different groups of people. Using Latent Transition Analysis, we aimed to track change over time in profiles of self-regard. We identified five profiles with different patterns of entitlement and self-esteem. While the majority of the sample had high self-esteem, two high self-esteem profiles diverged in their associations with entitlement, indicating important differences in high self-esteem (e.g., Baumeister et al., 2003; Kernis, 2003). Similarly, two highly entitled profiles diverged in their levels of self-esteem, suggesting these profiles will also diverge in their behaviour and outcomes (e.g., Brummelman et al., 2016; Pincus et al., 2009). Overall, the various profiles of self-regard were highly stable. Nonetheless, we observed several small transitions between profiles, which varied depending on their levels of both self-esteem and entitlement. These results demonstrate that taking into account multiple dimensions and subtypes of self-

regard can provide a more nuanced understanding of self-views and their development over time.

### **Latent Profiles**

The profiles identified here are clearly grouped, with three measuring low in entitlement and two measuring relatively high in entitlement. Overall, over 70% of the representative New Zealand sample reported low levels of psychological entitlement. The largest profile in the current research consisted of those with the highest levels of self-esteem and the lowest levels of entitlement, representing over 40% of the sample. We labelled this profile optimal self-esteem to indicate self-esteem that is unaccompanied by the high defensiveness associated with entitlement (Kernis, 2003; Stronge et al., 2016). We also identified a single moderate profile with low levels of entitlement, and self-esteem levels around the midpoint of the scale, which we labelled moderate self-regard. Finally, a small profile was identified with entitlement and self-esteem levels below the midpoint of the scale, which we labelled low self-regard.

Two high entitlement profiles were also identified. The first profile had both high levels of entitlement and high levels of self-esteem and was labelled narcissistic self-esteem; this profile reports high self-esteem that may not be particularly stable, genuine, or healthy as it comes hand in hand with psychological entitlement (Kernis, 2003). This profile also matches conceptions of grandiose narcissists (Brown & Brunell, 2017; Krizan & Herlache, 2017; Wink, 1991). The other profile had nearly identical levels of entitlement but much lower levels of self-esteem; we labelled this profile vulnerable self-regard in line with research identifying two types of narcissism, with the same core of high entitlement but differing levels of self-esteem (Brown & Brunell, 2017; Krizan & Herlache, 2017; Wink, 1991). Although levels of self-esteem in this profile are not particularly low, hovering around the midpoint of the scale, their belief that they deserve more is higher than their belief that

they are a person of worth, indicating a fragile self-view. Overall, these results demonstrate that those who measure high in entitlement can still have vastly different levels of self-esteem, and those high in self-esteem can have vastly different levels of entitlement.

Stronge et al. (2016) identified five profiles of self-esteem and entitlement in 2009, and four very similar profiles have been identified here. However the fifth profile is different. Whereas Stronge et al. (2016) identified a second, moderate profile with relatively low entitlement and self-esteem, the fifth profile identified here clearly has higher entitlement, and seems to fit with the vulnerable narcissists Stronge et al. (2016) hypothesised but did not identify. The measure used in the current research is slightly different to the measure used by Stronge et al (2016), as the item “[I] demand the best because I’m worth it” was omitted. This item may have tapped into self-esteem just enough that vulnerable narcissists did not endorse it and so vulnerable narcissists did not emerge as a clear profile. With regard to the different proportions of the profiles across studies, we hesitate to rely on these or compare them to Stronge et al.’s (2016) results as the data in the current research are not weighted to the census, and there are some differences in the mean levels of the profiles. Yet, these profiles are broadly comparable to those identified by Stronge et al. (2016), indicating there may be some ‘basic truths’ to the structure of self-regard among New Zealanders. These results show that these profiles are not only identifiable five years on, but are quite stable and hold longitudinally across the course of a year.

### **Demographic, Social and Personality Predictors**

To support our labelling of these profiles, we also examined demographic and personality variables that predict whether people are more likely to belong to one profile over another, in this case, using the optimal self-esteem profile as the main reference profile. These results illustrated that the optimal self-esteem profile was the most psychologically healthy profile, as it was associated with a more prosocial personality pattern and better

psychosocial health relative to other profiles. It was also associated with being older relative to other profiles. These results fit well with conceptions of optimal self-esteem (Kernis, 2003), and research that suggests self-esteem increases and entitlement decreases as people age (Bleidorn et al., 2016; Wilson & Sibley, 2011). In contrast, low self-regard was differentiated from optimal self-esteem mostly by high neuroticism, low extraversion, and to a lesser degree, low conscientiousness. While slightly less agreeable, this profile is still more agreeable than all other profiles, and just as open to experience. This suggests the low self-regard profile consists of people who are struggling, but for reasons other than entitled and self-serving behaviour. This profile may represent a transitional state that people pass through following significant negative life events, explaining its relatively low stability and allowing for transition in many different directions as people return to their baseline.

Belonging to the narcissistic self-esteem profile relative to the optimal self-esteem profile was largely driven by higher extraversion and lower agreeableness, which matches conceptions of grandiose narcissists (Hyatt et al., 2017; Miller et al., 2011a; Paulhus, 2001). However, the narcissistic self-esteem profile was associated with more psychological distress, higher neuroticism, less satisfaction with relationships, and greater neuroticism than the optimal self-esteem profile, even as they shared very similar levels of self-esteem. This suggests, as found in previous research, that psychological distress and difficulty with relationships are entirely related to high entitlement (Brummelman, Thomaes, & Sedikides, 2016; Byrne & O'Brien, 2014; Grubbs & Exline, 2016; Sedikides, Rudich, Gregg, Kumashiro, & Rusbult, 2004). This may also indicate that the entitlement measure used in the current research is tapping into the vulnerable, as opposed to grandiose, side of entitlement, as grandiose narcissism is typically associated with better mental health (e.g., Sedikides et al., 2004). However, these results are using optimal self-esteem as a comparison profile as opposed to a random control group, which may contribute to this difference to previous

research. People were also more likely to belong to the narcissistic self-esteem profile if they were male and younger. Previous research suggests that we would expect men to have higher entitlement and self-esteem (Bleidorn et al., 2016; Campbell et al., 2004), and younger people to have higher entitlement as well (Wilson & Sibley, 2011).

While the vulnerable self-regard profile shared the same levels of entitlement as the narcissistic self-esteem profile, the lower self-esteem associated with this profile meant they were far less psychologically healthy as would be expected among vulnerable narcissists (Grubbs & Exline, 2016; Miller et al., 2011a; Pincus et al., 2009). In fact, the strongest predictor in the whole model was psychological distress predicting belonging to the vulnerable self-regard profile relative to the optimal self-esteem profile; those with higher psychological distress were 10 times more likely to belong to the vulnerable self-regard profile. Belonging to this profile was also predicted by higher neuroticism and lower extraversion, followed by weaker effects of lower conscientiousness and openness.

In sum, these profiles fit conceptually with existing conceptions of narcissism and self-esteem in the literature. Optimal self-esteem is self-esteem without a sense of entitlement, and is psychologically healthy, prosocial, and stable over time (Kernis, 2003; Schmitt & Allik, 2005; Orth, 2017). Two highly entitled profiles are found and share a common core of disagreeableness, but the more grandiose profile is defined by its high extraversion while the more vulnerable profile is defined by its high neuroticism, just as hypothesised by Miller et al. (2017a) in their review. Similarly, Crowe et al., (2016a) identified two clusters of high entitlement, defined largely by their divergent levels of neuroticism. The markers of entitlement and self-esteem in the current research appear to have identified profiles of self-regard that are analogous to and share nomological networks with various previously theorised subtypes of self-esteem, narcissism, and entitlement.

## Transitions over Time

Now, we turn to the transitions between profiles over time. Although the transitions are generally small, change accumulates across longer time periods, with differences in narcissism from one end of the adult lifespan to the other reaching one standard deviation (Roberts, Edmonds, & Grijalva, 2010). As these profiles measure entitlement and self-esteem in the same participants across the course of a year, we interpret changes as developmental effects rather than the wider societal shifts investigated in previous research (e.g., Trzesniewski et al., 2008b; Twenge et al., 2008a). Self-regard was generally quite stable, however, there were differences in stability across profiles. Optimal self-esteem was the most stable profile, particularly compared to the relative instability of the high entitlement profiles, which illustrates the narcissistic and defensive nature of their self-regard. These differences in stability, and in the direction and strength of the transitions, indicate that there is heterogeneity not only in levels of self-regard, but also in the ways that self-regard develops over time.

Cross-sectional research suggests that as adults age, they move towards higher self-esteem and lower entitlement (Bleidorn et al., 2016; Wilson & Sibley, 2011). With a sample mean age of approximately 50, we would expect reasonably high self-esteem, reasonably low entitlement, and trends that continue in this direction. Our results fit well with these previous findings, demonstrating greater transitions out of, rather than into, the low self-regard and high entitlement profiles. The opposite was observed for the optimal self-esteem and moderate self-regard profiles, with more transitions into, rather than out of, these profiles.

In this way, the optimal self-esteem profile acts as a logical conclusion for the development of self-regard across the adult lifespan. Indeed, the high stability of the optimal self-esteem profile suggests that once people get there, they are likely to stay there. There

was a small transition probability towards the highly entitled narcissistic self-esteem profile over time, which indicated some support for the idea that high self-esteem can lead to high entitlement over time (Twenge, 2013a). However, this was a bidirectional process and the transition from narcissistic self-esteem to optimal self-esteem was more than twice as likely. These results indicate that grandiose narcissism may slowly fade into healthier forms of self-regard over time.

The narcissistic self-esteem profile also had a bidirectional transition with vulnerable self-regard. This fits with research that suggests that vulnerable and grandiose narcissists are actually the same group of people, but fluctuating between grandiosity and vulnerability over time (Gore & Widiger, 2016; Hyatt et al., 2017). However, both Gore and Widiger (2016) and Hyatt et al. (2017) found that grandiose narcissists were more likely to display vulnerable behaviour than the converse, and research and theory predict that narcissists should move towards lower self-esteem over longer periods of time (Baumeister & Vohs, 2001; Orth & Luciano, 2015). In contrast, the current results indicated that although the instability of self-esteem could go in both directions, vulnerable narcissists were more likely to transition towards grandiosity than vice-versa (e.g., Kernis, 2003; Morf & Rhodewalt, 2001).

The vulnerable self-regard profile also transitioned in other directions, showing a small probability of moving to every other profile across the course of a year. This suggests that those within this profile have quite an unstable self-evaluation. The vulnerable self-regard profile showed wildly variable transitions into higher self-esteem, lower self-esteem, lower entitlement, or combinations of both, all in one year. While transition towards the narcissistic self-esteem profile indicated fluctuating self-esteem, as would be expected (Dickinson & Pincus, 2003; Krizan & Herlache, 2017; Pincus et al., 2009), transitions towards optimal self-esteem, low self-regard, and moderate self-regard suggest that entitlement levels fluctuate as well. Finally, although these findings support previous research

that has found vulnerability and grandiosity fluctuate or co-occur to some degree (Hyatt et al., 2017; Ronningstam, 2009), the high entitlement profiles were still fairly stable. While state narcissism may fluctuate (Gore & Widiger, 2016), and there may be *some* long-term transition, these results suggest that grandiose and vulnerable expressions of narcissism are relatively stable traits over time. Their emergence as consistent, separate, latent categorical factors across multiple time points implies they are not the same group of people.

The low self-regard profile was the least stable of the profiles, however, the majority of its transition was towards the moderate self-regard profile with an annual transition probability of approximately 13%. While this is the nearest profile in levels of self-regard, this still implies a substantial increase in self-esteem within a year. This profile also transitioned to the optimal self-esteem profile; while the probability is low, this would mean swinging from one end of the self-esteem scale to the other. Altogether, these transitions indicate that the low self-regard profile may be a transitional state for those who have gone through a 'rough patch' and then bounced back to their original state of self-regard. However, even though this profile is relatively unstable, the vast majority (over 80%) of its members are likely to remain within this state of very low self-regard. Previous research similarly suggests that low self-esteem should be stable and self-reinforcing (Orth, 2017; Orth & Luciano, 2015; Sowislo & Orth, 2013). This group may be at risk of poor psychological health and behaviour in the long-term, such as depression, anxiety, and aggression (Donnellan, Trzesniewski, Robins, Moffitt, & Caspi, 2005; Sowislo & Orth, 2013).

Finally, the moderate self-regard profile represents a less exaggerated version of the optimal self-esteem profile, with low levels of entitlement and self-esteem just above the midpoint. This profile is fed by the other low self-esteem profiles (vulnerable and low self-regard), and has a small chance itself of transitioning into low self-regard. Interestingly, however, there is essentially zero probability of transitioning from here to higher self-esteem

profiles, narcissistic or not. We suggested earlier that the stability of the optimal self-esteem profile represents the conclusion of developmental processes of steadily increasing self-esteem across adulthood; with moderate self-regard the second most stable profile, it appears to be an alternative, more modest profile for people to settle into. As implied by the high rank-order stability of self-esteem (Orth, 2017), those with high self-esteem and those with moderate self-esteem may show small transitions around other profiles with similar levels, but the basic facts of one's self-regard do not usually change. Once someone takes a positive but measured view of themselves, it appears to remain that way.

### **Strengths and Limitations**

These results demonstrate the heterogeneity of self-regard. Even when groups of people may score similarly on one dimension, taking another dimension of self-regard into account paints a broader picture. Among those with high self-regard in particular, measuring entitlement is essential for distinguishing between different forms of self-esteem, and measuring self-esteem is essential for differentiating between subtypes of entitlement; previous research suggests that these profiles all display very different behaviours and personalities, and attain very different outcomes (e.g., Brummelman et al., 2016; Crowe et al., 2016a; Kernis, 2003; Miller et al., 2011a; Stronge et al., 2016). These profiles hold across one year (2014-2015) and are comparable to the profiles identified by Stronge et al.'s (2016) five years prior (data from 2009). This demonstrates a stable structure of self-regard within New Zealand, consisting of five common patterns. Broadly, this structure consists of a majority group with optimal or 'genuine' self-esteem – self-esteem that is stable over time and unaccompanied by feelings of deserving more than others (Kernis, 2003) – as well as a smaller group with similarly low entitlement but far more modest self-esteem, a group analogous to grandiose narcissists, another of vulnerable narcissists and finally, a small group with poor self-regard that is relative unstable.

These results raise the question of what increases in self-esteem and narcissism actually mean in previous longitudinal research (e.g., Stronge et al., 2018; Trzesniewski et al., 2008b; Twenge et al., 2008a; Wetzel et al., 2017). Discussions of rising self-esteem are often folded into discussions of rising narcissism, under the general banner of ‘positive self-views’, ‘individualism’ or ‘an inflated sense of self’ (e.g., Trzesniewski & Donnellan, 2010; Twenge, 2013a), but they are distinct constructs that are not always positively associated. Furthermore, measuring each construct alone may obscure differential outcomes or differences in change over time. For example, Twenge (2013a) notes that self-esteem is not always beneficial (Baumeister et al., 2003), but the vast majority of those with high self-esteem in the current research appear to have a healthy self-concept that is generally associated with positive outcomes and is unlikely to change. Similarly, while high entitlement is certainly not positive, the outcomes of narcissistic and vulnerable self-regard are worth differentiating between (e.g., Miller et al., 2011a). The ways in which they change over time are also different, with grandiose forms of narcissism having better odds of developing into a healthy self-view. Using entitlement and self-esteem as broad markers, subtypes of narcissism can be easily differentiated between, and provide a fuller picture of changing self-regard over time.

As stated by Collin and Lanza (2009), remaining within the same profile one year later is not necessarily the same as having stayed in that profile across the entire course of the year – participants may have transitioned out and back in any number of times, particularly for transitions between vulnerable and grandiose narcissism (Wright & Edershile, 2017). Self-regard has high stability across long time-frames (Orth, 2017), however, with self-esteem fluctuation measurable in under a week (Kernis, 2005) and narcissism fluctuation measurable daily (Giacomin & Jordan, 2014), the idea of stability across a year must be interpreted with caution. It could also be important to track change over longer periods of time as narcissistic strategies to maintain self-esteem may work well in the short term, but in

the long run end up undermining their self-esteem and relationships (Grubbs & Exline, 2016; Morf & Rhodewalt, 2001). There also remains the issue of systematic attrition of those high in entitlement across time. Satherley et al. (2015) found, unsurprisingly, that those with high entitlement are more likely to drop out of the NZAVS over time, which could mean potentially underestimating transitions towards our narcissistic self-esteem profile.

We note that the measure of entitlement used in this research is a short-form, 2-item measure, and short-form measures can be more prone to Type I or Type II errors (Credé, Harms, Niehorster, & Gaye-Valentine, 2012; Krueger, Emons, & Sijtsma, 2013). However, using shorter measures is a natural trade-off for large scale national panel studies. These items are a useful marker of entitlement that has been utilised in a body of previous research (Stronge et al., 2016; Stronge et al., 2018; Wilson & Sibley, 2011), and the scale has good reliability and high one year test-retest correlations.

As this research was conducted in New Zealand, there remains the question of generalisability to other contexts. Research suggests that differences in entitlement do exist across countries (Foster et al., 2003), and mean levels of entitlement in New Zealand are likely to be relatively low compared to other Western countries, given New Zealand's cultural focus on humility and meritocracy (e.g., Kirkwood, 2007; Sibley, Horder, & Liu, 2011a). However, while there is certainly the potential for differing proportions within profiles, or differing transitions between profiles, it seems likely that the structure of self-regard (i.e., the profiles identified here across time) would remain similar across Western contexts.

Finally, we have chosen to discuss variables that are generally treated as continuous in a categorical way (Foster & Campbell, 2007). Categorizing variables can result in a loss of predictive utility (Costa, Herbst, McCrae, Samuels, & Ozer, 2002; Irwin & McClelland, 2003). However, previous research has also identified groups, clusters, or patterns where

people have similar levels of narcissism but diverge in other important ways (Crowe et al., 2016a; Wetzel et al., 2016). These differences are often missed when examining purely linear relationships, as differences are occluded by the average tendency. Categorical and dimensional methods should be used together in a complementary fashion in order to provide the maximum amount of useful information (Wetzel et al., 2016).

### **Conclusion**

We identify here five main patterns that self-regard may follow, consisting of differing levels of psychological entitlement and self-esteem. These profiles of entitlement and self-esteem represent different self-views that are associated with different personalities and levels of psychosocial health. Furthermore, the profiles diverge in their development over time, with different levels of stability and different directions of change identified over the course of a year. However, the majority of the change in self-regard across one year was towards lower entitlement and higher self-esteem. Overall, these results demonstrate the heterogeneity of high self-regard, and raise the question of how changing levels of narcissism and self-esteem should be interpreted.

### **Bridging Statement**

Together, Study 1 and Study 2 provide a parsimonious structure of self-regard that covers grandiose and vulnerable expressions of entitlement, optimal self-esteem, and other important profiles with moderate and low levels of self-regard. These profiles are found at two cross-sectional time points and hold longitudinally between them. Study 1 suggested that self-esteem is a necessary but not sufficient condition for high entitlement; however, Study 2 found that self-esteem is neither a necessary nor sufficient condition following the identification of a vulnerable self-regard profile. The difference between studies in the identification of the vulnerable self-regard profile appears to be related to the changed measure. This can be seen in Supplementary Figure A1 (Appendix A), a reanalysis of Study 1 using the 2-item measure of psychological entitlement that finds an identical structure at Time 1 as those presented in Study 2 at Time 6 and Time 7. This resolves a limitation of Study 1, where entropy is slightly lower than ideal across the various profile solutions. Using a measure that taps more into the vulnerable side of entitlement appears to allow for the identification of a vulnerable self-regard profile, and therefore clearer separation between the profiles. Using the 2-item entitlement measure, these five profiles are identified six years apart, providing evidence for a basic structure of self-regard in New Zealand.

Study 1 and Study 2 both support the idea that heterogeneity within self-regard, and high self-regard in particular, means that measuring these constructs as unidimensional obscures important variability. Even as each profile scores similarly on either self-esteem or entitlement as another profile, they are qualitatively different in terms of their personalities and psychosocial outcomes. Study 2 now demonstrates that these profiles are also heterogeneous in the ways that they change over time, for example, grandiose entitlement has a better chance of moving towards a healthy and secure form of self-esteem than does vulnerable entitlement, and grandiose and vulnerable entitlement may interchange to some

extent. Study 2 also begins to investigate the narcissism epidemic: are narcissism and entitlement increasing over time? The results from Study 2 show no signs of increasing entitlement; rather, most profiles appear to be on a slow path towards higher self-esteem, and lower entitlement. But as Study 2 only measures change across one year, we turn to Study 3.

Study 3 uses the novel approach of Cohort-Sequential Latent Growth Models to combine the measurement of both longitudinal change in entitlement over six years, and age differences across the lifespan ( $N = 10,412$ ). This allows competing theories about differences in entitlement across generational cohorts to be tested. Ideally, in order to account for heterogeneity in entitlement, Study 3 would make use of longitudinal person-centered approaches (see Laursen & Hoff, 2006; Muthén & Muthén, 2000). Unfortunately, in order to have sufficient power to run such a model, more waves of data would be needed (Preacher et al., 2008; Sibley & Milojev, 2014). Instead, Study 3 focuses in on entitlement, the key concern behind the narcissism epidemic, to avoid conflation with self-esteem and adaptive facets of narcissism. The following chapter is the author's copy of a manuscript published in the *Personality and Social Psychology Bulletin*. The paper is replicated here as published, with only minor formatting changes to maintain consistency across the thesis. As such, some material may be a repetition of the material reviewed within Chapter Two. *Mplus* syntax for the analysis conducted in Study 1 is presented in Appendix B (Supplementary Files 5 and 6). Missing data was handled using Full Information Maximum Likelihood. The research was supported by a Templeton World Charity Foundation Grant (ID: 0077). Please see:

Stronge, S., Milojev, P., & Sibley, C.G. (2018). Are people becoming more entitled over time? Not in New Zealand. *Personality and Social Psychology Bulletin*, *44*(2), 200-213. doi: 10.1177/0146167217733079

**CHAPTER SIX**

## **Are People Becoming More Entitled over Time? Not in New Zealand**

Both the public discourse and psychological literature are concerned with the current ‘narcissism epidemic’ or ‘culture of entitlement’ – that is, the idea that narcissism and entitlement are on the rise (Stein, 2013; Twenge, 2013a). In particular, ‘millennials’ (born between 1982 and 2004) are believed to be more narcissistic and entitled than previous generations, due to recent cultural shifts towards individualism and selfishness (Stein, 2013; Twenge, 2006), producing unrealistically positive self-views associated with grandiose behaviour, aggression, and exploitativeness (Campbell, Bosson, Goheen, Lakey, & Kernis, 2007). However, providing data to support these claims is challenging, as developmental trends (levels of entitlement changing as people age and mature) and societal trends (shifts in culture over time and differences between generations) are likely to be occurring at the same time. Additionally, any changes are likely to differ from context to context, and yet research has largely been confined to the United States. In the current research, we analyse a representative sample of New Zealanders and employ Cohort-Sequential Latent Growth Models (LGMs) to present new data on this issue, tracking change in psychological entitlement across 6 years over the entire adult lifespan for men and women.

### **Narcissism and Entitlement over Time**

Efforts to untangle cohort effects from developmental effects and examine change in narcissism across generations have been made by collecting multiple cross-sectional samples of North American college students across several decades and comparing their narcissism scores (see Twenge, 2013a; Trzesniewski & Donnellan, 2010 for a review). However, the results from research in this area are conflicting. In the first such cross-temporal meta-analysis, Twenge, Konrath, Foster, Campbell, and Bushman (2008a) investigated change in narcissism scores (as measured by the Narcissistic Personality Inventory or NPI; Raskin & Terry, 1988) among samples of college students. Results showed that NPI scores increased

over time from the 1980's up to 2006, by approximately a third of a standard deviation. The authors theorised that rising levels of individualism over time have produced a cultural shift where college students today are more entitled than college students at the same age in previous decades and generations (Twenge et al., 2008a).

However, when Trzesniewski, Donnellan and Robins (2008b) compared narcissism scores among college and high school students from 1982 to 2007, they concluded that there was no change in NPI scores. These data were subsequently reanalysed a number of times with various subsamples added or removed, resulting in Twenge and Foster (2008; 2010) concluding that there was an increase in narcissism over time, and Roberts, Edmonds, and Grijalva (2010) and Donnellan, Trzesniewski, and Robins (2009) concluding that there was no change in narcissism over time. In other data, Stewart and Bernhardt (2010) found that narcissism scores among 2004 to 2008 undergraduate students were higher than scores among undergraduates before 1990, whereas Grijalva et al.'s (2015) meta-analysis found no difference in narcissism scores among undergraduates between 1990 and 2013, and Trzesniewski and Donnellan (2010) found no evidence for increases in egotism, self-enhancement, individualism or self-esteem over time among US high school students (1976-2006).

In sum, there is no definitive pattern of narcissism increasing, or staying the same, over time or across generations. Next, we review the research relating specifically to entitlement, the measure employed in the current research. Psychological entitlement is a core facet of narcissism (Krizan & Herlache, 2017) and represents a global sense that one is entitled to more than others (Campbell et al., 2004). It is known as the 'socially toxic' aspect of narcissism (Ackerman et al., 2011; Trzesniewski, Donnellan, & Robins, 2008a); while narcissism as a whole may include some adaptive elements that are associated with positive psychosocial outcomes (Campbell et al., 2007; Ackerman et al., 2011), entitlement is

associated with high neuroticism, low agreeableness, higher selfishness and aggression, lower empathy, poorer mental health, and lower self-esteem (Campbell et al., 2004; Ackerman et al., 2011; Brown et al., 2009; Clarke et al., 2015; Grubbs & Exline, 2016). Therefore, psychological entitlement represents a wholly maladaptive trait that taps into the heart of concerns about rising narcissism (cf. Crowe, LoPilato, Campbell, & Miller, 2016a).

Entitlement can have differing associations to the NPI scale (Ackerman et al., 2011; Brown, Budzek, & Tamborski, 2009; Clarke, Karlov, & Neale, 2015), but in this case seems to show the same pattern of conflicting results across time. Several of the previously reviewed studies (Donnellan et al., 2009; Trzesniewski et al., 2008b; Twenge & Foster, 2010) broke the NPI scale down into subscales, including the entitlement subscale. In Trzesniewski et al.'s (2008b) study, where no change was found over time with the overall NPI scale, entitlement showed a small increase over time. Yet in other research, entitlement showed no change over time when an increase was found in the NPI scores as a whole (Donnellan et al., 2009; Twenge & Foster, 2010). We interpret these findings with caution as separating the NPI into its subscales lowers its reliability (e.g., Brown et al., 2009), and the entitlement subscale and Psychological Entitlement Scale (PES) employed in this study are related but separate measures (Campbell et al., 2004; Grubbs & Exline, 2016).

### **Associations with Age**

We now turn from cohort research investigating the same age groups across time, to cross-sectional research using samples with wide age ranges at a single time point. Results consistently show that narcissism is negatively associated with age (Foster, Campbell, & Twenge, 2003; Wilson & Sibley, 2011). Research using two large samples of New Zealand adults found that both narcissism and entitlement had negative relationships with age; people in their 20's scored the highest, but then scores progressively lowered up to age 75 (Wilson &

Sibley, 2011). Foster et al. (2003) found similar results in their large, online, cross-cultural sample, with narcissism and entitlement showing negative trends across ages 8 to 83.

These findings fit well with the view of narcissism as a trait that naturally decreases across the lifespan (Kohut, 1977). In fact, multiple theories such as the maturity principle (Caspi et al., 2005) and social investment theory (Roberts & Wood, 2006), suggest a pattern of moving away from entitlement and narcissism as one ages, matures, and increases their commitment to social roles and institutions such as work, marriage, and the community. In Roberts et al.'s (2010) cross-sectional sample, they found that splitting participants into age-dependent roles, such as student or grandparent, magnifies the typically observed negative association between narcissism and age. These results provide strong support for the theory that narcissism is likely to decrease across the lifespan as people take on more mature, interpersonal roles with high levels of commitment.

### **Gender Differences**

Gender has a clear and consistent relationship to narcissism, with men scoring higher than women on measures of both narcissism and entitlement (Foster et al., 2003; Wilson & Sibley, 2011). Grijalva et al.'s (2015) meta-analysis showed that men scored higher on narcissism across 355 studies, and in particular, men scored higher on the entitlement facet of the NPI. However Grijalva et al. (2015) did not find an interaction between gender and age or gender and time in their meta-analysis, with men simply scoring higher in narcissism across different ages and different generational cohorts. In contrast, cross-sectional data within New Zealand support the idea that there are gender differences in changes in entitlement, finding that while entitlement was generally negatively associated with age for both men and women, the trend for men was much weaker and lagged behind the trend for women by about 10 to 15 years (Wilson & Sibley, 2011). Additionally, in previous research where increases in narcissism have been found, results suggests that only women's scores are increasing, as they

come more in line with men's higher narcissism scores (Donnellan et al., 2009; Twenge et al., 2008a; Twenge & Foster, 2010). Therefore, we aim to examine change in entitlement separately for men and women to avoid such confounds.

### **Unanswered Questions**

Despite the body of research surrounding narcissism and entitlement, there are several issues that remain unaddressed. Firstly is the question of whether change in narcissism is occurring – or not occurring – among *all* age groups. Terracciano (2010) and Twenge et al. (2008a) both point out that, while there is some evidence that societal trends may be affecting levels of entitlement, research has focused exclusively on children, adolescents, and college students. It is difficult to argue that increases in narcissism are occurring only among millennials when there is no similar research available in other age cohorts for comparison. Any increases in narcissism could be the same across all age cohorts, and representative of a larger societal shift. Additionally, if there are increases in entitlement over time among young people only, this effect may be a short-lived phenomenon that does not have a long-lasting impact into adulthood as young people navigate a particularly self-focused life stage (Arnett, 2010; Stewart & Bernhardt, 2010; Terracciano, 2010). Change in entitlement may show a completely different trajectory beyond the ages that have been researched so far.

Furthermore, college and high school student samples are not particularly representative of the population and often make use of samples of convenience, so results cannot be readily generalised to other groups (Arnett, 2013; Donnellan et al., 2009; Trzesniewski & Donnellan, 2010; Trzesniewski et al., 2008a). Undergraduates now and in previous decades all score above the test norms in narcissism (Stewart & Bernhardt, 2010), so those who attend college are specifically unrepresentative in terms of narcissism. Rising college costs (Davidson, 2015) also mean that each annual sample of college students across the decades may be comprised of wealthier and wealthier segments of the population. Thus,

college students are not only unrepresentative of the general population; they may also be *increasingly* unrepresentative over time – and increasingly likely to have higher levels of entitlement relative to other young people.

Finally, while discussion of the narcissism epidemic has long since reached New Zealand media (e.g., Remes, 2016), all of the previous research tracking change in narcissism over time has been conducted within the single cultural context of the United States. NPI scores have been found to be higher in the United States than in other locations such as Asia or the Middle East (Foster et al., 2003), suggesting that research from the United States is unlikely to be representative of changes in other countries. Although New Zealand is also a Western country, there are still potential cultural differences in the expression and development of narcissism. New Zealand is a country that emphasises humility as representative of the national image (Sibley, Hovard, & Liu, 2011a), and Stronge, Cichocka and Sibley (2016) reported that 91% of their census weighted New Zealand sample had low levels of psychological entitlement. Thus we have some reason to believe that entitlement levels are lower in New Zealand than in the United States, and that entitlement could develop in different ways as well. The aim of the current research is to address these issues using longitudinal research conducted with a large, representative sample of New Zealanders that is heterogeneous in terms of age and other demographic factors.

### **Cohort-Sequential Latent Growth Model**

To investigate change in entitlement over the lifespan, we employ Cohort-Sequential Latent Growth Models in order to take into account changes over both time and age (Preacher, Wichman, Mac, Callum, & Briggs, 2008; Prinzie & Onghena, 2005). We use two different but complementary approaches to do so (see Method section for details). First, we estimate a single group model that estimates change over six years across the adult lifespan. If a participant was 18 in 2009, 19 in 2010, and 20 in 2011, their responses inform the

estimation of the growth curve at those particular ages. Similarly, a person who was 41, 42, and 43 at the different assessment points would then inform a later portion of the growth curve. With this method, each participant contributes to different parts of the curve across the adult lifespan based on the available data (currently six years in the NZAVS). Given the size and range of the NZAVS sample, we can estimate changes in psychological entitlement over time across the entire adult lifespan (18-74).

Second, we use a multi-group model to estimate change across five years in separate but sequential 5-year birth cohorts. This approach means we can compare change in entitlement across different birth cohorts and see if, for example, younger generations are increasing in entitlement more rapidly or differently to older generations. In addition, the level of entitlement for one age group at their initial point of assessment (2009) will overlap with the estimated level of entitlement for the previous age cohort at their final assessment (2013) – thus we can estimate whether a 25 year old today is more entitled than a 25 year old was 5 years before. Taken together, these approaches allow us to observe change as people age, but also assess the magnitude of cohort differences. Naturally, in order to precisely measure the extent to which change over time is due to aging versus generational differences, many more years of data would be needed – a lifetimes worth. However, the Cohort-Sequential LGMs offer a method that provides useful information and assists our interpretation of developmental and cohort effects.

Milojev and Sibley (2016) used this technique to investigate change in the HEXACO personality traits over time and age. They found that honesty-humility (which serves as an approximation of reverse-coded narcissism) showed a steady, positive linear relationship across age, and increases in honesty-humility were found within each 5-year birth cohort over a recent five year period. This suggests that honesty-humility increases as people age, indicating a possible developmental effect. However, there was evidence of cohort

differences among younger cohorts, as people at age 34 had higher honesty-humility in 2014 than 34 year olds in 2009– that is, honesty-humility has increased over time at that age. However, honesty-humility includes facets of sincerity and fairness, and so does not provide a pure (reverse-coded) estimate of entitlement (Ashton & Lee, 2007; Milojev & Sibley, 2016). In our reanalysis of these data (Milojev & Sibley, 2016), we use items assessing entitlement only. We also aim to expand on these results by modelling separate LGMs for men and women, as gender differences in narcissism (both cross-sectionally and over time) are well-documented (Foster et al., 2003).

### **Overview and Guiding Hypotheses**

In summary, the association between birth cohorts and entitlement is not particularly clear (e.g., Trzesniewski et al., 2008b; Twenge et al., 2008a), and the generalizability of previous research is questionable. As much of the previous research has been conducted within the United States, while the current research is conducted within New Zealand (a country that emphasises low entitlement as part of the national image; Sibley et al., 2011a), we expect our results to be more in line with those that show no change in entitlement over time. Taken together with the cross-sectional negative association between age and entitlement, which is well supported both empirically and theoretically (Caspi et al., 2005; Wilson & Sibley, 2011), we theorise an overall developmental pattern where entitlement decreases across the lifespan as people age across six years, but entitlement does not increase over time over the last five years.

In investigating our hypotheses, we would expect to see that the single-group model has a negative slope across age. Because the single-group model incorporates both the cross-sectional association between entitlement and age, as well as longitudinal change across six years, we turn to the multi-group model in order to determine whether this negative relationship occurs from developmental change, or a generational difference. If it is a largely

developmental effect, the slopes for each 5 year birth cohort from the multi-group model should fit well with the overall slope from the single-group model, and be negative (or potentially non-significant given the time-frame). In contrast, if entitlement is increasing over time, the multi-group model should display positive slopes, indicating that entitlement has increased across five years (even as the single-group model may show a negative association between entitlement and age driven by cohort differences). If this occurs across all age cohorts, it would suggest that entitlement is on the rise generally; if this pattern is only found in younger cohorts, then it would suggest that entitlement is increasing among younger generations but not older generations. Finally, we also model separate trajectories of change in psychological entitlement for men and women. Although some research has found that gender does not moderate these changes (Grijalva et al., 2015), the existence of contrasting evidence (Donnellan et al., 2009; Twenge et al., 2008a; Twenge & Foster, 2010) suggests it is worth investigating.

### **Method**

Analyses were conducted for the 10,412 (62.5% women) participants who responded to at least three out of the six waves of the New Zealand Attitudes and Values Study (NZAVS). The NZAVS is an on-going study that has been conducting an annual longitudinal panel survey of adult New Zealanders since 2009 (Time 1) through 2010 (Time 2), 2011 (Time 3), 2012 (Time 4), 2013 (Time 5), and 2014 (Time 6). We present a focused reanalysis of the data from Milojev and Sibley (2016). The items used to measure psychological entitlement make up part of the Milojev and Sibley measure of honesty-humility. However, Milojev and Sibley focus on tracking changes in honesty-humility, and Big Six personality more generally, while in the current research, we track change in psychological entitlement, separately for men and women.

The majority of the participants identified as New Zealand European (91.1%), while 15.5% of the sample identified as Māori, 4.1% identified as Pacific, and 4.7% identified as Asian. Socioeconomic status was calculated using the New Zealand Deprivation index, a decile based measure of deprivation in neighbourhood units across the country with 1 representing the most affluent neighbourhoods and 10 representing the most deprived (see Atkinson, Salmond, & Crampton, 2014). The mean score for the NZ Deprivation index in the sample was 4.86 ( $SD = 2.80$ ). The mean age of the sample was 47.92 ( $SD = 14.91$ ), and ages ranged from 13 to 94. For the purposes of estimating the Multi-Group Cohort-Sequential LGMs, participants were grouped into 5-year cohorts based on the year of their birth. These birth cohorts and their respective sample sizes are presented in Table 6.1.

Table 6.1

*Sample sizes and the represented age range for the 5-year birth cohorts for women and men.*

<b>Birth Cohort</b>	<b>N (women)</b>	<b>N (men)</b>	<b>Age in T1 (approx. 2009)</b>	<b>Age in T5 (approx. 2013)</b>
1940 and older	187	187	69	74
1941 to 1945	290	261	64	69
1946 to 1950	420	321	59	64
1951 to 1955	457	318	54	59
1956 to 1960	501	297	49	54
1961 to 1965	491	299	44	49
1966 to 1970	429	234	39	44
1971 to 1975	392	162	34	39
1976 to 1980	285	104	29	34
1981 to 1985	212	58	24	29
1986 to 1990	219	101	19	24
1991 and younger	84	21	18	23
<b>Total</b>	<b>3,967</b>	<b>2,363</b>	-	-

We tested for demographic differences between those that responded to at least three waves and those who did not respond to enough waves and thus were excluded from the models. Looking at differences in the first wave, those who were excluded from the model for not responding in enough waves were younger ( $M = 43.49$ ,  $SD = 14.70$ ) than those included in the model ( $M = 47.91$ ,  $SD = 14.91$ ,  $t_{(19,801)} = -25.24$ ,  $p < .001$ ). The excluded participants were also more likely to be living in less affluent areas ( $M = 5.06$ ,  $SD = 2.85$ ) than included participants ( $M = 4.86$ ,  $SD = 2.79$ ,  $t_{(11,030)} = 3.60$ ,  $p < .001$ ), but there were no significant gender differences between excluded and included participants (62.0% female vs. 62.5%, respectively). Excluded participants were slightly higher in psychological entitlement ( $M = 2.81$ ,  $SD = 1.43$ ) than those included in the model ( $M = 2.67$ ,  $SD = 1.36$ ,  $t_{(10,276)} = 5.34$ ,  $p < .001$ ). For a more detailed analysis of sample retention and bias associated with the longitudinal nature of the NZAVS please refer to Satherley et al. (2015).

## **Materials**

Psychological entitlement was measured by a short-form, 2-item measure adapted from Campbell et al. (2004). These questions were embedded in the larger NZAVS questionnaire, among items assessing HEXACO or Big 6 personality, all measured by a Likert scale from 1 (very inaccurate) to 7 (very accurate). The items used to measure entitlement were: “[I] feel entitled to more of everything” and “[I] deserve more things in life”. The mean scale score was used in the analyses, and was constructed by calculating the mean of the two item scale. Scale reliability estimates using Cronbach’s  $\alpha$  were stable, ranging from .70 to .73 across the six points of assessment.

## **Analysis**

As described earlier, we used two different but complementary estimations of Cohort-Sequential Latent Growth Models in order to assess change in levels of psychological entitlement across the lifespan (Milojev & Sibley, 2016; Preacher et al., 2008; Prinzie &

Onghena, 2005). Firstly, we employed a Single-Group Cohort-Sequential Latent Growth Model to estimate an overall growth trajectory for psychological entitlement between the ages of 19 to 74. Note that we included all participants in the analyses, including those younger than 18 and older than 74, however we did not include them in the estimation of model-implied growth trajectories as these groups have small sample sizes which may be unreliable (see Table 6.1). Secondly, we employed a Multi-Group Cohort-Sequential Latent Growth Model for each five year birth cohort (presented in Table 6.1) across the same age range. This second approach allows us to assess whether cohort effects are present in the estimated change trajectories in entitlement. The two types of models were estimated in *Mplus 7.4* (Muthén & Muthén, 1998-2015) using maximum likelihood with robust estimation of standard errors (MLR).

To investigate gender differences in change in entitlement, we used a multi-group approach for both models, allowing for differences between men and women and estimating separate growth trajectories. We allowed the intercept and growth factors to differ for men and women, thus enabling us to estimate separate rates of change in psychological entitlement across the lifespan. We constrained the variances for the growth factors to equality as we assume that the levels of individual differences in the rates of change are equal for men and women.

### **Single-Group Cohort-Sequential Latent Growth Model**

Single-Group Cohort-Sequential LGMs were estimated based on scale means of entitlement at each of the six waves of annual assessments. The assessments correspond to the years 2009 (Time 1), 2010 (Time 2), 2011 (Time 3), 2012 (Time 4), 2013 (Time 5), and 2014 (Time 6). In order to estimate developmental change across the age range, participants' ages were used as individual varying time indicators. A participant who was 19.50 years of age at their first response at Time 1 would be 20.50 years of age at the follow-up at Time 2,

assuming that they completed each wave at a yearly interval. As participants rarely complete their responses exactly one year apart (i.e., 350 days for some participants, 400 days for others), participants' exact ages (to two decimal places) were estimated at each time point, allowing for variation in age at assessment points. The responses from a participant who is 19.50 years of age at Time 1 will inform estimation of the growth curve in that area of the age range, while the response from someone who was 41.50 years of age at Time 1 will inform estimation of a later part of the growth curve. With the diverse range of age-cohorts represented and the large number of participants of overlapping ages, a growth curve can be estimated representing change in entitlement over time from ages 19 to 74, with the different participants' data informing different portions of the curve.

We modelled the rate of change in entitlement as a polynomial growth function including a linear, quadratic, and a cubic component. Even if these components were not significant, they were retained in the model in order to adjust for possible quadratic or cubic effects while estimating the linear component of the growth model. It is entirely possible that change over time follows a curvilinear pattern, so even if we were not yet able to statistically detect such patterns, they should be adjusted for. It also provides a more robust test of the linear component of the model.

A latent intercept ( $i$ ) and a latent slope ( $s$ ) were estimated based on the participants' ages estimated as individually varying time indicators, using the TSCORE function in *Mplus*. Age was centered on the sample means for men and women. Quadratic ( $q$ ) and cubic ( $c$ ) slopes were also estimated. The latent intercept was estimated by fixing the six factor loadings (T1 to T6) to 1. The latent intercept thus estimated the mean levels of psychological entitlement at the sample mean age, for both men and women. The latent slope was estimated based on individually-varying indicators of participants' age over time (T1 to T6). Similarly the quadratic and the cubic latent slope were estimated based on the quadratic and cubic

functions of the individually varying indicators of participants' age over time, respectively. Thus, the latent linear (s), quadratic (q), and cubic (c) slopes represent the linear or curvilinear change trajectory for entitlement across the available age range (19 through to 74).

### **Multi-group Cohort-Sequential Latent Growth Model**

To estimate the Multi-Group Cohort-Sequential LGMs the sample was organised into 12 sequential 5-year birth cohorts as presented in Table 6.1, for both men and women ( $n = 6,330$ ). In congruence with the 5-year birth-cohorts, the multi-group growth model was estimated based on the first five points of assessment (Time 1 to Time 5). The 12<sup>th</sup> birth cohort (born in 1991 and later) was removed from the multi-group analyses due to small sample size (see Table 6.1), leaving 11 5-year birth cohorts in the analysis (those born between 1940 and 1990). The multi-group models essentially estimate a different latent growth trajectory in psychological entitlement for each of these eleven birth cohorts. While the NZAVS data allow for the use of 6-year birth cohorts, 5-year birth cohorts were used based on the common practice in the available literature on aging and normative change (e.g., Lucas & Donnellan, 2011; Milojev & Sibley, 2016).

As with the single-group model, the multi-group models were estimated based on the individually varying time indicators (i.e., date of response rather than age at time of response). Within these models a latent intercept (i) was estimated as in the single group models, along with the latent slope (s), for each of the 5-year age cohorts seen in Table 6.1. The variances of the latent intercept and the latent slope, and the covariance between the intercept and slope were constrained to equality across the birth-cohorts. Unlike the single group models, only the linear slope was estimated in these models (refer to Milojev & Sibley, 2016, for Monte Carlo Simulations that estimate the power to detect varying effect sizes i.e., the latent slope, given the varying sample sizes of the cohorts).

Each cohort LGM estimated change in psychological entitlement over 5 years of assessment for that cohort – i.e., the 1986 to 1990 birth-cohort represented change from 19 years of age to 24 years of age; the 1981 to 1985 cohort represented change from 24 years of age to 29 years of age, and so on. For each 5-year age cohort, the youngest age represented by that cohort was taken as an indicator of age in this framework. As the multi-group models spanned consecutive 5-year periods, the organisation of birth cohorts into 5 year bands allowed us to sequentially organise the multiple LGMs. By employing this approach, the estimated levels of entitlement, the intercepts, and the latent change trajectories (i.e., the slopes) could be plotted across the adult lifespan (ages 19-74). This allows for simultaneous investigation of estimated cross-sectional cohort differences in the latent intercepts (i.e., the cohort differences in levels of entitlement at Time 1), the change trajectories in each cohort and the cohort differences in the rate of change (i.e., the latent slopes for each 5-year birth cohort), as well as the overall pattern of change in psychological entitlement that may be observed across the adult lifespan. Most importantly, this approach allows one to appreciate the age differences that are due to cohort differences, and those that are due to change over time. Sample *Mplus* syntax for the Single-Group and the Multi-Group Cohort-Sequential Growth Models can be found in Appendix B (Supplementary Files 5 and 6).

## Results

Descriptive statistics and bivariate correlations for psychological entitlement on the six assessment occasions are presented in Table 6.2. The mean of psychological entitlement at Time 1 was 2.67 on a scale of 1 to 7 ( $SD = 1.36$ ). The means of entitlement at all time points (overall and separate for men and women) are presented in Table 6.2. The one year test-retest correlation for psychological entitlement was .63 (Time 1 to Time 2), while the five year re-test correlation was .59 (Time 1 to Time 6).

### Single-Group Cohort-Sequential Latent Growth Models

The parameter estimates for the Single-Group Cohort-Sequential LGMs estimating mean-level change in psychological entitlement across the six annual assessments for men and women are presented in Table 6.3. Figure 6.1 shows the estimated values of psychological entitlement across ages 19 to 74 for women, while Figure 6.2 presents the same estimated values for men. The Single-Group Cohort-Sequential LGMs are represented by the dark lines within each figure. For women, the estimated mean level of entitlement at the sample mean age (about 46 years of age; or 46.2 specifically) was 2.76 [2.72, 2.79]. The LGM indicated a negative linear trend from age 19 to age 74. For men, the estimated mean level of entitlement at the sample mean age (50.8 years of age, specifically) was 3.01 [2.96, 3.05]. The LGM indicated a curvilinear trend, with psychological entitlement initially getting higher across the age range, and then lowering after the mid-30's.

### **Multi-Group Cohort-Sequential Growth Models**

The Multi-Group Cohort-Sequential LGMs are also presented in Figure 6.1 for women, and Figure 6.2 for men, with the estimates represented as the light lines within each age-cohort. These models estimate mean-level change between the five annual assessments – from October 2009 to July 2013 – within each of the 11 five-year birth cohorts for men and women. For women, the slopes are non-significant in almost all cohorts, indicating there is no within-cohort change over time. The exception is the 69-74 age cohort, where a positive, significant slope is shown ( $s = .066$ ), indicating that the oldest age cohort reported increasing levels of psychological entitlement over 5 years. For men, we see a similar pattern with no within-cohort change over time observed in most age cohorts, but a significant positive slope in the 64-69 ( $s = .041$ ) and 69-74 ( $s = .051$ ) age cohorts. For both men and women, the Multi-Group Cohort-Sequential LGM indicates an overall change trajectory that is subjectively comparable to that estimated by the Single-Group Cohort-Sequential modelling framework

(represented as the darker line in Figure 6.1 and Figure 6.2, and described in the previous section).

Table 6.2

*Descriptives and bivariate correlations for psychological entitlement at the six assessment points. All correlations are significant at  $p < .001$ .*

	Mean (SD)			Bivariate Correlations				
	Overall	Women	Men	1	2	3	4	5
Time 1	2.67 (1.36)	2.55 (1.34)	2.86 (1.38)	-				
Time 2	2.88 (1.36)	2.77 (1.35)	3.07 (1.36)	.625	-			
Time 3	2.80 (1.30)	2.70 (1.29)	2.96 (1.31)	.592	.647	-		
Time 4	2.78 (1.32)	2.68 (1.30)	2.96 (1.33)	.583	.615	.604	-	
Time 5	2.74 (1.30)	2.64 (1.29)	2.91 (1.29)	.561	.592	.585	.625	-
Time 6	2.65 (1.28)	2.56 (1.28)	2.82 (1.26)	.590	.594	.598	.628	.657

### Cohort Effects

In the multi-group models, the use of 5-year birth cohorts with the 5 yearly assessments means there is an overlap between the estimated mean level of entitlement at the last assessment of one birth cohort, and the mean-level of entitlement for the same age at the first assessment point of the next cohort. For example, the LGM for the youngest cohort used in our models estimates change from age 19 at the first assessment to age 24 at the fifth and final assessment. The LGM for the next cohort estimates change across the five yearly assessments, from age 24 to age 29. Therefore, the two models each provide an estimate of mean-level entitlement at age 24, one from the five-year latent change trajectory from age 19 to 24 (in 2013), and the second estimate from the initial level of the trait for those aged 24 to 29 (in 2009). The discrepancy between these two estimates can provide an indication of the

difference between the model-implied value based on change over time, and the model-implied value based on cohort differences. That is, we can examine whether the change in entitlement seen across five years among 19-24 years olds puts them in the same place developmentally as a 24 year old from five years before; if not, cohort differences may be at play.

Table 6.3

*Parameter coefficients for the single-group age-based Latent Growth Model for psychological entitlement for women and men, estimating the change trajectory from age 19 to 74.*

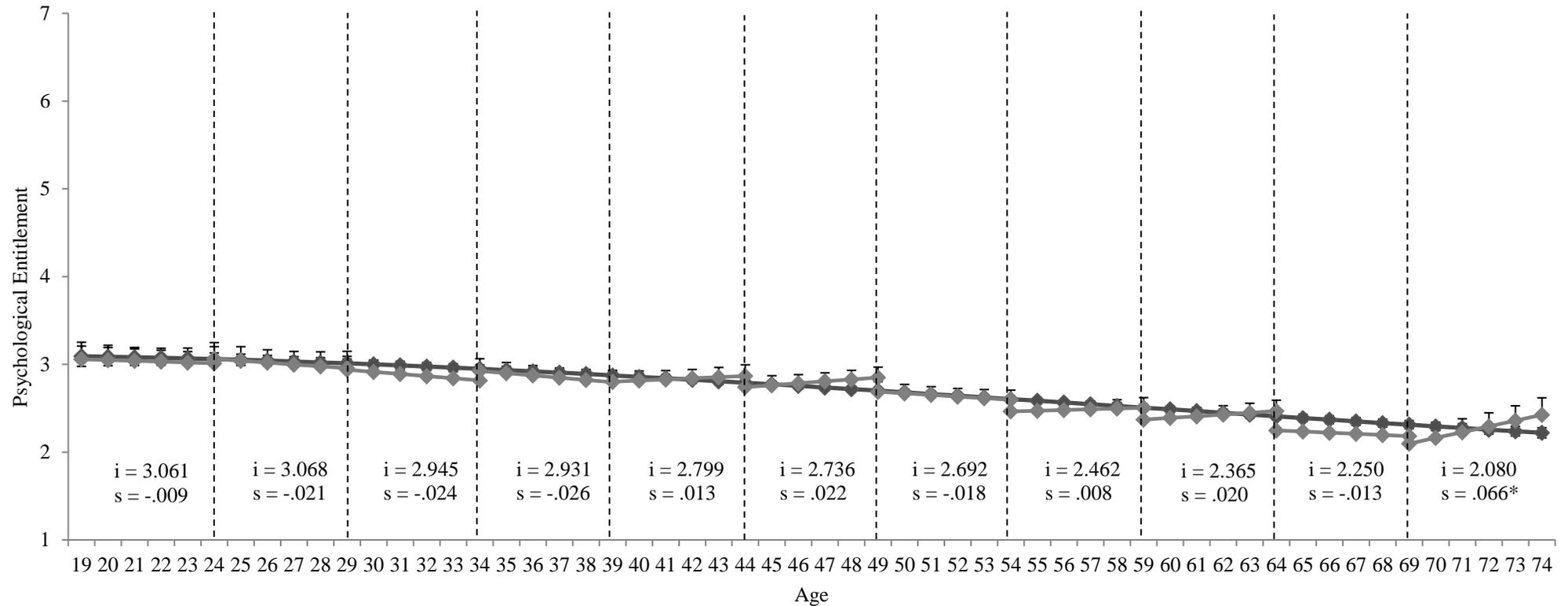
	<i>Estimate</i>	<i>se</i>	<i>p -value</i>	<i>95% CIs</i>		<i>Variances</i>
				<i>Low</i>	<i>High</i>	
<b>Women</b>						
Intercept	2.773	.019	<.001	2.736	2.810	1.074**
Linear Slope	-.178	.015	<.001	-.206	-.149	.322*
Quadratic Slope	-.013	.006	.042	-.026	.000	.030
Cubic Slope	.003	.002	.212	-.002	.008	.001
<b>Men</b>						
Intercept	3.120	.027	<.001	3.067	3.173	1.074**
Linear Slope	-.177	.019	<.001	-.214	-.140	.322*
Quadratic Slope	-.032	.009	.001	-.050	-.014	.030
Cubic Slope	.011	.003	.001	.005	.017	.001

Akaike Information Criterion = 124432.734; Sample-size adjusted Bayesian Information Criterion = 124510.118;  $N = 10,412$ ; \*\*  $p < .001$ , \*  $p < .05$

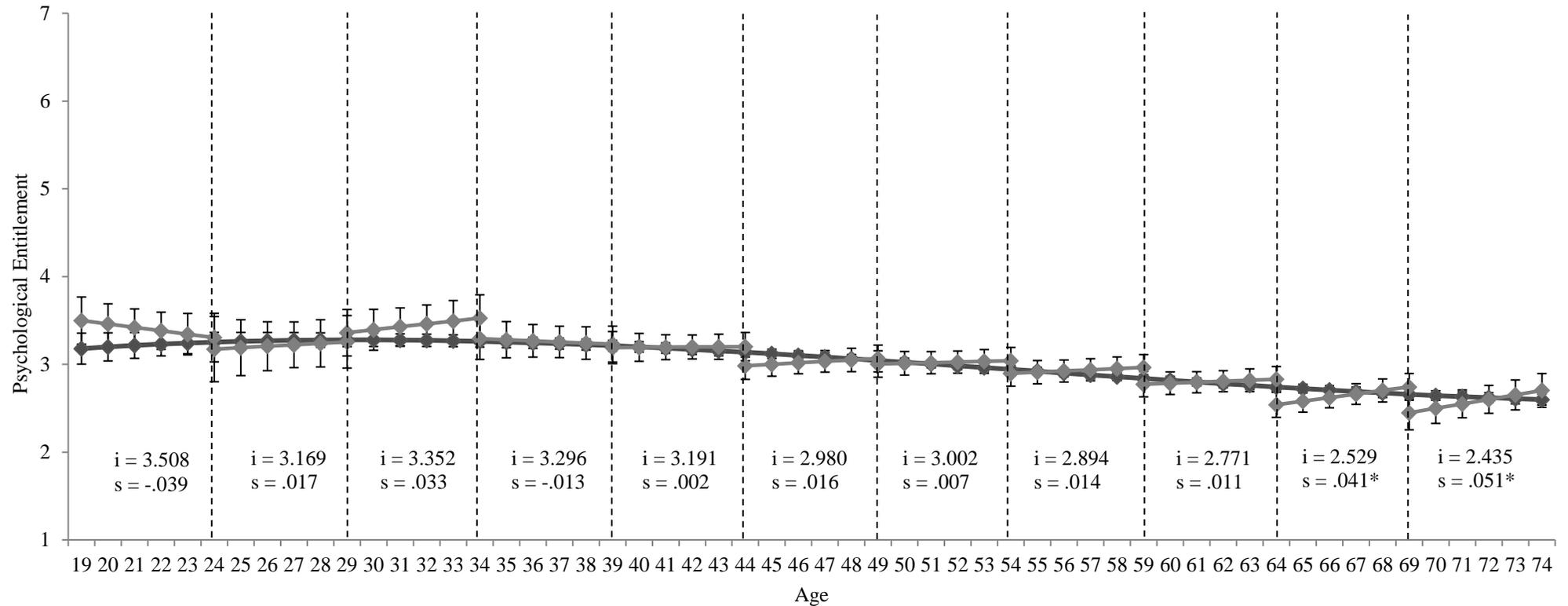
The differences in estimated values of entitlement at Time 5 (2013) and the estimated values for the same age at Time 1 (2009) are presented in Figure 6.3 for both men and women, and it can be seen that many of the differences between the overlapping ages are non-significant, with confidence intervals that pass through 0. However, there are some significant differences. Among women, the results indicate that the 59-64 age cohort had higher estimated levels of entitlement than the 64-69 age cohort. Among men, differences can

be observed where the 59-64 and 64-69 age cohorts have higher estimated levels of entitlement than their respective subsequent age cohorts. The differences described here are not ideal indicators of cohort effects, but they are a novel method for investigating cohort effects (see Milojev & Sibley, 2016) given the lack of longitudinal data collected across generations and consisting of participants of all ages.

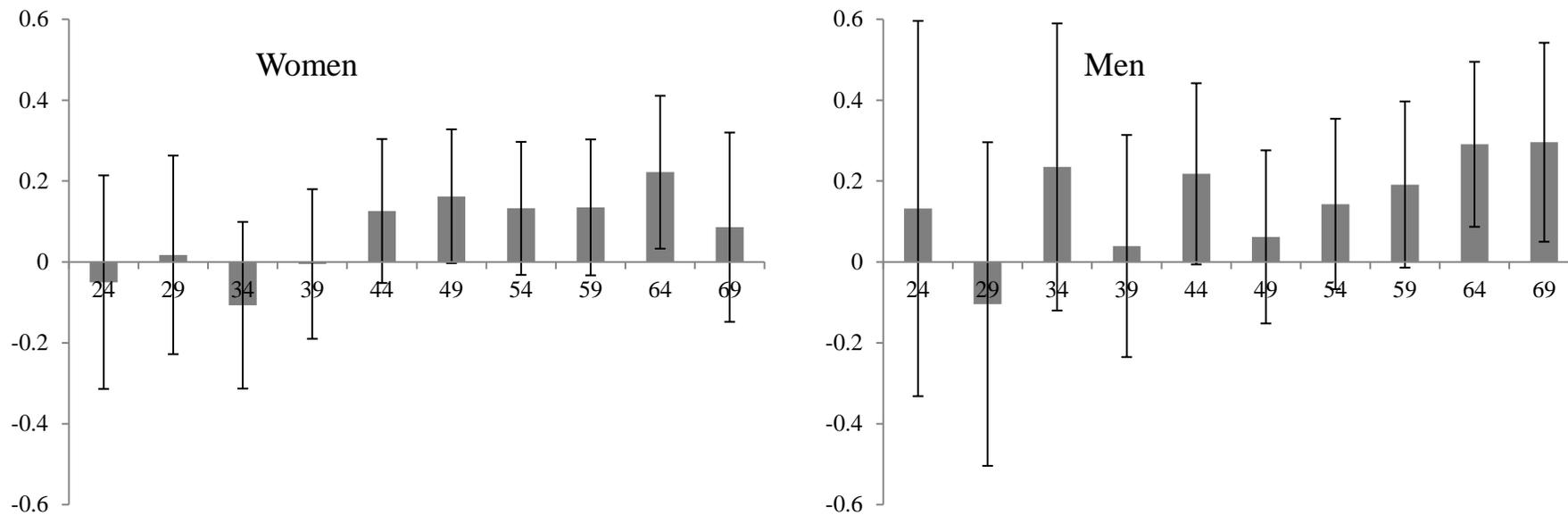
We additionally conducted a formal test for cohort differences across the various change trajectories by running a set of models where the latent intercepts and the latent slopes were constrained to equality across each age cohort. We then compared the fit of these constrained models to the baseline models where the intercepts and slopes are free to vary across the age cohorts (those presented in Figure 6.1 and Figure 6.2). The unconstrained models (AIC = 72914.991, aBIC = 73100.908) provided a better fit than the constrained models (AIC = 80075.476, aBIC = 80093.353), as indicated by the smaller information criteria values (Akaike Information Criteria and sample size adjusted Bayesian Information Criteria) in the unconstrained models. These results suggest that cohorts are changing at different rates or in different directions (possibly reflecting the significant positive slopes in the oldest cohorts while the other cohorts show no change).



*Figure 6.1.* Developmental patterns of normative (mean-level) change in psychological entitlement for women. Each panel shows the latent change trajectories based on the (a) six-year single-group Cohort-Sequential Latent Growth Model (dark line;  $N = 6,509$ ), and (b) five-year multi-group Cohort-Sequential Latent Growth Models across the 5-year birth cohorts presented in separate sections (light lines;  $n = 3,967$ ). The estimates of the latent intercept and the latent slope for each cohort are presented in the graph. Estimates are based on the mean-levels of psychological entitlement (y axis) across age and assessments (x-axis). The 95% confidence intervals are presented as error bars around each point estimate. Within each cohort,  $i$  = intercept for that parameter,  $s$  = the fixed effect for the slope.



*Figure 6.2.* Developmental patterns of normative (mean-level) change in psychological entitlement for men. Each panel shows the latent change trajectories based on the (a) six-year single-group Cohort-Sequential Latent Growth Model (dark line;  $N = 3,903$ ), and (b) five-year multi-group Cohort-Sequential Latent Growth Models across the 5-year birth cohorts presented in separate sections (light lines;  $n = 2,363$ ). The estimates of the latent intercept and the latent slope for each cohort are presented in the graph. Estimates are based on the mean-levels of psychological entitlement (y axis) across age and assessments (x-axis). The 95% confidence intervals are presented as error bars around each point estimate. Within each cohort,  $i$  = intercept for that parameter,  $s$  = the fixed effect for the slope.



*Figure 6.3.* Estimated cohort effects between each of the cohorts as seen in Figure 6.1 (women) and Figure 6.2 (men). The bars represent the difference between the mean-level of psychological entitlement at the intercept of the latent growth model for each age cohort, and the mean-level at the participants' age as estimated by the latent growth model from the preceding cohort. For example, the first bar in each panel indicates the difference between the level of psychological entitlement at age 24 based on the intercept of the 24 to 29 age cohort, and the level of psychological entitlement at age 24 as estimated by the latent growth model from the previous cohort (19 to 24). Thus bars with a positive value represent an age with higher model-implied levels of psychological entitlement in 2014 than the initially assessed levels of psychological entitlement in 2009 at the same age. Error bars represent 95% confidence intervals.

## Discussion

The current research investigated change in psychological entitlement across the adult lifespan, using Cohort-Sequential Latent Growth Models and a large, heterogeneous longitudinal sample of adult New Zealanders. Overall, entitlement shows a steady negative trend across the ages 19 to 74. The multi-group model fits well with the single-group model, and there is little evidence of cohort differences. Younger birth cohorts (those defined as millennials) have higher levels of entitlement than older cohort birth cohorts, but their entitlement is not on the rise over time; instead, this may be the starting point of a lifelong decrease in entitlement as people age and mature.

The Single-Group Cohort-Sequential Latent Growth Models indicated a steady negative association between entitlement and age among women. Among men, a small initial positive trend in entitlement is observed from age 19 until the early 30's, at which point men also begin to show the negative trend across age cohorts. This fits with previous research demonstrating negative relationships between age and both entitlement and narcissism (Foster et al., 2003; Wilson & Sibley, 2011). With six years of data, we cannot yet be confident that entitlement decreases across the lifespan as people age, however, this is the 'least contaminated' model; in addition to measuring entitlement across age, we also integrate longitudinal change across six years. Nonetheless, this does not rule out the possibility of cohort effects contributing to the overall negative slope. For further clarification, we turn to the Multi-Group Cohort-Sequential Latent Growth Model.

The multi-group model was largely non-significant across the multiple birth cohorts, suggesting no change in entitlement over time. Significant positive slopes were found in the oldest age cohort (69-74) among women, and the two oldest cohorts (64-74) among men, suggesting that entitlement has increased among these ages, and only these ages, between 2009 and 2013. This may simply demonstrate a developmental pattern where those who have

entered retirement feel that they have worked hard and deserve more at this point in their life. These results hold parallels to Marsh, Nagengast, and Morin's (2012) "la dolce vita" effect where people become more self-focused and more self-content in their old age. There are no increases across time in any of the other birth cohorts, and in particular, there is no increase in entitlement across five years in those who fit in the millennial generation.

There are two interpretations for the largely non-significant multi-group model, while entitlement showed a negative trend across the lifespan in the single-group model. Firstly, if entitlement is not changing over time, then differences across the lifespan are largely driven by cohort effects (e.g., Milojev & Sibley, 2016). However, we tested for cohort differences in entitlement levels at select ages in 2009, and again in 2013, and there were very few differences. The only significant difference for women was at age 64, suggesting that women at age 64 in recent years have higher entitlement than women at age 64 five years prior. For men, there were significant positive differences at ages 64 and 69, similarly suggesting that entitlement is higher at those ages today than at the initial assessment in 2009. Younger cohorts having higher entitlement than their subsequent older cohort could contribute to the negative trend found across the lifespan. The evidence certainly suggests that some cohort differences are at play in older birth cohorts. However, given that these findings are limited to a few cohorts, they do not fully explain the negative association between entitlement and age, as the single-group model is informed by data from the entire age range. The second interpretation is developmental – if cohort effects cannot explain the negative association in full, then developmental change likely plays a role in the negative trend in entitlement across the lifespan, even though we may not (yet) detect decreases in entitlement across a period of five years; developmental changes are likely to be slow, incremental, and difficult to detect.

Entitlement has long been argued to be the domain of youth. Several researchers have put forward the view that entitlement is high among children, adolescents, and young adults,

but that this is only temporary; entitlement should follow a decreasing developmental pattern as people grow, mature, and become committed to a variety of social roles such as work, marriage, and children (Arnett, 2010; Caspi et al., 2005; Kohut, 1977; Roberts & Wood, 2006). Roberts et al. (2010) argue that even when small differences are found across generations, they are unlikely to be larger or more important than the developmental changes. Our results support this view, with entitlement levels lowering across age cohorts, while there is limited evidence for cohort differences. Thus when older generations look at younger generations and judge them to be more narcissistic than themselves, they may in fact be correct – at their current age. However, if entitlement follows a developmental pattern, these older generations may have been just as entitled when they were young. As Roberts et al. (2010) put it, “every generation is Generation Me... until they grow up” (pp. 7).

It is difficult to compare our results directly to previous longitudinal studies, as the current research was conducted within New Zealand as opposed to the United States, with a representative heterogeneous population as opposed to college and high school students, and examines data from a shorter time-span than previous research. However, despite these differences and our earlier discussion of New Zealand’s different cultural context, our results do fit well with studies from the United States that conclude there is no increase in entitlement over time (Donnellan et al., 2009; Grijalva et al., 2015; Roberts et al., 2010; Trzesniewski et al., 2008b; Trzesniewski & Donnellan, 2010). The results from the multi-group model showed no significant change in entitlement within the same age ranges examined in previous studies. Additionally, the cohort differences we found were minimal, and not widespread enough to fully explain the higher entitlement in younger cohorts relative to older cohorts.

Yet our results may not be inconsistent with previous research that found an increase, either (Stewart & Bernhardt, 2010; Twenge et al., 2008a; Twenge & Foster, 2008; Twenge &

Foster, 2010). All previous data measuring change in narcissism over time were collected pre-2009 and therefore before the Global Financial Crisis (GFC) that affected many countries, New Zealand included (The Treasury, 2016). Recent research has suggested that those who were emerging adults during a recession, as evidenced by high unemployment rates for those aged 18-25, were likely to have lower narcissism than those who came of age at more prosperous times; this may even be an explanation for the rising narcissism levels measured over the past few decades (Bianchi, 2014; Twenge, 2013a). As we have only measured entitlement post-GFC, we may have essentially ‘missed’ the rise in narcissism among younger generations reported in US samples (Twenge, 2013a).

However, Bianchi (2014) notes that time did not appear to temper the effect of recessions on narcissism levels; that is, the conditions experienced in emerging adulthood set lower (or higher) narcissism levels for life. Thus we would expect to see a ‘bump’ in narcissism levels for those who were aged 18-25 before 2009 – which may in fact be apparent among our results for men. Interestingly, further research has demonstrated that the effect reported by Bianchi (2014) may be limited to men, as men may place greater importance on economic achievement (Leckelt et al., 2016). While these results taken together are still far from conclusive, they warrant further exploration, and the potential impact of the recession on the current research should not be underestimated. Nonetheless, while entitlement may or may not have increased before data collection, as of 2009, entitlement is not increasing among New Zealanders; it will be interesting to see whether post-2009 data in other contexts will show similar results going forward.

### **Gender Differences**

Overall, men had higher mean levels of entitlement than women. In the single-group model, women show a steady negative trend in entitlement across the adult lifespan, however men show an initial positive trend in entitlement that levels off in the early 30’s and then

begins the same decline across age cohorts. These results suggest young men may become increasingly entitled as they move from their teens through to young adulthood, however, without finding significant increases in entitlement over time we interpret these results with caution; this ‘bump’ may also be related to pre-recession cohort differences as discussed previously. There was also no evidence of women’s entitlement increasing to match men’s over time as has been suggested in previous research (Donnellan et al., 2009; Twenge et al., 2008a; Twenge & Foster, 2010). If anything, signs point to a potential increase in entitlement in men over time as more of the slopes (while non-significant) were in a positive direction in the multi-group model among men as compared to women; something we aim to collect more data on, particularly given the smaller sample sizes for men.

### **Strengths, Limitations and Future Directions**

This longitudinal research expands upon previous research in the area by investigating change in entitlement across the adult lifespan, using a nationally representative heterogeneous sample. Extant research (e.g., Twenge et al., 2008a; Trzesniewski & Donnellan, 2010) has focused on change in narcissism among high school and college students only. However, societal shifts that lead to increases in entitlement among younger generations may reasonably also affect older generations, so claims cannot be made comparing these generations unless change in entitlement is measured across a variety of ages; the current research only found increases among those aged over 65. We note that if we only measured entitlement in young people, we might conclude that young men are increasing in entitlement over time, however the data show that this trend reverses by the early 30’s. Finally, examining change at all ages means we can incorporate views of entitlement and narcissism as personality traits that develop across the lifespan into the wider debate about change over time.

The current research is also the first to track change in entitlement longitudinally outside of the United States, an important first step as media discussion of rising narcissism reaches well beyond North America (e.g., Remes, 2016). Although New Zealand's emphasis on a humble self-concept suggests there may be differences between countries in the development of narcissism over time, our results do not conflict much with previous research. Nonetheless, it must be cautioned that these results may not be generalizable to other contexts, and to less individualistic contexts in particular (Foster et al., 2003). Although others have suggested that the rising levels of narcissism in the United States may have abated in post-GFC years (Twenge, 2013a), our results may also be unique to the New Zealand context. For example, while we considered that the recession may have played a role in our results, supported by US data (Bianchi, 2014), this effect did not replicate in Germany (Leckelt et al., 2016). Changes in entitlement are likely to be culturally bounded, and future research should focus on collecting longitudinal data in multiple contexts.

We noted earlier that the current research is a finer-grained analysis extending upon Milojev and Sibley's (2016) research tracking change in honesty-humility (and Big Six personality more generally). Here, we utilised two of the items used to measure honesty-humility (reverse-coded) in order to measure entitlement. We did so because the four-item honesty-humility subscale employed by Milojev and Sibley (2016) incorporated facets of sincerity and fairness rather than being a pure measure of entitlement (Ashton & Lee, 2007). Specifically, that four-item measure was proposed by Sibley et al. (2011b) and used two items adapted from the HEXACO (Ashton & Lee, 2009) and two items adapted from the PES (Campbell et al., 2004). Critically, we also expand upon prior research by estimating a multi-group model to analyse change for men and women separately. This provides a more focused analysis of potential gender differences in change in entitlement over time. These important distinctions between our analyses and research focus, and those of Milojev and Sibley, are

illustrated in the different results found in the current research; while the general trend is in the same direction, we find several gender differences and differences in both the significance and direction of the multi-group LGMs.

The Cohort-Sequential LGMs allow us to estimate both change over time, and change due to cohort differences. These models cannot, however, completely untangle cohort effects; we use 5-6 years of data to answer a question that, to be answered fully, requires a lifetime worth. The model allows us to estimate to what extent cohort effects may be impacting upon our estimates of change across age. The results show that, when tracking each cohort's change across time separately, they fit very neatly with the overall change across age, suggesting cohort differences are contributing minimally. However we must recognise this approach as an approximation only at this current point in time; one we hope to improve upon in the future.

A natural drawback of a longitudinal sample is the opportunity for systematic attrition. We mentioned earlier that participants excluded from the analyses for not answering enough time points were slightly higher in entitlement than those included, which is not particularly surprising given the nature of entitlement. Satherley et al. (2015) found that honesty-humility is associated with higher sample retention within the NZAVS, indicating that those who are higher in entitlement may be more likely to drop out, which could potentially contribute to a negative trend in entitlement over time. Additionally, those who aren't included in the analyses are younger than those included. This could mean we are not tracking change in entitlement among those who are young and highly entitled; it may be that this population is the most likely to display increasing entitlement over time as entitlement may be self-sustaining (Campbell & Foster, 2007; Grubbs & Exline, 2016).

A limitation of this research is the short-form measure of entitlement we have used; a necessary trade-off of using a large-scale study with a nationally representative sample is the

use of shorter measures. These two items serve as markers for entitlement, and the measure is capable of tracking meaningful change in individuals over time, although the effect may be stronger if a multi-item scale was used. However, it is important to note that short-form measures may be associated with Type I or Type II errors (Credé, Harms, Niehorster, & Gaye-Valentine, 2012; Kruijen, Emons, & Sijtsma, 2013). This measure of entitlement has been used in previous research within New Zealand multiple times (Stronge et al., 2016; Wilson & Sibley, 2011) and shows good reliability, but there appear to be some differences in the association between entitlement and age, and the NPI and age, for men in particular (Wilson & Sibley, 2011). We hope that these results illustrate the importance of expanding beyond a single age-group when investigating development and cohort effects in future research, which may be able to utilise larger and more diverse measures.

Additionally, this measure may be tapping into non-exploitative entitlement, suggested by Lessard, Greenberger, Chen and Farruggia (2011) to be a form of entitlement where one believes they have a right to positive outcomes, but not a right to exploit others to get those outcomes. Therefore, when we report an increase in entitlement among those post-retirement age, it likely reflects that people feel deserving of positive outcomes at that life stage, rather than a sudden shift towards exploitative behaviour. Non-exploitative entitlement comes without the negative psychosocial consequences of exploitative entitlement, so the measure used in the current research may not be directly comparable with those in previous research. It is possible that there is a rise in exploitative entitlement over time, without a concurrent rise in non-exploitative entitlement (also see Crowe et al., 2016a for their emotionally stable/vulnerable conception of entitlement). However, we note that this seems unlikely given that non-exploitative entitlement is moderately correlated with exploitative entitlement, the PES, and the NPI (Lessard et al., 2011).

Finally, the lack of significant positive slopes in the multi-group model is, of course, not evidence that there is no increase in entitlement over time. We suggest we were unable to detect a decrease in entitlement within younger birth cohorts despite an overall negative trend across the lifespan, but it is possible that entitlement is in fact increasing over time, but slowly enough that more power is needed in order to detect the effect (e.g., among men aged 29-34; see Milojev & Sibley, 2016, for Monte Carlo simulations estimating the size of the effect that can be detected given the sample sizes in each birth cohort). However, those cohorts that do have significant slopes are not the largest in sample size, so if it is a matter of power to detect an effect, at the very least, the oldest cohorts are increasing in entitlement more rapidly than younger cohorts. Certainly, there is no evidence in these results for any kind of meaningful increase in entitlement among younger generations. Regardless, while six years of longitudinal data across the adult lifespan gives us an excellent first look, we do not expect change to be rapid and we are continuing to collect more annual waves of data.

### **Conclusion**

We used a series of Cohort-Sequential Latent Growth Models to investigate change in psychological entitlement across the adult lifespan and over six years, for men and women. Our results indicate that psychological entitlement is steadily, negatively associated with age, but there is little evidence that entitlement is increasing across time. These results offer no support for the popular notion that entitlement is currently on the rise among ‘millennials’ or younger generations—at least in the New Zealand context. Instead, they point to the idea that younger generations are naturally higher in entitlement than older generations as part of a developmental process. In time, as these current generations grow up and become less entitled, they may themselves become concerned by the entitled behaviour they observe in future generations.

**CHAPTER SEVEN**

## General Discussion

As technological advances are made and wealth increases, younger generations are viewed as taking for granted how much easier they have it (Freeman, 1922; Lasch, 1979; Twenge, 2006; Twenge & Campbell, 2009a; Wolfe, 1976). The idea that society is steadily worsening with the advent of each new generation has persisted across centuries, leading Robert Bork (1996, p.6, as cited in Eibach et al., 2003, p. 918) to observe, “given this straight-line degeneration for so many millennia, by now our culture should not be merely rubble but dust”. As the latest incarnation of this idea, the narcissism epidemic suggests that growing individualistic values have led to increasing narcissism in younger generations (Twenge, 2006; Twenge & Campbell, 2009a). However, the evidence for this trend remains contentious.

At the same time, debate around the definition and structure of narcissism continues. With two conflicting approaches to narcissism, one defining narcissism as grandiose and the other defining narcissism as fragile, a central question in this debate is whether or not narcissism is associated with self-esteem. As observed in the introduction, the answer to this question is, “it depends” (Miller et al., 2017a). The relationship that entitlement has with self-esteem, the associated outcomes, and the ways in which self-regard develops over time all differ significantly across individuals. While variable-centered research may obscure these relationships within linear trends, person-centered research can identify common patterns where individuals are similar to each other, but different from other groups (Laursen & Hoff, 2006). Both the self-esteem and narcissism literatures observe that neither high self-esteem nor high entitlement are one-size-fits-all (e.g., Jordan et al., 2009; Krizan & Herlache, 2017), but research aimed at capturing this heterogeneity is lacking.

The present thesis aimed to contribute new perspectives to these two central debates in the narcissism literature using novel analytic techniques. In terms of the narcissism epidemic, entitlement was not found to be particularly prevalent (Study 1), self-regard was shown to develop differentially across individuals, but largely towards a healthy sense of self (Study 2), and the lower entitlement found among older cohorts was attributable to normative development change rather than generational differences (Study 3). These results suggest there is little cause for concern about the narcissism epidemic or age of entitlement (Twenge & Campbell, 2009a). In examining the heterogeneity of self-regard, five profiles with differing levels of self-esteem and entitlement were identified at multiple time points and longitudinally, with different outcomes and different developmental pathways (Studies 1 and 2). Overall, evidence suggests that high entitlement and high self-esteem can represent vastly different ways of viewing the self.

## **Heterogeneous Structure of Self-Regard**

### ***Major Findings***

Determining the nature of the relationship between narcissism and self-esteem is a simple question that has turned out to have a complicated answer (Bosson & Weaver, 2011). The research in this thesis has identified significant heterogeneity in the structure of self-regard, with Study 1 identifying five different patterns of psychological entitlement and self-esteem in a representative sample. Study 2 expanded upon this structure by replicating these profiles at different time points, identifying an entitled but vulnerable profile, and demonstrating that all profiles hold longitudinally. The variation across these profiles explains the weak relationship consistently found between narcissism and self-esteem (Bosson & Weaver, 2011; Brown & Zeigler-Hill, 2004) and demonstrates that treating self-esteem and entitlement as unidimensional constructs obscures useful information. In Study 1

and Study 2, two groups with high self-esteem were identified (narcissistic and optimal self-esteem), two groups with high entitlement were identified (narcissistic and vulnerable self-regard), two groups with low self-esteem were identified (low and vulnerable self-regard) and multiple groups with low entitlement were identified (low self-regard, moderate self-regard, and optimal self-esteem). Yet each of these groups differed from the others in their overall view of themselves, their personalities and health, and the ways in which they change over time. This indicates that a score on any one measure simply does not capture the heterogeneity that exists at both high and low levels of each construct.

Integrating predictions from both the narcissism and self-esteem literatures, the mixture-modelling used in Study 1 and Study 2 identified common patterns in self-regard that fit remarkably well with existing research and theory. Across two studies and three time points, both cross-sectionally and longitudinally, profiles were identified that fit with previous conceptions of grandiose narcissism and optimal self-esteem (Cain et al., 2008; Kernis, 2003; Miller et al., 2011a). A change in the entitlement measure also allowed for the identification of a profile fitting the conception of vulnerable narcissism in Study 2 (Cain et al., 2008; Miller et al., 2011a). These results support previously hypothesised subtypes of high self-regard by demonstrating their emergence in a representative sample when using exploratory person-centered analyses, indicating that these subtypes are robust, common, and practically useful. Furthermore, the three forms of high self-regard discussed in the literature appear to be exhaustive, with no other subtypes of high self-regard emerging.

As a different profile was identified when the entitlement measure was changed between studies, it is worth commenting on the replicability of the structure of self-regard identified in Study 1 and Study 2. Profiles are expected to be largely replicable across measures and across Western contexts (albeit with differences in prevalence), because they fit clearly with previously theorised and measured subtypes of high self-regard. These profiles

are strongly theoretically grounded in core constructs of self-regard - grandiose and vulnerable narcissism (Rose, 2002; Wink, 1991), and secure and fragile self-esteem (Kernis, 2003) – with much of this research conducted in different Western contexts. As a caveat, the replicability of these profiles is likely related to the extent to which measures tap into the core concepts of grandiosity and vulnerability, with modern models of narcissism identifying these as the key elements of subtypes of narcissism (e.g., Krizan & Herlache, 2017; Miller et al., 2017a). But given appropriate coverage of these constructs and self-esteem, it would be unusual if these profiles did not emerge in future research. Furthermore, these subtypes of self-regard were clearly identified in the current research even when using relatively simple short-form measures. Longer scales that are specifically constructed to measure vulnerability, grandiosity, entitlement, and self-esteem may expect better model fit from reduced noise in the data.

The results from Study 1 and Study 2 did however identify moderate and low profiles of self-regard that have not been previously theorised or widely discussed in the literature. While high self-regard is often the focus in narcissism and self-esteem research, the consistent emergence of these profiles indicates that they are stable and meaningful forms of self-regard that represent a significant percentage of the population. These profiles should not be overlooked. When studies examine low self-esteem, it is typically not actually low in absolute terms, particularly in individualist countries (Heppner & Kernis, 2011). The small but vulnerable low self-regard profile may be obscured by people with higher levels of self-esteem, overestimating their true levels of psychosocial health (see Salmivalli et al., 1999; Wetzel et al., 2016 for exceptions). Similarly, while identification of a moderate level of self-esteem seems an obvious finding, the identification of a separate latent profile from those with high self-esteem indicates that there are meaningful differences between them (particularly with high entropy suggesting clear separation of these profiles).

These five profiles differed not only in their levels of self-esteem and entitlement, but in their personality signatures, psychosocial outcomes, and by age and gender. These differences supported the links between the identified profiles and previous conceptions of subtypes of narcissism, entitlement, and self-esteem in the literature (reviewed in detail in Chapter Three). In the current research, the key predictors of different subtypes of self-regard were neuroticism, agreeableness and extraversion. The entitled profiles were differentiated from less narcissistic profiles by their shared disagreeableness, but were set apart from one another by their neuroticism, and to a lesser extent introversion. These findings fit well with Miller et al.'s (2017a) triarchic model of narcissism, where narcissism is described as having a core of disagreeableness, grandiose expressions defined by high extraversion, and vulnerable expressions defined by high neuroticism (also see also see Krizan & Herlache, 2017). These results are also quite consistent with Crowe et al. (2016a), who differentiated between emotionally stable and emotionally vulnerable clusters of entitlement as the largest difference between the clusters was their levels of neuroticism. Thus, the profiles identified in Study 1 and Study 2 fit well with modern models of narcissism; furthermore, they indicate that there are meaningful differences between subtypes of self-regard in their personality, behaviour and psychosocial outcomes even as they share similar quantitative scores on a single construct.

Of particular interest here is the profile of high self-esteem and low entitlement, which is often overlooked in narcissism research (see Brummelman et al., 2016 for an exception). The fact that the vast majority of people with high self-esteem report low narcissism provides a very simple explanation as to the weak relationship between narcissism and self-esteem (Bosson & Weaver, 2011) – for approximately half of people (optimal self-esteem and vulnerable self-regard), the relationship between these constructs is negative, while for the other half (moderate self-regard, low self-regard, and narcissistic self-esteem)

the relationship is positive. Comparing genuine high self-esteem to narcissistic high self-esteem also helps to place adaptive or normal narcissism into context. For example, constructs such as ‘normal’ entitlement (Ackerman & Donnellan, 2013) present a *relatively* adaptive form of entitlement. However, entitlement of any kind does not represent a normal self-view statistically, with few people reporting high entitlement, or theoretically, when compared to genuine self-esteem (Grubbs & Exline, 2016). With ‘normal’ narcissism sometimes conflated with self-esteem, it is important to integrate models from the self-esteem literature to maintain the distinction between these very different constructs (Rosenthal & Hooley, 2010). While most narcissists have high self-esteem, most people with high self-esteem are not narcissists; self-esteem occupies a large part of our understanding of narcissism, but narcissism is considerably less relevant to an understanding of self-esteem (Eromo & Levy, 2017).

Of course, in recent years, in recent years, self-esteem is no longer considered to be universally positive (Baumeister et al., 2005; Eromo & Levy, 2017; Twenge, 2009, 2013a). Part of this relates to the self-esteem movement, which had serious flaws and over-hyped the importance of high self-esteem (Arnett, 2013; Sanchez, 2017; Singal, 2017; Storr, 2017). However, the backlash against the self-esteem movement may itself be overreaching (Heppner & Kernis, 2011). Self-esteem has many positive associations (Baumeister et al., 2003; Orth et al., 2012; see Chapter Three of this thesis), particularly when narcissism is controlled for (Brummelman et al., 2016). Even if self-esteem is not related to academic achievement, it may be a worthy goal in itself (Humphrey, 2004). In the current results, the optimal self-esteem profile had the most prosocial personality signature (Musek, 2007), and reported lower psychological distress and greater satisfaction with relationships than any other profile. The causal relationship between self-esteem and these positive correlates is still being researched (Orth et al., 2012), but in asking whether self-esteem should be vilified, the

results here illustrate that secure self-esteem, with no hint of entitlement, is both the most common and most adaptive self-view.

### *Change over Time and the Narcissism Epidemic*

In addition to heterogeneous associations between self-esteem and entitlement, person-centered approaches also measure differences in the way individuals develop over time. The results from Study 2 indicate there are important differences in longitudinal change across subtypes of self-regard. For example, vulnerable forms of entitlement suggest an unstable pattern of change, bouncing around other low self-esteem profiles or spiking up to high self-esteem profiles. In contrast, grandiose forms of entitlement suggest some periods of vulnerability but an overall transition towards stable self-esteem. Finally, high self-esteem with low entitlement is unlikely to move towards high entitlement profiles, and seems to act as an end point for the developmental pathways of increasing self-esteem and decreasing entitlement across the lifespan (Bleidorn et al., 2016; Wilson & Sibley, 2011).

There is also growing interest in the idea that grandiose and vulnerable narcissism may represent states rather than traits, or that they may covary to some degree (Miller et al., 2017a; Pincus & Roche, 2011; Ronningstam, 2009). Previous research has found that grandiose narcissists are described by others as regularly displaying vulnerable behaviour (Gore & Widiger, 2016; Hyatt et al., 2017). The results in Study 2 support this idea somewhat, demonstrating that transitions occur between grandiose and vulnerable narcissism even across the length of a year. However, these results do not support the conception of grandiose and vulnerable narcissism as states per se, as all profiles were generally temporally stable. Rather, combined with previous research (Gore & Widiger, 2016; Hyatt et al., 2017), these results suggest that grandiose and vulnerable behaviour may fluctuate considerably in the short-term (i.e., state narcissism), but in the long-term, narcissistic expression appears to

remain largely the same. The consistent identification of these profiles across multiple time points and changing samples also suggests that grandiose and vulnerable narcissists are clearly separable groups, not the same group of people varying in their behaviour.

The stability of the moderate self-regard profile was also an interesting finding, as it clearly illustrates the differences between high and moderate self-esteem. There was close to zero probability of movement out of the moderate self-regard profile, with its measured sense of self, into profiles with a higher opinion of themselves such as optimal self-esteem and narcissistic self-esteem. This suggests that findings of increasing self-esteem across the lifespan (e.g., Bleidorn et al., 2016) follow separate pathways for those with a moderately positive sense of self and those with a highly positive sense of self. While this profile had less adaptive associations than the optimal self-esteem profile, it was also the only profile with almost no chance of transitioning towards high entitlement. Overall, the emergence of this profile, which has not been previously hypothesised in the extant literature, suggests a fairly large part of the population have a decidedly sensible and unchanging view of themselves.

In terms of the narcissism epidemic, entitlement levels were generally quite low. Study 1 was weighted to the census so as to provide a population estimate, and found only 9% of participants reported high entitlement. This finding does not jibe with the widespread changes in behaviour described by proponents of the narcissism epidemic (Twenge, 2006; Twenge & Campbell, 2009a). For example, societal changes such as greater antidepressant use, increasing rates of casual sex, and the GFC are all attributed to the narcissism epidemic (Twenge & Campbell, 2009a). Yet, in the current research, the vast majority of the sample reported a positive self-view and no sense of deserving more than others. Self-regard was also highly stable and did not show increasing levels of entitlement overall. Of course, Study 3 is the better test of the narcissism epidemic, with Study 2 examining change across just one year. However, Study 2 can answer a person-centered question raised by Twenge and Foster

(2010), who argued that small changes in the average level of narcissism are likely to be amplified at the high ends of the narcissism spectrum. That is, more people are reaching the highest levels of narcissism (Twenge, 2009). This suggests that the high entitlement profiles should account for an increasing proportion of the sample over time. In contrast, Study 2 found that the most likely transitions were *away* from high entitlement profiles and their proportions did not change over time.

As observed in the introduction, person-centered approaches provide important complementary information to variable-centered approaches. This has implications for research that measures self-esteem and entitlement as unidimensional constructs. Crowe et al. (2016a) argue that ignoring heterogeneity within a construct may lead to inconsistent findings and inaccurate theory. This is already evident in the divide within social-personality and clinical conceptions of narcissism (Cain et al., 2008), the debate about whether self-esteem is an adaptive trait or not (Baumeister et al., 2003), and arguments about whether increasing NPI narcissism indicates adaptive or maladaptive change (Trzesniewski et al., 2008b). Interpretations of the impact of rising self-esteem levels over time (e.g., Twenge & Campbell, 2001) are confounded by the two different forms of high self-esteem, and research examining change in narcissism over time does not take vulnerable narcissism into account. The results in this thesis support the argument that person-centered research is lacking from psychological literature, particularly in areas that often hypothesise about ‘types’ of people (Osborne & Sibley, 2017).

In sum, this thesis has contributed to a growing literature that calls for recognition of the heterogeneity that exists within narcissism, entitlement, and self-esteem (Jordan et al., 2009; Kernis, 2003; Krizan & Herlache, 2017; Wink, 1991). While it is generally agreed that narcissism is continuous (Foster & Campbell, 2007), the use of a person-centered approach provided additional information that was otherwise obscured by variable-centered approaches

(e.g., Laursen & Hoff, 2006; Wetzel et al., 2016). Study 1 and Study 2 identified both cross-sectionally and longitudinally, at three different time points spanning across six years, a set of five profiles that depict common self-views in a nationally representative sample. These profiles provide a parsimonious structure of self-regard with profiles analogous to commonly identified subtypes and expressions of narcissism, entitlement, and self-esteem; from grandiose and vulnerable narcissism (Wink, 1991), to secure and fragile self-esteem (Kernis, 2003), and emotionally vulnerable and stable entitlement (Crowe et al., 2016a). These profiles were qualitatively different in terms of their demographics, personalities, and psychosocial outcomes, and also developed in different ways over time. These studies demonstrate that treating self-esteem or entitlement as unidimensional constructs, with homogeneous associations across the population, simply does not tell the whole story. Self-regard, and high self-regard in particular, is not the same for everyone.

## **Narcissism over Time**

### ***Major Findings***

The final study in this thesis investigated the narcissism epidemic directly. Study 3 used Cohort-Sequential Latent Growth Models to measure change in psychological entitlement across the adult lifespan, while estimating the impact of cohort and period effects. Firstly, Study 3 integrated six years of longitudinal data to create a ‘least contaminated’ model of entitlement across the ages 19 to 74 – a model that is more accurate than a cross-sectional association between age and entitlement. Results showed a negative trend across the lifespan, similar to previous cross-sectional research (Foster et al., 2003), indicating that the cross-sectional difference may in fact represent a developmental effect. Secondly, Study 3 measured change in entitlement across five years for separate five year birth-cohorts. No increase in entitlement was found across the last five years in younger generations such as

millennials, or older generations such as Gen X (born between 1965-1984; Bump, 2014). In fact, change in entitlement was largely non-significant in a large, representative sample. The exception to this rule is the Baby Boomer generation (born between 1946-1964; Bump, 2014); among men aged 64 and older, and women aged 69 and older, entitlement increased over the last five years.

Combined together, these models demonstrated that the way that people have changed as they age matches up very closely with the differences found across birth cohorts – thus suggesting that the differences in entitlement across cohorts occur *because* of the way people age. Additionally, tests of cohort differences were used to examine whether people were more entitled in 2014 than they were in 2009 at the same age. Study 3 largely found no differences between people at certain ages now, and those same ages five years ago, suggesting no change over time. Once again, the exception to these findings were men aged 64 and older and women aged 69 and older, while there was no evidence of cohort effects among younger generations. This indicates that the negative cross-sectional association between age and entitlement is informed almost entirely by longitudinal, developmental change, rather than stable generational differences. Using powerful data and novel statistical techniques, Study 3 indicates that people may begin their adult life high in entitlement, but high expectations and a sense of deservingness drop away as they age and mature. As described by George Vaillant, “the journey from immaturity to maturity is... a movement from narcissism to connection” (Gregoire, 2013).

### ***The Narcissism Epidemic is Dead***

Where does the narcissism epidemic stand now? In their recent paper, Wetzel et al. (2017) declared “the narcissism epidemic is dead” (p. 1). The results in this thesis support the idea that the narcissism epidemic is no longer, as evidence of no change in narcissism among

younger generations (Donnellan et al., 2009; Grijalva et al., 2015; Roberts et al., 2010; Stronge et al., 2018; Trzesniewski & Donnellan, 2010; Trzesniewski et al., 2008b; Wetzel et al., 2017) mounts against evidence for it (Stewart & Bernhardt, 2010; Twenge et al., 2008a; Twenge et al., 2008b; Twenge & Foster, 2008, 2010). How might we reconcile these two sets of findings? As documented in Chapter Two, a number of concerns have been raised regarding the analytic strategies, sampling, measures, and effect sizes (Arnett, 2013; Donnellan et al., 2009; Trzesniewski et al., 2008a; Trzesniewski & Donnellan, 2010) that may have led to these contrasting findings. While some of these concerns are beyond the scope of the current research to address (it is somewhat difficult to address, for example, how gender may moderate findings of rising narcissism given that no evidence of rising narcissism has been found), there are a number of areas where the current research has expanded upon extant research.

Firstly, research that has reported increasing narcissism over time has been criticised for a lack of representative sampling (Trzesniewski et al., 2008a). This thesis demonstrates no increase in entitlement over time in a large, heterogeneous, nationally representative sample (with the exception of the oldest cohorts, discussed later). Arguing for non-significant results can be somewhat difficult given that finding no statistical evidence of a trend is not the same as a trend not existing. Yet, as stated by Trzesniewski and Donnellan (2010), “null results can be informative when they result from statistically powerful studies and run counter to a predicted effect” (p. 72). Indeed, this thesis adds to a growing body of research that has found non-significant results when testing a theory that predicts a non-trivial increase in narcissism over time (Donnellan et al., 2009; Grijalva et al., 2015; Roberts et al., 2010; Trzesniewski et al., 2008b; Trzesniewski & Donnellan, 2010).

Furthermore, with larger sample sizes comes the rising likelihood that significant effects will be found, and yet, in the current research with a large representative national

sample, and indeed similar research that has come before (Trzesniewski & Donnellan, 2010), no rise in entitlement is found among younger generations. As a caveat, power analyses suggest Cohort-Sequential Latent Growth Models may not be able to detect subtle effects below the threshold of a small effect size, even at the sample sizes used in the current research (see Milojev & Sibley, 2016). However, the narcissism epidemic is not proposed to be a subtle effect (Twenge et al., 2008a), and certainly would not warrant the current concerns if it were too small to be detected in a large and representative sample (see Donnellan et al., 2009).

It is important to note that compared to previous research (e.g., Twenge et al., 2008a; Trzesniewski et al., 2008b), Study 3 has measured a shorter time-frame of six years, which may not accurately reflect generational change. However, Twenge and Foster (2008) focused on results showing rising narcissism between 2002 and 2007 – a period of five years – which suggest that sociocultural changes across time, impacting upon birth cohorts, can be detected even within this short time frame. Similarly, Twenge and Foster (2010) reported increases in narcissism across a period of three years. In fact, these changes are argued to be accelerating over time (Twenge & Foster, 2008; Twenge et al., 2008a). If each generation is a slight exaggeration of the generation before (Twenge et al. 2008a; Twenge & Campbell, 2009b), then the narcissism epidemic should proceed at an increasingly rapid pace. If increases in narcissism can be found in this time-frame, and if the shift in narcissism is as large as claimed, and if change is accelerating, these changes should be observable in the current research, and they are not.

Study 3 also expands on previous research that has largely examined a narrow age range using samples of high school or college students (e.g., Trzesniewski et al., 2008b; Twenge et al., 2008a). In Chapter Two it was observed that cohort effects are often conflated with period effects (Terracciano, 2010). While it has been repeatedly suggested that

narcissism is increasing in younger generations (e.g., Twenge et al., 2008a), this claim could not be supported without data from other generations to compare to. Study 3 presents the first research that has examined whether change in narcissism may be a cohort or period effect by examining change in entitlement across the adult lifespan. As no rise in entitlement was found, there is no support for the theorised cohort or period effects. It appears that there is no current sociocultural impact upon entitlement for younger generations, or for most of the older generations either – at least, not an impact that is causing entitlement levels to *rise*. In short, no evidence is found for the idea that changes in parenting, increasing individualism, or the self-esteem movement (e.g., Twenge & Campbell, 2009a; Twenge et al., 2008a) have increased narcissism in young generations.

The heterogeneous sample and novel analytic techniques used in Study 3 also mean that developmental change can be assessed alongside these cohort and period effects. As neither cohort or period effects appear to be impacting upon differences in entitlement across age cohorts, the best fitting explanations are those theories concerned with personality development, such as the maturity principle (Caspi et al., 2005), the reality principle (Foster et al., 2003), social investment theory (Roberts & Wood, 2006), and the ‘la dolce vita’ effect (Marsh et al., 2012). These theories suggest that normative events and roles across the lifespan should lead to decreasing entitlement, whether it is from experiences of failure, or investment in interpersonal roles such as one’s career, relationships, and family. The results in Study 3 illustrate this idea clearly, with a slow, steady decrease across the lifespan.

The exception here is those over 65 years of age, with Study 3 finding an unexpected cohort effect that suggests entitlement is on the rise amongst Baby Boomers. This increase does fit with theories of personality change that suggest many changes occur in wellbeing (Brandtstädter & Greve, 1994; Marsh et al., 2012) and personality (Marsh et al., 2012; Specht et al., 2011) in the late 60’s, in tandem with changes in employment, health, and

relationships. However, the increase in entitlement in the Baby Boomer generation goes beyond developmental effects. Rather, the results demonstrate that 64 year old men are more entitled today than 64 year old men from five years ago, as are 64 year old women and 69 year old men. This is an unusual finding as cohort effects are usually limited to younger generations, as personality is most impressionable during emerging adulthood (Arnett, 2015; Caspi et al., 2005; Roberts et al., 2006). One potential explanation for this effect is that wealth in the Baby Boomer generation is growing rapidly (Pew Research Center, 2011a), and wealth is associated with higher entitlement (Piff, 2014). Thus, in addition to the developmental change of taking more time for themselves post-retirement and raising a family, over-65's may also be becoming increasingly entitled over time as wealth accumulates. However, more research is needed regarding this novel finding.

While the results from Study 3 fit well with theories of personality development, they also fit with theories regarding economic conditions. As discussed in Chapter Six, all data were measured from the GFC onwards, while previous research used data measured before the GFC (e.g., Twenge et al., 2008a; Twenge & Foster, 2008, 2010). Perhaps then, these results are not at odds and simply reflect cycles of narcissism tied to better or worse economic conditions (Bianchi, 2014). Multiple theorists have suggested that narcissism is likely to decrease following the GFC (Bianchi, 2014; Leckelt et al., 2016; Twenge, 2013a) so it is possible it was increasing before data collection for Study 3. In line with this, Wetzel et al. (2017) found that entitlement was increasing up until 2007 and began to drop again around the time of the GFC. However, many researchers have found no change in narcissism before the GFC, so while the results in this thesis do not necessarily contrast the narcissism epidemic, many others do (e.g., Trzesniewski & Donnellan, 2010; Wetzel et al., 2017). Furthermore, while Twenge and Campbell (2009a) acknowledge the effects of the GFC on narcissism, they argue that the contributors to the epidemic are mostly unrelated to economics

– self-admiration, parenting, media, celebrity, and the internet – and so the narcissism epidemic should outlive changes in economic circumstances. To summarise, theories relating to economic conditions fit well with the results in this thesis, but do not explain the narcissism epidemic debate as a whole.

The effect sizes of the narcissism epidemic have previously been brought into question, regarding whether they are of a size appropriate enough to be called an epidemic, or should raise serious concerns about changes in behaviour in coming generations (Paris, 2014; Trzesniewski & Donnellan, 2009, 2010). Study 2 and Study 3 found only small, slow shifts across the course of a single year or across the lifespan. The stability of self-regard and personality in the face of a lifetime's worth of experiences suggests that sociocultural changes are unlikely to be particularly strong, and seem unlikely to lead to the widespread shifts in behaviour predicted by the narcissism epidemic (Twenge, 2013a). When significant increases in narcissism have been found, the effect size of a third of a standard deviation increase in narcissism (Twenge et al., 2008a) has also been criticised as unrealistically large by psychological standards (Terracciano, 2010). Terracciano (2010) report that cross-cultural differences in personality are less than half the size of the effects reported by cross-temporal analyses (Twenge, 2000; Twenge & Campbell, 2001); this led them to question whether the cultural change in the past few decades in America has created cultures as diverse between generations as America is to Japan or Burkina Faso. The change in personality suggested by the narcissism epidemic does not fit with other personality research (Terracciano, 2010), or with the slow and steady changes found in the current research.

Finally, Study 3 avoids a methodological issue in the existing literature by measuring psychological entitlement. Measurement of entitlement over time helps to cut through some of the questions of what growing narcissism or NPI mean scores actually represent (e.g., Arnett, 2013; Trzesniewski et al., 2008a, 2008b). As discussed in Chapter Two, a mean NPI

score can be conflated with self-esteem (Rosenthal & Hooley, 2010), and as demonstrated in Studies 1 and 2, a high score of self-esteem can be associated with both high and low narcissism. Although measuring entitlement as a unidimensional construct also has its issues as relatively adaptive and maladaptive forms exist, both subtypes still have largely negative connotations (see Chapter Three). Suffice it to say, entitlement is not a prosocial or adaptive construct (e.g., Campbell et al., 2004), unlike constructs of leadership, assertiveness (e.g., Ackerman et al., 2011), or other NPI facets that may be tangled up in measures of self-esteem (Rosenthal & Hooley, 2010), body image (e.g., Avalos, Tylka, & Wood-Barcalow, 2005), or changes in gender roles (Arnett, 2013; Donnellan et al., 2009; Twenge et al., 2008a). In terms of the most toxic, maladaptive element of narcissism (Ackerman et al., 2011; Trzesniewski et al., 2008b), there is no increase over time among younger generations.

In sum, even as support for the narcissism epidemic continues (e.g., Twenge & Foster, 2010), there is a large and growing body of evidence that simply finds no change (e.g., Stronge et al., 2018; Wetzel et al., 2017). The current research adds to this evidence by using novel analytical techniques, large and representative sampling, clearly interpretable measures, measurement of cohort, period, and developmental effects, and data outside of the United States. As empirical evidence is slowly weighted against the narcissism epidemic, the theoretical approaches of increasing individualism and the self-esteem movement (Twenge & Campbell, 2009a) lack concrete links to narcissism (Trzesniewski et al., 2008a). Trzesniewski and Donnellan (2010) suggest that the burden of proof rests with those who claim that changes such as the narcissism epidemic are happening, and that these changes must be large enough to be of practical significance and impact upon society in a tangible way. The findings in this thesis, combined with the extant literature, suggest that this has yet to be conclusively demonstrated.

### *Long Live the Narcissism Epidemic*

The narcissism epidemic is dead, we declare (Stronge et al., 2018; Wetzel et al., 2017) – but belief in the narcissism epidemic is not (Trzesniewski & Donnellan, 2014). Countless media articles discuss the narcissism epidemic as fact years after competing evidence has been both published and profiled (Black, 2012; Little, 2017; Remes, 2016; Singal, 2017; Stein, 2013; Williams, 2016). This belief continues in academia too; *The Handbook of Narcissism and Narcissistic Personality Disorder* dedicates multiple chapters to the debate about rising narcissism, and yet the introductory chapter describes concerns relating to the narcissism epidemic with no discussion of the competing evidence (Levy et al., 2011). Many research papers do the same (e.g., Derry et al., 2017; Giacomini & Jordan, 2014; Lessard et al., 2011; Miller & Campbell, 2010; Miller et al., 2014; myself included in Study 1, see Stronge et al., 2016). A recent article lambasts the weakly supported self-esteem movement, the educational movement of ‘grit’, power posing, and implicit association tests, but presents only one side of the narcissism epidemic debate (Singal, 2017). Trzesniewski and Donnellan (2010) remark that “perhaps the more interesting psychological story concerns the persistence of beliefs about cohort-related changes when clear evidence of such effects is fairly limited” (p. 72). Even the proponents of the narcissism epidemic suggest a slight downturn following the GFC (Leckelt et al., 2016; Twenge, 2013a; Twenge & Campbell, 2009a), and yet there has not been a spate of media attention towards the kindness and humility of ‘kids these days’ (for an exception, see Howe & Strauss, 2009).

Why are people so inclined to believe that young people are more entitled than ever? As this thesis argues that differences in entitlement between generations are most likely explained by developmental change, it is important to document how this belief may arise without due cause. This belief that new generations are increasingly selfish appears to have existed for a very long time (Arnett, 2013). Plato complained that, these days, “the young

expect the same treatment as the old, and contradict them and quarrel with them. In fact seniors have to flatter their juniors, in order not to be thought morose old dotards” (Freeman, 1922, p. 73-74). As “children began to be the tyrants, not the slaves of their households” (Freeman, 1922, p. 74), Ancient Greek teachers yearned for the days when “children learned obedience and morality, and were not pampered and depraved” (Freeman, 1922, p. 71). More recently, Twenge and Campbell (2009a) lament that “it is increasingly common to see parents relinquishing authority to young children, showering them with unearned praise... and allowing them to have freedom but not the responsibility that goes with it. Not that long ago, kids knew who the boss was – and it wasn’t them. It was Mom and Dad. And Mom and Dad weren’t your friends” (Section 2, Chapter 5, para 2). Believing that youth are more entitled than ever appears to go beyond more recent sociocultural changes.

As discussed in Chapter Two, one potential explanation for this belief is that it stems from the findings illustrated in Study 3 – young people are viewed as more entitled because at any cross-sectional point in time, *they are*. If entitlement decreases developmentally across the lifespan, then older generations will always be *currently* less entitled than younger generations. Thus, it is not surprising that older and middle-aged individuals view young people as more narcissistic, but they may be making an inaccurate comparison (Roberts et al., 2010). Comparing yourself to new generations of emerging adults repeatedly across your lifetime will lead to an accurate perception of change, but change may be occurring in the self rather than in others (Eibach et al., 2003). As evidenced by Study 3, young people appear to be following the developmental path set for them by their elders, and may be no more entitled at the same ages.

Arnett (2010) suggests that one reason young people are viewed so negatively these days is because there is a new life stage between high school and adulthood, labelled emerging adulthood. Arnett (2015) describe this as any time where a gap exists between

ending education and taking on the roles of adulthood. As jobs become increasingly technical, education takes longer. Younger generations then put off marriage, buying a house, and having children until they are financially stable (Arnett, 2015; New Zealand Productivity Commission, 2012; Pew Research Center, 2011a; Statistics New Zealand, 2017). Changing gender roles and the sexual revolution have also contributed to these milestones being pushed back (Arnett, 2015). Emerging adults make use of this time of instability with no dependents or long-term obligations to focus on themselves, explore their identities, and make the most of their freedom before they take on more responsibility. Older generations tend to view this period of identity exploration and hopefulness as selfishness and laziness; however, it is a fairly logical response to an unstable period of life which may last for many years (Arnett, 2010).

Finally, there may be a more systemic motive to endorsing beliefs of increasing narcissism in younger generations. If young people protest and demand change, but those younger generations can be written off as self-centered, immoral, and lazy (Trzesniewski & Donnellan, 2014), then nothing needs to be done because the problem does not exist. Except that the problems do exist: younger generations are increasingly worse off financially (Pew Research Center, 2011a, 2017a), and often struggle to enter into the roles that older generations want them to take on due to this financial instability (e.g., New Zealand Productivity Commission, 2012; Pew Research Center, 2010). For example, young people are increasingly unable to afford a first home in New Zealand, Australia, and the UK (Clarke, 2015; Jones, 2017; New Zealand Productivity Commission, 2012; Wynn, 2017). The idea that younger generations concerns may be written off as entitlement is evidenced somewhat by the constant stream of articles about token successes who worked 'hard enough' to become a homeowner (Gibson, 2017; New Zealand Herald, 2017a; Wade, 2013) or advice to young people to quit being so lazy and materialistic (Edmunds, 2017; New Zealand Herald,

2017b; Prynne & Ackerman, 2017). People may engage with reports of increasing entitlement in order to believe that the system is fair, by confirming stereotypes that anyone who is struggling is simply not working hard enough within a fair and meritocratic society (Bodenhausen, Todd, & Becker, 2007; Jost & Banaji, 1994).

What are the implications of labelling people, most likely undeservingly, as entitled? Broadly speaking, holding stereotypes about a group is associated with negative outcomes for that group (Dovidio et al., 2010). People are generally aware of a stereotype even when they themselves do not endorse it, and it can negatively impact upon their performance (Dovidio et al., 2010). Once a stereotype is formed, behaviour is then interpreted or perceptions are managed in a way so as to confirm that stereotype. Negative stereotypes are quicker to form and more difficult to dispel than positive stereotypes, with a negative stereotype requiring fewer instances of the stereotypical behaviour in order to be confirmed, and greater instances to be disconfirmed (Baumeister, Bratslavsky, Finkenauer & Vohs, 2001). For narcissism in particular, most media articles report that entitlement is increasing in millennials (e.g., Black, 2012; Remes, 2016; Sanchez, 2017; Singal, 2017; Stein, 2013), despite evidence to the contrary. Technological changes such as social media also highlight particularly excessive displays of narcissism, creating memorable instances of stereotype confirming behaviour (Buffardi & Campbell, 2008; Trzesniewski & Donnellan, 2010). Furthermore, it appears that people have a difficult time picking up on whether someone is actually entitled or not, with self-reported and informant-rated psychological entitlement completely uncorrelated even amongst good friends (Krizan & Johar, 2012). This makes it difficult for stereotype-inconsistent information to be recognised. Taken together, beliefs about entitlement are likely to be particularly difficult to shift (Fyock & Stangor, 1994; Todd et al., 2012).

Multiple theorists have suggested that a widely held negative portrayal of college students and younger generations could have a significant impact on the education and

occupations of an entire generation (Arnett, 2013; Trzesniewski & Donnellan, 2010; Wetzel et al., 2017). Trzesniewski and Donnellan (2014) point out that while stereotypes about age will not impact upon a person forever as they mature out of the age-cohort, stereotypes about generations target a fixed attribute. Advice is already being given to parents, teachers, employers, and policy makers about how to handle this incoming narcissistic generation (Twenge, 2009, 2010; Twenge & Campbell, 2009a). These include suggestions that students may refuse to work hard, be falsely confident even when it may endanger others, and struggle to read long texts (Twenge, 2009). These same stereotypes are then evinced in the media (Hanson, 2017), suggesting that millennials in the workplace are simultaneously unusually confident, and “incapable of small talk, critical thinking, and problem-solving” (Molloy, 2017). Yet the size and reliability of findings of increased narcissism do not warrant such concerns.

“It matters whether or not it’s actually real, the epidemic, but it matters even more whether or not we believe it’s real”, observes Dombek (2016, Chapter 1, Section 3, para. 2), and it proves true; the effect sizes of the *perceptions* of emerging adults as narcissistic are far greater than the effect sizes for any actual differences (Trzesniewski & Donnellan, 2014). A number of factors appear to contribute to an unfounded and harmful stereotype about younger generations, but one of these factors is easily mitigated. It is important to not state as definitive fact that young people today are more entitled than ever when the research is far from conclusive. Without a conservative approach to assessing generational change (Trzesniewski & Donnellan, 2009), research may further support the dissemination of difficult to shift and harmful stereotypes. For example, in a *Time* magazine article labelling millennials as the “me me me generation” Stein (2013) writes, “I am about to do what old people have done throughout history: call those younger than me lazy, entitled, selfish and shallow. But I have studies! I have statistics! I have quotes from respected academics!... I

have proof!'. In the face of growing evidence that finds no change in narcissism over time (Stronge et al., 2018; Trzesniewski & Donnellan, 2010; Wetzel et al., 2017), results supporting the narcissism epidemic must be interpreted with caution.

### *Developmental Change*

The findings in this thesis hold some interesting implications for developmental change in personality and narcissism. It is evident that, one way or another, younger generations are more entitled than older generations. If this is produced via developmental processes as indicated by Study 3, then the question must be raised as to the role that narcissism plays within normative developmental change. It has been suggested that young adulthood is likely to be a time of repeated failure as people approach serious romantic relationships and employment for the first time (Foster et al., 2003). Hill and Roberts (2012) therefore propose that narcissism may actually be beneficial to young people as a buffer against the changes, failures, and humiliation they may face as they transition into adulthood (also see Arnett, 2013; Arnett, Trzesniewski, & Donnellan, 2013). In support of this idea, Hill and Roberts (2012) found that life satisfaction is positively related to the NPI for emerging adults but not for older adults, suggesting that narcissism may serve an adaptive purpose for young people (also see Zuckerman & O'Loughlin, 2009). Young adults also rate narcissistic qualities as more socially desirable than older adults do, even when controlling for their own levels of narcissism (Berenson et al., 2017).

Developmental approaches can therefore be integrated with the cost-benefit perspective of narcissism described briefly in Chapter One. Ashton and Lee (2007) approach personality traits from an evolutionary perspective; variability within levels of traits across the population can be explained by the fact that each trait bestows both advantages and disadvantages. That is, people may be highly entitled because it has a net benefit for them.

Campbell and Foster (2007; see Campbell & Campbell, 2009; Hill & Roberts, 2012 for a review) add to this perspective by suggesting that the benefits are reliant on context; narcissism is beneficial when initiating new relationships and establishing oneself as a leader, but less beneficial when trying to maintain long-term relationships, or make decisions with far-reaching consequences. Here, we can see how narcissistic behaviour may be relatively adaptive among young people entering college, making new contacts, or establishing themselves in their career (or at least that young people *perceive* this to be adaptive; Berenson et al., 2017; Hart, Adams, & Burton, 2016).

At later life stages narcissistic behaviour is likely to become increasingly costly, so adults should relinquish their narcissism as they age in order to maintain their wellbeing (Hill & Roberts, 2012). This fits with the negative trend in entitlement across the lifespan in Study 3. Similarly, Hill and Roberts (2012) found that narcissism was not related to life satisfaction among older adults, where it was positively associated for younger adults. Older narcissists were also perceived as neurotic while younger narcissists were not (Hill & Roberts, 2012). Thus, narcissistic behaviour among young people may be viewed as normative, whereas the same narcissistic behaviour among older adults could be interpreted as a sign of emotional immaturity.

What then, might narcissism mean for aging adults? Loss of employment, relationships, and health in old age suggest that this should be a time of declining well-being. Yet in reality, wellbeing often increases from the late 60's onwards (Brandtstädter & Greve, 1994; Marsh et al., 2012). Brandtstädter and Greve (1994) suggest that this is the result of a variety of processes where older adults adjust their physical activities and way of life in order to maintain wellbeing. Of particular interest is the idea that older adults may deny or minimise inconsistent information in order to protect and maintain their positive self-image (Brandtstädter & Greve, 1994). In this way, narcissism could have a similar, healthier and

more positive function among older adults as it does for emerging adults (Hill & Roberts, 2012); if life brings a string of indignities, it is better to have an unrealistic self-concept than a realistic one. It is important to note that this is unlikely to apply to entitlement (Berenson et al., 2017; Hill & Roberts, 2012). Indeed, results from Study 2 demonstrate that even those with very low self-esteem have better relationships and mental health if their entitlement is also low. It has been proposed that some entitlement can be normal or healthy, as having no sense of entitlement whatsoever could be a risk factor for psychological distress (Grubbs & Exline, 2016), but more research is needed into this idea.

Narcissism may also play different developmental roles for men and women. In Study 3, men's and women's entitlement developed in largely the same fashion across the lifespan, as in previous research (Foster et al., 2003; Grijalva et al., 2015; Wilson & Sibley, 2011). There was, however, some indication that men's entitlement increased across their 20's before beginning to decrease, which is a novel finding. In Study 3, it was observed that this could be explained by changes in economic conditions that may only impact upon men (Leckelt et al., 2016), but there may be other explanations. For a female narcissist, displays of entitled or exploitative behaviour are likely to backfire as they violate gendered expectations of behaviour for women (Grijalva et al., 2015; Morf & Rhodewalt, 2001; Tschanz et al., 1998). As such, entitlement is a less central element of narcissism for women than it is for men (Tschanz et al., 1998). As a successful life often involves steadily increasing responsibility and interpersonal commitments (Roberts & Wood, 2006), entitlement should reduce across the lifespan among both men and women, but it should occur faster for women as they face greater consequences for failing to do so (Grijalva et al., 2015). Young men may therefore have their entitled behaviour tolerated up to a later life stage than women – 'boys will be boys'. This may translate into lifelong concrete differences such as gender disparities in pay (Grijalva et al., 2015).

## ***Generational Change***

Moving from developmental change to change across generations, Twenge and Foster (2010) describe the two competing view points as the generational similarities and generational differences hypotheses. While the generational differences model proposes that changing culture has an impact on the individuals within that culture, the generational similarities model states only that there are no differences in personality traits and attitudes across generations. However, this is not entirely accurate. While this thesis, alongside other research (Donnellan et al., 2009; Roberts et al., 2010; Trzesniewski et al., 2008b), argue against the narcissism epidemic theory upon the availability of the evidence, this is not to suggest that generations are no different from one another. Indeed, it is important to understand individuals by their current and past temporal contexts, as cultural change may be experienced differently by each generation, or normative developmental change across the lifespan may be impacted (Stewart & Healy, 1989). The disagreement surrounding the narcissism epidemic and ‘Generation Me’ is not that there is no change, but questioning the conclusions about *what* is changing, to what extent, why these changes are occurring, and how they should be measured (e.g., Arnett, 2013; Trzesniewski & Donnellan, 2010). As the discourse about the narcissism epidemic often covers the wider topic of generational change in general (e.g., Arnett, 2013; Twenge & Campbell, 2009a), this section will take a brief look at some of the concerns that have been raised about ‘Generation Me’.

The general argument for generational change is that increasingly individualistic values are causing a wide array of ailments in modern society, ranging from narcissism to body dissatisfaction, materialism, unrealistic expectations, depression, and anxiety to name a few (Twenge, 2006; Twenge & Campbell, 2009a). However, as with the narcissism epidemic, many of these trends lack clear empirical support. For example, Twenge (2000) found that younger generations are more anxious than older generations, but others found that

neuroticism is actually declining very slightly over time (Terracciano, 2010; McCrae & Costa, 2006). Some of these trends are contradictory; both narcissism and psychopathology are argued to be increasing (Twenge, 2000; Twenge et al., 2008a; Twenge et al., 2010), but the NPI is in fact negatively correlated with both anxiety and depression (Brown et al., 2009; Rosenthal & Hooley, 2011; Tracy et al., 2009). Similarly, prejudice is decreasing across generations (Arnett, 2013; Twenge, 2013a), but prejudice and intergroup ethnocentrism are positively associated with narcissism (Bizumic & Duckitt, 2008). Just as with the narcissism epidemic, care must be taken with arguments for ‘Generation Me’ while the evidence is less than robust.

Another concern is that some of the changes attributed solely to millennials may in fact be period effects. For example, Terracciano’s (2010) review of longitudinal research indicates that findings of increasing assertiveness, higher depression, and decreasing trust in younger generations may actually be occurring in all age groups. Similarly, it has been argued that younger generations have high expectations of their futures that exceed the reality, reflecting the over-inflated self-concept of narcissism (Twenge & Campbell, 2010; Trzesniewski & Donnellan, 2010). However, Trzesniewski and Donnellan (2014) found that adults of all ages view young people today as having more educational and occupational opportunities than young people in the past. Whether this view is accurate, then, is not particularly relevant; rather, if everyone believes the same thing, expectations are not inflated. As with the narcissism epidemic, these findings reflect the need for research outside of college students in order to provide an accurate portrait of generational differences.

Finally, understandings of generational differences thus far are lacking the foundational perspective of the economic challenges younger generations are faced with. Millennial households are the most likely to be living in poverty compared to other generations (Pew Research Center, 2017a), and this is not simply a function of age; poverty

has been increasing among households headed by young adults across the last few decades (Pew Research Center, 2011a, 2017a). The differences in net wealth between under 35's and over 65's was a 1:10 ratio in the 1980's, today it is 1:47 (Pew Research Center, 2011a). Millennials also earn a smaller share of wages and salaries compared to other generations at the same age in the 1960's (Pew Research Center, 2017a). These economic differences appear to be the result of long-term trends such as rising economic inequality (Pew Research Center, 2014; Roser & Ortiz-Ospina, 2017; World Wealth and Income Database, 2016), delayed entry to employment (Arnett, 2015; Pew Research Center, 2011a), and increased student loan debt (Pew Research Center, 2011a). However, these differences have been exacerbated further in recent years by the GFC (Pew Research Center, 2011a, 2017a). Research suggests that the GFC is likely to impact upon the millennial generations' earnings for a lifetime (Guo, 2014; von Wachter, Song, & Manchester, 2009).

These economic difficulties may then explain other generational differences, such as the often-observed delayed entry into adulthood (Arnett, 2000, 2010; Twenge & Campbell, 2009a). Millennials are moving out later than other generations (Pew Research Center, 2017a, 2017b), and are less likely to own their own homes than previous generations at the same age (Pew Research Center, 2017a). In New Zealand, unaffordable housing and rising rents have the largest impact upon younger generations (New Zealand Productivity Commission, 2012; Wynn, 2017). Millennials are less likely to get married even as 70% say they would like to, with many citing economic insecurity (Pew Research Center, 2010, 2014; Statistics New Zealand, 2017). Millennial workers today may also need a higher level of education to attain the same jobs as generations before, and those with a very low education level are particularly penalised (Pew Research Center, 2014, 2017c). Younger generations may be increasingly delaying developmental milestones because they simply cannot afford them.

In contrast to the idea that younger generations are increasingly individualistic (Twenge, 2008), just as the freedom of the 1960's and 1970's lead to growing conservatism in the children of those generations (Duff, 2016; Twenge & Campbell, 2009a), so today the excesses of individualism and economic inequality should logically lead to a growing interest in collectivism among today's young adults. Research supports this idea, with the majority of millennials in support of higher taxes on the wealthy, access to healthcare for all, greater assistance for the poor, and a living wage (Giuliano & Spilimbergo, 2014; Reason-Rupe Poll, 2014). While Americans as a whole have a preference for a capitalist country, millennials in America and Australia would prefer to live in a socialist or communist context (Ryan & McClintock, 2017; Steverman, 2017; YouGov, 2017) and are less inclined to support capitalism (Gallup, 2016; Harvard University, 2016). Younger generations are also more concerned about climate change, want more environmentally friendly policies (Pew Research Center, 2011b), and are less prejudiced (Arnett, 2013; Twenge, 2009, 2013a).

In sum, it could be argued that instead of embracing and exacerbating the individualist culture in which they were raised, young people are hungry for change in the face of rising economic inequality, and searching for connection in a society with decreasing social ties (Duff, 2016; Putnam, 2000; Roser & Ortiz-Ospina, 2017; World Wealth and Income Database, 2016). The argument of a wider shift towards narcissistic values and behaviours among younger generations misses the glaring realities of millennials lives. If younger generations are more concerned with making money, more materialistic (Trzesniewski & Donnellan, 2010; Twenge, 2010, 2013), disengaged from political institutions they don't trust (Trzesniewski & Donnellan, 2010), taking longer to build adult lives (Arnett, 2010), disengaged from economic institutions that work against them (YouGov, 2017), increasingly anxious (Twenge, 2000), and reporting beliefs such as "hard work and education do not pay off" (Pew Research Center, 2015a; Trzesniewski & Donnellan, 2010), they have reason to be.

Going forward, theories of generational change also lack discussion of the increasing pressure that climate change has on younger generations, which would predict that narcissism and individualism will reduce out of necessity over the next few decades. As discussed at length in this chapter, any less than a measured and thoughtful approach to these topics runs the risk of validating harmful stereotypes.

### **Future Directions**

The research in this thesis has complemented and extended upon the existing literature using mixture modelling and latent growth models to provide new perspectives in on-going debates. Although these debates – the narcissism epidemic and the association between narcissism and self-esteem – deal with the same core topic, the two areas are curiously distinct from one another. While one side of the literature is preoccupied with clearly defining narcissism and its relative adaptiveness using largely cross-sectional research, the other measures change over time with a somewhat looser consideration of what narcissism actually is. Here, future directions are suggested for research into these two areas, as well as how they may be reconciled going forward.

Narcissism is generally considered to be a continuum (e.g., Foster & Campbell, 2007), and this is supported by the fact that Study 1 and Study 2 both identify low, moderate, and high patterns of self-regard. However, these studies also demonstrate that important information can be gained from the use of person-centered approaches as a complement to variable-centered approaches (Wetzel et al., 2016; Laursen & Hoff, 2006; Rosato & Baer, 2012). Using the two together allows for the documentation of both general trends and heterogeneity; some things can be generalised across populations (i.e., entitlement is associated with low agreeableness), but variability can also emerge within those populations

(grandiose and vulnerable forms of entitlement are differentiated by their associations with neuroticism, extraversion, and self-esteem; Laursen & Hoff, 2006).

Person-centered approaches are growing (e.g., Crowe et al., 2016a; Wetzel et al., 2016), but there is room for much more. Firstly, it is important to replicate the profiles identified in the current research using different measures, and across different contexts. In particular, future research should attempt to replicate the moderate and low self-regard profiles as they are less theoretically grounded than the high self-regard profiles. However, there are also other forms of self-regard that may be identified in future research. For one, the lack of a clear relationship between narcissism and fragile forms of self-esteem may indicate further refinement in subtypes of narcissism is needed. Unstable self-esteem is not necessarily a sign of a narcissist – self-esteem may be poorly anchored and yet not inflated – and yet narcissism may be a sign of unstable self-esteem (Bosson et al., 2008). As demonstrated in this thesis, these relationships are obscured when treated as homogeneous across the population. Future research could therefore identify profiles or clusters of narcissism differentiated by multiple constructs rather than just one; for example, explicit self-esteem, implicit self-esteem, and self-esteem stability (Eromo & Levy, 2017).

However, a particularly important direction for future research is utilising more longitudinal data when measuring subtypes of narcissism. Geukes et al. (2017; also see Back et al., 2013) proposed that the more maladaptive parts of narcissism are not always present, but only when responding to a threat. They found that narcissistic self-promotion was associated with stable self-esteem, while defensive narcissistic behaviours were associated with unstable self-esteem. Wetzel et al. (2016) also identified that different subtypes of narcissism use self-promotion and self-protection to different degrees, indicating that narcissistic subtypes may be defined by their temporal stability. The fluctuation between grandiose and vulnerable narcissism is also a growing area of interest (Gore & Widiger,

2016; Hyatt et al., 2017; Ronningstam, 2009), and is supported by the findings in Study 2. However, more research is needed to determine how often and how strongly narcissism fluctuates between these expressions and how stable they are in the long-term. One promising future area of research is the use of Ecological Momentary Assessment to assess fine-grained longitudinal data (Gore & Widiger, 2016; Holtzman et al., 2010; Miller et al., 2011a; Wright & Edershile, 2017).

Just as longitudinal data should be integrated into research regarding the structure of narcissism, longitudinal research could benefit from person-centered approaches (e.g., Heppner & Kernis, 2011). Variable-centered approaches can identify universal patterns of change across time, as seen in normative change in personality (Caspi et al., 2005; Laursen & Hoff, 2006). It is appropriate to assume that a population may experience similar lifespan events at similar ages, and show similar changes in their personality. However, an important next step is to examine how change over time *differs* across people. Study 2 presents some of the first work in this area and indicates that there is indeed variation in the development of self-regard over time, but measuring change over a longer period of time will provide a stronger estimate of this variation and its consequences. Latent Growth Mixture Modelling would be an ideal analytic technique going forward, as it integrates the techniques used within this thesis by estimating separate growth curves (implemented in Study 3) for each latent profile (implemented in Study 1 and 2; Laursen & Hoff, 2006; Muthén & Muthén, 2000). These person-centered techniques were not utilised in Study 3 as having appropriate power for such models would require more waves of data (Sibley & Milojev, 2014). However, attempts to capture as much heterogeneity as possible in longitudinal models will be pursued in future research.

One question such approaches could answer more clearly is whether those who are already highly narcissistic will increase in narcissism the most. The corresponsive principle

suggests that “the most likely effect of life experience on personality development is to deepen the characteristics that lead people to those experiences in the first place” (p. 470, Caspi et al., 2005). There is evidence that those with very high levels of entitlement may not follow the same negative trajectory over time, as high initial entitlement would suggest hostility towards any experiences of failure or interpersonal feedback, thus halting normative development (Bushman & Baumeister, 1998; Morf & Rhodewalt, 2001; Roberts & Wood, 2006; Ronningstam et al., 1995; Zuckerman & O’Loughlin, 2009). Thus, the negative trend identified in Study 3 may not fit for some individuals. Leckelt et al. (2016) similarly propose that the effects of a recession on narcissism may differ across individuals, for example, those who are already high in narcissism may view unemployment as an ego-threat and double down on their narcissism in response. Furthermore, Bianchi (2014) suggests that the effects of a recession are likely to be tempered for those who are less dependent on economic conditions – that is, the wealthy and the educated.

Another area where research measuring change in narcissism could benefit from integration with research into the structure of narcissism is moving away from the use of the NPI. The appropriateness of the NPI as a measure of narcissism has been discussed for quite some time (Ackerman et al., 2012; Rosenthal & Hooley, 2010), and yet, the debate over its validity has only tangentially entered into the debate about generational change (Trzesniewski et al., 2008a). The mix of adaptive and maladaptive facets makes increases in the total NPI score difficult to interpret (Brown et al., 2009; Rosenthal et al., 2011), and yet the subscales are too unreliable to provide consistent estimates of change on their own (Ackerman & Donnellan, 2013; Campbell et al., 2004; del Rosario & White, 2005). Of course, there is still plenty of support for the NPI (e.g., Miller et al., 2012b), and as the oldest measure of narcissism, it is the only measure where decades of data are available (Raskin & Hall, 1979). Continuing to measure NPI narcissism in the future will allow for comparisons

across even longer time periods. However, in order to be able to track narcissism over time using more reliable measures, the best time to begin collecting data is now.

The results in this thesis indicate that sociocultural changes such as growing individualism and the self-esteem movement do not appear to contribute to the development of narcissism. This raises the question – what *does* contribute to an individual's narcissism? A certain amount of all personality traits, narcissism included, are attributable to genetics (Vernon et al., 2008). In fact, Vernon et al. (2008) suggest that approximately 60% of the variance in NPI narcissism can be explained by genetic factors. Of course, environmental factors also play an important role in the development of personality traits (Caspi et al., 2005), and previous research has found that invalidating, controlling or hostile parenting has consistent links with narcissism (e.g., Horton et al., 2006; Huxley & Bizumic, 2017; Wetzel & Robins, 2016). Study 3 also adds some tentative evidence for the growing area of research into narcissism and economic conditions, with results finding higher narcissism among men who were emerging adults when the economy was strong. Although economic conditions are not yet *strongly* linked to narcissism, more research in this area may prove helpful for understanding the causes of individual differences in narcissism, and perhaps for predicting when cycles may occur. These areas may prove to be better candidates for research in the future regarding the development of narcissism, rather than more research into sociocultural changes.

More research is also needed into what drives normative change in narcissism across the lifespan. Studies 2 and 3 concluded that the best-fitting explanation for the negative association between entitlement and age is that personality change across the lifespan is driven by normative experiences such as entering the job market, finding a long term partner, or becoming a parent (Caspi et al., 2005; Roberts et al., 2006). However, the theorised links between narcissism and life events, responsibility, or experiences of failure have yet to be

investigated directly (Hill & Roberts, 2011; Robert et al., 2010). Previous longitudinal research into NPD found 60-70% declines in prevalence across periods between 3 and 10 years, particularly following experiences of failure, success, or the development of important relationships (Johnson et al., 2000; Ronningstam et al., 1995). Yet, it is unclear whether the same effects would be found for trait narcissism which is far more stable (Hopwood et al., 2013). Changes in secure forms of self-esteem may also be associated with the same developmental triggers, as Kernis (2003) describe optimal self-esteem as “favourable feelings of self-worth that arise naturally from successfully dealing with life’s challenges” (p. 13), but this too lacks research. Furthermore, entitlement may develop differently across the lifespan to narcissism as a whole, with the unique maladaptiveness of entitlement suggesting it may be slower and more difficult to shift than the collection of constructs that make up narcissism. Future research is important for establishing how events and experiences across the lifespan may contribute to changing levels of self-esteem, narcissism, and entitlement.

Some evidence exists that people attribute change in themselves to change in the world instead (Eibach et al., 2003). However, more research is needed into how exactly these processes may work. In this chapter, it is suggested that there may be system-justifying motives behind the consistent support for the narcissism epidemic across several decades. As much of the research into age-based stereotypes focuses on the elderly, it is unclear how being labelled “entitled” may impact upon emerging adults. Furthermore, attitudes towards different ages are not necessarily the same thing as attitudes towards different generations, so more research may be needed to investigate the antecedents and consequences of these views (Trzesniewski & Donnellan, 2014). The little research that has investigated these issues indicates it is likely to have a negative impact, with managers from the Baby Boomer generation evaluating the same millennial employees more negatively than managers from Gen X (Rentz, 2015).

Finally, there remains the question of whether these results may be culturally bounded to New Zealand. As documented in the introduction, New Zealand has a unique cultural identity. Yet, it is also a Western English-speaking country that has undergone the same sociocultural changes as the United States of increasing wealth, rising individualism and a growing focus on self-esteem (Allen et al., 2007). There is no particular reason to believe that New Zealand would be totally exempt from the forces theorised to drive the narcissism epidemic. Indeed, Twenge and Campbell (2009a) argue that the narcissism epidemic is spreading to countries like New Zealand. Therefore, the lack of evidence of increasing entitlement in Study 3 may not be a cultural difference, but an addition to a growing international literature that has also found no rise in narcissism (e.g., Trzesniewski et al., 2008b; Wetzel et al., 2017). Similarly, the prevalence of the profiles identified in Studies 1 and 2 may change from one context to another, but the general structure of self-regard should stay largely the same across cultural contexts because it fits well with subtypes identified in international research (e.g., Crowe et al., 2016a). However, differences across countries do exist, and these results are likely not generalizable outside of Western contexts (Henrich et al., 2010). Assessing the extent to which the structure and development of self-regard differ across cultural contexts is an important next step.

## **Conclusion**

The three studies in this thesis have provided new perspectives to two on-going debates within the narcissism literature, using a large representative sample of New Zealanders and novel analytic techniques. Firstly, these studies have demonstrated that narcissism and self-esteem are heterogeneous constructs by identifying five stable profiles with differing associations between entitlement and self-esteem. A high score on entitlement may represent a confident, self-aggrandizing, extraverted individual or someone who is shy, hypersensitive and moody (Wink, 1991). Similarly, a high score on self-esteem may

represent a grounded, happy, and social person, or someone who antagonises others, burns through relationships, and has little self-control (Kernis, 2003; Wink, 1991). High self-regard is not unidimensional, not the same for everyone, and neither uniformly good nor bad.

Secondly, this thesis has found no evidence for the popular idea that we are raising “an army of little narcissists” (Twenge, 2006, p. 223). High entitlement appears in less than 1 in 10 New Zealanders and secure and optimal self-esteem is the most common self-view. Self-regard is generally stable over time, and the small changes that do occur largely reflect movement towards secure self-esteem. Entitlement is not increasing among younger generations, and if anything, signs point to rising narcissism in the Baby Boomer generation.

While understandings of self-esteem and narcissism suffer from a lack of longitudinal research (Miller et al., 2017a), research measuring longitudinal change in narcissism notes that the lines between self-esteem and narcissism have become blurred (Twenge & Campbell, 2009a). To work towards a complete understanding of narcissism, these two perspectives must be integrated together. Similarly, person-centered and variable-centered approaches to self-regard are both essential, in order to understand general associations between variables as well as the individual differences in these associations (Laursen & Hoff, 2006). Both the experiences that people share and the ways in which people differ are important in order to fully understand self-regard and its development across the lifespan (Laursen & Hoff, 2006). While this thesis has begun some of this work, there is much more to be done.

This thesis begins and ends with the observation from George Vaillant that “the journey from immaturity to maturity is a movement from narcissism to connection” (Gregoire, 2013). From childhood self-adulation and adolescent egocentrism (Elkind, 1982; Kohut, 1977) to the self-exploration, setbacks, and humbling experiences of emerging adulthood (Arnett, 2010; Foster et al., 2003; Hill & Roberts, 2012), to a life filled with roles, responsibilities, and strong social ties (Roberts & Wood, 2006), the high entitlement of youth

simply reflects a lack of life experience. Rather than undermining future generations we can have confidence in their ability to rise to the challenges they will face, just as those before them have done.

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**APPENDICES**

## Appendix A

Appendix A presents supplementary material from Study 1 (Chapter Four) and Study 2 (Chapter Five). As mentioned in Study 1, Supplementary File 1 presents the same three-step weighted multinomial regression model assessing gender, age, and personality differences in the likelihood of profile membership, but uses the narcissistic self-esteem profile as the reference profile instead of optimal self-esteem. Table A1 presents the full bivariate correlations, means and standard deviations for all variables, including the gender, age, and personality predictors used in the logistic regression model, without sample weighting. Table A2 presents the means of psychological entitlement and self-esteem for all considered profile solutions, from a 3-profile solution to a 6-profile solution. As referenced in Study 2, Supplementary File 2 presents likelihood ratio tests for profile solutions ranging from 4 to 6 profiles at both Time and Time 7. Table A3 presents the fit indices for these same profile solutions. Table A4 presents the same three-step weighted multinomial regression model assessing gender, age, personality differences, psychological distress, and satisfaction with personal relationships used in Study 2, but with alternate profiles used as the reference profile. Figure A1 presents the Latent Profile Analysis using the same model as the presented in Study 1, but using the 2-item measure of psychological entitlement rather than the 3-item measure, demonstrating that this structure does indeed hold from Time 1 (2009) to Time 7 (2015).

Table A1

*Bivariate correlations, means, and standard deviations between all scale variables and demographic variables*

	1.	2.	3.	4.	5.	6.	7.	8.	9.
1. Gender (0 women, 1 men)									
2. Age	.089								
3. Self Esteem	.050	.120							
4. Entitlement	.100	-.197	-.028						
5. Extraversion	-.057	-.128	.224	.088					
6. Agreeableness	-.296	-.014	.084	-.149	.209				
7. Conscientiousness	-.117	.090	.221	-.058	.005	.149			
8. Neuroticism	-.121	-.173	-.499	.148	-.081	-.025	-.116		
9. Openness	.013	-.188	.083	.002	.252	.245	.013	-.016	
<i>M</i>		47.91	5.15	3.11	4.04	5.24	5.10	3.44	4.76
<i>SD</i>		15.72	1.19	1.30	1.16	0.99	1.08	1.09	1.12

*Note:*  $r > .016$  significant at  $p < .05$ ,  $N = 6,471$

### Supplementary File 1

For ease of comparison, we report key comparisons between profiles from the model as reported in the manuscript when re-parameterised with narcissistic self-esteem as the reference profile. In addition to the results reported earlier where optimal self-esteem is the reference profile, these ancillary analyses indicate that women were less likely to belong to the narcissistic esteem profile than the high moderates profile ( $b = -.535$ ,  $se = .243$ ,  $z = -2.202$ ,  $p = .028$ ,  $OR = 0.59$ ) and the low moderates profile ( $b = -.598$ ,  $se = .262$ ,  $z = -2.286$ ,  $p = .022$ ,  $OR = 0.55$ ). However, there was no gender difference for the low self-regard profile. Age only predicted belonging to the high moderates profile ( $b = .027$ ,  $se = .007$ ,  $z = 3.939$ ,  $p < .001$ ,  $OR = 1.03$ ), but no other profiles.

Membership of the grandiose narcissistic self-esteem profile was predicted by higher extraversion relative to all other profiles; high moderates ( $b = -.468$ ,  $se = .138$ ,  $z = -3.389$ ,  $p = .001$ ,  $OR = 0.63$ ), low moderates ( $b = -.791$ ,  $se = .148$ ,  $z = -5.355$ ,  $p < .001$ ,  $OR = 0.45$ ), and low self-regard ( $b = -.997$ ,  $se = .201$ ,  $z = -4.957$ ,  $p < .001$ ,  $OR = 0.37$ ), as well as higher conscientiousness compared to the high moderates ( $b = -.591$ ,  $se = .140$ ,  $z = -4.208$ ,  $p < .001$ ,

OR = 0.55), low moderates ( $b = -.741, se = .147, z = -5.059, p < .001, OR = 0.48$ ), and low self-regard ( $b = -1.019, se = .176, z = -5.771, p < .001, OR = 0.36$ ).

Belonging to the narcissistic self-esteem profile was also predicted by lower agreeableness compared to all other profiles; high moderates ( $b = .277, se = .131, z = 2.118, p = .034, OR = 1.32$ ), low moderates ( $b = .424, se = .142, z = 2.993, p = .003, OR = 1.53$ ), low self-regard ( $b = .560, se = .176, z = 3.190, p = .001, OR = 1.75$ ), and lower neuroticism relative to the two lowest profile, low moderates ( $b = 1.007, se .196, z = 5.132, p < .001, OR = 2.74$ ) and low self-regard ( $b = 1.626, se = .231, z = 7.041, p < .001, OR = 5.08$ ). Higher openness only predicted belonging to the low self-regard profile relative to the narcissistic self-esteem profile ( $b = .339, se = .167, z = 2.024, p < .043, OR = 1.40$ ). Overall, belonging to the narcissistic self-esteem profile is, with few exceptions, predicted by high extraversion, high conscientiousness, low neuroticism, and low agreeableness relative to the other profiles.

Table A2

*Estimated means for entitlement and self-esteem in possible solutions ranging from three to six profiles*

	Three Profiles		Four Profiles		Five Profiles		Six Profiles	
	<i>Ent.</i>	<i>SE</i>	<i>Ent.</i>	<i>SE</i>	<i>Ent.</i>	<i>SE</i>	<i>Ent.</i>	<i>SE</i>
Profile 1	3.26	3.60	3.00	2.51	2.98	1.98	2.98	1.98
Profile 2	4.92	5.55	3.40	4.30	3.29	3.55	3.22	3.56
Profile 3	2.75	5.59	5.03	5.89	3.41	4.82	3.06	4.88
Profile 4			2.76	5.86	5.14	6.19	4.94	4.66
Profile 5					2.79	6.07	5.02	6.16
Profile 6							2.66	6.10

## Supplementary File 2

We conducted LPA's at Time 6 and Time 7 to test model fit for four, five, and six-profile solutions. Fit indices for these models are presented in Supplementary Table A3. Entropy should be above .7-.8 for clear separation between profiles (Collins & Lanza, 2009). The Vuong-Lo-Mendell-Rubin (VLMR) likelihood ratio test (see Lo, Mendell, & Rubin, 2001) and Bootstrapped Likelihood Ratio Test (BLRT; McLachlan & Peel, 2000) both indicated that a five-profile solution performed significantly better than a four-profile solution at Time 6 (LRT = 652.89,  $p < .001$ ; adjusted LRT = 631.13,  $p < .001$ ; BLRT = 652.89,  $p < .001$ ;  $N = 15,621$ ). A six-profile solution was also a significant improvement on a five-profile solution at Time 6 (LRT = 331.77,  $p < .001$ ; adjusted LRT = 320.70,  $p < .001$ ; BLRT = 331.77,  $p < .001$ ). At Time 7, the five-profile solution performed significantly better than a four-profile solution (LRT = 460.93,  $p < .001$ ; adjusted LRT = 449.16,  $p < .001$ ; BLRT = 460.93,  $p < .001$ ;  $N = 13,893$ ). A six-profile solution was not a significant improvement on the five-profile solution for the VLMR tests, however, the BLRT indicated that a six-profile solution was a better fit (LRT = 403.47,  $p = .31$ ; adjusted LRT = 393.17,  $p = .32$ ; BLRT = 403.47,  $p < .001$ ).

At Time 6, the probability (averaged across participants) that a participant belonged to a given profile for the four-profile solution ranged from .74 - .92, from .79 - .89 for the five-profile solution, and from .75 - .87 for the six-profile solution. At Time 7, the probability that a participant belonged to a given profile for the four-profile solution ranged from .79 - .91, from .77 - .90 for the five-profile solution, and from .71 - .88 for the six-profile solution. These values indicate that there was only a small average likelihood of misclassification overall.

Table A3

*Model fit for the different profile solutions of the Latent Profile Analyses at Time 6 and Time 7*

	Time 6			Time 7		
	AIC	aBIC	Entropy	AIC	aBIC	Entropy
Four Profiles	99782	99840	.728	107097	107175	.768
Five Profiles	98205	98277	.749	86480	86550	.757
Six Profiles	97879	97964	.738	106248	106362	.735

Note: AIC = Akaike Information Criterion; aBIC = Adjusted Bayesian Information Criterion

Table A4

*Results from the distal multinomial logistic regression with the auxiliary variables (gender, age, personality, K-6 psychological distress, and satisfaction with personal relationships) at Time 6, using moderate self-regard and vulnerable self-regard as reference profiles.*

	<i>Moderate self-regard reference profile</i>				<i>Vulnerable self-regard reference profile</i>			
	<i>b</i>	<i>se</i>	<i>z</i>	<i>OR</i>	<i>b</i>	<i>se</i>	<i>z</i>	<i>OR</i>
<i>Vulnerable self-regard</i>								
Gender	-.275	.147	-1.868	0.76				
Age	-.003	.005	-.578	1.00				
Extraversion	-.303	.059	-5.134	0.74**				
Agreeableness	-.168	.070	-2.393	0.85*				
Conscientiousness	-.243	.062	-3.919	0.78**				
Neuroticism	1.118	.083	13.438	3.06**				
Openness	-.094	.061	-1.546	0.91				
Kessler-6	1.518	.119	12.709	4.56**				
Satisfaction with Personal Relationships	-.256	.025	-10.313	0.77**				
<i>Low self-regard</i>								
Gender	-.467	.105	-4.446	0.63**	-.192	.135	-1.420	0.83
Age	.013	.003	3.850	1.01**	.016	.004	3.827	1.02**
Extraversion	-.596	.045	-13.282	0.55**	-.293	.056	-5.202	0.75**
Agreeableness	.341	.061	5.629	1.41**	.510	.069	7.407	1.67**
Conscientiousness	-.191	.048	-3.948	0.83**	.051	.057	0.904	1.05
Neuroticism	.908	.063	14.308	2.48**	-.210	.075	-2.809	0.81*
Openness	.029	.048	0.600	1.03	.122	.056	2.186	1.13*
Kessler-6	1.085	.087	12.491	2.96**	-.433	.098	-4.438	0.65**
Satisfaction with Personal Relationships	-.177	.019	-9.062	0.84**	.079	.022	3.625	1.08**

*Note.* Gender coded as 0 for women, 1 for men; Kessler-6 measured on a scale from 0 to 4; personality on a scale from 1 to 7, and satisfaction with personal relationships on a scale from 1 to 10.

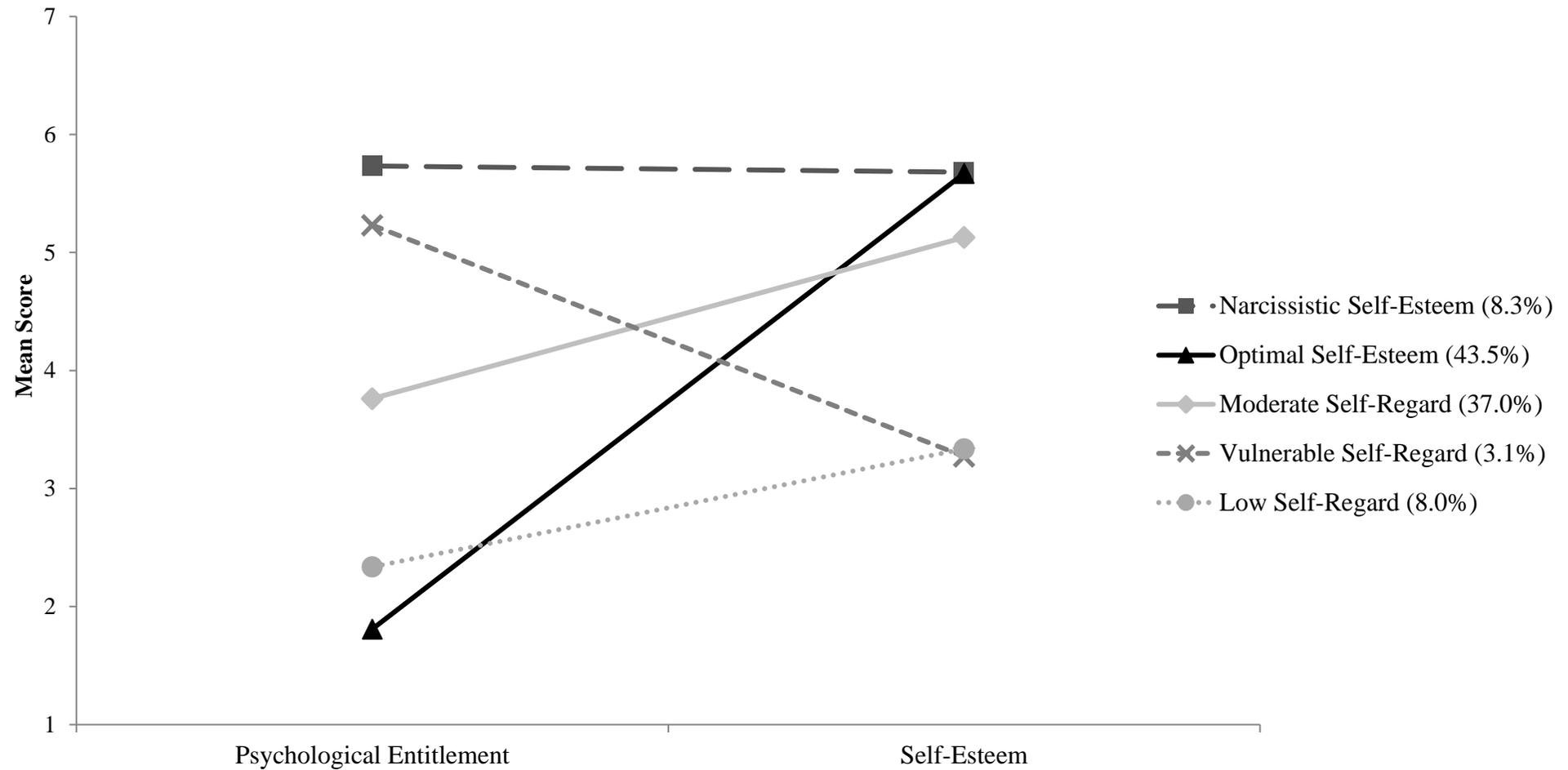


Figure A1. Mean scores of psychological entitlement and self-esteem for the five profiles identified by Latent Profile Analysis at Time 1 (2009) using the 2-item measure of psychological entitlement and sample weighting ( $N = 6,468$ ; entropy = .734).

## Appendix B

Appendix B presents the selected *Mplus* syntax used to implement the models presented in this thesis. Supplementary File 3 presents the *Mplus* syntax for the Latent Profile Analysis run in Study 1 (Chapter Four). Supplementary File 4 presents the *Mplus* syntax for the Latent Transition Analysis run in Study 2 (Chapter Five; Latent Profile Analyses run at Time 6 and 7 in Study 2 use the same syntax as presented in Supplementary File 3). Supplementary File 5 contains *Mplus* syntax from the Single Group Cohort-Sequential Latent Growth Model, while Supplementary File 6 contains *Mplus* syntax from the Multi-Group Cohort-Sequential Latent Growth Model, both used in Study 3 (Chapter Six). The syntax is annotated for the readers' reference (*note*: annotations are preceded with “!” as per *Mplus* language specifications). Please note that the full syntax for the models presented here, as well as worked examples of these models with the associated data are also presented online on the NZAVS web page.

### Supplementary File 3

```

DATA:
FILE IS LPA DATA.txt;
VARIABLE:
IDVARIABLE IS subnum;
MISSING ARE ALL (9999);
NAMES ARE
NARCT1 SET1 GENT1 AGET1 ET1 AT1 CT1 NT1 OT1 SUBNUM;
USEVARIABLE ARE
NARCT1 SET1 GENT1 AGET1 ET1 AT1 CT1 NT1 OT1;

!Specifies five latent profiles should be identified
CLASSES = C(5);

!Distal three-step weighted multinomial logistic regression model
AUXILIARY = GenT1 (DCAT) AgeT1 (DCON) ET1 (DCON) AT1 (DCON) CT1 (DCON) NT1 (DCON)
OT1 (DCON);

ANALYSIS:
PROCESSORS = 4;
TYPE = Mixture; ESTIMATOR=MLR;
STARTS = 5000 500; STITERATIONS = 20;
LRTBOOTSTRAP = 100;
LRTSTARTS = 0 0 5000 100;
k-1STARTS = 5000 100;

MODEL:

```

%OVERALL%

OUTPUT:  
ENTROPY SAMPSTAT

PLOT:  
TYPE IS Plot3;

SERIES IS  
NarcT1 (1) SET1 (2);

#### Supplementary File 4

DATA:  
FILE IS LTA DATA.txt;  
VARIABLE:  
IDVARIABLE IS subnum;  
MISSING ARE ALL (9999);  
NAMES ARE  
Y1\_T1 Y2\_T1 Y1\_T2 Y2\_T2 SUBNUM;  
USEVARIABLE ARE  
Y1\_T1 Y2\_T1 Y1\_T2 Y2\_T2;

! Specifies five latent profiles should be identified  
CLASSES = C1(5) C2(5);

!Use participants who responded at both Time 6 and Time 7  
USEOBS ARE (T06 EQ 1) AND (T07 EQ 1);

DEFINE:  
Y1\_T1 = NARCT6; Y2\_T1 = SET6;  
Y1\_T2 = NARCT7; Y2\_T2 = SET7;

ANALYSIS:  
PROCESSORS = 12;  
TYPE = Mixture;  
STARTS = 5000 500; STITERATIONS = 100;

MODEL:  
%OVERALL%  
C2 ON C1;

MODEL c1:  
%c1#1%  
[y1\_T1] (1);  
[y2\_T1] (2);

%c1#2%  
[y1\_T1] (3);  
[y2\_T1] (4);

%c1#3%  
[y1\_T1] (5);  
[y2\_T1] (6);

%c1#4%  
[y1\_T1] (7);  
[y2\_T1] (8);

```
%c1#5%
[y1_T1] (9);
[y2_T1] (10);
```

```
MODEL c2:
%c2#1%
[y1_T2] (1);
[y2_T2] (2);
```

```
%c2#2%
[y1_T2] (3);
[y2_T2] (4);
```

```
%c2#3%
[y1_T2] (5);
[y2_T2] (6);
```

```
%c2#4%
[y1_T2] (7);
[y2_T2] (8);
```

```
%c2#5%
[y1_T2] (9);
[y2_T2] (10);
```

```
OUTPUT:
SAMPSTAT STDYX
```

### Supplementary File 5

```
DATA:
FILE IS SINGLE CSLGM DATA.txt;
VARIABLE:
IDVARIABLE IS subnum;
MISSING ARE ALL (9999);
NAMES ARE
Y_T1 Y_T2 Y_T3 Y_T4 Y_T5 Y_T6 TS1 TS2 TS3 TS4 TS5 TS6 SUBNUM;
USEVARIABLE ARE
y_T1 y_T2 y_T3 y_T4 y_T5 y_T6 TS1 TS2 TS3 TS4 TS5 TS6;
```

```
!Select participants who have responded at three or more time points
USEOBSERVATIONS ARE (TSUM GE 3);
```

```
!Defines TSCORES for time-varying growth models, in this case: participants' age
TSCORES = TS1 TS2 TS3 TS4 TS5 TS6;
```

```
GROUPING IS Gender (0 = Women, 1 = Men);
```

```
ANALYSIS:
PROCESSORS = 4; TYPE = RANDOM; ESTIMATOR = MLR;
```

```
MODEL:
!LGM specified based on the TSCORES (age)
!estimating linear, quadratic and cubic growth curves
i s q c| y_T1-y_T6 AT TS1-TS6;
```

```
y_T1 (a);
y_T2 (a);
```

y\_T3 (a);  
 y\_T4 (a);  
 y\_T5 (a);  
 y\_T6 (a);

[i] (ix);  
 [s] (sx);  
 [q] (qx);  
 [c] (cx);

MODEL Women:

[i] (if);  
 [s] (sf);  
 [q] (qf);  
 [c] (cf);

i (b);  
 s (c);  
 q (x1);  
 c (x2);

MODEL Men:

[i] (im);  
 [s] (sm);  
 [q] (qm);  
 [c] (cm);

i (b);  
 s (c);  
 q (x1);  
 c (x2);

!Estimating conditional mean-level estimates for entitlement for women

MODEL CONSTRAINT:

new(Age18f Age19f Age20f Age21f Age22f Age23f Age24f Age25f Age26f Age27f Age28f Age29f Age30f  
 Age31f Age32f Age33f Age34f Age35f Age36f Age37f Age38f Age39f Age40f Age41f Age42f Age43f  
 Age44f Age45f Age46f Age47f Age48f Age49f Age50f Age51f Age52f Age53f Age54f Age55f Age56f  
 Age57f Age58f Age59f Age60f Age61f Age62f Age63f Age64f Age65f Age66f Age67f Age68f Age69f  
 Age70f Age71f Age72f Age73f Age74f);

Age18f=if+(sf\*((18-45)/10))+(qf\*((18-45)/10)^2)+(cf\*((18-45)/10)^3);  
 Age19f=if+(sf\*((19-45)/10))+(qf\*((19-45)/10)^2)+(cf\*((19-45)/10)^3);  
 Age20f=if+(sf\*((20-45)/10))+(qf\*((20-45)/10)^2)+(cf\*((20-45)/10)^3);  
 Age21f=if+(sf\*((21-45)/10))+(qf\*((21-45)/10)^2)+(cf\*((21-45)/10)^3);  
 Age22f=if+(sf\*((22-45)/10))+(qf\*((22-45)/10)^2)+(cf\*((22-45)/10)^3);  
 Age23f=if+(sf\*((23-45)/10))+(qf\*((23-45)/10)^2)+(cf\*((23-45)/10)^3);  
 Age24f=if+(sf\*((24-45)/10))+(qf\*((24-45)/10)^2)+(cf\*((24-45)/10)^3);  
 Age25f=if+(sf\*((25-45)/10))+(qf\*((25-45)/10)^2)+(cf\*((25-45)/10)^3);  
 Age26f=if+(sf\*((26-45)/10))+(qf\*((26-45)/10)^2)+(cf\*((26-45)/10)^3);  
 Age27f=if+(sf\*((27-45)/10))+(qf\*((27-45)/10)^2)+(cf\*((27-45)/10)^3);  
 Age28f=if+(sf\*((28-45)/10))+(qf\*((28-45)/10)^2)+(cf\*((28-45)/10)^3);  
 Age29f=if+(sf\*((29-45)/10))+(qf\*((29-45)/10)^2)+(cf\*((29-45)/10)^3);  
 Age30f=if+(sf\*((30-45)/10))+(qf\*((30-45)/10)^2)+(cf\*((30-45)/10)^3);  
 Age31f=if+(sf\*((31-45)/10))+(qf\*((31-45)/10)^2)+(cf\*((31-45)/10)^3);  
 Age32f=if+(sf\*((32-45)/10))+(qf\*((32-45)/10)^2)+(cf\*((32-45)/10)^3);  
 Age33f=if+(sf\*((33-45)/10))+(qf\*((33-45)/10)^2)+(cf\*((33-45)/10)^3);  
 Age34f=if+(sf\*((34-45)/10))+(qf\*((34-45)/10)^2)+(cf\*((34-45)/10)^3);

Age35f=if+(sf\*((35-45)/10)+(qf\*((35-45)/10)^2)+(cf\*((35-45)/10)^3);  
 Age36f=if+(sf\*((36-45)/10)+(qf\*((36-45)/10)^2)+(cf\*((36-45)/10)^3);  
 Age37f=if+(sf\*((37-45)/10)+(qf\*((37-45)/10)^2)+(cf\*((37-45)/10)^3);  
 Age38f=if+(sf\*((38-45)/10)+(qf\*((38-45)/10)^2)+(cf\*((38-45)/10)^3);  
 Age39f=if+(sf\*((39-45)/10)+(qf\*((39-45)/10)^2)+(cf\*((39-45)/10)^3);  
 Age40f=if+(sf\*((40-45)/10)+(qf\*((40-45)/10)^2)+(cf\*((40-45)/10)^3);  
 Age41f=if+(sf\*((41-45)/10)+(qf\*((41-45)/10)^2)+(cf\*((41-45)/10)^3);  
 Age42f=if+(sf\*((42-45)/10)+(qf\*((42-45)/10)^2)+(cf\*((42-45)/10)^3);  
 Age43f=if+(sf\*((43-45)/10)+(qf\*((43-45)/10)^2)+(cf\*((43-45)/10)^3);  
 Age44f=if+(sf\*((44-45)/10)+(qf\*((44-45)/10)^2)+(cf\*((44-45)/10)^3);  
 Age45f=if+(sf\*((45-45)/10)+(qf\*((45-45)/10)^2)+(cf\*((45-45)/10)^3);  
 Age46f=if+(sf\*((46-45)/10)+(qf\*((46-45)/10)^2)+(cf\*((46-45)/10)^3);  
 Age47f=if+(sf\*((47-45)/10)+(qf\*((47-45)/10)^2)+(cf\*((47-45)/10)^3);  
 Age48f=if+(sf\*((48-45)/10)+(qf\*((48-45)/10)^2)+(cf\*((48-45)/10)^3);  
 Age49f=if+(sf\*((49-45)/10)+(qf\*((49-45)/10)^2)+(cf\*((49-45)/10)^3);  
 Age50f=if+(sf\*((50-45)/10)+(qf\*((50-45)/10)^2)+(cf\*((50-45)/10)^3);  
 Age51f=if+(sf\*((51-45)/10)+(qf\*((51-45)/10)^2)+(cf\*((51-45)/10)^3);  
 Age52f=if+(sf\*((52-45)/10)+(qf\*((52-45)/10)^2)+(cf\*((52-45)/10)^3);  
 Age53f=if+(sf\*((53-45)/10)+(qf\*((53-45)/10)^2)+(cf\*((53-45)/10)^3);  
 Age54f=if+(sf\*((54-45)/10)+(qf\*((54-45)/10)^2)+(cf\*((54-45)/10)^3);  
 Age55f=if+(sf\*((55-45)/10)+(qf\*((55-45)/10)^2)+(cf\*((55-45)/10)^3);  
 Age56f=if+(sf\*((56-45)/10)+(qf\*((56-45)/10)^2)+(cf\*((56-45)/10)^3);  
 Age57f=if+(sf\*((57-45)/10)+(qf\*((57-45)/10)^2)+(cf\*((57-45)/10)^3);  
 Age58f=if+(sf\*((58-45)/10)+(qf\*((58-45)/10)^2)+(cf\*((58-45)/10)^3);  
 Age59f=if+(sf\*((59-45)/10)+(qf\*((59-45)/10)^2)+(cf\*((59-45)/10)^3);  
 Age60f=if+(sf\*((60-45)/10)+(qf\*((60-45)/10)^2)+(cf\*((60-45)/10)^3);  
 Age61f=if+(sf\*((61-45)/10)+(qf\*((61-45)/10)^2)+(cf\*((61-45)/10)^3);  
 Age62f=if+(sf\*((62-45)/10)+(qf\*((62-45)/10)^2)+(cf\*((62-45)/10)^3);  
 Age63f=if+(sf\*((63-45)/10)+(qf\*((63-45)/10)^2)+(cf\*((63-45)/10)^3);  
 Age64f=if+(sf\*((64-45)/10)+(qf\*((64-45)/10)^2)+(cf\*((64-45)/10)^3);  
 Age65f=if+(sf\*((65-45)/10)+(qf\*((65-45)/10)^2)+(cf\*((65-45)/10)^3);  
 Age66f=if+(sf\*((66-45)/10)+(qf\*((66-45)/10)^2)+(cf\*((66-45)/10)^3);  
 Age67f=if+(sf\*((67-45)/10)+(qf\*((67-45)/10)^2)+(cf\*((67-45)/10)^3);  
 Age68f=if+(sf\*((68-45)/10)+(qf\*((68-45)/10)^2)+(cf\*((68-45)/10)^3);  
 Age69f=if+(sf\*((69-45)/10)+(qf\*((69-45)/10)^2)+(cf\*((69-45)/10)^3);  
 Age70f=if+(sf\*((70-45)/10)+(qf\*((70-45)/10)^2)+(cf\*((70-45)/10)^3);  
 Age71f=if+(sf\*((71-45)/10)+(qf\*((71-45)/10)^2)+(cf\*((71-45)/10)^3);  
 Age72f=if+(sf\*((72-45)/10)+(qf\*((72-45)/10)^2)+(cf\*((72-45)/10)^3);  
 Age73f=if+(sf\*((73-45)/10)+(qf\*((73-45)/10)^2)+(cf\*((73-45)/10)^3);  
 Age74f=if+(sf\*((74-45)/10)+(qf\*((74-45)/10)^2)+(cf\*((74-45)/10)^3);

!Estimating conditional mean-level estimates for entitlement for men

new(Age18m Age19m Age20m Age21m Age22m Age23m Age24m Age25m Age26m Age27m Age28m  
 Age29m Age30m Age31m Age32m Age33m Age34m Age35m Age36m Age37m Age38m Age39m Age40m  
 Age41m Age42m Age43m Age44m Age45m Age46m Age47m Age48m Age49m Age50m Age51m Age52m  
 Age53m Age54m Age55m Age56m Age57m Age58m Age59m Age60m Age61m Age62m Age63m Age64m  
 Age65m Age66m Age67m Age68m Age69m Age70m Age71m Age72m Age73m Age74m);

Age18m=im+(sm\*((18-45)/10)+(qm\*((18-45)/10)^2)+(cm\*((18-45)/10)^3);  
 Age19m=im+(sm\*((19-45)/10)+(qm\*((19-45)/10)^2)+(cm\*((19-45)/10)^3);  
 Age20m=im+(sm\*((20-45)/10)+(qm\*((20-45)/10)^2)+(cm\*((20-45)/10)^3);  
 Age21m=im+(sm\*((21-45)/10)+(qm\*((21-45)/10)^2)+(cm\*((21-45)/10)^3);  
 Age22m=im+(sm\*((22-45)/10)+(qm\*((22-45)/10)^2)+(cm\*((22-45)/10)^3);  
 Age23m=im+(sm\*((23-45)/10)+(qm\*((23-45)/10)^2)+(cm\*((23-45)/10)^3);  
 Age24m=im+(sm\*((24-45)/10)+(qm\*((24-45)/10)^2)+(cm\*((24-45)/10)^3);  
 Age25m=im+(sm\*((25-45)/10)+(qm\*((25-45)/10)^2)+(cm\*((25-45)/10)^3);  
 Age26m=im+(sm\*((26-45)/10)+(qm\*((26-45)/10)^2)+(cm\*((26-45)/10)^3);  
 Age27m=im+(sm\*((27-45)/10)+(qm\*((27-45)/10)^2)+(cm\*((27-45)/10)^3);  
 Age28m=im+(sm\*((28-45)/10)+(qm\*((28-45)/10)^2)+(cm\*((28-45)/10)^3);

```

Age29m=im+(sm*((29-45)/10))+qm*((29-45)/10)^2+(cm*((29-45)/10)^3);
Age30m=im+(sm*((30-45)/10))+qm*((30-45)/10)^2+(cm*((30-45)/10)^3);
Age31m=im+(sm*((31-45)/10))+qm*((31-45)/10)^2+(cm*((31-45)/10)^3);
Age32m=im+(sm*((32-45)/10))+qm*((32-45)/10)^2+(cm*((32-45)/10)^3);
Age33m=im+(sm*((33-45)/10))+qm*((33-45)/10)^2+(cm*((33-45)/10)^3);
Age34m=im+(sm*((34-45)/10))+qm*((34-45)/10)^2+(cm*((34-45)/10)^3);
Age35m=im+(sm*((35-45)/10))+qm*((35-45)/10)^2+(cm*((35-45)/10)^3);
Age36m=im+(sm*((36-45)/10))+qm*((36-45)/10)^2+(cm*((36-45)/10)^3);
Age37m=im+(sm*((37-45)/10))+qm*((37-45)/10)^2+(cm*((37-45)/10)^3);
Age38m=im+(sm*((38-45)/10))+qm*((38-45)/10)^2+(cm*((38-45)/10)^3);
Age39m=im+(sm*((39-45)/10))+qm*((39-45)/10)^2+(cm*((39-45)/10)^3);
Age40m=im+(sm*((40-45)/10))+qm*((40-45)/10)^2+(cm*((40-45)/10)^3);
Age41m=im+(sm*((41-45)/10))+qm*((41-45)/10)^2+(cm*((41-45)/10)^3);
Age42m=im+(sm*((42-45)/10))+qm*((42-45)/10)^2+(cm*((42-45)/10)^3);
Age43m=im+(sm*((43-45)/10))+qm*((43-45)/10)^2+(cm*((43-45)/10)^3);
Age44m=im+(sm*((44-45)/10))+qm*((44-45)/10)^2+(cm*((44-45)/10)^3);
Age45m=im+(sm*((45-45)/10))+qm*((45-45)/10)^2+(cm*((45-45)/10)^3);
Age46m=im+(sm*((46-45)/10))+qm*((46-45)/10)^2+(cm*((46-45)/10)^3);
Age47m=im+(sm*((47-45)/10))+qm*((47-45)/10)^2+(cm*((47-45)/10)^3);
Age48m=im+(sm*((48-45)/10))+qm*((48-45)/10)^2+(cm*((48-45)/10)^3);
Age49m=im+(sm*((49-45)/10))+qm*((49-45)/10)^2+(cm*((49-45)/10)^3);
Age50m=im+(sm*((50-45)/10))+qm*((50-45)/10)^2+(cm*((50-45)/10)^3);
Age51m=im+(sm*((51-45)/10))+qm*((51-45)/10)^2+(cm*((51-45)/10)^3);
Age52m=im+(sm*((52-45)/10))+qm*((52-45)/10)^2+(cm*((52-45)/10)^3);
Age53m=im+(sm*((53-45)/10))+qm*((53-45)/10)^2+(cm*((53-45)/10)^3);
Age54m=im+(sm*((54-45)/10))+qm*((54-45)/10)^2+(cm*((54-45)/10)^3);
Age55m=im+(sm*((55-45)/10))+qm*((55-45)/10)^2+(cm*((55-45)/10)^3);
Age56m=im+(sm*((56-45)/10))+qm*((56-45)/10)^2+(cm*((56-45)/10)^3);
Age57m=im+(sm*((57-45)/10))+qm*((57-45)/10)^2+(cm*((57-45)/10)^3);
Age58m=im+(sm*((58-45)/10))+qm*((58-45)/10)^2+(cm*((58-45)/10)^3);
Age59m=im+(sm*((59-45)/10))+qm*((59-45)/10)^2+(cm*((59-45)/10)^3);
Age60m=im+(sm*((60-45)/10))+qm*((60-45)/10)^2+(cm*((60-45)/10)^3);
Age61m=im+(sm*((61-45)/10))+qm*((61-45)/10)^2+(cm*((61-45)/10)^3);
Age62m=im+(sm*((62-45)/10))+qm*((62-45)/10)^2+(cm*((62-45)/10)^3);
Age63m=im+(sm*((63-45)/10))+qm*((63-45)/10)^2+(cm*((63-45)/10)^3);
Age64m=im+(sm*((64-45)/10))+qm*((64-45)/10)^2+(cm*((64-45)/10)^3);
Age65m=im+(sm*((65-45)/10))+qm*((65-45)/10)^2+(cm*((65-45)/10)^3);
Age66m=im+(sm*((66-45)/10))+qm*((66-45)/10)^2+(cm*((66-45)/10)^3);
Age67m=im+(sm*((67-45)/10))+qm*((67-45)/10)^2+(cm*((67-45)/10)^3);
Age68m=im+(sm*((68-45)/10))+qm*((68-45)/10)^2+(cm*((68-45)/10)^3);
Age69m=im+(sm*((69-45)/10))+qm*((69-45)/10)^2+(cm*((69-45)/10)^3);
Age70m=im+(sm*((70-45)/10))+qm*((70-45)/10)^2+(cm*((70-45)/10)^3);
Age71m=im+(sm*((71-45)/10))+qm*((71-45)/10)^2+(cm*((71-45)/10)^3);
Age72m=im+(sm*((72-45)/10))+qm*((72-45)/10)^2+(cm*((72-45)/10)^3);
Age73m=im+(sm*((73-45)/10))+qm*((73-45)/10)^2+(cm*((73-45)/10)^3);
Age74m=im+(sm*((74-45)/10))+qm*((74-45)/10)^2+(cm*((74-45)/10)^3);

```

```

OUTPUT:
SAMPSTAT
CINTERVAL

```

## Supplementary File 6

```

DATA:
FILE IS MULTI CSLGM DATA.txt;
VARIABLE:
IDVARIABLE IS subnum;
MISSING ARE ALL (9999);

```

NAMES ARE  
 Y\_T1 Y\_T2 Y\_T3 Y\_T4 Y\_T5 TS1 TS2 TS3 TS4 TS5 COHORTNB SUBNUM;  
 USEVARIABLE ARE  
 y\_T1 y\_T2 y\_T3 y\_T4 y\_T5 TS1 TS2 TS3 TS4 TS5;

!Select participants who have responded at three or more time points  
 USEOBSERVATIONS ARE (TSUM GE 3);

!Defines TSCORES for time-varying growth models in this case: date/time of response  
 TSCORES = TS1 TS2 TS3 TS4 TS5;

!Specifying 5-year birth cohorts  
 GROUPING IS CohortNB (8=1936-1940, 9=1941-1945, 10=1946-1950, 11=1951-1955, 12=1956-1960,13=1961-1965, 14=1966-1970, 15=1971-1975, 16=1976-1980, 17=1981-1985,18=1986-1990, 19=1991-1995);

ANALYSIS:  
 PROCESSORS = 12; TYPE = RANDOM; ESTIMATOR = MLR;

MODEL:  
 !Estimating a linear LGM based on the TSCORES  
 i s | y\_T1-y\_T5 AT TS1-TS5;  
 y\_T1 (a);  
 y\_T2 (a);  
 y\_T3 (a);  
 y\_T4 (a);  
 y\_T5 (a);

[i];  
 [s];

MODEL G1: !Women 1936-1940

[i] (ia\_w);  
 [s] (sa\_w);

i (1);  
 s (2);  
 i WITH s (3);

MODEL G2: !Women 1941-1945

[i] (ib\_w);  
 [s] (sb\_w);

i (1);  
 s (2);  
 i WITH s (3);

MODEL G3: !Women 1946-1950

[i] (ic\_w);  
 [s] (sc\_w);

i (1);  
 s (2);  
 i WITH s (3);

MODEL G4: !Women 1951-1955

[i] (id\_w);  
[s] (sd\_w);

i (1);  
s (2);  
i WITH s (3);

MODEL G5: !Women 1956-1960

[i] (ie\_w);  
[s] (se\_w);

i (1);  
s (2);  
i WITH s (3);

MODEL G6: !Women 1961-1965

[i] (if\_w);  
[s] (sf\_w);

i (1);  
s (2);  
i WITH s (3);

MODEL G7: !Women 1966-1970

[i] (ig\_w);  
[s] (sg\_w);

i (1);  
s (2);  
i WITH s (3);

MODEL G8: !Women 1971-1975

[i] (ih\_w);  
[s] (sh\_w);

i (1);  
s (2);  
i WITH s (3);

MODEL G9: !Women 1976-1980

[i] (ii\_w);  
[s] (si\_w);

i (1);  
s (2);  
i WITH s (3);

MODEL G10: !Women 1981-1985

[i] (ij\_w);  
[s] (sj\_w);

i (1);  
s (2);  
i WITH s (3);

MODEL G11: !Women 1986-1990

[i] (ik\_w);  
[s] (sk\_w);

i (1);  
s (2);  
i WITH s (3);

MODEL G12: !Women 1991-1995

[i] (il\_w);  
[s] (sl\_w);

i (1);  
s (2);  
i WITH s (3);

MODEL G13: !Men 1936-1940

[i] (ia\_m);  
[s] (sa\_m);

i (1);  
s (2);  
i WITH s (3);

MODEL G14: !Men 1941-1945

[i] (ib\_m);  
[s] (sb\_m);

i (1);  
s (2);  
i WITH s (3);

MODEL G15: !Men 1946-1950

[i] (ic\_m);  
[s] (sc\_m);

i (1);  
s (2);  
i WITH s (3);

MODEL G16: !Men 1951-1955

[i] (id\_m);  
[s] (sd\_m);

i (1);  
s (2);  
i WITH s (3);

MODEL G17: !Men 1956-1960

[i] (ie\_m);  
[s] (se\_m);

i (1);  
s (2);  
i WITH s (3);

MODEL G18: !Men 1961-1965

[i] (if\_m);  
[s] (sf\_m);

i (1);  
s (2);  
i WITH s (3);

MODEL G19: !Men 1966-1970

[i] (ig\_m);  
[s] (sg\_m);

i (1);  
s (2);  
i WITH s (3);

MODEL G20: !Men 1971-1975

[i] (ih\_m);  
[s] (sh\_m);

i (1);  
s (2);  
i WITH s (3);

MODEL G21: !Men 1976-1980

[i] (ii\_m);  
[s] (si\_m);

i (1);  
s (2);  
i WITH s (3);

MODEL G22: !Men 1981-1985

[i] (ij\_m);  
[s] (sj\_m);

i (1);  
s (2);  
i WITH s (3);

MODEL G23: !Men 1986-1990

[i] (ik\_m);  
[s] (sk\_m);

i (1);  
s (2);  
i WITH s (3);

MODEL G24: !Men 1991-1995

[i] (i1\_m);  
[s] (s1\_m);

i (1);  
s (2);  
i WITH s (3);

MODEL CONSTRAINT:

NEW (k09\_OctW k10\_OctW k11\_OctW k12\_OctW k13\_OctW k14\_OctW);  
NEW (j09\_OctW j10\_OctW j11\_OctW j12\_OctW j13\_OctW j14\_OctW);  
NEW (i09\_OctW i10\_OctW i11\_OctW i12\_OctW i13\_OctW i14\_OctW);  
NEW (h09\_OctW h10\_OctW h11\_OctW h12\_OctW h13\_OctW h14\_OctW);  
NEW (g09\_OctW g10\_OctW g11\_OctW g12\_OctW g13\_OctW g14\_OctW);  
NEW (f09\_OctW f10\_OctW f11\_OctW f12\_OctW f13\_OctW f14\_OctW);  
NEW (e09\_OctW e10\_OctW e11\_OctW e12\_OctW e13\_OctW e14\_OctW);  
NEW (d09\_OctW d10\_OctW d11\_OctW d12\_OctW d13\_OctW d14\_OctW);  
NEW (c09\_OctW c10\_OctW c11\_OctW c12\_OctW c13\_OctW c14\_OctW);  
NEW (b09\_OctW b10\_OctW b11\_OctW b12\_OctW b13\_OctW b14\_OctW);  
NEW (a09\_OctW a10\_OctW a11\_OctW a12\_OctW a13\_OctW a14\_OctW);

NEW (kjDIFF\_w jiDiff\_w ihDIFF\_w hgDIFF\_w gfDIFF\_w feDIFF\_w edDIFF\_w dcDIFF\_w cbDIFF\_w baDIFF\_w);

!MODEL Women 1986-1990

k09\_OctW = ik\_w + (sk\_w \* 0.25);  
k10\_OctW = ik\_w + (sk\_w \* 1.25);  
k11\_OctW = ik\_w + (sk\_w \* 2.25);  
k12\_OctW = ik\_w + (sk\_w \* 3.25);  
k13\_OctW = ik\_w + (sk\_w \* 4.25);  
k14\_OctW = ik\_w + (sk\_w \* 5.25);

!MODEL Women 1981-1985:

j09\_OctW = ij\_w + (sj\_w \* 0.25);  
j10\_OctW = ij\_w + (sj\_w \* 1.25);  
j11\_OctW = ij\_w + (sj\_w \* 2.25);  
j12\_OctW = ij\_w + (sj\_w \* 3.25);  
j13\_OctW = ij\_w + (sj\_w \* 4.25);  
j14\_OctW = ij\_w + (sj\_w \* 5.25);

!MODEL Women 1976-1980

i09\_OctW = ii\_w + (si\_w \* 0.25);  
i10\_OctW = ii\_w + (si\_w \* 1.25);  
i11\_OctW = ii\_w + (si\_w \* 2.25);  
i12\_OctW = ii\_w + (si\_w \* 3.25);  
i13\_OctW = ii\_w + (si\_w \* 4.25);  
i14\_OctW = ii\_w + (si\_w \* 5.25);

!MODEL Women 1971-1975

h09\_OctW = ih\_w + (sh\_w \* 0.25);  
h10\_OctW = ih\_w + (sh\_w \* 1.25);  
h11\_OctW = ih\_w + (sh\_w \* 2.25);  
h12\_OctW = ih\_w + (sh\_w \* 3.25);  
h13\_OctW = ih\_w + (sh\_w \* 4.25);  
h14\_OctW = ih\_w + (sh\_w \* 5.25);

!MODEL Women 1966-1970

g09\_OctW = ig\_w + (sg\_w \* 0.25);  
g10\_OctW = ig\_w + (sg\_w \* 1.25);  
g11\_OctW = ig\_w + (sg\_w \* 2.25);  
g12\_OctW = ig\_w + (sg\_w \* 3.25);

g13\_OctW = ig\_w + (sg\_w \* 4.25);  
 g14\_OctW = ig\_w + (sg\_w \* 5.25);

!MODEL Women 1961-1965:  
 f09\_OctW = if\_w + (sf\_w \* 0.25);  
 f10\_OctW = if\_w + (sf\_w \* 1.25);  
 f11\_OctW = if\_w + (sf\_w \* 2.25);  
 f12\_OctW = if\_w + (sf\_w \* 3.25);  
 f13\_OctW = if\_w + (sf\_w \* 4.25);  
 f14\_OctW = if\_w + (sf\_w \* 5.25);

!MODEL Women 1956-1960  
 e09\_OctW = ie\_w + (se\_w \* 0.25);  
 e10\_OctW = ie\_w + (se\_w \* 1.25);  
 e11\_OctW = ie\_w + (se\_w \* 2.25);  
 e12\_OctW = ie\_w + (se\_w \* 3.25);  
 e13\_OctW = ie\_w + (se\_w \* 4.25);  
 e14\_OctW = ie\_w + (se\_w \* 5.25);

!MODEL Women 1951-1955:  
 d09\_OctW = id\_w + (sd\_w \* 0.25);  
 d10\_OctW = id\_w + (sd\_w \* 1.25);  
 d11\_OctW = id\_w + (sd\_w \* 2.25);  
 d12\_OctW = id\_w + (sd\_w \* 3.25);  
 d13\_OctW = id\_w + (sd\_w \* 4.25);  
 d14\_OctW = id\_w + (sd\_w \* 5.25);

!MODEL Women 1946-1950  
 c09\_OctW = ic\_w + (sc\_w \* 0.25);  
 c10\_OctW = ic\_w + (sc\_w \* 1.25);  
 c11\_OctW = ic\_w + (sc\_w \* 2.25);  
 c12\_OctW = ic\_w + (sc\_w \* 3.25);  
 c13\_OctW = ic\_w + (sc\_w \* 4.25);  
 c14\_OctW = ic\_w + (sc\_w \* 5.25);

!MODEL Women 1941-1945  
 b09\_OctW = ib\_w + (sb\_w \* 0.25);  
 b10\_OctW = ib\_w + (sb\_w \* 1.25);  
 b11\_OctW = ib\_w + (sb\_w \* 2.25);  
 b12\_OctW = ib\_w + (sb\_w \* 3.25);  
 b13\_OctW = ib\_w + (sb\_w \* 4.25);  
 b14\_OctW = ib\_w + (sb\_w \* 5.25);

!MODEL Women 1936-1940  
 a09\_OctW = ia\_w + (sa\_w \* 0.25);  
 a10\_OctW = ia\_w + (sa\_w \* 1.25);  
 a11\_OctW = ia\_w + (sa\_w \* 2.25);  
 a12\_OctW = ia\_w + (sa\_w \* 3.25);  
 a13\_OctW = ia\_w + (sa\_w \* 4.25);  
 a14\_OctW = ia\_w + (sa\_w \* 5.25);

!Difference tests for end and start of sequential cohort points  
 kjDIFF\_w = j09\_OctW - k14\_OctW;  
 jiDiff\_w = i09\_OctW - j14\_OctW;  
 ihDIFF\_w = h09\_OctW - i14\_OctW;  
 hgDIFF\_w = g09\_OctW - h14\_OctW;  
 gfDIFF\_w = f09\_OctW - g14\_OctW;  
 feDIFF\_w = e09\_OctW - f14\_OctW;  
 edDIFF\_w = d09\_OctW - e14\_OctW;  
 dcDIFF\_w = c09\_OctW - d14\_OctW;

cbDIFF\_w = b09\_OctW - c14\_OctW;  
 baDIFF\_w = a09\_OctW - b14\_OctW;

NEW (k09\_OctM k10\_OctM k11\_OctM  
 k12\_OctM k13\_OctM k14\_OctM);

NEW (j09\_OctM j10\_OctM j11\_OctM  
 j12\_OctM j13\_OctM j14\_OctM);

NEW (i09\_OctM i10\_OctM i11\_OctM  
 i12\_OctM i13\_OctM i14\_OctM);

NEW (h09\_OctM h10\_OctM h11\_OctM  
 h12\_OctM h13\_OctM h14\_OctM);

NEW (g09\_OctM g10\_OctM g11\_OctM  
 g12\_OctM g13\_OctM g14\_OctM);

NEW (f09\_OctM f10\_OctM f11\_OctM  
 f12\_OctM f13\_OctM f14\_OctM);

NEW (e09\_OctM e10\_OctM e11\_OctM  
 e12\_OctM e13\_OctM e14\_OctM);

NEW (d09\_OctM d10\_OctM d11\_OctM  
 d12\_OctM d13\_OctM d14\_OctM);

NEW (c09\_OctM c10\_OctM c11\_OctM  
 c12\_OctM c13\_OctM c14\_OctM);

NEW (b09\_OctM b10\_OctM b11\_OctM  
 b12\_OctM b13\_OctM b14\_OctM);

NEW (a09\_OctM a10\_OctM a11\_OctM  
 a12\_OctM a13\_OctM a14\_OctM);

NEW (kjDIFF\_M jiDiff\_M ihDIFF\_M hgDIFF\_M gfDIFF\_M feDIFF\_M edDIFF\_M dcDIFF\_M cbDIFF\_M  
 baDIFF\_M);

!MODEL Men 1986-1990

k09\_OctM = ik\_m + (sk\_m \* 0.25);  
 k10\_OctM = ik\_m + (sk\_m \* 1.25);  
 k11\_OctM = ik\_m + (sk\_m \* 2.25);  
 k12\_OctM = ik\_m + (sk\_m \* 3.25);  
 k13\_OctM = ik\_m + (sk\_m \* 4.25);  
 k14\_OctM = ik\_m + (sk\_m \* 5.25);

!MODEL Men 1981-1985:

j09\_OctM = ij\_m + (sj\_m \* 0.25);  
 j10\_OctM = ij\_m + (sj\_m \* 1.25);  
 j11\_OctM = ij\_m + (sj\_m \* 2.25);  
 j12\_OctM = ij\_m + (sj\_m \* 3.25);  
 j13\_OctM = ij\_m + (sj\_m \* 4.25);  
 j14\_OctM = ij\_m + (sj\_m \* 5.25);

!MODEL Men 1976-1980

i09\_OctM = ii\_m + (si\_m \* 0.25);  
 i10\_OctM = ii\_m + (si\_m \* 1.25);  
 i11\_OctM = ii\_m + (si\_m \* 2.25);  
 i12\_OctM = ii\_m + (si\_m \* 3.25);

i13\_OctM = ii\_m + (si\_m \* 4.25);  
 i14\_OctM = ii\_m + (si\_m \* 5.25);

!MODEL Men 1971-1975  
 h09\_OctM = ih\_m + (sh\_m \* 0.25);  
 h10\_OctM = ih\_m + (sh\_m \* 1.25);  
 h11\_OctM = ih\_m + (sh\_m \* 2.25);  
 h12\_OctM = ih\_m + (sh\_m \* 3.25);  
 h13\_OctM = ih\_m + (sh\_m \* 4.25);  
 h14\_OctM = ih\_m + (sh\_m \* 5.25);

!MODEL Men 1966-1970  
 g09\_OctM = ig\_m + (sg\_m \* 0.25);  
 g10\_OctM = ig\_m + (sg\_m \* 1.25);  
 g11\_OctM = ig\_m + (sg\_m \* 2.25);  
 g12\_OctM = ig\_m + (sg\_m \* 3.25);  
 g13\_OctM = ig\_m + (sg\_m \* 4.25);  
 g14\_OctM = ig\_m + (sg\_m \* 5.25);

!MODEL Men 1961-1965:  
 f09\_OctM = if\_m + (sf\_m \* 0.25);  
 f10\_OctM = if\_m + (sf\_m \* 1.25);  
 f11\_OctM = if\_m + (sf\_m \* 2.25);  
 f12\_OctM = if\_m + (sf\_m \* 3.25);  
 f13\_OctM = if\_m + (sf\_m \* 4.25);  
 f14\_OctM = if\_m + (sf\_m \* 5.25);

!MODEL Men 1956-1960  
 e09\_OctM = ie\_m + (se\_m \* 0.25);  
 e10\_OctM = ie\_m + (se\_m \* 1.25);  
 e11\_OctM = ie\_m + (se\_m \* 2.25);  
 e12\_OctM = ie\_m + (se\_m \* 3.25);  
 e13\_OctM = ie\_m + (se\_m \* 4.25);  
 e14\_OctM = ie\_m + (se\_m \* 5.25);

!MODEL Men 1951-1955:  
 d09\_OctM = id\_m + (sd\_m \* 0.25);  
 d10\_OctM = id\_m + (sd\_m \* 1.25);  
 d11\_OctM = id\_m + (sd\_m \* 2.25);  
 d12\_OctM = id\_m + (sd\_m \* 3.25);  
 d13\_OctM = id\_m + (sd\_m \* 4.25);  
 d14\_OctM = id\_m + (sd\_m \* 5.25);

!MODEL Men 1946-1950  
 c09\_OctM = ic\_m + (sc\_m \* 0.25);  
 c10\_OctM = ic\_m + (sc\_m \* 1.25);  
 c11\_OctM = ic\_m + (sc\_m \* 2.25);  
 c12\_OctM = ic\_m + (sc\_m \* 3.25);  
 c13\_OctM = ic\_m + (sc\_m \* 4.25);  
 c14\_OctM = ic\_m + (sc\_m \* 5.25);

!MODEL Men 1941-1945  
 b09\_OctM = ib\_m + (sb\_m \* 0.25);  
 b10\_OctM = ib\_m + (sb\_m \* 1.25);  
 b11\_OctM = ib\_m + (sb\_m \* 2.25);  
 b12\_OctM = ib\_m + (sb\_m \* 3.25);  
 b13\_OctM = ib\_m + (sb\_m \* 4.25);  
 b14\_OctM = ib\_m + (sb\_m \* 5.25);

!MODEL Men 1936-1940

```
a09_OctM = ia_m + (sa_m * 0.25);  
a10_OctM = ia_m + (sa_m * 1.25);  
a11_OctM = ia_m + (sa_m * 2.25);  
a12_OctM = ia_m + (sa_m * 3.25);  
a13_OctM = ia_m + (sa_m * 4.25);  
a14_OctM = ia_m + (sa_m * 5.25);
```

!Difference tests for end and start of sequential cohort points

```
kjDIFF_M = j09_OctM - k14_OctM;  
jiDiff_M = i09_OctM - j14_OctM;  
ihDIFF_M = h09_OctM - i14_OctM;  
hgDIFF_M = g09_OctM - h14_OctM;  
gfDIFF_M = f09_OctM - g14_OctM;  
feDIFF_M = e09_OctM - f14_OctM;  
edDIFF_M = d09_OctM - e14_OctM;  
dcDIFF_M = c09_OctM - d14_OctM;  
cbDIFF_M = b09_OctM - c14_OctM;  
baDIFF_M = a09_OctM - b14_OctM;
```

```
OUTPUT:  
SAMPSTAT;  
CINTERVAL;
```