Legacy: Motivations and Mechanisms for a Desire to be Remembered

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Abstract

The psychology underlying the desire to be remembered after death by leaving a legacy is an understudied area in the social sciences. In the current thesis, I broaden the theoretical examination of the appeal of leaving a legacy and the likely psychological factors behind this motivation. In Chapter 1, I survey the extant literature to develop a better conceptualization of the category itself, then identify candidate mechanisms involved in the desire to leave a legacy. Chapter 2 explores participants' forced choice preferences for a positive reputation in life, or for a positive legacy, both in a creative and in a moral context. The results demonstrate a split preference for a positive reputation in life and a positive legacy. A survey was used in Chapter 3 to assess participants' desires to leave a legacy, as well as their goals and motivations for this goal. The results demonstrated most participants did desire to leave a legacy and identified various legacy typologies and motivations for doing so. These motivations were utilized for the development of the Legacy Motivation Scale (LMS) in Chapter 4 as an instrument to measure legacy motivations, due to the lack of such a measure in the literature. Furthermore, two studies demonstrated the construct validity and partly demonstrated the predictive validity of the LMS. Chapter 5 explored potential cognitive factors for the desire to be remembered after death, such as afterlife beliefs and conceptions of post-mortem consciousness. I hypothesized that participants in an afterlife affirmation condition would report higher desires to leave a legacy than participants in an afterlife disconfirmation condition. The results failed to support this hypothesis. Chapter 6 explored potential adaptive benefits for caring about post-mortem reputation by investigating the disadvantages conferred on those related to someone who leaves a negative legacy. The results indicated that a negative legacy had detrimental effects on the mating prospects for the relatives of the deceased, suggesting the maladaptive impact a negative legacy has on one's descendants. I conclude the thesis with a general discussion (Chapter 7) summarizing the findings of the present research, their limitations, implications, applications, and potential areas for future research.

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Chapter 1: The Desire to be Remembered: A Review and Analysis *of* Legacy Motivations and Behaviors

In 4th century B.C. Greece, a man by the name of Herostratus gained infamy as an arsonist when he burned down the Temple of Artemis in Ephesus. He eventually confessed that his motivation for carrying out this act, was to gain a legacy through the bizarre deed and avoid historical obscurity. After sentencing the arsonist to death, the Ephesians abolished his name by decree to thwart Herostratus's attempt to cement a lasting reputation for his bizarre act amongst the people. Despite these efforts, the ancient historian Theopompus mentioned him in his work, thus preserving the name, reputation, and legacy of Herostratus.

What exactly is a legacy and why do some people have a strong desire to "leave" one after they've died? While Herostratus is an extreme example, it is fairly common, often when some public figure or adored celebrity passes away, for us to reflect on the legacy they've left behind. For thousands of years, people have embarked on personal projects and missions to create, maintain, and leave behind what they refer to as a "legacy" (Braudy, 1986). This drive may be directed and fulfilled through numerous avenues, and there are many different areas of popular culture in which legacies are created and maintained over time, such as sports, music, art, business, politics, and science (Becker, 1973; Lifshin, et al., 2021).

When legendary basketball star Dwyane Wade retired from the National Basketball Association after sixteen seasons of playing for the Miami Heat, his jersey retirement consisted of an extravagant three-day celebration titled "L3gacy" (the 3 in the name referring to Wade's jersey number). Likewise, in 2012, legendary rock band Led Zeppelin was honored at the Kennedy Rock Center for the group's impressive music career, with numerous artists performing in appreciation for the legacy that Led Zeppelin had contributed to the music industry. Additionally, many entrepreneurs mention legacy and the mark they want to leave on the world as being a motivation behind starting their business (Fox & Benzoni, 2017).

A legacy may mean different things, such as "a gift by will esp. of money or other personal property" as well as "something transmitted by or received from an ancestor or predecessor or from the past" (Merriam-Webster's Collegiate Dictionary, 2014). Previous research has defined legacy as "the process of passing one's self through generations, creating continuity from the past through the present to the future (Hunter & Rowles, 2005)". Intuitively, when one thinks about leaving a legacy, this may be seen as a way to ensure that one is remembered positively by subsequent generations. However, while these definitions do describe crucial factors of legacy, they do not accurately capture what a legacy is in its complexity (Hunter & Rowles, 2005).

Specifically, legacies may be both positive and negative. Historically, some legacies, produced by the likes of Gandhi and Martin Luther King, Jr. have been constructive, paving roads of social progress for subsequent generations to follow and emulate, whereas other legacies, produced by the likes of Adolf Hitler and Charles Manson, have been abhorrent, serving as a lesson for how not to live and the disgraceful

and deplorable things humans are capable of. Furthermore, not all legacies consist of post-mortem reputations, as many different cultural figures (athletes, musicians, and business moguls) may leave legacies after their retirement long before their death. Dwyane Wade's basketball legacy is only the end to his NBA career, and he will still be alive to look back on his athletic achievements. The surviving members of Led Zeppelin are alive to see the effects of their work on new generations of musicians. Many entrepreneurs can appreciate the legacy they leave behind in their company after they retire and leave the business in someone else's hands.

Specifically, in this thesis, my focus is in legacy as a form of post-mortem reputation. Although previous work has investigated similar categories, such as *generativity* (McAdams et al., 1992; McAdams et al., 1998) and *symbolic immortality* (Dechesne et al., 2003; Greenberg et al., 1997; Lifshin et al., 2021), it is surprising that there has been little analysis of legacy from a scientific perspective. Legacy is a concept that possesses potential as an area of study in the social sciences given the importance that inter-generational thinking and collaboration will have on solving the problems humans face, both current and future.

Throughout the scant empirical literature on the subject, different motivations for wanting to leave a legacy emerge (Aarssen & Altman 2006; Slight et al., 2013), with little to no research addressing whether these underlying factors are complementary or oppositional in nature. The purpose of this thesis is therefore severalfold, including: to examine legacy as a phenomenon that may or may not be generalizable across cultures; to discuss the previous academic literature on legacy and similar concepts; to seek a means by

which the multidimensionality of legacy may be measured; and to analyze the psychological basis for wanting to leave a legacy.

Given that all humans will one day die, it seems natural for people to ponder how they will be remembered when they are no longer present, or whether they will be remembered at all. When carefully considered, however, the desire for leaving a legacy seems complex. Additionally, it is not apparent whether legacy and similar concepts such as generativity and symbolic immortality are complementary or incompatible.

In the current thesis, I examine the appeal of leaving a legacy and the likely psychological factors behind this motivation. To begin with, I survey the extant literature to develop a better conceptualization of the category itself, then identify candidate mechanisms involved in the desire to leave a legacy, such as the pursuit of symbolic immortality to assuage death anxiety (Becker, 1973; Greenberg et al., 1986; Lifton & Olson, 1974), creating a satisfying ending to one's "life story" consistent with one's narrative identity (McAdams, 1993), cognitive components allowing for perceptions and representations of the self after death (Bering, 2002), and evolutionary factors pertaining to reputation management and reproductive fitness. I will begin by unpacking the possible connection between human sociality, status-seeking, and fame with a desire to be remembered and admired through a legacy.

The Need to be Loved and to Belong

Human beings want to be liked by others, and to have a group to which they feel they belong (Leary & Cox, 2008). Additionally, social reputation plays a fundamental role in our ability to cooperate and serves an important function in social life (Suzuki & Akiyama,

2005). Given that legacy largely consists of one's posthumous (post-mortem) reputation, the drive to leave a legacy may be an extension of the natural human tendency to seek, establish, and enjoy close connections with others along with the admiration that such connections provide. A large body of evidence shows that our species possesses an innate drive for establishing and maintaining social relationships (Baumeister & Leary, 1995; Leary & Cox, 2008; Matthews & Tye, 2019; Walton et al., 2012). From an evolutionary perspective, there are clear adaptive advantages of being social. Because strong social bonds provide support-system benefits, these relationships translate to genetic fitness dividends (Barton & Dunbar, 1997; Taylor & Gonzaga, 2006). Research also demonstrates how fundamental social connections are for human mental health and wellbeing, as well as physical health (Kok et al., 2013; Ploskonka & Servaty-Seib, 2015; You et al., 2011) Furthermore, the human drive to form close bonds with others is demonstrated by psychological research in attachment theory (Bowlby, 1982), which highlights the importance of cultivating functional emotional relationships with others. Indeed, our inborn need for dependency—and our expectations that others are trustworthy and reliable—is exemplified by the attachment styles that infants develop with their caregivers, healthy (or unhealthy) relationship patterns that persist throughout the life course (Ainsworth, 1989; Fraley, 2002).

In simple terms, the attachment figure provides a basis by which the individual can feel safe and secure in an unpredictable and dangerous world. Research also shows that when a bond or relationship with a family member or friend is strong, perceptions of one's self and that loved one tend to overlap (Aron et al., 1991), suggesting that intimate relationships influence the way that we view ourselves. Again, this is unsurprising, given

that creating and maintaining strong social relationships with other ingroup members was key to our survival in the evolutionary past (Axelrod & Hamilton, 1981; Moreland, 1987).

Social relationships are also crucial to our individual wellbeing and happiness. Close ties that provide a sense of connection correlate strongly with positive emotions (Bradburn, 1969) and serve to enhance happiness when people are feeling down (Quoidbach et al., 2019). For example, divorcees and widows tend to experience a drop in their wellbeing right before and after the loss of their partners (Clark et al., 2004; Lucas et al., 2003; Stroebe et al., 1996). Among children, as well, having healthy relationships with parents and friends correlates positively with happiness (Holder & Coleman, 2007). Such findings suggest that having strong social connections is crucial for an individual's subjective sense of contentment and wellbeing.

Moreover, the desire to be liked and to belong is not constrained to relationships with family members and close friends. Rather, most people display a drive, or at least a desire, to attain high social status within their societies (Anderson et al., 2015; Barkow et al., 1975; Mitchell et al., 2020). *Social status* is defined here as the respect, admiration, and voluntary deference that a person is given by others (Anderson et al., 2015). The concept differs from *social belongingness* in that the latter refers to the extent to which someone gains others' approval and is liked. By contrast, social status denotes a hierarchical position held by the individual within the group; it is based on the person's perceived "value" (i.e., competencies and abilities aiding the group in achieving a collective goal) (Anderson et al., 2015). An increase in one's social status results in an increase in subjective well-being (SWB), whereas a decrease in social status results in a decrease of SWB (Anderson et al.,

2012). Similar positive correlations and causal effects of social status have been found in the areas of self-esteem (Fournier, 2009; Leary et al., 2001) and health (Cooper et al., 2010; Euteneuer et al., 2012; Ghaed & Gallo, 2007). This drive to acquire social status may play a prominent role in the appeal of legacy, in that it essentially translates to maintaining hierarchical primacy even after death.

Another concept that is closely related to social status, and is ostensibly linked to legacy, is fame. *Fame* is defined by the Oxford English Dictionary as "The condition of being much talked about. Chiefly in good sense: Reputation derived from great achievements; celebrity, honour, renown" (Oxford English Dictionary, 1989). Attaining fame ensures that we are known by many people. Social status can go hand in hand with fame, to the extent that someone who is well-known for certain accomplishments and achievements can command a high amount of respect, admiration and voluntary deference. However, famous people do not necessarily command high status, given that people may be famous for negative reasons (i.e., "infamy"). Nevertheless, the desire to be famous in a positive way is a strong motivation for many people. A 2006 survey by the Pew Research Center revealed that most 18- to 25-year-olds mentioned fame as one of the goals they valued most (Kohut et al., 2006). The desire for fame seems to be an artifact of human's evolved social nature, with research suggesting that belongingness is related to multiple dimensions of fame appeal (Greenwood et al., 2013).

Whenever we watch the news, television, or scroll through social media, we are exposed to others who are admired (and sometimes loathed) by countless strangers. The external validation that comes with being famous can serve as a boost for that individual's

self-esteem, an elevated state that may be the proximate mechanism driving fame-seeking behaviors. A study by Noser and Zeigler-Hill (2014), for instance, reported that female undergraduates with unstable (but high) self-esteem had a stronger desire to be famous than those with stable high self-esteem. Overcoming the insecurities that come with low self-esteem is likely the incentive to gain the external validation associated with being recognized and celebrated by millions.

The appeal of fame, along with gains in social status, may contribute to our wanting to leave a posthumous legacy. Given that we will one day die and cease to exist as agents in the world, leaving a legacy is one way to fulfill these social drives in perpetuity. The desire to continue in some way, shape, or form after death has been common throughout history (Braudy, 1986) and one of the ways this desire manifests itself in people's behavior is through strivings for legacy. While many people have sought to survive death through different concepts in religion, such as an afterlife and a soul, other, less literal and more "symbolic" paths to immortality have appealed to humans throughout history.

In the proceeding sections, I will investigate and describe two concepts that are related to legacy and have been studied in much more detail in previous psychological literature: symbolic immortality and generativity. After describing these two concepts in detail, I will then address the concept of legacy, and how it differentiates it from the two.

Symbolic Immortality

The social recognition and praise accompanied with fame can bolster people's self-esteem, making them feel that they are of social and cultural significance. Furthermore, the

positive emotions linked with high self-esteem can provide famous individuals not only with a salubrious sense of belongingness to their own group, but the world at large. The average person finds themselves in a predicament in that, regardless of how relevant and valuable they may be to their own ingroup during their lifetime, in a very real sense they will be quickly forgotten once they are dead, with most families only having awareness and knowledge of two to three generations of particular ancestors (Hunter, 2008). Thus, the pursuit of legacy ostensibly provides an important psychological function in alleviating existential anxieties, serving as a culturally sanctioned means by which one can build and maintain a sense of enduring social relevance and significance even after death.

Traditionally, religious belief in the afterlife has allowed individuals to transcend the ephemeral limitations of personal mortality (Vail, et al. 2010). However, secular attempts to preserve the "self" have also been common. These may consist of the accomplishments that people achieve during their lifetime, membership in a cultural ingroup with enduring values, and having lasting effects on the world after they have died. Such nonliteral permanence after death has been labeled *symbolic immortality*. One of the first theorists to discuss the notion of symbolic immortality was the American psychiatrist, Robert Jay Lifton. Lifton, along with his colleague Eric Olson, believed that while it was important for people to grasp the finality of death, it was equally important to have a connection to history that transcends them as individuals (Lifton & Olson, 1974). The authors argued that it was the "immortal" symbolism and imagery linked to larger group aspirations that provide a framework of meaning, through which the individual attains a feeling of significance in the face of their own inevitable biological demise.

Lifton proposed five conceptual categories of immortality: *biological*, *creative*, *theological*, *natural*, and *experiential transcendence*. For the purpose of investigating legacy, the *creative* and *experiential* categories are particularly relevant. The creative category evokes the timelessness or eternal fame gained from performative work (e.g., art, invention, brand, teaching, science, or construction) that connects the self to others past, present, and future. In other words, the individual has made a singular contribution to humanity and will be remembered in perpetuity because of that creative work. There is an apparent overlap between the creative component of immortality and legacy, through the recognition and admiration people receive for their creative output, even after they have died.

Lifton and Olson speculated that the fifth category of immortality—experiential transcendence—often occurs in tandem with the other types. In the case of the creative category, for instance, feeling connected with others historically across time induces a sense of transcending the physical limitations of merely being here in the present. Lifton referred to this state as "mythic time"—through it, the person's death anxiety is attenuated; they feel as though they dwell in a "continuous present" in which both the past and the future coexist. This feeling of experiential transcendence also may be one of the reasons why legacy seems appealing to some people, in that it allows them to transcend the admiration they receive in the present and achieve an admiration that defies death and the passage of time.

Another important figure concerning death anxiety and the pursuit of immortality was the cultural anthropologist, Ernest Becker. In his book the *Denial of Death* (1973),

Becker argued that a person's self-esteem was largely dependent on their ability to maintain a subjective state of *heroism*, which is essentially a feeling of self-worth and value. Relatedly, Becker refers to *narcissism* as the desire to be significant and to stand out in a crowd, with one's own unique personality and talents being given their deserved appreciation. Given that humans are cultural animals, we utilize symbols as a means of gaining transcendent value and self-worth. Thus, the transcendent value that humans achieve through heroism (and narcissism) gives each person the feeling that they are not merely one insignificant animal in a pack, but unique figures with irreplaceable attributes. This blaze of heroism provides a sense of immortality that allows the individual to transcend their animal finitude. According to Becker, the world is a stage on which humans can achieve heroism through their cultural symbols and, by fusing the self to these "everlasting" symbols, the individual can defeat the existential realities of biological mortality.

Developmentally, children's awareness and understanding of death matures over time. Death is not only an abstract concept, but something that will inevitably happen to them and everyone they know (Hamilton, 2012). Central to Becker's model is the claim that human beings are the only animal that is aware of its own mortality. Given that we know that we will inevitably perish, alongside our species' evolved desire to maintain a sense of social value, it is only natural that some people seek ways to be remembered and appreciated after death.

Terror Management Theory (hereafter "TMT"; Greenberg et al., 1986) is a social psychological theory inspired by Becker's work that has long been interested in the ways

that the awareness of mortality plays a role in human behavior. Using empirical methods, it has sought to explain why humans have a need for self-esteem and why people of different cultural and ideological backgrounds often have trouble coexisting. According to TMT, one of the crucial psychological functions that culture serves is to mollify the potential existential anxiety that arises from the awareness of death. Using a wide variety of (mostly) experimental methods, over nearly four decades, terror management theorists have systematically investigated the subtle but recurring ways that death awareness influences human behavior and attitudes. Usually, this involves asking laboratory participants to contemplate their own death or to expose them to implicit death-related cues, and then examining the effects of such manipulations on some dependent measure.

For example, in one classic study, twenty-two municipal court judges were instructed to set bond for a prostitute. Half of the judges in the experiment were made to think about their own death, otherwise known in the TMT literature as mortality salience (hereafter "MS"), while the other judges were primed with a control topic. Given that prostitution is perceived by many as a crime which threatens the moral fabric of one's culture, the researchers were interested to see if the judges, in response to the MS, would provide harsher penalties to the prostitutes than judges in the control condition, as a means of upholding and enforcing the sanctity of their culture. The results were that judges in the MS condition issued significantly higher bonds for the prostitute than participants in the control condition ($455 for MS, and $50 for the control condition) (Rosenblatt et al., 1989). These results demonstrate what the TMT literature refers to as "worldview defense," by which individuals and groups seek to bolster their cultural worldview after they are primed with MS.

Given the anxiolytic function of culture in this domain of existential concerns, TMT postulates that people will try to attain such cultural means of symbolic immortality in whatever ways they can. However, such implicit mechanisms are presumed to operate alongside those that promise a more literal immortality. Historically, of course, people's attempts to transcend death have also taken the form of explicit afterlife beliefs, which are common to religions the world over. Conceptions of the afterlife can be traced back thousands of years. In ancient Egypt, the afterlife, otherwise referred to as the *Duat*, was where the soul (*Ahk*) arrived after death, provided that the proper burial processions and rituals were carried out. Originally, immortality was primarily a chief concern for the pharaoh and his closest advisors, although this eventually expanded to others, who would be judged based on their deeds and reputation (Segal, 1989). Similarly, the Greeks believed that after a person died, their soul (psyche) arrived in the gloomy underworld Hades. And according to the ancient religion Zoroastrianism, once all people are forgiven by God, they will all be gifted with new spiritual bodies (Segal, 1989). These afterlife concepts, and similar ones found in many different mythologies and religions, provide us with a compelling view of the near-universal desire for a literal immortality.

Indeed, TMT research suggests that, when participants are given "evidence" that supposedly confirms the existence of the afterlife, the worldview defenses invoked for symbolic immortality purposes are less apparent, presumably because afterlife beliefs achieve the same anxiolytic ends more directly (Dechesne et al., 2003). In addition, religious people increase their belief in an afterlife after thinking about death (Osarchuk & Tatz, 2003). If belief in supernatural agents provides the theological foundation for the afterlife, belief in such agents should also serve to mitigate death anxiety. Indeed, this

appears to be the case, with data showing that both Christian and Muslim participants primed with mortality salience cues increase their belief in their ingroup's High God (Jesus and Allah, respectively), while simultaneously decreasing belief in that of an outgroup (Vail et al., 2012). Moreover, such cues lead to increased general religious beliefs as well, including divine intervention from God (Norenzayan & Hansen, 2006).

In addition to literal immortality, TMT researchers have spent decades investigating why people strive to attain symbolic immortality (Dechesne et al., 2003; Greenberg et al., 1997; Lifshin et al., 2021). According to TMT, the sense of obtaining symbolic immortality, along with a range of alternative or ancillary defense mechanisms (e.g., belief in literal immortality through a spiritual afterlife or life-extending biotechnologies, having progeny, and fostering meaningful relationships), can serve as a "buffer" to the potential existential anxiety that arises from the awareness of one's inevitable death. However, within the TMT literature and other related work, there seems to be a lack of specification concerning the exact nature of symbolic immortality. This form of immortality is typically described in two ways: immortality achieved through creative projects (novel, work of art, brand, etc.) (Lifshin et al., 2021; Perach & Wisman, 2019) and immortality achieved through one's membership to a group larger than oneself, such as their religion or country (Vail et al., 2010; Wojtkowiak & Rutjens, 2011).

While it is seemingly plausible how one may attain the sense of an enduring presence through either of these avenues, symbolic immortality in the TMT literature has often been used to encompass both of the foregoing categories. This can lead to potential problems when trying to distinguish between symbolic immortality and legacy, as the

symbolic immortality gained through creative accomplishments is easy to assimilate with legacy, while its application to group identification is not as apparent. Overall, this may reflect a need to distinguish between an "individualistic symbolic immortality" and a "collective symbolic immortality." Overall, legacy's relation to symbolic immortality is complicated, given the longstanding conflation of the latter. One may argue that the more "individualistic" aspects of symbolic immortality are identical to legacy, and that research exploring this individual component of symbolic immortality is concerned with the same phenomenon as legacy. By contrast, the collective component of symbolic immortality encompasses more ground than legacy.

Generativity

Another concept that is closely related to legacy is generativity. Erikson's theory of psychosocial development (1950; 1968) demarcated eight different "stages" of life, each characterized by a conflict between two different drives. These life stages of development and the conflicting drives of each stage were: *Infancy* (Trust vs. Mistrust); *Early Childhood* (Autonomy vs Shame/Doubt, Play Age (Initiative vs Guilt); *School Age* (Industry vs. Inferiority); *Adolescence* (Identity vs. Confusion); *Young Adulthood* (Intimacy vs. Isolation); *Adulthood* (Generativity vs. Stagnation), and; *Old Age* (Integrity vs. Despair). Erikson claimed that when people reach middle adulthood (approximately, the years 40 to 65 (Freud, 1905)), healthy development is reflected by the individual's need to be generative. *Generativity* is the desire to participate "in areas of involvement in which one can learn to take care of what one truly cares for" (Erikson, 1986, p. 267) as well as a "concern in establishing and guiding the next generation" (Erikson 1963, p. 267). In late

adulthood, most people find it important to preserve, protect, and pass on the things in life that they cherish and care about. Erikson stressed generativity was a "generational-cycle," consisting of multiple lives and time periods. That is to say, generativity consists of a past (those who came before oneself), the present (what one does in the present for future generations), and the future (how one's actions impact future generations).

According to Erikson's model, generative people prioritize the values and beliefs that played a role in their own self-development; as such, they seek to maintain these important factors in their own lives and to pass them on to future generations. Spreading and extending these values and beliefs by giving, creating, and teaching the next generation fulfills a psychologically important generative function. If people are unable to spread and cultivate these attributes in these ways, they experience a state of self-absorption or stagnation (Erikson, 1986).

Such generativity may exist in the relationships that adults establish with their children and grandchildren, and the examples that they choose to set for them (Erikson, 1968). Erikson was especially curious about how middle-aged adults and the elderly viewed and approached the looming inevitability of their own death. Through interviews, he found that, as people grow older, most want to capitalize on the time they still have. The realization that we have *less* time remaining than we have already lived leads us to ponder on how to make the best use of the years ahead. The construct of generativity captures the attempt to make these later years matter through efforts to instill the self's values and beliefs into future generations.

Following Erikson, Kotre (1984) defined generativity as "a desire to invest one's substance in forms of life and work that will outlive the self" (p. 10). The author

subsequently argued that there were four major types—or methods—of generativity. These include *biological* (having offspring); *parental* (raising one's offspring, such as providing for, disciplining, and instructing one's children); *technical* (teaching and passing on one's skills and knowledge to a student), and *cultural* (conveying a sense of meaning to younger generations). This last method of generativity is particularly relevant to legacy. In this latter case, the "apprentice" becomes aware of the cultural significance/symbolism behind their learning, while the "mentor" is reminded of the importance of what they are passing on (Kotre, 1984). Indeed, professions such as teaching offer individuals a way to shape the future (Kessel & Burke, 2018).

Kotre also distinguished between agentic and communal modes of generativity. *Agentic generativity* involves the promotion and preservation of oneself as an individual entity, seeking ways to expand the self beyond the physical limitations of mortality. Agentic generativity works as a sort of personal monument, or something designed to maintain an enduring sense of significance, symbolic immortality, and an honored post-mortem self. By contrast, *communal generativity* is focused on the preservation and maintenance of a grand idea or cause that is of vast communal importance. The concern is with preserving the immortality of a philosophical principle or cultural value system, rather than the self, per se (Kotre, 1984). Given these distinctions, there is a particular overlap between legacy and agentic generativity, with both drives being directed toward preserving the reputation of the individual self after death, rather than the self being absorbed into the collective whole (as in communal generativity).

Previous research investigating the relationship between age and generative behavior have reported mixed findings, with some results suggesting that generativity

increases as people enter middle adulthood (Snarey et al.,1980), and others showing no clear relationship between age and generative behavior at all (Whitbourne et al., 1992). Ultimately, the age at which generative concerns begin to take form can vary with personal life circumstances, given the variance in life patterns among different people (McAdams & Logan, 2004). Those with more education and/or a more advanced career skillset, for example, may be more prone to generative acts, given that they simply have more transferable information and skills (Keyes & Ryff, 1998). For those older adults who do engage in generative behaviors, findings suggest that generativity is associated with higher levels of happiness (Shahen et al., 2019), intrinsically rewarding work (Chen et al., 2019), well-being (McAdams et al., 1993) and life satisfaction, with creativity serving as a meditating variable (Adams-Price et al., 2018).

McAdams and his colleagues (1992; 1998) developed a seven-factor model by which generativity can be conceptualized, understood, and carried out (McAdams & St. Aubin, 1992; McAdams et al., 1998). The first factor of this model, *inner desire*, stresses that generativity originates with an inner desire for symbolic immortality for the self, along with a strong proclivity toward communal nurturance. These two drives are combined in the second factor of the model, *cultural desire*, which is a societal demand for people within the society to create something of value that can be useful for others. The third factor, *concern*, is characterized by a concern for future generations, for whom the *cultural desire* to create something of value can be targeted. Generative people use their *inner desire* for symbolic immortality and communal nurturance for the purpose of providing their creation for the benefit of future generations. One's fame and impact can inspire

others in the future, and the benefits one has provided for the community can continue for decades.

The fourth factor, *belief in the goodness of the species*, is a contributing variable, given the plausible notion that someone possessing a more optimistic future for humanity will be more likely to create and pass something on. The fifth factor, *generative commitment*, is the decision to create, teach, and leave something of value behind, leading to the sixth factor, *generative action*. The seventh and final factor of the model is the *narration of generativity*, or the story that emerges from generative action to provide a satisfying framework to one's life and identity.

Additional research provides similar results on the characteristics that drive generative behaviors. Faßbender et al. (2019) found three factors influencing generativity amongst twins. The first of these is a heritable general "concern for the future," the second is the desire to be a valued source of advice, and the third is to have a positive influence on the lives of other people. Leaving behind a legacy through generativity is a means for someone to view their life in a way that makes them feel complete and accomplished. This is consistent with McAdam's life story model (McAdam's, et al 1998) which suggests that people construct internal narratives around their life to form a unified story of "self" to understand their identity as it evolves throughout the lifespan. According to life story model, symbolic immortality is therefore best understood in relation to generativity, as being one of the underlying motivations behind generative action. The fact that one will be remembered and admired after their death accomplishes the death anxiety amelioration goal of symbolic immortality.

Legacy

Having examined the underlying social factors that may motivate people's striving to leave a legacy, as well as concepts closely related to legacy, such as symbolic immortality and generativity, I now delve further into the concept of legacy to investigate the various ways it may become a desired accomplishment for some people, as well as how it may be distinguished the related and more widely researched concept generativity. Hunter points out that legacy is more universal than generativity, given that it is less culturally constrained (Hunter, 2008). Additionally, while generativity is inherently intentional (McAdams et al., 1998), legacy can arise with or without the individual's pursuit of such an outcome. One may acquire a lasting reputation through a legacy, either positive or negative, without having had any intention to create this enduring cultural impression of the self. For those who are so motivated, however, the desire to cement a legacy for oneself has been referred to as the "legacy drive" (Aarssen, 2006).

Seemingly fundamental to the concept of legacy is the idea of a "postself," a term coined by Shneidman (1973) to refer to how the individual imagines their own reputation after they have died. Again, whereas symbolic immortality is often concerned with the ways in which an individual continues after death through absorption into the larger group's ideals, and generativity often focuses on the "gifts" one can supply to future generations, the postself involves the person's representation of their lasting reputation after their own death. That is to say, it is the contemplation a person has about how they will be remembered by those who survive them, and what impact their memory will have on others in the world.

Consistent with the notion that leaving a personal legacy may help people cope with existential anxiety, at least one study has found that engaging in positive postself affirmations (pondering how one's reputation will continue after death) buffers the TMT worldview defense effects of mortality salience (Wojtkowiak & Rutjens, 2011). In this study, participants were asked to read a short description of the post-self before giving three examples of how they would be remembered. Next, participants were primed with mortality salience (vs. control), where they were asked to describe how thinking about their death makes them feel, as well as describing what they will physically feel when they are dying. Afterward, participants death thought accessibility was measured by having participants complete a series of word stems (example: sk_ll), with completed word stems related with death (sk<u>u</u>ll) being seen as indicative of more death related thoughts compared to completed word stems with neutral words (sk<u>i</u>ll). The results showed that death thought accessibility was higher in the mortality salience condition compared to the control condition, but that these effects were neutralized under the post-self-condition. These findings suggest that the belief that one will leave a legacy after death is capable of ameliorating existential anxiety concerning one's mortality.

Aarssen (2006) has argued that the desire to pass something of oneself into the future is driven ultimately by the evolved drive to efficiently spread one's genes. While direct reproduction can satisfy this imperative, Aarssen speculates that the ability to spread one's *memes* (e.g., Dawkins, 1976) in the form of cultural symbols and ideas provides an added adaptive benefit. Given that biological heredity is diluted over time (i.e., human offspring contain only half of one parent's genetic makeup), leaving a legacy through memetic transmission reflects a "purer" version of oneself. Hence, Aarssen argues that the

intrinsic human urge to "leave something of oneself" has led humans to engage in these drives both genetically and through meme transmission. In addition to Aarssen's arguments, I would argue this complementary effect of legacy on biological reproducibility may translate to genetic fitness effects. In other words, the desire to transcend death through memes and cultural creations may stem from standard evolutionary pressures, in that a positive legacy can be converted into descendants' reproductive advantages (e.g., being related to a positively regarded deceased artist, politician, or celebrity). Conversely, a negative legacy may not only taint one's reputation, but the reputation of one's descendants, inadvertently resulting in reproductive disadvantages (e.g., being related to a murder, rapist, or despised public figure).

According to some definitions, leaving a legacy is not contingent on creative projects or having children alone. Rather, as previously mentioned, there are several different routes to the same end. For example, someone who is not engaged in any creative pursuits may still cultivate a legacy by passing on their values to their children; likewise, people who have no offspring can leave a meaningful legacy through a creative project or humanitarian mission. In an attempt to disentangle these various pathways to legacy, Hunter and Rowles (2005) conducted interviews with fourteen adults ranging in age from 31 to 94 years. The researchers identified three categories of legacy transmission: *biological legacy*, *material legacy*, and a *legacy of values*.

Each of the foregoing categories was further broken down into subcategories. Biological legacy, for instance, was expressed through *genetic* (spreading one's genes), *health* (transmission of health conditions), and *body* (body as legacy). According to the authors, genetic legacy consists of having children and ensuring that one's name lives on

through them. Health legacy arises from the knowledge that one's offspring may face future health-related issues (or lack of such issues) that they have inherited from them. Finally, body legacy focuses on what will happen to one's actual body after death (e.g., organ donation or burial practices).

Material legacy, by contrast, was expressed in the interviews through discussions surrounding *heirlooms, possessions,* and *symbols*. Concerning heirlooms, participants expressed the importance of passing down historic, intergenerational items, along with the stories surrounding them. The desire to create autobiographical works emphasizes the importance of passing down such narratives to future generations. Possessions consisted of the financially valuable items that one would pass on to a family member or close friends after death. The use of wills is one way that people can ensure that their possessions will be fairly transferred. Finally, symbolic material legacy is the continuation of the self through some material object. This can consist of a brand, artwork, or a building with one's name on it. This form of material legacy is the closest example to Becker's original concept of symbolic immortality (Becker, 1973).

Lastly, the type of legacy considered most important to the participants was that of values, which consisted of *personal, social,* and *cultural*. Personal values are those that people hold dear to themselves and wish to pass on to future generations so that the world may embody these same principles in the future, such as treating people well, kindness, and honesty. Further research verifies this form of legacy, particularly in the form of leaving behind one's ethical philosophy when one lacks a financial legacy to provide for one's offspring, which has been referred to as "ethical capital" (Williams et al., 2010). Social values are those that place a strong emphasis on various social principles or

practices, such as (but not limited to) the value of voting in an election, pursuing an education, or being involved throughout one's life in volunteer work or travel. Finally, cultural values are those reflecting religious and cultural identification and traditions. Together, the categories and subcategories revealed in the interviews by Hunter and Rowles (2005) suggest that the legacy drive consists of goals and values associated with many different aspects of the human experience. Furthermore, these varieties of legacy are not mutually exclusive, and in fact often interconnect.

In a follow-up study, Hunter (2008) interviewed women about their legacy-related concerns. The participants placed considerable importance on determining what their values were, so that these values could be handed down to the next generation. Being kind and serving others through volunteering were seen as ways to preserve a positive philosophy and to ensure that altruistic attitudes and actions would survive them. Additionally, Jewish women stressed the importance of passing down their religious cultural practices, so that these ancient traditions and practices would also be preserved after their own biological demise. Hunter (2008) stressed that the notion of history was a recurring theme in her legacy interviews. Because legacy involves transmitting our "self" into the future, and so much of who we are is based upon the influences of those who came before us, historical figures are a central part of the process. Many of the women interviewed by Hunter, for example, expressed a desire to pass on their parents' values. Yet people's knowledge of family history fades quickly, with specific ancestors beyond two or three generations being largely unmentioned (and likely unknown) by the respondents.

Hunter's findings shed light on the transcendent nature of legacy, showing how it is inherently interwoven with past, present, and future. An important part of her work is that

it distinguishes the construct of legacy from that of generativity, claiming that the former is broader than the altruistic drive found in the generativity framework put forth by Erikson (1963, 1986) and freed from any particular life stage. Nevertheless, a comparison of McAdams's seven step generativity model (McAdam's, 1998) and the legacy typologies reported by Hunter & Rowles (2005) shows similarities. The passing down of heirlooms, possessions and personal values, along with the continuation of one's personal projects (creative/artistic and business) reflect the steps of *generative commitment* and *generative action* that motivate people to create and provide for the next generation. Additionally, these legacy related actions are likely to play a role in the *narration of generativity* that aids one in constructing a satisfying ending to one's life story (McAdmas, 1993, 1998). According to Hunter (2008), legacy-seeking behaviors reflect the narrative drive to make sense of one's life by developing an identity molded by past influences, life experiences, and capable of being preserved after death.

Agentic and Communal Drives

Similar to generativity, legacy can also encompass a combination of both *agentic* and *communal* drives (see Ackerman et al., 2000; Frimer et al., 2011; Mansfield & McAdams, 1996; Newton et al., 2014, Peterson & Stewart, 1993). As previously mentioned, agentic drives are motivations for self-preservation, honor, admiration, and success, whereas communal drives are those involving contributing to the community, bettering future generations, and the improvement of society. Many people seek to engage in actions that will positively affect the lives of those who come after them, while simultaneously awarding them with admiration from others as a result of these actions.

Building on the agentic dimension, some researchers have investigated the relationship between the desire to leave a legacy and narcissism. Although narcissism tends to be viewed in a negative light as an overinflated sense of self, it is not always pathological in nature. In fact, healthy narcissism has been described as "the strategies used to promote a positive self-image and facilitate agency by otherwise psychologically well-adjusted individuals" (Ackerman et al., 2011, p. 68). Every day people may seek to promote the self through positive affirmations of their own qualities and characteristics, such as describing how intelligent and creative they are. In this sense, clinically healthy expressions of narcissism contribute to the agentic features prevalent in many legacy goals. Additionally, Gebauer et al. (2012) developed the seemingly counterintuitive concept of communal (as opposed to agentic) narcissism. A communal narcissist may seek the same self-promotion and self-preservation typical of agentic narcissists but attempts to obtain these goals through a more interdependent and charitable avenue, such as mentioning how dedicated they are to the betterment of their community and how much they give to charity.

Concerns for the future also reflect the communal aspects of legacy, specifically in cases of concern over climate change. "Psychological distance," or the intergenerational gap of time that exists between people alive in the present and the people that will be alive in the distant future, can serve as a potential barrier between behaving in a way that will benefit those in the future along with the planet they inhabit (Wade-Benzoni, 2019). However, the idea that one may leave a lasting legacy that will influence future generations can serve as a powerful motivator, in that it prompts consideration for how one's actions will impact future generations. Specifically, research shows that a positive relationship

exists between a desire to leave a legacy and pro-environmental action, and that legacy primes increase giving to environmental charities, and pro-environmental intentions (Zaval et al., 2015). This tension between communal and generative drives with agentic and narcissistic drives seem to form a balance in most legacy desires.

Using adults' written narratives, Newton et al. (2014) explored the associations among legacy, generativity, and narcissism. Participants completed a "life story interview," in which they were asked to recall past events in their lives, and then to imagine what their lives would look like in the future, generating a so-called future script. Specifically, the researchers were interested in statements about the future concerning "lasting impressions," and coded these occurrences as indicators of narcissism and generativity. Answers were coded into one of three categories: *self-script*, *other-script*, or *composite-script*. Participants who scored in the self-script category made reference to a lasting impression related to themselves and others in their immediate circle, with one participant writing, for example, "I just hope to be able to be a strong advisor to my children, my grandchildren, my nieces, and my nephews so that they can come to me and they can ask me something, and I can share with them something that I've gone through'' (Newton et al., 2014).

Participants who scored in the other-script category, by contrast, provided an answer related to others outside of themselves or their immediate circle, and focused more on people in the community. One such participant, for example, wrote about their desire to ''…work with African American students that don't [have] good self-esteem…helping them to explore the African past so that they can take pride in what— who they were and who their ancestors were and the accomplishments that they achieved throughout history

and not just these last few hundred years but with thousands of years of history which they can be proud of'' (Newton et al., 2014). Lastly, participants who scored in the composite-script category blended the self and others in their responses, such that the self is highlighted in its service to others, with one participant writing ''…the mentoring program that I'm starting, and that's real now. And I want to do a rites of passage for young girls between the ages of ten and 15. I think it's like really instrumental that young women learn younger their value. And I just want to show a girl or kid that she's valuable, you know, what she can do with her life. And that was—I tried that with my daughter, and I was successful, and I'm so happy that I was'' (Newton et al., 2014).

Newton et al.'s findings showed that a score of high generativity, alongside high narcissism, was related to a desire for legacy in which the self is socially admired due to expressions of care and concern for others. These results reveal that the division between self-interest and altruism are not as clear as some believe it to be. As such, motivations to leave a legacy are oftentimes neither selfish nor selfless, but a healthy composite of both. However, recent research also highlights the role of cultural forces in shaping these psychological imperatives, with people from collective societies being driven more toward generative actions involving communal goals (Au et al., 2019).

Having explored legacy and its related concepts, in the following sections I will examine three areas that potentially play a role in the formation of legacy desires: existential motivations to transcend death, identity narrative, and simulation constraints.

Death Anxiety & Terror Management Theory (TMT)

As previously mentioned, symbolic immortality is defined and gained in multiple ways in the previous TMT literature, including nationalism (Pyszczynski et al., 2003) or progeny, (Zhou et al., 2008), as well as through personal scientific, business, or artistic achievements (Solomon et al., 2004). The individualistic symbolic immortality that is achieved through personal accomplishments is arguably indistinguishable to legacy, with symbolic immortality being a by-product of one's legacy. In the United States, the number of people who consider themselves nonreligious is growing (Pew Research Center, 2015), and therefore an increasing number are eschewing the theologies that would have traditionally offered them the promise of an afterlife, making symbolic immortality the only recourse for assuaging the nonbeliever's existential anxiety that arises from the awareness of the inevitability of death. By gaining symbolic immortality through a legacy, people can derive a sense of "cheating death" by living on for decades, centuries, or even millennia through their individual accomplishments.

In some cases, the lure of symbolic immortality may even take precedence over the present, ephemeral life. An example of this is the response that athletes gave in a non-scientific interview when asked hypothetically if they would take a magic pill that would allow them to win every competition, they entered for the next five years but resulted in their death from the substance's side effects after those five years of victory. Fifty-two percent of the athletes answered yes (Goldman, Bush, & Klatz, 1984). Given the previous research describing the appeal of fame to so many people, such findings show how symbolic immortality can provide people with the benefits of what is essentially eternal fame.

The role of symbolic immortality in motivating people to engage in creative activities has not been sufficiently explored. However, in one study, being reminded of their mortality increased participants' creativity when it allowed them to leave a legacy (Slight et al., 2013). Specifically, after being primed with mortality salience, participants were given a task to think of names for a newly discovered iguana for a zoo and told that the best name would be displayed on the information sign at the iguana's cage, along with the name giver. In the legacy condition, participants were told that the iguana could live for as long as 100 years (thus providing a legacy for the name creator), while in the control condition they were told the iguana could only live for one year. Results showed that in the mortality salience condition, participants provided more original names for the iguana when their name might leave a legacy than when it could not. Subsequent studies replicated these effects, but only when creativity was perceived as being socially valued, and only amongst participants high in individualism (Slight et al., 2013). These findings suggest that the desire to be remembered and admired after death effectively spurs the capabilities of creative individuals highly concerned with their posthumous individual reputation.

Additional TMT research also shows a correlation with high self-esteem and a belief that one will be remembered and have an impact on the world after death (Lifshin et al., 2021). These findings suggest that when existential anxiety arises from contemplating the inevitability of death, this anxiety may be mollified by the belief that one will transcend death symbolically through one's accomplishments. By creating a legacy and achieving an individualistic symbolic immortality, one is capable of making an impact in the world that will outlive the self.

Narrative and the Self as Story

An important framework from which to view legacy is the framework of one's life as a narrative. Stories are a ubiquitous phenomenon of human social life (McAdams, 1993). Across cultures, myths, legends, tales, epic poems, novels, plays, and films serve to convey fundamental truths about the human condition, identity, and relationships (Campbell, 1949). At their core, stories convey moral messages. They tend to encompass common themes and characteristics such as characters, plot, and setting, as well as initiating events, conflict, tension, and resolution (McAdams, 1993). Jung et al. (1964) noted that myths and stories tended to be rich, ubiquitous sources of "archetypes," or general representations and motifs of universal human truths. In other words, stories communicate important lessons on how we as humans can answer and cope with common questions and problems that we experience across cultures throughout our lifetimes. Jung believed that the propensity to create stories, and therefore to share archetypes using the formula of narrative, was a human instinct similar to the instincts of other animals.

Campbell (1949) coined the term "monomyth" to describe story universalities from cultures that had never been in contact with one another, suggesting that Jungian archetypes were responsible for these recurring themes. Additionally, Campbell's notion of the "hero's journey" outlines the common narrative arc of a protagonist's departure, fulfillment, and return. Like Jung, Campbell points out that, historically, myths and stories did more than explain the origins of the cosmos and the nature of the gods; they also served important sociocultural functions, such as providing a foundation through which members of a community could assess the values and beliefs that are appropriate and inappropriate.

For example, citizens of ancient Greece frequently used stories such as *The Iliad* to justify their behaviors and decisions (Kitto, 1968).

While myths play a fundamental role for many cultures, McAdams (1993) argues that personal stories provide a similar role for individuals. The author reasons that people naturally experience their lives and the world around them through the lens of temporal story. That is to say, we experience the world changing from moment to moment, and as each moment unfolds, events take place due to the actions, intentions, and motivations of other characters in the world.

In line with this dramaturgical model, McAdam's concept of *narrative identity* encompasses the internal stories that individuals develop over their lifespan to make sense of who they are, how they relate to their social and cultural environment, and how they will continue in the memories of others through their legacy. This narrative identity is subject to change and evolves as the person grows and adapts to different contexts and life circumstances (McAdams, 2008). The autobiographical stories created by the individual serve an integrative function, helping the person to reconcile complex events, characters, drives, and goals that might otherwise be perceived as unrelated to one another, and even contradictory. Our self-narratives facilitate a sense of causal coherence, helping us to understand how and why events unfold, as well as to perceive meaningful transformation of characters and unraveling plots.

Due to errors in human memory and the reconstructive effects of post-event information, many autobiographical episodes are subject to revision and change over time (Talarico & Rubin, 2003). Given that one's life story can have a crucial impact on the way that they perceive themselves, personal storytelling techniques are used in clinical settings.

Specifically, *narrative therapy* is a framework that encourages patients to discuss and investigate previous negative experiences and stories, with the therapist helping the patient to formulate new stories that encourage growth and development (Dimagio & Semerari, 2004; Niemeyer & Tschudi, 2003).

Given the centrality of narrative in evolved human cognition, storytelling plays an important role in many different social domains. For example, the presentation of data through stories results in better comprehension, interest, and engagement with science than the delivery of facts alone (Dahlstrom, 2014). Likewise, businesses capitalize on our penchant for stories in building brand recognition; through attention-getting mini-narratives (e.g., commercials), and storytelling in content, advertisers can forge a sense of consumers' familiarity and connection with their products.

Given the role narration and story play in identity and the self, one argument is generativity and legacy play an important role in narrative identity (McAdams, 1993). Given the importance of a proper ending to a good story, legacy and generativity may fulfill the important function of providing one with the feeling that one's life story need not end with death, but that the story continues through the impact one will have on future generations (i.e., it was not all for naught; there was a *reason* for our trials and tribulations, with our legacy being the meaning of our existence). Moreover, leaving a legacy for future generations to admire provides a way for the self to continue metaphorically or to be immortalized. In addition to providing a satisfying end to one's life story, one's legacy is also capable of transforming the perception of the quality of one's life prior to death.

Research by Rozin and Stellar (2009) found events that occur after a person's death can still affect the perceived goodness and happiness of that life before the posthumous

events took place. Participants were each given life stories to read and asked to rate the quality of each life, with some of the stories specifically made to test the effects that positive and negative posthumous events would have on the perceived quality of the life. The results indicated that participants tended to view life stories with negative posthumous events more negatively and life stories with positive posthumous events more positively compared to when these life stories lacked posthumous events. The researchers refer to this effect as "retroactive re-evaluation," which is the tendency for people to use later information to evaluate the quality and value of previous events.

Rather than our unique stories ending at the grave, they remain to be told, time and again, thereby influencing those who come after us through the moral lessons that our own hard-won stories convey. This continuity demonstrates the appeal that legacy and generativity have in building the narrative of a person's life. The appeal of a life narrative that ends on the right note, by continuing to influence and impact the world after the self is gone, may be a motivational factor in people's desire to leave a legacy.

Imagining the Future, Simulation Constraints, and Legacy

Contemplating our own legacies recruits cognitive processes that shape our representations of this "postself" social status. To ponder how we will be remembered after our death necessitates that we imagine a nonexistent, hypothetical future and transport ourselves into that time-period. Multiple theorists have pointed out how the ability to imagine ourselves in the future plays an important role in our present behavior, especially regarding our social behavior, goal formation, and our self-development over time (Bandura, 1986; Lewin, 1951; Moore et al., 1998; Nuttin, 1964, 1985). The concept of

Future Time Perspective (Boyd & Zimbardo, 1997) extends this future-oriented thinking beyond the grave, to such concepts as the afterlife and reincarnation. Indeed, if one believes in an afterlife, it may be worth one's efforts to reflect on how their present behavior affects their experience in eternity.

Over the past few decades, cognitive theorists have shown how imagination and "mental transportability" utilize information from our past experiences (Atance & O'Neill, 2001, Atance & O'Neill, 2005; Schacter et al., 2017; Tulving, 1985). Memories from our personal past, such as going to the beach, attending a wedding, or volunteering at a soup kitchen, equip us with unique experiences as well as emotions that leave an impression on us, and this extant phenomenological content is used in the construction of simulated futures.

Atance and O'Neill's (2001) concept of *episodic future memory* goes some way toward explaining how memories of our past and simulations of potential futures are integrally related. According to these authors, episodic memory may be distinguished from other forms of memory, such as semantic memory, because only the former involves individuals mentally transporting themselves to events from the past, as occurs explicitly during a bout of reminiscing. Episodic memory helps us to maintain and update information about who we were and have been, which is in turn used in our autobiographical storytelling and personal myths. Planning our life story in advance and strategizing about who we want to be, so we can execute our decisions to land as close as possible to our ideal self, is grounded in a coherent narrative. Thus, episodic future memory has been referred to as the "pre-experience" of the future (Atance & O'Neill, 2005).

Episodic memory also allows us to examine and assess how we might behave in a given situation, due to our knowledge of self from previous experiences in similar situations. In accessing these subjective "data" from historical incidents and experiences, we create models of what kinds of future will be most favorable to us. The "pre-experience" of our legacy is ultimately rooted, therefore, in our actual past experiences as a social animal that has derived memorable pleasure from discrete historical moments of admiration, praise, and positive regard. These experiences shape the type of legacy we wish to leave and the potential impact we imagine our legacy will have on us and others in the future.

Death and Posthumous Wellbeing

It is unclear the extent to which a person's afterlife beliefs influence their legacy-seeking motivations and behaviors. On the one hand, the notion of a literal immortality appears to dampen the need for worldview defense mechanisms involved in terror management concerns (Dechesne et al., 2003). On the other hand, it's clear that many people who believe in the afterlife nevertheless also desire to leave a legacy.

The nature of one's afterlife beliefs, or lack thereof, may intersect with their envisioning of their legacy. According to Thalbourne (1996), people's beliefs about the afterlife can be classified into one of several types. For present purposes, the most important distinction is between so-called *immortalists* (those who believe the conscious self-survives the death of the body) and *extinctivists* (those who believe the conscious self-

ceases permanently when the body dies)[1]. For immortalists, the survival of the self may imply an awareness of one's legacy playing out in time after their death. In principle, the anticipated pleasure one will derive after death in leaving a legacy and being admired may be a motivating factor, since posthumous reputation can be enjoyed. Extinctivists, by contrast, should reason that they will be completely ignorant of events that transpire after their death, including those involving their legacy. For them, death is essentially "the deprivation of sensation" (Epicurus, Letter to Menoeceus, p. 63). Therefore, whatever is motivating the extinctivist's legacy-seeking behaviors cannot, ipso facto, be the anticipation of an experiential posthumous reputation.

Related to the foregoing distinction between immortalists and extinctivists is Luper's (2004) "Harm as Deprivation" philosophical model regarding the nature of death. The author discusses two theses regarding death and wellbeing: the *mortem thesis* and the *immunity thesis*. The mortem thesis holds that death is harmful to us given that it prevents us from experiencing some good (whatever may occur in life), whereas the immunity thesis holds that those who are already dead cannot be harmed. If one subscribes to the latter thesis, the prospect of leaving a legacy, good or bad, should be irrelevant to the extinctivist because, either way, the person will not experience their own posthumous reputation. Given that death destroys the conscious self, nothing that happens after death can affect our subjective wellbeing, since our personal consciousness is no more.

Given that posthumous pleasure or harm is impossible according to the extinctivist position, it seems somewhat contradictory that an extinctivist should find comfort in the notion of leaving a legacy. If consciousness ends at death, then the agentic aspects of

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[1] The remaining afterlife belief categories are reincarnationists, eclectics, agnostics, and others.

cementing a legacy will ultimately go unappreciated by the self. Indeed, in this light, a person cannot even "know" that they have died. An aspiring author may seek to write a novel that transcends time by being admired by countless readers yet unborn. But such an author will receive no subjective reward whatsoever of having their work celebrated after they are gone. Tolstoy, after all, no longer exists and therefore cannot appreciate when someone buys a copy of *Anna Karenina*. Likewise, if the novel is forgotten after the author has died, the author's consciousness is no longer around to grieve their forgotten writing, and therefore, suffers no harm from obscurity.

Simulation Constraint Hypothesis

There are several reasons why an extinctivist may seek to leave a legacy. For example, a positive posthumous reputation may benefit the deceased person's offspring or relatives. From an evolutionary perspective, such factors may even culminate in genetic fitness advantages. However, such driving forces behind legacy-seeking behaviors may also operate alongside cognitive errors that obviate the immunity thesis posited by Luper (2004). According to Bering (2002, 2006), at the heart of these errors is a "simulation constraint" on people's capacity to mentally represent death. Specifically, because we have never consciously experienced the absence of consciousness, we cannot draw from these "experiences" to properly imagine—or simulate—death in line with explicit extinctivist beliefs. As Freud (1918/1957) observed:

"It is of course impossible to imagine our own death; and whenever we attempt to do so we can perceive that we are in fact still present spectators. Hence the psycho-analytic

school could venture on the assertion that at the bottom no one believes in his own death, or, to put the same thing in another way, that in the unconscious every one of us is convinced of his immortality" (p. 291).

The same biased reasoning applies when thinking about other people's mortality. In asking "what is it like to be dead?" we are assuming that it is *like* something. To the extent that we represent others' mental states by drawing analogies to our own (see Asakura et al., 2016, Bivona et al., 2018, Gordon, 1986, 1995a), attempting to simulate a dead agent's mind will fall flat, as we have no experience to help place us in their shoes; any attributions we make will be made through the conscious lens of the living.

In a series of experiments with both adults and children, Bering and his colleagues demonstrated that belief in the continuity of psychological functioning after death is the "default stance" in human cognition, and that beneath the veneer of extinctivism, even many non-believers reason implicitly as though their personal consciousness will survive their death (for a review, see Bering, 2006). In one study, for instance, adults read a fictitious vignette about a schoolteacher who died suddenly in a car accident on his way to work. Leading up to the death, the text of the narrative "loaded" the character with different types of mental states. For example, the previous night, the teacher had studied for his lesson that day, he was angry at his wife for coming home late the evening before, he was feeling sick, had just put a breath mint in his mouth before the accident, and so on. Thus, when asked questions about the psychological (dis)continuity of the dead agent, such

as "Now that he is dead, does he still…" participants answered "yes" or "no" and then gave their rationale.[2]

Although most extinctivists (and agnostics) in the study answered as would be expected (i.e., with psychological discontinuity responses), they were not at ceiling in this regard. In particular, *emotional* (e.g., "does he still love his wife?"; "is he still angry at his wife?"), *intentional* (e.g., "does he wish he were still alive?" "does he want to be home?"), and *epistemic* states (e.g., "does he remember what he studied last night?", "does he know that he's dead?") were the most likely to generate continuity responses for all participants, immortalists and extinctivists alike. By contrast, discontinuity responses were significantly more common when thinking about the dead agent's *perceptual* (e.g., "can he smell the paramedic's cigarettes?", "can he still taste the breath mint?") and *physiological* states (e.g., "is he still thirsty?" "does he still feel sick?"). Moreover, when looking at latencies of verbal responses, participants took longer to state that the dead agent no longer experienced emotions, knowledge, and intentional states, suggesting that it was cognitively effortful to reason in extinctivist terms for these categories.

Bering's interpretation of these findings was that, because we have firsthand phenomenological knowledge of what it feels like to be devoid of some kinds of mental states but not others (e.g., we know what not being thirsty is like but we cannot know what not thinking is like), "easy-to-imagine-the-absence-of states" (EIA: perceptual and physiological) are less likely to be ascribed to the dead than are "difficult-to-imagine-the-absence-of states" (DIA: emotional, intentional, epistemic).

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[2] "No" answers did not always imply non-continuity. One participant claimed "he's not angry at his wife anymore because he forgives her now," rather than the cessation of his consciousness leading to the absence of his anger.

If the simulation constraint hypothesis is correct, extinctivism is cognitively effortful and is frequently betrayed by implicit reasoning about our own subjective afterlife. Indeed, in work with children, Bering has found that younger children are more likely to believe in psychological continuity after death than are older children, a finding that contradicts assumptions that belief in the afterlife is simply the product of religious teaching (but see Astuti & Harris, 2008; Harris & Giménez, 2005; Sperber & Hirschfeld, 1999). In one study, children watched a puppet show in which an anthropomorphized mouse was eaten by an alligator (Bering & Bjorklund, 2004). Although even the youngest children (3- to 4-year-olds) understood that the dead mouse no longer had biological needs like food or water, and would not grow older, they stated that the dead mouse still thought and remembered things.

Older children (7- to 12-year-olds), by contrast, were more likely to be invoke explanations of brain-body materialism and state that the dead mouse no longer had the capacity for psychological functions, presumably due to their scientific education. These developmental findings suggest that belief in the "afterlife," in its most basic form as belief in the continuity of personal consciousness after death, is intuitive, with culture exacerbating and capitalizing on this default stance rather than instilling it.

If desires for legacy consist partly of agentic, rather than exclusively communal, motivations (Kotre, 1984), the foregoing simulation constraints on death reasoning may play an important role, even if such factors are unacknowledged by subscribing to extinctivist beliefs. Simulations of what post-mortem events will be "like" may conjure scenes of events that the dead self cannot possibly perceive, such as our funerals, eulogies delivered by our admirers, and so on. Even if these imagined scenes and posthumous

accolades are explicitly denied as illogical, that does not prevent them from occurring and having to be overwritten by extinctivist thinking.

On the surface, at least, legacy-driven behaviors that are more communal in nature appear to be less susceptible to such cognitive biases. Certainly, many people hope that their time on Earth will have a positive impact on others, enriching the lives of future generations and leaving the world a better place. As we have seen, however, for most individuals there is often a (healthy) sense of communal narcissism at play, with ostensibly selfless motives often being fueled by selfish goals. Indeed, part of the satisfaction that comes with changing society for the better is to perceive and take pride in others' acknowledgement of one's contributions. In other words, even if we change the lives of others for the better with our legacy, this motive cannot be completely separated from one's agentic desires to attain symbolic immortality.

Conclusion

The current thesis has explored legacy in detail, first by examining legacy in its relation to social factors, such as reputation, status, and fame. Additionally, we have compared and contrasted legacy with similar concepts, including symbolic immortality and generativity. Lastly, we have considered multiple potential factors underlying the desire to leave a legacy and the ways in which they may interact with one another. Specifically, legacy seeking behaviors are likely appealing in that they help us to transcend death, provide a satisfying ending to one's life story, and recruit intuitive, but flawed, cognitive resources for envisioning the post self.

For many people, leaving a positive legacy is of paramount importance. This is largely fueled by a desire to do something great in the world, and the fear that one would be forgotten and irrelevant in the history books. As demonstrated in this opening chapter, creative pursuits, cultural and familial rituals, and acts of community engagement are often spurred by a drive to defy death, even if such pathways to immortality are only symbolic. Many people, in fact, spend their lives working explicitly toward these ends.

That said, there are also many people who, at first glance, appear less concerned about such existential matters, spending their time "smelling the flowers" and enjoying the present. Indeed, being present and appreciating the moment is a fundamental value of many different religious teachings and philosophies, especially in the East (Chen et al., 2014). Some mindfulness research suggests that focusing one's attention and awareness on the present moment rather than the past or what might occur in the future provides certain benefits, including self-regulated behavior, positive emotional states, and lower stress (Brown & Ryan, 2003). Interestingly, however, these cultural practices may be orthogonal to the issue of legacy; indeed, some research has even found that death anxiety is higher in Buddhists than those of other religions (Nichols et al., 2018) although other research contradicts these findings (Wong, et al. 2015). Nevertheless, in terms of the day-to-day management of such existential concerns, it may behoove individuals to focus more on the present that they are able to experience, rather than focusing on a posthumous future that they will never experience.

The current thesis explores the understudied concept of legacy, as well as the complex and likely interrelated factors influencing individuals to leave legacies. In Study 1 (Chapter 2), I sought to examine the extent to which people consider legacy to be a priority

and fundamental to their life goals, as well as investigating the potentially incompatible goals of "living in the present" as opposed to working to cement a legacy for the future, by comparing people's forced-choice preferences for a successful life versus a successful legacy, and in Study 2 I examined this same prioritization by comparing preferences for a moral reputation during life versus a moral legacy. In Study 3 (Chapter 3), I designed a survey to gain deeper insight into whether people want to leave a legacy, what kind of legacy they hoped to leave if they affirmed such a desire, what kinds of motivations people express for leaving a legacy, and how people define legacy.

In Studies 4 and 5 (Chapter 4), I used the data acquired in Chapter 3 to develop a new scale for measuring legacy motivations. Following this, in Study 6 (Chapter 4) I used this scale as a means of predicting people's preferences for a successful/moral life versus a successful/moral legacy. In Study 7 (Chapter 5), I examine the effects that post-mortem consciousness primes have on desires to leave a legacy, as well as preferences for a successful/moral life versus a successful/moral legacy. In Studies 8 and 9 (Chapter 6), I pivot my attention to evolutionary factors underlying a desire to leave a legacy, assessing people's willingness to date someone whose deceased family member was guilty of various crimes, resulting in a negative legacy. Finally, in Chapter 7, I conclude by summarizing the findings of these studies as well as an explanation as to how the findings of this thesis provide novel insights and contributions to the slim legacy literature, as well as how legacy as a type of inter-generational thinking can be used to solve important problems facing civilization in the present and future.

Cumulatively, the empirical studies throughout the present thesis were designed to uncover the underlying desires and motivations that people tend to possess concerning

their legacy, some of which has been discussed in the prior literature, and others which have not been considered previously. While legacy in general can consist of either pre-mortem and post-mortem reputations, the primary interest of this thesis focuses specifically on post-mortem legacy. The purpose of this thesis is to provide further insight into the factors influencing desires to leave this post-mortem legacy. I now turn to the issue of separating desires for pre-mortem as opposed to post-mortem legacy, as well as assessing which of these people tend to perceive as more important.

Chapter 2: Forced choice preferences for pre-mortem versus post-mortem reputation

How much of a priority is leaving a legacy? Do we consider leaving a legacy a fundamental goal to accomplish, or are we more interested in investing our efforts in the here and now? Given that people can only work to accomplish their legacy goals in the present, it is not evident whether an action is carried out for a reward in the present, for a future legacy, or both. Indeed, it is likely that most people who have left admirable legacies led relatively admirable lives. As mentioned in the previous chapter, legacy need not be exclusively limited to how one is remembered after death, given that certain people such as athletes, musicians, and corporate executives leave a pre-mortem legacy after their retirement. This distinction between pre-mortem and post-mortem legacies raises the question as to how much of an emphasis people place purely on the latter.

It is also unclear how a person's afterlife beliefs influence their legacy desires and behaviors. If extinctivists consider their lives to be the only first-hand experiences they will ever have, a pre-mortem legacy is the only kind that they could hope to experience (i.e., in the absence of consciousness after death, they will never know if they have left a post-mortem legacy or not, favorable or unfavorable). Does this belief in a lack of awareness after death render pursuits of post-mortem legacy useless to extinctivists, or are they driven by alternative motivations? As mentioned in the previous chapter, legacy seems to be a

complex concept, and before delving into the many factors that influence such desires, it is important to identify exactly how commonplace they are.

When considering the significance of the present compared with the future, the practice of mindfulness may shed light on what people tend to prioritize in their lives. As a method for truly appreciating the present moment, mindfulness has become popular over the last few decades as a means of reducing anxiety and stress (Hoffman et al., 2010). Numerous scholars (e.g., Brown & Ryan, 2003; Hitchcock et al., 2016; Hoffman et al., 2010; Tolle, 2004) have expounded on the benefits that mindfulness can have on living a fulfilling and happy life. A central component of mindfulness is its emphasis on living in and appreciating the present moment (Tolle, 2004). This focus on the present derives its influence from Eastern religions and practices (Chen et al., 2014), the central logic being that the present moment is all one really has, and therefore the here and now should take priority over our past and future (Tolle, 2004).

An emphasis on the present moment, however, may collide with the desire to cultivate a positive posthumous reputation. It is worth exploring, therefore, the extent to which people who want to leave a legacy might experience tension between their aims to solidify such a posthumous reputation, and their everyday efforts to live well while they are still alive. For example, given that work is one route to symbolic immortality (Lifshin, 2021), legacy strivings may cause people to spend more time focusing on their jobs and less on family, friends, and the hobbies that they can enjoy in the present. Although a good work life balance has been shown to be positively associated with job and life satisfaction, and negatively associated with anxiety (Harr et al., 2014), some who wish to work hard to

leave a legacy in their professional field may feel the need to work longer hours. This challenge to work more at the expense of family may be especially difficult for women, as they try to balance the demands of both provider and caregiver roles (Bear, 2019).

Despite these sacrifices of time in the present moment, people may still feel a strong initiative and motivation to leave a legacy so that their reputation will endure beyond their mortal life. As noted in the previous chapter, people may perceive a legacy as the true ending of their life story (McAdams, 1993). Rozin and Stellar's (2009) research examining retroactive re-evaluation suggests that posthumous events play a role in how the life before those posthumous events is perceived, indicating that a positive legacy may increase the perceived happiness of the person's life. Previous literature also suggests that motivations to accomplish future goals, otherwise referred to as future-oriented motivation, may serve as useful drivers for accomplishing proximal subgoals that can be perceived as smaller steps to accomplishing a larger goal (Miller & Brickman, 2004). For example, a PhD student with the future goal of completing a dissertation may use this future-oriented motivation as a driver for completing a smaller proximal goal, such as conducting a literature review of the previous work in the area of interest.

Moreover, the afterlife beliefs that a person holds may play an important role in their preference for a successful life versus a successful legacy. While someone who believes in an afterlife (i.e., an immortalist) may believe that they will be aware of their legacy after their own death, someone who believes in the cessation of consciousness after death (i.e., an extinctivist) may feel that being admired after death will yield no direct benefit to them as a subjective agent, given that there will be no "them" to experience or

contemplate such circumstances. For the extinctivist, the current life is all there is, so it stands to reason that they have a greater desire to attain the most possible from this life, rather than to prioritize social admiration and recognition in a future they will be incapable of experiencing.

These factors concerning post-mortem consciousness lead to some interesting questions: how prevalent are legacy desires, and to what extent do people value "successful" lives over "successful" post-mortem legacies? Additionally, are inclinations for legacy related to afterlife beliefs, and other individual differences, such as personality? Given that previous research has found relationships between generativity and openness to experience (Cox et al, 2010; Peterson et al., 1997) and extraversion (Cox et al., 2010; Blatný et al, 2019), there may be a relationship between these personality traits and legacy.

In the present chapter, I investigated these questions by providing people with a forced-choice decision between lived experiences and postmortem legacies. Specifically, with a design based loosely on the forced choice Goldman dilemma (Goldman, Bush, & Klatz, 1984, described above), in which athletes were asked to choose to take a pill that would allow them to win every Olympic competition they were involved in, but would kill them shortly after, I provided participants with two alternate scenarios: one in which someone could have a successful life, but then be quickly forgotten after their death, versus one in which someone would live in obscurity, but be remembered and admired for many generations after their death. Furthermore, to better understand their rationale for their choices, I analyzed people's attempts to articulate their decision-making on this forced-choice item, and also analyzed the moderating role of afterlife beliefs. I hypothesized that

most immortalists would prefer a successful legacy to a successful life, given that they consider consciousness to continue after death and, therefore, may be capable of having awareness of how their legacy unfolds following their biological demise. By contrast, I hypothesized that most (but not all) extinctivists would prioritize a successful life, given their belief that consciousness ceases after death, rendering them unable to appreciate their legacy. Agnostics should be divided in their preferences. Finally, for exploratory purposes, I examined the relationship between scenario choices and several relevant individual difference measures, including the Big Five personality dimensions, mental transportability, and visualization skill.

Methods

Participants

A total of 227 participants (Male =134; Female = 88; Another gender = 3; Missing = 2), all located in the United States, were recruited through Amazon's Mechanical Turk to participate in the survey designed in Qualtrics in exchange for $1. The mean age of the participants was 36.99 (range 19-74 years; SD= 11.30).

Measures

In order to pit a successful life against a successful legacy, participants were asked to indicate their preference for two alternative scenarios. Specifically, they were given the following instructions:

"Below are two hypothetical situations about a man named Bob. Read both scenarios carefully, and then decide which one you would prefer if you were in Bob's position."

Scenario 1

Bob is an artist. He creates art that is personally fulfilling, but his art is also well known among his peers and the general public, and he is seen as a significant and influential figure. However, after Bob dies his work is eventually forgotten forever. People in future generations have no knowledge of Bob or of his work.

Scenario 2

Bob is an artist. Although he creates art that is personally fulfilling, his art is not well known among his peers or the general public, and he is not seen as a significant or influential figure. However, when Bob dies, his art is discovered by a prominent art critic, and people come to think of him as a visionary of immense talent. He is well known to future generations, who study his work and are inspired to model it.

After choosing their preferred scenario, participants were asked to rate their confidence in their choice on a 1 to 5 scale (1= Not confident, 5= Very confident). Following this, they were provided a free-response text box and asked to briefly explain why they chose the scenario that they did.

Afterlife beliefs were assessed using the Survey of Belief in an Afterlife (Thalbourne, 1996). This survey was constructed to assess the variety of beliefs people possess concerning life after death. While people belonging to various religious backgrounds adhere to different views concerning the afterlife, these beliefs are not reliant

on religious affiliations and may be believed regardless of whether one is "religious." Participants were given several statements and asked to select the one that best describes their personal belief. The survey consists of questions such as "What we think of as the "soul", or conscious personality of a person, ceases permanently when the body dies" and "The "conscious personality" survives the death of the body, but I am completely unsure as to what happens to it after that". Participants who believe that the conscious personality survives death are labeled "immortalists", while people who believe the conscious personality ceases to exist at death are labeled "extinctivists". Participants who claim to not know what happens to the conscious personality after death are labeled "agnostics".

Exploratory measures:

Personality was assessed on the Ten Item Personality Inventory (TIPI) (Gosling et al., 2003), which measures the Big Five traits with two items for each trait, each on a seven-point scale (1=strongly agree, 2= 7=strongly disagree).

Given the potential importance that mental "transportability" has on the ability to imagine future events concerning the self, I included Dal Cin et al.'s (2004) Transportability Scale, which examines the extent to which a person feels that they are absorbed when reading. It consists of 20 items such as "I have vivid images of the events in the story". Participants rated their agreement on a 9-point scale from 1 (strongly disagree) to 9 (strongly agree). A transportability score was calculated by reverse coding appropriate items, and then averaging across all items within the scale.

Relatedly, being able to *visualize* future events may be a useful factor in imagining one's legacy. To measure visualization skill, participants were asked to read a passage that

vividly describes the process of eating a lemon, including its weight, smell, texture, and taste, after which they rated how "real" the lemon seemed to them when reading the paragraph, using five items: "I could vividly imagine the lemon as I read the text", and "I could feel myself salivating as I read the text". Participants rated the extent to which these statements applied to them on a 1 (strongly disagree) to 7 (strongly agree) point scale.

Procedure

Participants provided written informed consent before participating in the study. All studies were approved by the University of Otago Human Ethics Committee.

After answering questions regarding their demographics (sex, age, country of residence, and religious affiliation), participants were presented the TIPI, the transportability scale, the visualization measure, followed by the life/legacy choice task, and lastly (for half of the participants) the Survey of Belief in an Afterlife. (The flow of the study was counterbalanced such that some participants were given the Survey of Belief in an Afterlife immediately before the scenarios, while other participants were given this measure immediately after the scenarios.) Next, participants were asked about their current job title/occupation; this was done to ascertain the role that a person's career might have in influencing their legacy desires. Finally, participants were asked whether their data were honest and suitable for use. All of the participants verified that they answered honestly, and their data were reliable.

Results

Nineteen participants gave incomplete or invalid data (non-sense answers), resulting in a final sample of 208 participants (Male = 122, Female = 84, Another gender = 2). The mean age was M=36.90 (age range, 20-74 years; SD= 11.26).

Successful Life or Successful Legacy?

Overall, 57.2% of the 208 participants indicated a preference for a successful legacy over a successful life. Overall, participants were very confident in their decision (M = 4.10, SD =.926), and there was no significant difference in confidence between participants choosing life or legacy (see Table 2.1). Choice did not differ by gender of participant (see Table 2.2).

Table 2.1. *Measured variables as a function of scenario choice.*

	Life		Legacy	
	M	SD	M	SD
Decision Confidence	4.12	.83	4.09	.99
Transportability	6.24	1.28	6.48	1.36
Visualization	5.68	.92	5.91	1.04
Openness to Experience	3.30	1.42	3.16	1.55
Conscientiousness	2.70	1.41	2.63	1.44

Extraversion	4.41	1.84	4.59	1.72
Agreeableness	3.00	1.46	2.86	1.46
Neuroticism	5.06	1.31	5.32	1.41

Participants' explanations as to why they chose the option they did were coded by me for common themes. Twenty percent of participants' answers were provided to a research assistant. An interrater reliability analysis using the Kappa statistic was performed to determine consistency among raters. The interrater reliability for the raters was found to be Kappa =.92 (95% CI, .82 to 1.026), $p < .001$. The results of the categories that emerged from participants explanations are shown below in Table 2.2:

Table 2.2. *Explanations for chosen scenario.*

Explanation	Percentage
Lived experiences should be prioritized	36.1%
Intergenerational impact more significant	47.6%
Other	16.3%

Among participants choosing a successful legacy, the most common reason was the belief that the impact they would have on many generations in the future would outweigh

the accomplishments of a single lifetime. These participants often expressed a belief that what endures for generations is more important than what transpires during a fleeting lifetime of success. As one participant answered: "I chose the second scenario (legacy) because I would have wanted my art to live on long after I pass, rather than in-the-moment when I'm alive. That way, more people and different generations can see it and become inspired to the style that I made."

Among participants who chose a successful life, the primary reason (offered by 36% of participants) was that a legacy of admiration is mostly pointless if they are incapable of being aware that they are admired. One participant who chose the successful life scenario answered: "Because you wouldn't know after you died, that you were discovered. You don't get to enjoy the benefits of your hard work".

The other 16.3% of participants were categorized in a group of 'other' due to having more specific individual reasons for their choice that differed from a preference on individual experiences versus intergenerational impact. Some examples are, "I thought that one was more realistic than the other", and "It was bit more elaborated than other one".

Afterlife Beliefs

Afterlife beliefs were coded into one of three categories: immortalists (N=88), extinctivists (N=60), and agnostics (N=60), to capture participants' beliefs about post-mortem consciousness. Specifically, participants who believed that a person's conscious personality ceases at death were coded in the extinctivist category, and participants who claimed they were uncertain about what happens to the conscious personality after death were placed in the agnostic category. All other participants were placed in the immortalist

category, as all their answers indicated some belief that the conscious personality continues in some way after death. Chi square tests indicated no significant difference between afterlife beliefs in participants' scenario preferences (X^2 (2, N = 208) = 1.38, p = .50). While 61.4% of immortalists chose legacy, the other categories were more divided, with 51.7% of the extinctivists and 56.7% of agnostics choosing legacy.

Table 2.3. Scenario decisions based on afterlife beliefs.

	Life	Legacy
Immortalists	38.6%	61.4%
Extinctivists	48.3%	51.7%
Agnostics	43.3%	56.7%

In their explanations, 51.1% of immortalists expressed that having an impact that lasts for generations is more important than being well-known during a single generation, while 45% of extinctivitst and 45% of agnostics felt the same. However, while only 29.5% of immortalists believed that lived experiences should be prioritized over legacy, 40.0% of extinctivists and 41.7% of agnostics expressed this same opinion.

Table 2.4. *Explanation percentages for each afterlife category.*

Explanation	Immortalists	Extinctivists	Agnostics
Lived experiences should be prioritized	29.5%	40.0%	41.7%
Intergenerational impact more significant	51.1%	45.0%	45.0%
Other	19.3%	15.0%	13.3%

Individual Differences

An Independent Samples t test was used to examine the relationship between participants' Big Five personality traits and their preference for life over legacy. The results of the analysis indicated no relationship between participants decision and their ratings on extraversion $t(206)= -.74$, $p=.26$), agreeableness $t(206)= .66$, $p=.75$), conscientiousness $t(206)= .36$, $p=.80$), emotional stability $t(206)= -1.35$, $p=.43$), and openness to experience $t(206)= .64$, $p=.30$).

An Independent Samples t test was used to examine differences in transportability and visualization between participants who preferred life and those who preferred legacy. The results indicated no significant differences between groups for transportability, $t(206)= -1.31$, $p=.18$, or visualization, $t(206)= -1.68$, $p=.09$.

Lastly, while participants occupation was included in the study as an exploratory variable, due to uncertainty as to how this complex variable would be related to legacy preference, it was ultimately not analyzed.

Discussion

The present study was driven by an interest to assess the importance that people place on a successful legacy versus success in their present life. Many of the activities and projects that people pursue in life may be productive toward both a successful life or a successful legacy, and hence, what drives them more in these endeavors is not always clear. Furthermore, I was interested to see how a person's afterlife beliefs affect the importance they place on living a successful life or leaving a successful legacy. The results of the present research indicate that people are surprisingly evenly split in their preference for legacy over life: a little over half of the participants in the present study placed more importance on being remembered after their death. The primary reason was the belief that playing a role in the future of humanity by impacting multiple generations, as opposed to only the current one, is more influential than the success that comes with the achievements one accumulates throughout life. Among those choosing a successful life at the expense of a successful legacy, the primary reason offered was to enjoy the fruits of their labor and to experience the admiration they would receive from those who admired their work.

The appeal be remembered after death by inspiring others, shares some similarity to the desire to overcome death through symbolic immortality (Greenberg et al., 1997). According to TMT, one of the psychological roles of self-esteem is to feel that one is a person of value in the world, rather than being insignificant through one's impermanence

(Greenberg et al., 1986). The notion that it may be undetectable to future generations that one ever lived may be depressing, which leads one to engage in activities that will survive oneself, serving as a sign to future generations that one "was here". Having a multigenerational impact in the world by leaving an inspirational legacy seems to be an efficient way to attain symbolic immortality in one's culture.

Interestingly, despite a belief that consciousness ceases after death, extinctivists were no less likely to opt for successful legacies. This finding suggests that, despite the belief that extinctivists believe their consciousness ceases after death, they still consider the idea of being admired long after their death appealing. As explained in the opening chapter, this may be due to simulation constraints resulting in faulty conceptions of how rewarding being admired for generations after one's death might be, or how disappointing being forgotten after one's death might be. If asked to ponder over their belief in the cessation of post-mortem consciousness, some extinctivists may be more likely to choose the life option. However, another possibility is that there are alternative reasons to conscious experience of legacy that leads extinctivists to be divided in their choice.

However, while these scenarios focused on the extent to which success is desired more during life or after death via a legacy, posthumous reputation does not consist simply of career or artistic achievement, but also on one's moral reputation. Indeed, one need not look too far to find popular cases where moral reputation has either tarnished or compromised people's reputation when alive or deceased, and as a result negatively affected their legacy. Bill Cosby, once widely esteemed as being "America's dad", had his reputation severely damaged after allegations of sexual abuse. Likewise, Michael

Jackson's legacy as one of the greatest musicians in history has been sullied by allegations from men claiming that Jackson sexually abused them during their childhoods. While there are those who call such allegations into question, there can be no doubt that these alleged actions do severe damage to the artistic legacy of the acclaimed "King of Pop".

While people in general, as well as people of different afterlife beliefs were divided in their choice, would a forced choice scenario regarding moral reputation as opposed to career success skew participants choices more in one direction? Would people with different afterlife beliefs be less divided in their choice? To investigate how participants' answers to forced choice scenarios might differ if the options reflected a moral reputation, I adjusted them to provide a question regarding preferences for either a moral reputation in life, or a moral legacy. These moral scenarios result in more stark consequences and thus increase the difficulty of the decision to be made.

Moral Reputation: Pre-mortem or Post-mortem?

The value of moral reputation plays a crucial role in group behavior, given that interpersonal and ethical violations suggest that a person is potentially untrustworthy or even dangerous, and should therefore be avoided, shamed, or even ostracized (Feinberg et al., 2014). Therefore, maintaining a positive moral reputation is fundamental and a priority of social life, as demonstrated by research showing that when expressing hypothetical preferences, people would rather make substantial sacrifices, such as having their limbs

amputated, serving jail time, and even death, rather than suffering intense reputational damage such as being identified as a child molester (Vonasch et al., 2018).

One may argue that the importance of moral reputation exceeds the value of fame and a successful career that Bob experiences in the scenarios of Study 1, given that one need not have fame and fortune to have a positive reputation, while an immoral reputation can damage even the most successful and famous person's career. Additionally, moral reputations may also have negative consequences not only for the individual, but also for family members and others close to that "tainted" individual, with research suggesting that people feel guilt when ingroup members are guilty of transgressions, even though they are themselves innocent of the infringement (Li et al., 2020; Vollberg & Cikara, 2018).

Previous research has investigated preferences for a good reputation in life as opposed to a good posthumous reputation (Vandenbergh & Raimi, 2015). Participants were told to imagine possessing one hundred dollars that could be spent toward both their reputation in life and their legacy. The more money participants chose to spend on one reputation would result in a decrease in the quality of the other reputation (e.g., seventy percent of the money spent on a good legacy would mean thirty percent spent on a good life). The results showed participants spent more money on their life reputation ($M=$ $62.49) than on their posthumous reputation ($37.51). As in the current Study 1, while some of the participants in Vandenbergh et al's study allocated more money to their good reputation in life, the fact that some allocated money toward their legacy shows that people do care about the way they are remembered, with some willing to make sacrifices in the quality of their reputation while alive to preserve some for their posthumous reputation.

To examine participants' preferences for a moral life or moral legacy, I modified the scenarios from Study 1 to reflect a moral component of reputation and legacy. In this case, participants were asked to choose between being well known as a moral person during life but be remembered as an immoral person after their death, or vice versa.

Methods

Participants

A total of 206 participants (Male= 127, Female= 77, Other= 2) were recruited through Amazon's Mechanical Turk to participate in the survey designed in Qualtrics in exchange for $1 payment. The mean age of the participants was 38.07 years (age range, 18-69, $SD= 11.83$).

Measures

The overall method was similar to that of Study 1, with the only exception being the content of the scenarios with which participants were presented. Specifically, participants chose between the following:

Scenario 1

Bob is accused of a terrible, immoral act. He has not in fact committed the act, but because of the accusation he is thought of with bitterness, disgust, and contempt his whole life. His friends, family, and acquaintances want nothing to do with him, and people the world over use him as an example of the worst thing a person can be. Soon after his death, however, it is discovered that he is innocent of the accusation, and people come to think

that they were entirely wrong about him. People who hated him while he was alive pay their respects to him when they pass by his grave. His reputation grows and, in time, people the world over talk about Bob with respect, admiration, and love. Eventually, he comes to be remembered as a great man and is admired for many generations.

Scenario 2

Bob is loved by everyone throughout his life. People the world over think about Bob with respect, admiration, and love. But after his death, Bob is accused of a terrible and immoral act, and people come to think that they were entirely wrong about him. He has not in fact committed the act, but because of the accusation his friends, family, and acquaintances no longer want to be associated with him, and people the world over use him as an example as the worst thing a person can be. People who used to love him curse his name under their breath when they pass by his grave. His reputation grows and, in time, people the world over talk about Bob with bitterness, disgust, and contempt. Eventually, he comes to be remembered as a terrible man and is hated for many generations.

Procedure

The procedure was identical to that used in Study 1.

Results

Due to incomplete data, 4 participants were deleted from the dataset, along with 1 participant who admitted to giving unreliable data, resulting in a final sample of 201 participants.

Moral Reputation Preferences

Overall, 52.2% of the 201 participants indicated a preference for a moral legacy over a moral life. Once again, participants were very confident in their decision ($M = 4.02$, $SD = .997$). Unlike in Study 1, participants who chose a positive reputation as a legacy were more confident in their decision compared to those who chose a positive reputation in life $t(200) = 2.94$, $p < .01$. Additionally, men were more confident in their choice than were women $t(200) = 2.25$, $p = .02$. (See Table 2.5)

Table 2.5. *Moral scenario choices and measured variables.*

	Life		Legacy	
	M	*SD*	*M*	*SD*
Decision Confidence	3.81	1.04	4.21	0.90
Transportability	6.24	1.34	6.34	1.18
Visualization	5.71	0.92	5.74	1.00
Openness to Experience	3.07	1.35	3.26	1.33
Conscientiousness	2.81	1.36	2.64	1.28
Extraversion	4.73	1.65	4.34	1.50
Agreeableness	2.79	1.34	2.91	1.31
Neuroticism	3.18	1.56	3.52	1.55

Participants' explanations as to why they chose the option they did were coded by myself for common themes. Twenty percent of participants' answers were provided to a research assistant. An interrater reliability analysis using the Kappa statistic was performed to determine consistency among raters. The interrater reliability for the raters was found to be Kappa =.78 (95% CI, .615 to .905), $p < .001$. The results of the categories that emerged from participants explanations are shown below in Table 2.6:

Table 2.6. *Explanations for chosen moral scenario.*

Legacy	Percentage
Legacy is more significant/enduring than life	31.4%
The truth about Bob deserves to be known	20.0%
It's a better ending to life story	13.3%

Life	Percentage
Immoral reputation doesn't matter after death	25.0%
I want to experience moral admiration	19.8%
Immoral reputation doesn't matter after death/I want to experience moral admiration	35.8%

Other	Percentage
Other explanations	25.7%

For participants who chose a moral legacy, 31.4% said that a legacy that lasts for generations provides a greater impact than a positive reputation limited to a single lifespan. As one participant expressed: "I would prefer to be remembered with fondness for generations, even if it meant my present life would be unfavorable, as it would have a lasting, positive social effect on my surviving family members and any descendants I may have." Others who chose legacy approached the scenarios from a desire for justice, with 19.8% saying they chose legacy because, in the end, the truth would be known, rather than a lie ("At the end of the day, the truth is known."). Lastly, 13.3% of participants who chose a moral legacy said the scenario had the better ending, with Bob being redeemed in the end ("I liked the way the story ended. He was innocent the whole time…"). These last two categories emphasize how the ending to Bob's story played a role in some participants preferences. These explanations are interesting, given the potential for narrative identity and perceptions of a life story to play a role in the desire for legacy.

For participants who chose a moral life, 25.0% explained that they chose this scenario because they would not experience the hate and ridicule they would reap in their legacy because they would be dead ("I would unquestionably choose the life that's more

enjoyable to experience as Bob. Given that I don't live with the thought of there being anything after I've passed, I refuse to stress over what people say about me after my time."), while 19.8% of the participants who chose a moral life said they preferred the option where they would enjoy a positive moral reputation ("I want to be loved during my time alive because I wouldn't want to be miserable while I'm living.").

Furthermore, a sizeable percentage of participants (38.5%) gave both such explanations, stating they preferred a moral life since they wanted to experience the admiration and it wouldn't matter what people thought about them once they were dead, since they will be deceased and oblivious of the ridicule ("I feel that at least in scenario 2 Bob had a happy life when he was alive. Now, no matter where he is or what happened to him after death, he cannot be harmed by others' ideas of him."). Therefore, in total, 60.8% of participants who chose moral life over moral legacy did so based on a belief that, after death, a negative reputation does no harm to the deceased individual (See Table 2.4 below).

Afterlife Beliefs

As in Study 1, a chi square test was performed to examine differences in scenario choices as a function of afterlife beliefs (immoralist (N=104), extinctivist (N=42), agnostic (N=55). The results of the chi square test showed a significant difference based on afterlife beliefs (X^2 (2, $N = 200$) = 11.8, $p = .003$), with 63.5% of immortalists compared to 35.7% of extinctivists preferring a positive legacy. Similar to the previous study, agnostics were divided, with 43.6% preferring a positive legacy.

Regarding explanations as to their preference, 54.8% of extinctivists reported a lack of concern for how they would be remembered if they left an immoral legacy, with 34.6% of agnostics expressing the same lack of concern. Only 18.1% of immortalists did not care how they are remembered after death. In reference to other explanations, such as how the ending to Bob's story in the positive legacy scenario played an important role in some participants' choices, the analysis showed that 46.7% of extinctivists and 45.8% of agnostics who chose legacy provided an explanation indicating a positive ending/justice prevailing in the end as the reason for their choice. 25.4% of immortalists provided this same explanation.

Individual Differences

An Independent Samples t test was used to examine the relationship between participants' Big Five personality traits and their preference for life over legacy. The results of the analysis indicated no relationship between participants decision and their ratings on agreeableness $t(199)=$ .67, $p=.49$), conscientiousness $t(199)=$ .90, $p=.36$), emotional stability $t(199)=1.52$, $p=.12$), openness to experience $t(199)=.1.02$, $p=.30$), and extraversion $t(199)=-1.75$, $p=.08$), although this result for extraversion was marginal.

An independent Samples t test was used to examine differences in transportability and visualization between participants who preferred life and those who preferred legacy. The results indicated no significant differences between groups for transportability, $t(199)$, .53, $p=.59$, or visualization, $t(199)=.26$, $p=.79$.

Similar to Study 1, participants occupation was included in the present study as an exploratory variable, but due to uncertainty as to how this complex variable would be related to legacy preference, it was ultimately not analyzed.

Discussion

The results of the present study demonstrated that when the scenarios were adjusted to reflect moral reputation rather than success as an artist, people were still divided over their preference for a positive reputation throughout life as opposed to a positive posthumous legacy. Although many people dislike the idea of being despised after their death, others do not ostensibly place much value on how they are remembered after they die. This is often in line with the latter's belief that they will not be consciously aware of what people think in the wake of their deaths, and therefore will not suffer the shame or insults that result from such a negative reputation. Not surprisingly, 54.8% of extinctivists provided justifications along these lines, while 34.8% of agnostics did so. What is surprising, however, is that 18.1% of immortalists responded this way as well, suggesting that some immortalists may hold the belief that while their consciousness survives death, they may not have any awareness of their reputation or care what people think of them after death. This indicates variety in how immortalists perceive what they will be conscious of after they die. For example, some immortalists may believe that the afterlife is another realm that is separate from the one the living inhabits, making what transpires in the world unknown to the dead.

Additionally, contrary to the previous study, scenario preferences depended on afterlife beliefs. Specifically, a majority of immortalists prioritized a moral legacy while most extinctivists prioritized a moral reputation in life. As exemplified through their open-text explanations, many extinctivists considered it more important to live a life where they are respected and loved by family and friends. However, it is interesting to note that some extinctivists did choose a moral legacy over life, despite the fact that, according to their own afterlife belief, they will not be aware of their positive legacy. Furthermore, 7.1% of participants who reported that legacy was more important than a moral life in their explanations were extinctivists. This suggests that some extinctivists acknowledge alternative reasons besides their posthumous admiration (the effect that legacy may have on living family members, or the benefits that a positive legacy can have on others in the community and future generations), or perhaps that extinctivists have difficulty in overriding intuitive beliefs concerning their post-mortem consciousness and what a lack of conscious awareness truly entails (Bering, 2002; Huang et al., 2013; Pereira et al., 2012).

Regarding immortalists, an overall preference for a moral legacy may reflect the extent to which they believe that they will be aware of their reputation and legacy after their death. Some TMT theorists have argued that religion is the most useful terror management system, given its ability to provide literal immortality through the afterlife (Vail et al., 2010). The present data suggests that even with a buffering mechanism of the afterlife, more symbolic and secular means of immortality, such as legacy, are still valued and desired. However, the current data do not suggest that these desires for legacy amongst immortalists necessarily buffer death anxiety.

Furthermore, of all the participants who chose a positive legacy, 33% indicated in their explanation that they did so because they consider it to be a good ending or enjoyed the idea of Bob being redeemed after his death by the truth being known. These responses seem to demonstrate a case of retroactive re-evaluation (Rozin & Stellar, 2009), where participants perceive Bob's life as more meaningful when viewed in light of his posthumous circumstances. Previous research (Baerger & McAdams, 1999; McAdams 1993) suggests that life is often perceived in narrative form, and the ending to a story that makes sense of the life that preceded it is crucial to a meaningful story. Hence, the redemption and positive outcome for Bob in the positive legacy condition likely influenced some participants to perceive this scenario as more meaningful and fulfilling. Therefore, for some of those who chose a positive legacy, one of the factors that may encourage people to prioritize the quality of their legacy is a retroactive re-evaluation that incorporates posthumous events into the assessment of the life as a whole.

Part of the reason why participants of different afterlife beliefs are less divided over the moral scenarios than they are in the creative scenarios may be that, as mentioned previously, the power that serious moral transgressions have to destroy even the most successful of legacies, as evidenced by cases such as Bill Cosby and Michael Jackson. It may be that those who believe in the afterlife feel the need to preserve this moral legacy so that their reputation remains one that they can potentially be proud of, even after passing into the next phase of existence. Extinctivists, on the other hand, may prioritize their moral reputation in life to ensure that their social life is not damaged, given that the present life is the only form of conscious experience they will have.

A possible limitation of the present research, however, is that rather than asking participants to provide their personal desires, they were given a scenario where they were asked to make a choice for Bob. Although the instructions clearly told participants to choose "as if" they were in Bob's position, the fact that the scenario circulated around another person's life, career, and reputation may have affected the way that they perceived the given scenarios, and thus, how they answered them.

Moreover, while in the first study, participants were given scenarios where Bob's art was either admired or forgotten, in the second study the scenarios depict a situation where Bob's reputation is either loved or hated. This is because while someone may not like a particular artist's work, it is unlikely that an artist will be disliked to a point of hatred, contempt, or disgust, unless there are perceived moral transgressions that the artwork or artist commits. By contrast, when concerning moral reputation, it is easy to conceive that someone may be hated for severe offenses. Thus, one possible limitation is that this difference between merely being forgotten, versus being despised, provided an important difference between the two studies.

A final limitation of the present studies was a lack of attention checks to ensure that participants had read the scenarios they were presented with. Given the importance that participants paid attention to the scenarios to make informed decisions regarding their preferences for the forced choice decisions, the design of the study would have benefited from attention checks ensuring participants had read and understood the content of the scenarios, in addition to the question regarding whether their data was reliable for use.

Although the present findings provide a useful framework to examine desires for a successful or moral post-mortem legacy, it does not provide insight into the prevalence of post-mortem legacy desires in general. Specifically, simply because a person chooses the life choice over the legacy choice does not mean that they lack a desire to leave a legacy. Rather, we can only infer from this decision that current life experiences are more significant to them than leaving a legacy. In the next chapter, therefore, my goal is to more accurately examine the prevalence of a desire to leave a legacy, as opposed to those who are apathetic concerning their legacy. In addition, I sought to gain a clearer understanding of the *types* of posthumous legacies that people desire most, as well as their underlying motivations for pursuing these ends.

Chapter 3: Desires and Motivations for Leaving Legacy

The previous chapter explored how much importance people place on leaving a legacy. I investigated this by providing participants with two forced-choice scenarios in which they would either sacrifice a "successful" life for "successful" legacy, or vice versa. Overall, participants were, interestingly, evenly split on these decisions, illustrating the importance of legacies for many people, but also the diversity of motivations and rationales for such pursuits. The combination of both agentic and communal motivations for legacy explored in prior research (Newton et al., 2014) suggests that there is complexity in the reasons why people want to leave a legacy. Indeed, given the importance that values play in the formation of a legacy (Hunter, 2008), people adhering to different values will likely play a role in the legacy that they leave behind. Additionally, the various typologies that previous qualitative research has identified (Hunter & Rowles, 2005) provide a starting point in examining the variety of ways in which a legacy may be left.

The goal of the present study was therefore to clarify people's perception of legacy, the nature of the legacies (if any) they want to leave, and their reasons for pursuing them. Following up on differences between afterlife believers and nonbelievers (which itself differed in Study 2), I also wanted to explore the role of these beliefs in a new sample.

Methods

Participants

A total of 249 (Males= 133, Females= 115, Another Gender= 1) participants were recruited through Amazon's Mechanical Turk to participate in the survey designed in Qualtrics in exchange for $1 payment. The mean age of the participants was 35.39 years old (age range 18-71, SD= 10.27).

Measures

Legacy desires were measured via a series of open-ended responses. Specifically, participants were told that "people often speak about their desire to 'leave a legacy behind' that would endure after their death. In this section, we are interested in people's beliefs and desires for their legacies- what legacy, if any, they want to leave, and why. Do you desire to leave a 'legacy' behind?" Participants clicked on a "yes" or a "no" button to record their answer. Participants who answered 'Yes' were further asked to "Please describe what you want your 'legacy' to be," and "What is your motivation for wanting to leave this 'legacy'?" Finally, all participants (regardless of legacy intentions) were asked, "What is your definition of a legacy?". Participants responded to the open-ended questions by typing their responses into separate text boxes.

Personality traits were assessed on Ten Item Personality Inventory (TIPI) (Gosling et al., 2003), which measures the Big Five traits with two items for each trait, each on a seven-point scale (1 = strongly agree, 7 = strongly disagree).

Generativity was assessed on the Loyola Generativity Scale (LGS) (McAdams & de St. Aubin, 1992), which assessed various characteristics of concern for the future (e.g., I try to pass along the knowledge I have gained through my experiences; Others would say that I have made unique contributions to society; I feel as though my contributions will exist after I die). The LGS consists of twenty statements, and participants were instructed to rate on a scale from 0-3 the extent to which the statement applied to them (0 = never applies to me; 3 = very often/almost always applies to me).

Death Anxiety was measured using the Death Anxiety Questionnaire (DAQ) (Conte et al., 1982) on a three-point scale from 0 (not at all) to 2 (very much). The DAQ consists of five factors across 15 items: fear of the unknown aspects of death (e.g., "Does the thought worry you that with death you may be gone forever?"), fear of suffering related to death (e.g., "Do you worry that dying may be very painful?"), a fear of loneliness at the time of death (e.g., "Do you worry that you may be alone when you are dying?"), fear of the interpersonal aspects of death (e.g., "Does it worry you that your instructions or will about your belongings may not be carried out after you die?"), and the fear of personal extinction (e.g., "Does the thought bother you that you might lose control of your mind before death?").

Religious beliefs were measured using the six-item version of the Supernatural Belief Scale (SBS; Jong & Halberstadt, 2016), which consists of six items designed to measure participants' belief in religious supernatural agents and concepts (e.g., "There exists an all-powerful and all-knowing spiritual being, whom we might call God; Every human being has a spirit or soul that is separate from the physical body; There is some kind

of life after death."). Participants rated their agreement with the items on a nine-point Likert scale anchored at -4 (strongly disagree) and 4 (strongly agree).

Transportability and visualization were measured by the Transportability Scale and Lemon Test, as described in Chapter 2.

Procedure

All participants provided written informed consent before participating in the study. This study was approved by the University of Otago Human Ethics Committee.

After answering questions regarding their demographics (sex, age, country of residence, and religious affiliation), all participants were given the TIPI, legacy survey, LGS, DAQ, SBS, Transportability Scale, and Lemon Visualization Test, always in that order. Participants also provided their parental status after the LGS (i.e., number of biological and adopted children) and occupation at the end, although these occupation data were ultimately not analyzed.

Results

Fifty-five participants' data were determined to be unreliable (e.g., because they contained material copied from the Internet or meaningless answers) or incomplete, resulting in a usable sample of 194 participants (Male = 99, Female = 94, Another Gender = 1).

Legacy Desires & Definitions

The majority of participants, 63.4%, expressed a desire to leave a legacy. Participant's definitions of legacy were classified by me; a research assistant independently

coded 20% of the responses. An interrater reliability analysis using the Kappa statistic was performed to determine consistency among raters. The interrater reliability for the raters was found to be Kappa =.74 (95% CI, .552 to 2.708), $p <$ .001. Our assessment of these definitions provided by participants resulted in four categories (*see Table 4.1*). By far the most common definition that participants provided, was that legacy was "something", either tangible or intangible, that a person would be remembered for after their death. In this case, participants' definitions either consisted of a vague "something" that a person would be remembered for, or their answers specifically stated that the legacy resulted from something either tangible (a product, artwork, brand, etc.) or intangible (accomplishment, philosophy, or idea).

The next most common way that people defined legacy was as an inheritance or gift that is passed down from one person to a descendant after death. This definition is consistent with one of the dictionary definitions of legacy (Merriam-Webster's Collegiate Dictionary, 2014). The next category, and the smallest one, was that legacy was an inter-generational exchange, emphasizing the historical process of values and objects being created and handed down from one generation to the next. The last category was "other", consisting of definitions that were unique and not able to be placed in an overall category.

Table 3.1. *Percentage of participants' legacy definitions.*

Definition	Percentage
Something tangible/intangible that a person is	63.5%

remembered by.

Money/Inheritance passed on to descendant.	17.9%
An inter-generational process.	8.1%
Other	10.6%

Legacy Goals and Motivations

Participant's definitions of legacy were classified by me; a research assistant independently coded 20% of the responses. An interrater reliability analysis using the Kappa statistic was performed to determine consistency among raters. The interrater reliability for the raters was found to be Kappa =.66 (95% CI, .557 to .767), $p < .001$ (see Table 3.2). Additionally, I and the research assistant discussed our disagreements over the categorizations and came to a mutual agreement over the categorization for participants' answers. The same process was used to classify participant's motivations for wanting to leave a legacy in terms of seven emergent themes (see Table 3.3). An interrater reliability analysis using the Kappa statistic was performed to determine consistency among raters. The interrater reliability for the raters was found to be Kappa =.60 (95% CI, .509 to .701), $p < .001$. Given that explanations typically consisted of multiple motivations (e.g., "I want my children to be able to discuss me with my grandchildren in a positive light. I want to be remembered as a woman who was strong, independent and willing to work very hard

for what I have. I especially want to be remembered as a Christian woman willing to stand strong in my beliefs even with problems of life."), responses were coded to encompass multiple motivational categories.

Table 3.2. *Percentages of participants who fell into the different emerging legacy typologies.*

Typology	Percentage
Values/Skills	20.0%
Family/Children	18.4%
Positive Reputation	15.9%
Inspirational	14.2%
Giving/Serving	13.8%
Wealth/Success	5.1%
Other	12.9%

A legacy of Values/Skills, reflected the intention to ensure that one's meaningful, personally held beliefs or skills were successfully transmitted and preserved in future generations after one has passed (e.g., "I want my legacy for my family to carry on what I have instilled in them. Integrity, Honesty, loyalty, love, kindness, gentleness, a faith in God. I want to be known as a woman who loved God and loved people.").

A legacy of Family/Children consisted of the desire for continuity through one's offspring and the desire to be remembered by one's offspring and other descendants. It also consisted of a desire to preserve one's family name and ensure their future well-being (e.g., "I want my legacy to be as a loving spouse and mother, someone who made their family's life really warm and special by working hard for them.").

A legacy of positive reputation consisted of wanting to be remembered fondly by one's friends, acquaintances, and community, specifically for having good character (kindness, reliable, helpful, etc.) and being an overall good person (e.g., "I would like to be remembered for all the good things I have done and how I have been able to impact on others positively"). These legacy goals were "small" in that they desire a more modest legacy than in the "Inspirational" category (see below).

"Inspirational" legacies consisted of attaining status as an icon and gaining immortality through influence in a field or area of expertise that would transcend their physical death (e.g., "I would like to create something in this world that will be enjoyed after my death such as music or video content produced for the masses."). These legacy goals were desires for a "large" legacy where the impact the individual has on society and history continues long after one's death.

A legacy of Giving/Serving consisted of a desire to give back to the community, help the less fortunate, and make the world a better place, many characteristics which fall under generativity (Erikson, 1962) and a more communal legacy (Newton, et al., 2014) (e.g., "I want to be a philanthropist, a man who cared for everyone in need. A man full of love to share.").

Lastly, a legacy of Wealth/Success consisted of wanting to be remembered for having attained wealth, property, and success over one's lifetime (e.g., "Money and property.").

All other legacy desires that were provided by participants that were unique and did not fit into the above-mentioned categories were coded as "Other" (e.g., "I don't know.").

After categorizing legacy goals, a research assistant and I independently coded participants' legacy motivations in terms of seven emergent themes (see Table 3.3). Agreement was 60% and disagreements were resolved with discussion.

Table 3.3. *Percentages of participants who fell into the different emerging legacy motivations.*

Motivation	Percentage
Pass down values/message	17.4%
Be Remembered	13.3%
Be Good Parent/Preserve Family	9.8%
Help People	9.7%
Impact the World/Icon	9.1%

Accomplish Something	3.1%
It's Important/Provides Purpose	2.5%
Other	14.4%

The appeal to "Pass down values" was a motivating factor for many people's legacy desires, as they expressed this incentive behind their legacy goals more than all categories (e.g., "I want to pass down my passions and beliefs to the next generation. While I can't promise land, property, or money, I can promise to pass on a way of life and values to the others."). These answers were placed in the "pass down values/message" category.

The motivation to "Be Remembered" was rooted in the desire to continue in the memory of those one knew during one's life (e.g., "I want to be remembered as being a good person. Ultimately, I want to feel as if my life on earth had a purpose, and that purpose was an overwhelmingly positive and uplifting one.")

Participants with motivations in the "Help people" category were motivated to aid their fellow humans through their legacy (e.g., "I want to be able to give something back.").

The motivation to "Impact the world/Become an icon" was characterized by motivations to make the world a better place through one's actions or work, to transcend death through one's legacy (work, creations, business, etc.), and to gain some form of

immortality rather than being forgotten after death (e.g., "I want a piece of me to continue to exist even after I perish and is no longer with this world.").

"Be a good parent/Preserve one's family" was a motivation where being remembered fondly by their children as well as ensuring their family would be safe and secure in the future was the driving force behind the legacy they wanted to leave (e.g., "My motivation is for my family, and my family's family, and everyone after that. I want them to have a better world and learn from my accomplishments as well as my mistakes.").

The motivation to "Accomplish something" was characterized by a legacy driven by a desire to complete an impressive task or goal before one has died (e.g., "Females and my ethnic group are underrepresented in the tech industries as CEOs. Seeing the huge potentials of AI, I would like to play a part.").

Lastly, participants who were placed in the "It's important/Creates purpose" category were motivated to leave a legacy because it provided purpose to their life and believed that legacies were important for the world (e.g., "It's useful and important to the future".).

All other motivations provided by participants that did not fit within the above categories were coded into an "Other" category (e.g., "My personal legacy is more than simply a statement of how you wish to be remembered after you pass on.").

Generativity, Parenthood, & Legacy Desires

I examined how a desire to leave a legacy was related to desires to engage in generativity. An independent t-test was used to examine any differences in scores on the LGS between people who did want to leave a legacy and people who did not. The results

of the t-test indicated a significant difference in generativity scores between people who did and did not want to leave a legacy, with people who wanted to leave a legacy scoring higher in generativity than those who did not $t(192) = -9.18$, $p < .01$).

A chi square test was also performed to examine the effect of biological parenthood on a desire to leave a legacy. The results of the chi square test showed a significant difference between parents and non-parents in desires to leave a legacy, with parents more likely to want to leave a legacy than non-parents (X^2 (2, $N = 194$) = 14.12, $p <$ .01. While 48.8% of participants with no biological children wanted to leave a legacy, 75% of participants with biological children wanted to leave a legacy. There was no significant difference in legacy desires for adoptive parents.

Death Anxiety, Transportability, & Visualization

An independent t-test was used to assess any difference in legacy desires based on scores for death anxiety and desire to leave a legacy. The results of the t-test indicated no significant difference in death anxiety between those who did and did not want to leave a legacy (t (192) = .84, $p = .39$). Additionally, independent t-tests were used to assess any differences for participants' scores on the Transportability Scale and The Lemon Test with the desire to leave a legacy. The results indicated there was no significant differences between groups on transportability ($t(192) = 5.2$, $p= .35$) and scores on the lemon test ($t(192) = 2.94$, $p = .76$) .

Religiosity & Belief

A chi square test was also performed to examine the effect that religious beliefs had on a desire to leave a legacy. The chi square test indicated that while participants of

most religious backgrounds were divided over a desire to leave a legacy, the majority of Christian participants (72.4%) wanted to leave a legacy (X^2 (2, $N = 194$) = 17.8, p =.012). Furthermore, an independent t-test was performed to examine the effects that belief in the supernatural (as measured by the SBS) had on desire to leave a legacy. The results of the t-test indicated a significant effect of supernatural belief on legacy decision, with people who score higher on supernatural belief more likely to have legacy desires (t(192) = -.29, p = .76).

Table 3.4. *Legacy Desires and Measured Variables*

	Legacy (Yes)		Legacy (No)	
	M	*SD*	*M*	*SD*
Generativity	1.94	.46	1.30	.46
Death Anxiety	0.91	0.48	0.85	0.50
Transportability	6.35	1.22	6.51	1.10
Visualization	5.82	0.94	5.78	0.87

Supernatural Belief	6.61	2.27	4.72	2.70
Open to Experience	4.98	1.33	4.46	1.37
Conscientiousness	5.23	1.36	5.01	1.47
Extraversion	3.75	1.47	2.95	1.50
Agreeableness	5.06	1.27	4.90	1.33
Neuroticism	4.86	1.54	4.35	1.63

Table 3.5. *Religious Demographics*

Traditional Religions

		Percent
Valid	Agnostic	11.9
	Agnostic,Atheist	1.0
	Atheist	11.9
	Buddhist	1.5
	Christian	62.4
	Hindu	.5
	None	7.7
	Other (please specify)	3.1

Total	100.0

Alternative Religions

	Percent
Valid	96.9
Satanist	.5
Spiritual	.5
spiritual no affiliation	.5
spiritual, hebrew israelite	.5
Spiritual, not religious	.5
wicca	.5
Total	100.0

Discussion

The purpose of the present study was to acquire insight into people's beliefs, desires, and motivations concerning leaving a legacy. Particularly, I sought to examine how people defined legacy, whether they wanted to leave one, what kind of a legacy they desired to leave if they did, and what their motivations were for leaving that legacy. Overall, the results demonstrated that a majority of participants did aspire to leave a legacy, while a substantial minority (36.6%) had no such aspirations, mirroring to some extent the ambivalence expressed by participants in Chapter 2.

The different definitions participants provided reveal the distinct ways that "legacy" is understood, at least in Western culture. While one dictionary (Merriam-Webster's Collegiate Dictionary, 2014) defines legacy as money or gifts that are passed from one person to another at the time of death, the term also means, and is more often colloquially used to mean the achievements and accomplishments that a person is known for after they have passed away, such as works of art, a brand, or other social contributions (Scarre, 2001). Some participants' definitions of legacy also exhibited other important characteristics of the concept, such as it being an intergenerational process.

Most participants believed that legacy was something tangible or intangible that a person is remembered for after they have passed away. However, some participants perceived the tangible legacies differently, emphasizing objects such as a novel, album, or product (e.g., "An accomplishment such as an invention, a company, a piece of art, or some other contribution to the world."), while others perceived the tangible objects of legacy in terms of heirlooms left by a relative (e.g., "anything handed down from the past, as from an ancestor or predecessor."). These different ways of viewing legacy demonstrate the intricacy in how a person can be remembered by others after their death.

Additionally, my findings unveil some common themes, desires, and typologies that are consistent with previous research. Specifically, similar to the findings of Hunter and Rowles (2005), people's perceptions of legacies, as well as their personal desires for their own, fall into categories concerning self-continuity through their offspring and family preservation, being remembered and admired by others for their personal accomplishments, passing down their personal beliefs and values so they are preserved in

future generations, and contributing to their community by giving and serving others. These are themes previous theorists have identified in prior work (Becker, 1973; Erikson, 1986; Kotre, 1984). Furthermore, the present study also demonstrates the differences in magnitude that many people possess regarding their legacy goals. While legacy is often perceived as a reputation based on large achievements that will continue for generations to come, some legacy desires are far more subtle and consist more of being remembered positively by their loved ones once they are gone.

Furthermore, it is important to note that the different typologies that emerged in this study are far from mutually exclusive and are often interrelated. For example, a person may combine their desire to pass on their values and continue their family through having children by teaching and raising their children with these values and encouraging them to spread these beliefs themselves. Similar to the difficult task of separating concepts such as legacy, generativity, and symbolic immortality, it is also difficult to completely disentangle the motivations underlying these concepts, as they seem to be mutually inclusive. A desire for immortality, helping the next generation, and passing down values may be interconnected drives for many people.

The results also show that participants who want to leave a legacy score higher on generativity. Given that generativity is concerned with improving the world for subsequent generations (Erikson, 1962), it is not surprising that people who are generative also have interests in leaving a legacy, as posthumous reputation can be one way to inspire people through one's values and actions (Kivnick, 1996; Williamson, et al., 2010). However, research investigating this relationship between generativity and legacy has yielded mixed

findings, with some finding no relationship between generativity and expressed legacy desires (Newton, et al., 2019), while other work has found support for a relationship between generativity and composite legacy desires (legacy desires that involve both agentic and communal goals; Newton, et al., 2016). Further research is needed to clarify the relationship between generativity and legacy desires.

Additionally, the results also show that participants with biological children were more likely to express a desire to leave a legacy. Given that the maintenance and preservation of one's family has emerged in this study and in prior literature (Hunter & Rowles, 2005) as one of the motivations and goals of legacy, these results give further indication that continuity through children is one of the ways that people engage in legacy-seeking behaviors. However, it is not entirely clear which motivation is driving which. It may be that individuals who possess legacy desires and motivations are more likely to have children as a means of achieving self-continuity, or it may be that after someone has biological children their legacy desires increase as a means of preserving a positive lasting reputation for their children, grandchildren, and future descendants. Since people tend to be forgotten two to three generations after they have died (Hunter, 2008), leaving a legacy may be a parent's way of striving to increase the likelihood that they will be remembered by their descendants.

Lastly, the results also found that participants who believed in supernatural concepts were more likely to want to leave a legacy compared to secular participants. This is consistent with findings from the moral scenarios in the previous chapter, with survivalists being more likely to prefer the moral legacy option as opposed to the moral life. This may

be due to the fact that, depending on the particular beliefs religious individuals have about the capabilities of their post-mortem consciousness, survivalists may believe they will be conscious of their legacy after they die.

One of the potential limitations of the present study is a lack of attention checks to assess whether participants were carefully reading the questions presented to them. While the questions concerning participants' legacy desires, goals, motivations, and definitions did require participants to respond before continuing and non-sensical answers were deleted from the data set, attention checks could have been included in the various scales in the study that participants completed. Given the importance of these scales in investigating potential relationships with between legacy and concepts such as death anxiety, supernatural beliefs, transportability, and visualization, ensuring participants have read each item is important.

One of the primary insights of this study is the complexity of legacy. Although several people may want a legacy, this data suggests that people's motivations to leave a legacy, as well as the kind of posthumous reputation they want to leave, will vary. Furthermore, the multidimensionality of legacy desires suggests that one's motivations for legacy can predict what kinds of behaviors one may engage in to fulfill the goals for their particular legacy. In the next chapter, I further explore the intricacies of legacy and examine a way to predict what kind of behaviors a person may engage in to leave one.

Chapter 4: The Legacy Motivation Scale

Based on theoretical considerations, and now empirical data from Chapter 3, "legacy" appears to be a multifaceted concept, consisting of multiple factors, and perhaps driven by diverse motivations. Not all individuals express a desire to leave a legacy, and among those who do, reasons range from being remembered as an icon for multiple generations, to being remembered fondly by one's children and preserving the well-being of one's family. There is, however, currently no validated instrument in the literature designed to capture the primary factors that compel different individuals to seek a legacy. The present chapter describes the development of such a scale, with the goal of using responses on such a measure to predict people's specific legacy-related behaviors and decision-making.

Study 4

Methods

Participants

A total of 551 participants (Males = 291, Females = 243, Other = 1) were recruited through Amazon's Mechanical Turk to participate in the survey designed in Qualtrics in exchange for US $1 participation, and an additional US$.50 for reliable data. The mean age of the participants was 36.97 years old (age range= 18-73; SD= 10.78).

Item Pool

A large pool of potential items was initially assembled from responses to the question in the legacy survey described in the previous chapter, "What is your motivation for wanting to leave this "legacy"?". Each of these answers was converted into an item expressing a specific motivation for leaving a legacy (e.g., "To pass on the virtues I believe in"; "To be remembered for my creative projects"). In total, the one-hundred-and-twenty-three participants provided ninety-five non-redundant responses, which were converted into potential scale items.

Procedure

After providing written informed consent, and answering a basic set of demographic questions (see Chapter 2), participants were given the following instructions:

"In this section, we are interested in the motivations that people have regarding their "legacy", and what motivations people have for leaving a legacy after they are dead. Please rate the extent to which each item applies to you (1= not at all, 7= very much so). Please note that there are no right or wrong answers. Each person feels differently about their legacy after death and we are interested only in your personal opinions."

Items were presented in blocks of ten, in random order, with participants responding on radio button scales. After rating all the items, participants were thanked for participating in the study and compensated.

Results

Due to incomplete data, 41 participants were deleted from the dataset, resulting in a total sample of 510 participants (Males = 276, Females = 233, Other = 1). The mean age of the participants was 36.85 years old (age range= 18-73, *SD*= 10.70)

Factor analysis.

Responses were analyzed using a Principal Component Analysis. Given the expectation that the resulting factors would be correlated, a direct oblimin rotation was applied to improve their interpretability. The Kaiser-Meyer-Olkin measure of sample adequacy was used to ensure that the 95 items used in the study had satisfactory common variance for a factor analysis, with the KMO=0.984 which is above the acceptable limit (.0963) of 0.5 (Field, 2013). Overall, five factors, which explained 60% of the variance, were extracted.

For each of the five factors extracted from the analysis, the four items with the highest factor loadings were used to serve as latent variables that would measures people's motivations for each factor in my scale. This resulted in a final scale of twenty items.

The Legacy Motivations Scale (As shown below)

Social Contribution

1. Contribute to solving social issues.

2. Use my previous experience to help the less fortunate.

3. Make the world a less selfish place.

4. Help underrepresented people.

Parenting

5. Be remembered by my children for how much I loved them.

6. Raise my children to be responsible.

7. Instill valuable life advice to my children.

8. Help my children succeed in the world.

Values

9. Leave a legacy so that my loved ones will never forget about me and will remember me.

10. Pass on the virtues I believe in.

11. Pass down my beliefs to the next generation.

12. Leave behind my values.

Positive Reputation

13. Be remembered positively.

14. Be remembered as a loving friend.

15. Live a life filled with meaning and purpose.

16. Leave a legacy that is good and positive.

<u>Immortality</u>

17. Be remembered through my creative projects.

18. Push the boundaries in my field.

19. Be the first person to accomplish some great task.

20. Be remembered as a great icon/figure.

Study 5: Construct Validity

To establish the construct validity of my new scale, which I named the Legacy Motivations Scale (LMS), and to confirm the factor structure uncovered in Study 1, I compared responses to those on similar existing measures, the Loyola Generativity Scale (LGS, McAdams & de St. Aubin 1992), the Social Generativity Scale (SGS, Morselli & Passini, 2015, and the Gen-Parental Scale (GPS, Schoklitsch & Baunumm, 2011). I predicted that the social contribution, immortality, and the positive reputation dimensions of the LMS would correlate positively with the LGS and SGS dimensions, given the crucial role that contributing to one's community and improving the world has in generativity, the positive reputation that one creates for oneself by being generative in one's community, and the possibility of creating a lasting legacy as an immortal icon through one's generative actions. I also predicted that the parenting and values dimensions of the LMS would correlate positively with the GPS dimension of parenting, as both relate

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to the motivation to raise one's children in a way that ensures the continuity of one's family for the future and passing down one's cherished values over time.

Methods

Participants

A total of 405 participants (Males= 225, Females= 180) were recruited through Amazon's Mechanical Turk to participate in the survey designed in Qualtrics in exchange for US $1. The mean age of the participants was 37.67 years old (age range= 18-71, SD= 10.75).

Materials

In addition to the LMS, participants were given the Loyola Generativity Scale (LGS) (McAdams & de St. Aubin, 1992), which, as described in Chapter 2, measures their concern for future generations (e.g., "I try to pass along the knowledge I have gained through my experiences"; "Others would say that I have made unique contributions to society"; "I feel as though my contributions will exist after I die"). The LGS consists of twenty statements, and participants were instructed to rate on a scale from 0-3 the extent to which the statement applied to them (0 = never applies to me; 3 = very often/almost always applies to me).

Responsibility for future generations was also measured on the Social Generativity Scale (SGS; Morselli & Passini, 2015); example items include: ''I carry out activities in order to ensure a better world for future generations''; ''I give up part of my daily comforts to foster the development of next generations'' and; ''I think that I am responsible for ensuring a state of well-being for future generations.'' In addition, the three items of the

LGS and another scale that measures generativity, the Erickson Generativity Scale (EGS), that were more linked to social responsibility were adapted to capture the feeling of responsibility in one's generative actions to future generations, and were presented in the SGS: ''I have a personal responsibility to improve the area in which I live''; ''I commit myself to doing things that will survive even after I die'' and; ''I help people to improve themselves.'' Participants rated their preferences on a seven-point Likert scale (1 = strongly disagree, 7 = strongly agree).

Parenting concerns were measured on the Gen-Parental Scale (Schoklitsch & Baumann, 2011). The scale consists of two domains: *biological generativity* and *parental generativity*, with a total of 19 items (e.g., "It was/is my desire that I would have my own biological child/children"; "It was/is my desire that I would prepare my child/children for having their own family"). Participants responded to each item on a four-point scale (1 = does not apply, 2 = doesn't really apply, 3 = mostly applies, 4 = applies).

Procedure

After providing informed consent, participants provided the demographic data requested in previous studies, then proceeded to complete the LMS, LGS, SGS, and Gen-Parental Scale, always in that order. Finally, they were asked to confirm the validity of their data, before being thanked and compensated for their participation.

Results and Discussion

Structural equation modelling (SEM) and confirmatory factor analysis (CFA) were used to confirm the factor structure uncovered in Study 1. Specifically, I used the SEM software AMOS to carry out my analyses. An image of the model is presented below.
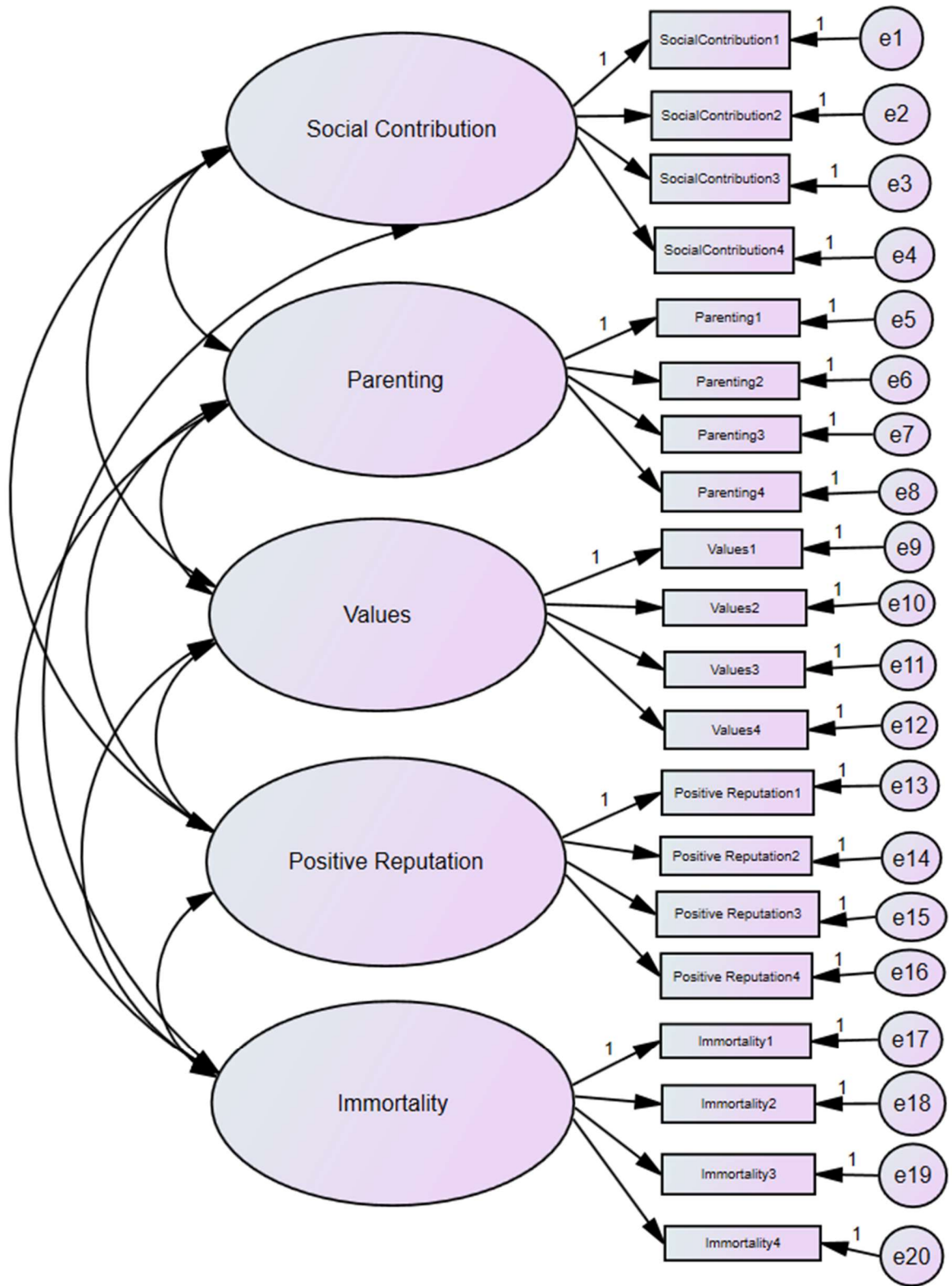
Figure 1. *LMS Model*

The items loaded on the respective factors as hypothesized (all $p < .01$). The model was a good fit to the data (CFI = .95, RMR =.13, CMIN/DF = 3.03)

To examine construct validity, I calculated Pearson Correlation coefficients. There was a strong positive correlation between scores on the SGS, and scores on the social contribution factor of the LMS (r(403)= .68, $p < .01$), and moderate positive correlations for immortality (r(403) = .52, $p < .01$) and positive reputation (r(403)= .48, $p < .01$). Scores for the GPS correlated highly with the scores for parenting (r(403) = .73, $p < .01$) and values (r(403)= .63, $p < .01$). Correlation coefficients are shown below in Table 4.2.

Table 4.1. *Correlation coefficients between the LMS and similar scales.* * = *Correlation is significant at the 0.01 level (2-tailed).*

	LGS_Average	SGS_Average	GPS_Average
Soc Contribution	.493*	.689*	.263*
Parenting	.378*	.739*	.752*
Values	.617*	.581*	.632*
Positive Reputation	.521*	.478*	.547*

Immortality	.515*	.529*	.354*

A sensitivity analysis performed in G-Power (Erdfelder et al., 1996) indicated that a Pearson's correlation coefficient with 405 participants would be sensitive to effects of $r = .12$ (assuming $\alpha = .05$, and power $= .80$). This demonstrates that the study would not be able to reliably detect correlations smaller than $r = .12$, suggesting that the above results are unlikely to represent a Type 1 error.

These results verify the factor structure and construct validity of the LMS, suggesting that the LMS is valid measure for quantifying the varying motivations underlying people's complex and diverse legacy desires. These findings also confirmed my predictions that the social contribution, positive reputation, and immortality factors would correlate with the SGS and that the parenting and values factors would correlate with the GPS.

A linear regression was used to examine potential collinearity among the five factors of my scale. The results demonstrated Tolerance and VIF scores indicating low multicollinearity for each of the five factors of my scale (*Social Contribution, Tolerance=.50, VIF=1.99; Parenting, Tolerance=.46, VIF=2.17; Values, Tolerance=.41, VIF=2.39; Positive Reputation, Tolerance=.34, VIF=2.93; Immortality, Tolerance=.68, VIF=1.46)*. Lastly, a reliability analysis was used to examine the consistency of the LMS. The results revealed a Cronbach's alpha of .927, demonstrating high consistency between the items of the LMS.

revealed a Cronbach's alpha score of .927.

Study 6: Predictive Validity

Having tested and verified the factor structure and construct validity of the LMS, I wanted to test its predictive validity. Specifically, I was interested to see the extent to which legacy decisions might be differentially predicted by motivations measured by the LMS. The previous studies in chapter 2 examined whether individuals preferred a successful/moral legacy or a successful/moral life, in a forced-choice scenario. The results revealed a nearly even split in preferences, but little evidence for what mechanism(s) underlie them. In the present study, I examined how the various factors in the LMS might predict participants' preferences in these forced-choice scenarios. In Study 6, I hypothesized that high scores on the immortality factor of the LMS would be the best predictor for a preference for the legacy option for the creative scenarios. I hypothesized this based on the symbolic immortality that works of art and creative accomplishments can provide to the deceased after their death (Becker, 1973; Lifton & Olson, 1964; Lifshin, et al., 2021). In contrast, I hypothesized that high scores on the values and positive reputation factors of my scale would be the best predictors of a preference for the legacy option in the moral scenarios, given how fundamental values and a positive reputation are to a moral reputation.

Participants

A total of 214 participants (Male = 111, Female = 99, Missing = 4) were recruited through Amazon's Mechanical Turk to participate in the study designed in Qualtrics in

exchange for US $1. The mean age of the participants was 39.02 years old (age range= 20-77, *SD*= 12.56).

Materials

The LMS, consisting of the twenty items that emerged from the principal components analysis in study 1 and validated in study 2 was used to predict the choices participants would make in both the art and moral scenarios explored previously in chapter 2.

Procedure

After providing informed consent, participants were provided the same demographics questions presented in the previous studies, and then randomly assigned to answer either the art scenario or the moral scenario from the second chapter. As in that study, participants were also asked to provide their confidence level in their choice, and to type an explanation for their choice into a response box. Participants also completed the LMS either before or after making their scenario choice (counterbalanced).

After completing the scenario questions and LMS, participants completed the Survey of Belief in an Afterlife (Thalbourne, 1996), reported how many biological and adopted children they had, and finally, confirmed the validity of their responses, before being thanked and remunerated.

Results

One participant admitted to providing dishonest data, and was deleted from the data set, resulting in a final sample of 199 (Males = 144, Females = 95) participants.

Scenario Decisions and the LMS

Similar to the previous chapter, participants in both scenarios were split over their preference for a successful/moral life or legacy, with 57.6% of participants in the creative scenario and 43.9% of participants in the moral scenario preferring legacy, respectively. Participants were confident in their choices in both the art (M=4.01 on a 1 to 5 scale, SD= .955) and moral (M=4.09, SD= 1.12) scenarios. While there was no significant in choice confidence between those who preferred legacy compared to those who preferred life in the creative scenarios (t(90)= -.31, p = .75), there was a significant difference for the moral scenarios, with those who preferred legacy having higher confidence in their choice than those who preferred life (t(105)= -2.25, p = .01). Additionally, participants in the moral scenarios were significantly more confident in their choice compared to participants in the creative scenarios (t(105)= -2.25, p = .01).

A Binary Logistic Regression Analysis was used to examine the independent contribution of five factors in the legacy scale (social contribution, parenting, values, positive reputation, and immortality) to participants scenario choice. For the art scenario, the results revealed a significant effect for social contribution (B = -.29, $S.E$ = .17, $Wald$ = 2.80, p =.028) and a preference for a successful life, showing that when people score high on the social contribution factor for the LMS, the change in the odds of preferring the successful life in the creative scenarios is .58. For the creative scenarios, there were also marginal effects for positive reputation (B = .69, $S.E$ = .37, $Wald$ = 3.44, p = .063) and immortality (B = .29, $S.E$ = .17, $Wald$ = 2.80, p = .094) for a preference for the successful legacy, showing that when people score high on the positive reputation factor, the change in the odds for preferring the legacy option is 2, and when people score high on the

immortality factor, the change in odds of preferring the legacy option is 1.33 (see Table 4.2 below). However, these findings for positive reputation and immortality for legacy were not significant, and only show a trending effect.

Table 4.2. *Regression Output for Predictive Validity for Creative Scenario.*

	B	S.E	Wald	df	Sig.	Exp(B)
Social_Contr_Average	-.543	.248	4.822	1	.028	.581
Parenting_Average	.100	.206	.237	1	.627	1.106
Values_Average	-.052	.262	.040	1	.841	.949
Positive_Rep_Average	.693	.373	3.448	1	.063	2.000
Immortality_Average	.292	.174	2.802	1	.094	1.339

For the moral scenario, the results revealed a significant effect for values ($B = .74$, $S.E = .28$, $Wald = 6.78$, $p < .01$) on a preference for a moral legacy, showing that that when people score high on the values factor for the LMS, the change in the odds for preferring the moral legacy to the moral life is 2 (see Table 4.3 below).

Table 4.3. *Regression Output for Predictive Validity for Moral Scenario.*

	B	S.E.	Wald	df	Sig.	Exp(B)
Social_Contr_Average	-.273	.189	2.087	1	.149	.761
Parenting_Average	-.017	.183	.009	1	.924	.983
Values_Average	.740	.284	6.780	1	.009	2.097
Positive_Rep_Average	-.187	.315	.354	1	.552	.829
Immortality_Average	.123	.164	.569	1	.451	1.131

Additionally, unlike in the previous chapter, there was no significant difference in legacy desires between parents and non-parents in the art scenarios (X^2 (1, $N = 92$) = .56, p = .29) or the moral scenarios (X^2 (1, $N = 105$) = 2.34, $p = .09$).

Discussion

In this study, I used the dimensions of the LMS to predict participant's decisions in the forced-choice scenarios first reported in Chapter 2. The results showed that for the art scenarios, while high scores on the social contribution factor (B= .29, $S.E$= .17, $Wald$= 2.80, p =.028) did predict a preference for a successful life, none of the factors in my scale

predicted a preference for a successful legacy based on participants' scores, although the findings do show a trend toward positive reputation ($B = .69$, $S.E = .37$, $Wald = 3.44$, $p = .063$) and immortality scores ($B = .29$, $S.E = .17$, $Wald = 2.80$, $p = .094$) predicting a preference for a successful legacy. This suggests that participants who place a high value on contributing to their community and seeing the effects that their work has on those they are helping prefer being admired as an artist while they are alive so that they can experience and see the benefits their art has on their community during their life. These results failed to confirm the hypothesis that scores on the immortality factor of the LMS would predict a preference for the successful legacy in the art scenarios.

For the moral scenarios, the results show that higher scores on the values factor ($B = .74$, $S.E = .28$, $Wald = 6.78$, $p < .01$) predict a preference for a moral legacy. This suggests that the more a person's values and beliefs serve as a priority and part of their identity, the more they will seek to ensure that they are remembered for these values and beliefs after they have died. These results partially confirmed the hypothesis, as a higher score on the values factor of my scale did predict a preference for a moral legacy, although the hypothesis that a higher score on the positive reputation factor of my scale did not.

These results further demonstrate the multidimensionality of legacy, as the results show how different legacy desires (a legacy of values as opposed to a legacy of immortality through one's accomplishments, or social contribution) predict preferences within different contexts.

General Discussion

In this chapter, I report the development of a scale to measure the variety of motivations that individuals might have for leaving a legacy. The survey from the previous chapter demonstrates that people may differ not only in what type of legacy (if any) they want to leave, but also in what psychological function(s) their legacy beliefs and behaviors serve.

Using participants' answers from the previous chapter regarding their motivations for leaving a legacy, I transformed their answers into ninety-five items and used factor analysis to extract five factors from the data, which I termed social contribution, parenting, values, positive reputation, and immortality. Using the 4 items that loaded highest for each factor, I used these items to form the content of my scale. Study 5 confirmed the factor structure of the scale, and that the interpretations of the dimensions were plausible, as the results of the SEM and CFA indicated a good fit between the model and the LMS. Study 5 also confirmed the construct validity of the LMS by demonstrating a significant relationship between its scores and scores on those measuring generativity, a concept very similar to legacy (Newton, et al., 2014).

Study 6 then used the scale to predict the motivations for the scenario choices in Chapter 2. Although participants were again evenly split in terms of their choices in the creative and moral scenarios, their scores on the LMS indicated different motivations underlying those choices, as high scores on the values factor in the moral scenarios predicted a preference for legacy, while in the creative scenario, high scores on the value factor did not predict a preference for legacy. For the creative scenario, none of the factors

on the LMS predicted a legacy preference at a level of significance, although there were marginal effects for positive reputation and immortality. However, high scores on the social contribution factor did predict a preference for a successful life.

In sum, the LMS appears to capture meaningful variability in individuals' motivations for legacy decisions, which conform to some degree with those hinted at in related literatures. Some of the legacy typologies previously reported have been biological, values, and symbolic (creative), and these concepts are represented in the LMS.

One of these concepts, biological/parenting is particularly interesting, in that children provide continuity inherently through both genetic inheritability and through the extension of one's family surname into future generations. Indeed, prior research shows continuity through one's offspring as one of the reasons why people want to have children (Balen & Trimbos-Kemper, 1995). This is consistent with the finding in the previous chapter that people who desired to leave a legacy were more likely to have biological children. This replicates recent work which found an association between having children and expressing desires for legacy (Newton, et al., 2020). However, in Study 6, there was no significant difference between parents and non-parents in preference for a successful/moral legacy. This may be because while parents are more likely to want a legacy compared to non-parents, when placed in a forced-choice scenario to choose between their lived experiences versus their legacy, many parents may be unwilling to sacrifice their life experience for the sake of their posthumous reputation.

It is interesting to note that, in Study 6, when analyzed individually, the parenting factor marginally predicted moral legacy choices ($B = .24$, $S.E = .14$, $Wald = 2.92$, $p = .08$),

but with all factors in the model, the values factor significantly predicted these judgments, while the contribution of parenting was negligible (see Table 4.4). This suggests part of the reason why people who want to leave a legacy also want to have children is to pass down their values so that they continue in the next generation.

A limitation of studies 4, 5, and 6 of this chapter are that there were no attention checks used to ensure participants were reading and comprehending the various scale items and scenarios in each study. While participants were asked if their data was reliable (with no consequence to their payment), providing attention checks to each study would have improved their design.

Having acquired more insight into legacy as a concept, a deeper understanding of the multiple desires and motivations people tend to possess for their legacy and created a scale capable of measuring these motivations while simultaneously capturing their variability, in the next chapter, I return my attention to the role that afterlife beliefs have on legacy desires. Specifically, I will examine the causal effect that perceptions of post-mortem consciousness have on people's desires to leave a legacy.

Chapter 5: Does Reasoning about Post-Mortem Consciousness Influence Legacy Desires?

The research in the previous chapters uncovered differences between legacy desires amongst people possessing different afterlife beliefs. Specifically, in Chapter 2, immortalists in the moral scenario were more likely to prefer the legacy option (i.e, being perceived as an immoral person throughout life, but being absolved after death and leaving a moral legacy) than were extinctivists and agnostics. Additionally, in Chapter 3, participants who scored high in supernatural beliefs, such as a belief in the soul and the afterlife, were more likely to desire a legacy than those who scored lower. Considered together, these results suggest that believers in the afterlife are more inclined to desire a legacy compared to their skeptical counterparts. However, it is not clear why such a predilection exists amongst believers.

One possibility is that those who believe in the continuation of consciousness after death believe that their legacy is something that they will be capable of experiencing and enjoying. Conversely, those who lack a belief in the afterlife may have less interest in working for outcomes they themselves will never see. Nevertheless, some extinctivists do desire legacy, even to the extent that they are willing to forego their lived experiences (e.g., opting to have a poor quality of life in the here and now) to ensure a legacy for a future that they believe they will not be around to appreciate. This may potentially result from intuitive beliefs concerning post-mortem consciousness, which manifests itself amongst both believers and non-believers.

Pondering one's legacy requires one to imagine and simulate future events related to post-mortem events. Several studies have already explored how humans reason about the afterlife (Bering, 2002; Bering et al., 2005; Hodge, 2011), with some research suggesting

that humans are intuitively prone to believe in the continuation of mental states after death, even without adopting explicit afterlife beliefs, due to features of human social cognition (Bering, 2002; Georgiadou et al., 2019; Pereira et al., 2012). These findings have been shown to replicate cross-culturally (Huang et al., 2013). While the majority of work in this area has concentrated on how people think about the minds of other dead agents (Bek & Lock, 2011; Bering, 2002; Georgiadou et al., 2019), some scholars have explored how people conceptualize their own post-mortem consciousness (see, for example, Nichols, 2007; Swan et al., in press).

Previous theoretical work argues that perceptions of the post-mortem self-consist of both Subject-Self (I) or an Object-Self (Me) (Sá-Nogueira Saraiva, 2003). This Object-Self (Me) refers to the ability to perceive oneself as an object in the world and one who will eventually die and cease to exist while the world continues to function. The Subject-Self (I), by contrast, refers to the self as the center of our subjective agency that experiences the world. Although it may be relatively effortless to accurately conceptualize the death of the Object-Self (Me), conceptualizing the cessation of the Subject-Self (I) proves more difficult. In one revealing qualitative study, participants were told to imagine themselves as dead, affording the researchers with insight concerning how they represented their post-mortem Subject-Self (I) (Pereira, et al., 2012).

The results showed that even participants lacking explicit afterlife beliefs found it difficult to override the continuation of the Subject-Self (I) after death, especially when it came to attributing ongoing perceptual, epistemic, and emotional states to their post-mortem selves (Pereira, et al., 2012). These findings are consistent with previous findings

suggesting that humans have an innate bias to envision the self as an experiencing agent when dead. Bering's (2002) "simulation constraint hypothesis" suggests that this intuitive tendency is the result of a cognitive error in which the human agent is incapable of constructing an accurate simulation of the experience of cessation of consciousness. The task of thinking about what it is like to have no thoughts seems to be an epistemological impossibility (Bering, 2002), and the best that humans can do is create flawed simulations of what such an "experience" might entail.

Legacy desires may be partially explained by such simulation constraints on our capacity to mentally represent death as the absence of consciousness. The findings provided in the second and third chapters in the present thesis show that, for many people, being remembered after death as someone who continues to have a positive impact in the world is a desirable accomplishment. These agentic desires may potentially be due to a "faulty" death simulation, in which the person reasons as though they will be consciously aware of and enjoy the admiration of others after their own death (or, conversely, that they will be saddened by the thought that they will be forgotten by others), when in reality such post-mortem mental states will not occur.

However, as noted in previous chapters, explicit afterlife beliefs should also influence how people reason about consciousness after death, including the capacity to be aware of one's legacy. If someone identifies as an extinctivist and believes that physical death results in the cessation of consciousness, then ipso facto, they should recognize that their death will result in their having no awareness of either their own post-death admiration or obscurity. Yet, due to simulation constraints that render them observers after

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the fact, extinctivists may still find it difficult to escape agentic desires to be admired in death or attempts to avoid their slipping into obscurity. By contrast, for an immortalist who believes that consciousness survives biological death, it is logically consistent to think that one can be aware of their post-mortem legacy, and therefore capable of enjoying the admiration one receives or feeling disappointment in one's obscurity. (That being said, it is also conceivable that believers might reason that this does not necessarily entail the dead agent's awareness of, or at least concern with, the matter of legacy.)

The current study was designed to gain some in initial insight into the role of post-mortem consciousness in legacy desires. Specifically, I wanted to examine the effects that affirmation or disconfirmation of post-mortem consciousness would have on people's desires to leave a legacy, measured by participants' scores on the Legacy Motivations Scale (LMS). Participant were presented with a vignette in which scientists were said to have either found evidence for the existence of the afterlife (affirmation) or a vignette in which scientists were said to have found evidence disproving the existence of the afterlife (disconfirmation). Additionally, I sought to investigate how participants' reasoning about mental capacities after death would map onto their preferences on critical forced-choice options favoring life experiences (choosing positive conditions while alive over those after death) or legacy (choosing positive conditions after death over those while alive). To get at this latter question, I presented participants with the same creative and moral scenarios from chapters 2 and 4.

I hypothesized that participants in the afterlife affirmation condition would be significantly more likely to choose the legacy option than would control participants or

those randomly assigned to the afterlife disconfirmation condition. Considering their explicit belief in consciousness after death (and therefore allowing for the possibility of an awareness of the impact one has left among the still-living), I also predicted that self-classified immortalists would be more likely than extinctivists and agnostics to prefer the legacy option. Furthermore, I expected these effects to be mirrored in scores on the LMS (specifically the immortality dimension), assuming the motivations measured by this instrument are somewhat fluid.

Study 7

Methods

Participants

A total of 395 participants (Male = 184, Female = 196, Another gender = 2, Missing = 13) were recruited through Amazon's Mechanical Turk to participate in a study investigating "how interest in scientific research affects one's life goals and aspirations." The mean age was M=41.44 (range 19-76 years; SD= 13.33). All participants were from the United States and were compensated US $1; those who answered the attention check questions correctly received an additional $0.50.

Materials and Measures

Afterlife beliefs were assessed using the Survey of Belief in an Afterlife (Thalbourne, 1996) (see Chapter 2).

Information concerning the existence of the afterlife was manipulated via one of several paragraphs adapted from previous research (Wisman & Heflick, 2016). The material in these summaries ostensibly provided recent scientific evidence for or against

the existence of the afterlife. Participants in the afterlife affirmation condition, for example, read the following:

People who have Near-Death Experiences (also known as "NDEs") often report having had vivid encounters with an afterlife (e.g., having "left their bodies," being in "another realm," etc.). Intriguingly, recent research (Barkowski, 2019) has now revealed that NDEs cannot simply be explained in terms of chemical changes in the brain that occur during the dying process. Moreover, the nature of NDEs show striking similarities across cultures, with people who report such experiences reporting the same phenomena despite their society's prevailing beliefs. Together, the scientific consensus is that NDEs reflect an otherworldly reality rather than being just a product of imagination. These findings are strong scientific evidence for the existence of life after death.

Participants in the afterlife disconfirmation condition, by contrast, instead read:

People who have Near-Death Experiences (also known as "NDEs") often report having had vivid encounters with an afterlife (e.g., having "left their bodies," being in "another realm," etc). However, recent research (Barkowski, 2019) has now revealed clearly that NDEs can be explained in terms of chemical changes in the brain that occur during the dying process. Moreover, the nature of NDEs show striking differences across cultures, with people who report such experiences having similar "scripts" about the afterlife in line with their society's prevailing beliefs. Together, the scientific consensus is that NDEs are a product of the dying brain, filled in by the person's cultural expectations about what happens after death, rather than a product of an otherworldly reality. These findings suggest that there is no support for the existence of life after death.

In addition to the above, participants also read two filler essays to assist in the study cover story. One of these essays was about the evolution of diversity in flowers, and the second was about the soothing effects of bird singing.

Legacy motivations were measured on the LMS, developed and described in Chapter 4.

Preference for a "successful/moral legacy" over a "successful/moral life" was measured with the forced-choice scenarios used in Chapters 2 and 4.

Supernatural beliefs were measured using the six-item version of the Supernatural Belief Scale (SBS; Jong & Halberstadt, 2016) (See Chapter 3).

Procedure

After giving written informed consent, participants provided demographic information as described in Study 1, with the addition of the Survey of Belief in an Afterlife. They were then randomly assigned to one of the three conditions: afterlife affirmation, afterlife disconfirmation, or control. All participants read the two filler essays; participants in the experimental groups (but not the control group) read, in addition, a third essay appropriate to their conditions. Participants were instructed to read each summary carefully, as they would be asked a question about its content afterwards and were informed that they would receive a fifty-cent bonus if they successfully answered all questions.

To serve as an attention check, after participants finished reading each summary they were provided with a multiple-choice question with five answers and asked to select the

answer that best summarized the findings of the research they had just read about. Following this, participants rated how interesting they found the summary on a scale of 1 (very uninteresting) to 7 (very interesting).

After reading all the essays for each condition, participants completed the LMS, followed by the forced-choice legacy decisions (the latter were counterbalanced). Finally, participants completed the SBS and self-reported on the validity of their data, before being thanked and paid.

Results

From the 395 participants recruited, 24 participants were deleted from the dataset for missing data, and 6 participants were deleted for providing duplicate cases. This resulted in a total sample of 365 participants (Male = 179, Female = 184, Another gender = 2). The mean age was $M = 41.62$ (range 19-76 years; $SD = 13.35$).

Scenario Decisions

For the creative scenario, 53.2% of participants indicated a preference for a successful legacy over a successful life. In the moral scenario, 45.2% of participants indicated a preference for a successful legacy over a great life. In other words, for each case, around half of the sample opted for a successful/moral legacy even if it meant either being unsuccessful or having an immoral reputation during their life, whereas the other half preferred to have a successful/moral reputation during their life even if it meant either being forgotten after death or leaving an immoral legacy people despised. These findings mirror the split in preference for the scenario decisions shown in Chapter 2 and Chapter 4. Similar to the findings in Chapter 2, but contrary to the findings in Chapter 4, there was no

significant difference in confidence between the creative ($M = 4.18$) and moral ($M = 4.00$) scenarios.

Afterlife Beliefs and Scenario Decisions

Afterlife beliefs were coded into one of three categories: *immortalists*, *extinctivists*, and *agnostics*, to capture participants' beliefs about post-mortem consciousness, as described in Chapter 2. A chi-square test indicated a significant difference among these groups in terms of their preferences in the creative scenario (X^2 (2, N = 365) = 11.78, $p <$ .01). For immortalists, 59.9% chose a successful legacy while only 34.5% of extinctivists chose a successful legacy. Agnostics were more divided in their preferences, with only 51.3% of those in this afterlife-belief category choosing the legacy option. A chi-square test also indicated significant differences in the moral scenario (X^2 (2, N = 365) = 13.06, p < .01): 49.0% of immortalists chose the moral legacy, compared to only 24.1% of extinctivists doing so, with agnostics in between (46.1%).

A chi-square test was also used to examine the main effect of condition (afterlife affirmation vs. disconfirmation vs. control) on choice for the two scenarios. The results indicated no significant difference between the conditions and forced-choice responses for the creative scenario (X^2 (2, N = 365) = 1.97, p = .37) or for the moral scenario (X^2 (2, N = 365) = 2.77, p = .25).

A Binary Logistic Regression was used to examine if there was an interaction between afterlife beliefs (immortalist, extinctivist, and agnostic) and condition (affirmation, disconfirmation, and control). The results of the regression indicated no significant interaction between afterlife beliefs and condition on preferences for a specific

scenario in both the creative and moral scenarios (X^2 (2, N = 365) = 2.77, p =. 25). These findings failed to support the hypothesis that scenario decisions would significantly differ between the affirmation, disconfirmation, and control conditions.

An issue in the findings reported above was a lack of extincitivists in the data sample (N = 58). Given the limitation in sample size, I recoded extinctivists and agnostics together as "non-believers" to compare responses between those who believe in the continuation of the self after death (immortalists) with those who are either unsure or outright reject such beliefs (extinctivists and agnostics).

After dummy coding afterlife beliefs into believers and non-believers a univariate ANOVA was used to examine any differences between believers and non-believers in their legacy preferences. The results of the ANOVA indicated a significant difference between believers and non-believers in scenario preference for the creative scenario, F (1, 365) = 7.51, $p < .01$, and the moral scenario, F (1, 365) = 5.62, $p= .01$, with believers rating a higher preference for the legacy option than nonbelievers. However, the results indicated no interaction in either scenario.

Additionally, I also dummy coded conditions into affirmation versus disconfirmation/control and disconfirmation versus affirmation and control. A Binary Logistic Regression was used to examine if there was an interaction between afterlife beliefs (believers vs. non-believers) and condition.

The data for the creative scenario did show, however, that a higher percentage of immortalists chose the legacy option in the affirmation and control conditions than in the

disconfirmation condition, while a higher percentage of extinctivists chose the life option in the disconfirmation and control conditions than in the affirmation condition. For the moral scenarios, while immortalists were more evenly divided in their scenario preferences across all conditions, a higher percentage of extinctivists in the disconfirmation condition and control condition chose the life option than in the affirmation and control conditions.

Additionally, a Binary Logistic Regression was used to examine if scores on item 4 of the SBS ("There is some kind of life after death"), had on their scenario decisions. Specifically, I predicted that participants who scored higher in belief in an afterlife on this single item would be more likely to prefer legacy in the creative and moral scenarios. The results indicated participants' positive response to this question significantly predicted their preferences in the forced-choice scenarios; participants who chose the legacy option in both the creative ($B = .10$, $S.E = .03$, $Wald = 7.06$, $p < .01$), and the moral scenarios ($B = .15$, $S.E = .04$, $Wald = 14.87$, $p < .01$), rating significantly higher on the belief in an afterlife item the SBS.

I also used a Univariate ANOVA to assess whether the afterlife affirmation/disconfirmation essays were able to influence participants' beliefs in the supernatural and their beliefs in the continuity of the self after death. The results showed no significant effect of afterlife conditions on supernatural beliefs, $F (2, 363) = 1.59$, $p = .20$. These results suggest that the afterlife essays were not successful in influencing beliefs concerning post-mortem consciousness.

Afterlife Beliefs and Legacy Desires

A multivariate ANOVA was used to test for effects of afterlife beliefs on participants' scores on the LMS. The results indicated a significant difference in legacy desires between afterlife beliefs for all five factors of the LMS (immortality, $F (2, 365) = 3.44$, $p = .03$, social contribution, $F (2, 365) = 4.47$, $p = .01$, parenting, $F (2, 365) = 6.30$, $p < .01$, values, $F (2, 365) = 16.33$, $p < .01$, and positive reputation, $F (2, 365) = 12.06$, $p < .01$). Specifically, immortalists rated higher in all the LMS factors compared to extinctivists, and higher than agnostics on values, $F (2, 365) = 19.87$, $p < .01$ and positive reputation, $F (2, 365) = 7.62$, $p<.01$. This finding supported the hypothesis that immortalists would score higher in their legacy desires (specifically the immortality factor) than extinctivists. A multivariate ANOVA revealed no significant effects of condition on LMS scores. The findings failed to support the hypothesis that participants in the affirmation condition would score higher on the immortality factor of the LMS than would extincitivists and agnostics.

Additionally, a reliability analysis was used to examine the consistency of the LMS. The results revealed a Cronbach's alpha of .930, demonstrating high consistency between the items of the LMS.

Finally. there was no significant interaction between condition and afterlife beliefs on LMS scores.

Discussion

The present research replicated findings from the previous chapters regarding the division amongst participants in scenario preferences. For the creative and moral scenarios,

immortalists preferred a successful and moral legacy more than did extinctivists, while agnostics tended to be divided in their preferences. Additionally, findings from the current study also show that the LMS accurately captures these differences in desires, as immortalists tend to rank significantly higher on all five factors of the LMS compared to extinctivists. The results also showed that people who scored higher on the afterlife beliefs item of the Supernatural Beliefs Scale were more likely to choose the legacy scenario than those who scored lower.

Nevertheless, the present research did not support my hypotheses that providing participants with ostensible scientific research affirming or disconfirming the existence of an afterlife would increase or decrease their preference to leave a successful/moral legacy in the forced choice scenarios as well as increasing or decreasing their desire to leave a legacy in their scores on the LMS.

However, the data did show that a higher percentage of immortalists chose the legacy option in the affirmation and control conditions than in the disconfirmation condition, and a higher percentage of extinctivists chose the life option in the disconfirmation and control conditions compared to the affirmation condition. Agnostics remained divided across all conditions.

One of the potential reasons why there was no significant interaction between afterlife beliefs and condition on scenario preference may be the low number of extinctivists in the sample size, increasing the likelihood of a Type 2 error. Extinctivists are a smaller percentage of the population and more difficult to acquire in sufficient numbers (Pew Research Center, 2008; 2012). Future research may further investigate the effect that

different forms of post-mortem consciousness have on preferences for post-mortem legacy for people possessing different beliefs about the afterlife.

One interpretation of why immortalists express a higher desire to leave a legacy may be that such aspirations are driven by a conviction that they will be aware of their lasting impact on those still living, with extinctivists and agnostics less concerned with legacy given their lack of belief or uncertainty in post-mortem consciousness. However, this accounting of the trends observed herein are only speculative; unfortunately, the present data fail to clarify that these factors indeed underlie this difference amongst those holding different afterlife beliefs. An alternative interpretation, for instance, could be that immortalists are more likely to belong to religious communities and groups, and spend more time thinking about how they will be remembered by their religious in-group members and how their legacy will contribute to their spiritual goals.

In addition to a shortage of extinctivist participants, another potential reason why my hypotheses were not confirmed may have been due to the afterlife manipulations being ineffective in their ability to have an impact on participants' afterlife beliefs. While these essays have been used in prior studies (Wisman & Heflick, 2016), analysis of my data shows that scores on the SBS did not significantly differ across the experimental conditions, suggesting the afterlife essays did not influence participants in the desired way. However, another valid possibility may be that simulation constraints do not play a role in legacy desires. While the present thesis fails to provide evidence for a causal role of afterlife beliefs on legacy desires, future research may further investigate these arguments

with more stringent tests better capable of manipulating afterlife beliefs and perceptions of post-mortem consciousness.

Overall, the present study further verifies that legacy desires do differ based on perceptions of post-mortem consciousness. In general, those who believe that consciousness survives the death of the physical body report a higher desire to leave a legacy than those who do not believe or are agnostic that consciousness survives death. However, the findings failed to reject the null hypothesis and demonstrate that an attempt to manipulate people's perception of post-mortem consciousness after death does not result in significant differences in legacy desires and preferences. Specifically, people who are provided with evidence disconfirming post-mortem consciousness are not less likely to desire a legacy than those who are provided with evidence affirming post-mortem consciousness and those in a control condition.

Previous work concerning legacy desires (Hunter & Rowles, 2005; Hunter, 2008, Slight et al., 2013; Newton et al., 2014), as well as my own research in this thesis so far, have focused on proximate psychological explanations as to why people desire legacy. In the next chapter, however, I will investigate the potential role that ultimate (evolutionary) forces may have had on people's behavioral decision-making and efforts to ensure a positive posthumous reputation.

Chapter 6: Adaptive benefits of legacy

As reviewed in Chapter 1, several scholars have explored the proximate causes and motivations behind legacy-related behaviors. However, no previous research has investigated potential *ultimate* causes behind a desire to be remembered after death. Proximate explanations describe the *how* behind human behavior – how interaction between the environment and psychological mechanisms produces certain behaviors, as well as the development of those mechanisms across the lifespan. Ultimate explanations describe the *why* behind human behavior – the reason that psychological mechanisms work the way they do, and the evolutionary advantages these mechanisms afford those who possess them (Daly & Wilson, 1983; Tinbergen, 1963; Zietsch et al., 2020). The prior research investigating *proximate* causes behind legacy related behaviors and decision making have recruited theoretical mechanisms involving, for example, symbolic immortality, generativity, and death anxiety (Becker, 1973; McAdams & de St. Aubin, 1992; Slight et al., 2013). Here, I consider the *ultimate* (i.e., evolutionary) causes of legacy, the adaptive advantages, if any, that accrue from the pursuit of a positive postmortem reputation. We have already encountered one approach that links legacies to evolutionary fitness: Terror Management theorists argue that death anxiety is potentially debilitating and must be managed through various efforts to achieve immortality. Thus, to the extent that legacies serve as symbolic extensions of individuals' lives, they may provide a critical,

adaptive buffer against debilitating existential terror (Greenberg, 2012; Wojtkowiak & Rutjens, 2011).

More subtle evolutionary factors might also be at play in legacy desires and motivations, however. Social reputation plays an important role in cooperation and society (Suzuki & Akiyama, 2005). The evolutionary development of language provided humans with both an efficient system for bonding and the wide propagation of information, with the ability to gossip serving a useful means of disseminating information about others (Dunbar, 1996). The tendency to gossip and share information concerning other group members increases the need for individuals to regulate their behavior in a way that secures a positive reputation (Beersma & Kleef, 2011; Wu et al., 2016). This positive reputation is crucial, given the importance that trustworthiness and credibility have in human cooperation and "social capital" (Ferrin et al., 2008; Quin et al., 2011). The observed tendency for children to tattle and hold others accountable to a socially approved standard of conduct (Hardecker et al., 2016; Ingram and Bering, 2010; Rakoczy et al., 2008; Ross & Den Bak-Lammers, 1998) demonstrates the social importance of vigilant reputation management. In addition to individual, the reputation of our in-group is also vital, with research showing that children engage in increased pro-sociality when the standing of their ingroup is at stake (Engelmann et al., 2018).

Additionally, a positive reputation is also important for the successful propagation of one's genes (Reynolds et al., 2018). Recent research shows that perceived mate trustworthiness and warmth predict romantic attraction and relationship satisfaction (Valentine et al., 2020), and that desirability for a person increases when they exhibit pro-

sociality (though only when they are also considered physically attractive; Ehlebracht, 2018). The importance of reputation and trustworthiness in mate selection is also exemplified in online dating, as users mentioned sexual violence and meeting dangerous and untrustworthy people among their highest risks in meeting someone online (Couch et al., 2007).

Given that legacy largely consists of one's reputation extending into the future, it may be that the desire to create a positive legacy is partly due to an extension of human social drives for ingroup validation and social approval after death. As the previous chapters show, while not everyone is equally invested in their legacy, there are many who consider a positive legacy to be a worthwhile or even fundamental goal. Some people may be willing to make considerable sacrifices in their quality of life, regarding either success or moral standing, to ensure their legacy is positively preserved. Indeed, the concept of "ethical capital" has been coined in previous work (Williams et al., 2010) as a type of moral reputation that may be left behind in the form of legacy for those of lower socioeconomic status who do not possess the economic resources (economic capital, social, capital, etc.) required to leave a legacy of inheritance or cultural impact. This is often exemplified in the form of an "ethical will," which is a document people create that espouses various principles, values, and wisdom they wish to leave behind for future generations and descendants (Cohen-Mansfield 2009).

The transmissibility of legacy can work in negative ways too, of course. Throughout history, some individuals have essentially sabotaged their reputations and disgraced their family members through their transgressions. Before being sentenced to

prison, for example, the criminal financier and convicted fraudster Bernie Madoff was quoted as saying: "…I have left a legacy of shame, as some of my victims have pointed out, to my family and my grandchildren" (O'Connel, 2021). Madoff, that is, recognized that his actions not only damaged his own reputation, but also tainted the reputation of his descendants. Similarly, the surviving relatives of Adolf Hitler have vowed never to have children, in order to eradicate their infamous family name (Gardner, 2001). Although no empirical data exist on the question, I suggest that negative legacies can indeed impair the social standing (and therefore reproductive success) of individuals' descendants. In other words, through indirect fitness effects, the reproductive prospects of biological kin may suffer due to their association with contemptible ancestors.

To investigate the potential evolutionary advantages that legacy motivations may provide, and to specifically test the potential disadvantages that a negative posthumous reputation may have on descendants, the current studies examined whether the appeal of a potential mate would be influenced by their association with a criminal ancestor, along with whether the severity of the crime in question might play a role in such perceptions.

Study 8 Pretest

As a way of creating a hierarchy of criminal behavior, a pretest was conducted to establish the perceived severity, and immorality, of a wide variety of crimes, to be used in the main study. These crimes would be used as examples of a negative legacy.

Methods

Participants

A total of 232 participants (Male = 133, Female = 71, Another gender = 3, Missing = 25) were recruited through Amazon's Mechanical Turk to participate in the study designed in Qualtrics, and were paid US $1 for their participation. The mean age of the participants was $M=36.25$ (range 20-68 years; $SD=10.29$).

Materials

Twenty-seven crimes were selected to vary in terms of their moral severity, and to capture a wide range of criminal activity and felony status, according to LegalMatch.com.

Procedure

For the crime and moral judgement measure, participants were given the following instructions:

"Thank you for participating in this study. This research is concerned with people's opinions about the moral severity of certain crimes in society. On a scale from 1-7 (1=slightly immoral, 7= extremely immoral) please rate the immorality of the following crimes. Please base your ratings on your gut reaction."

Following these instructions, participants were provided with a list of twenty-seven crimes (with definitions), in random order, one crime per screen, along with the seven-point scale for them to rate the moral severity of each crime. The twenty-seven crimes consisted of extortion, aggravated assault, identity theft, armed robbery, drug possession, littering, animal cruelty, first degree murder, arson, pollution, tax-evasion,

shoplifting, grand theft auto, rape, vandalism, second degree murder, prostitution, hate crime, speeding, child pornography, manslaughter, drunk driving, kidnapping, incest, embezzlement, child abuse, and bestiality.

After rating all crimes, participants provided the demographics requested in the previous studies, including their gender, age, country of residence, the TIPI personality scale (Gosling, Rentfrow, and Swann 2003), and the Survey of Belief in an Afterlife (Thalbourne, 1996). Finally, they were asked if their data were reliable for use in our analyses.

Results and Discussion

Twenty-six participants were deleted from the data set due to incomplete or unreliable data, resulting in a total sample of 206 participants.

Crime Immorality

Mean immorality ratings appear in Table 6.1.

Table 6.1. *Immorality Rating for Each Crime (from most to least immoral).*

Crime	*M*	*SD*
First Degree Murder	5.66	1.31
Child Abuse	5.60	1.32
Child Pornography	5.59	1.33

Rape	5.57	1.36
Kidnapping	5.51	1.29
Identity Theft	5.51	1.27
Aggravated Assault	5.50	1.17
Second Degree Murder	5.50	1.29
Armed Robbery	5.43	1.29
Incest	5.42	1.32
Arson	5.40	1.22
Embezzlement	5.38	1.22
Bestiality	5.38	1.31
Hate Crime	5.32	1.33
Animal Cruelty	5.28	1.27
Grand Theft Auto	5.27	1.28
Drunk Driving	5.27	1.28
Vandalism	5.27	1.27
Extortion	5.23	1.22

Manslaughter	5.21	1.38
Pollution	5.20	1.24
Shoplifting	5.15	1.22
Prostitution	5.13	1.50
Drug Possession	5.04	1.42
Tax Evasion	5.03	1.38
Speeding	4.97	1.45
Littering	4.96	1.43

Although the absolute differences across crimes are surprisingly small, their rank order appears intuitive, apparently reflecting the salience of a victim and the extent to which he or she has been injured. This is consistent with previous literature investigating crime severity, with prior research indicating crimes which cause more harm or loss to the victims are perceived as more severe (Ramchand et al., 2009; Roman, 2011).

A limitation of the present study was that there were no attention checks. Providing attention checks would ensure the data collected were genuine self-reports rather than participants simply selecting various points on the scales as they completed the study.

This study provides the necessary subjective validation of crimes' moral severity, establishing a hierarchy of negative actions that could adversely affect a person's

reputation. Next, I report a study that tests the extent to which individuals' interest in dating someone is affected by the latter's familial relationship to others who have committed these crimes. I was also interested in how the perceived moral severity of each crime would affect a person's willingness to date someone with these various crimes in their family history.

Study 8

Methods

Participants

A total of 213 participants (Male = 120, Female = 87; Missing = 6) were recruited through Amazon's Mechanical Turk to participate in the study designed in Qualtrics in exchange for US $1, and an additional US $.50 for reliable data. The mean age of the participants was $M=36.49$ (range 20-69 years; $SD= 9.33$).

Procedure

After providing informed consent, all participants were told, "In this study, we are interested in how your knowledge of a person's family history influences your romantic interest in them. Please answer honestly, as there are no right or wrong answers." They were then presented the following scenario:

Imagine that you have matched with someone on a dating website. While considering whether or not to go on a date, you Google their name and discover that one of their relatives – now deceased – had been tried and convicted of a crime. There is no

question that this relative committed the crime. In other words, their relative was definitely

guilty. Next, you will see a list of various crimes. Please rate your interest in dating

someone whose deceased relative had committed each of the following crimes:

Following this, participants were presented with the twenty-seven pretested crimes, each presented individually in randomized order. Participants rated their interest in meeting their potential date on a nine-point scale, ranging from -4 (*not interested at all*) to +4 (*very interested*), with a rating of zero meaning a neutral desire ("neither interested nor uninterested"). After rating their interest, participants were asked, "In general, does a person's family criminal history affect your willingness to date them? Why or why not?". Participants typed their answer (required) into an open-ended text box. Next, the crimes were re-presented, in a new random order, and rated in terms of their immorality (i.e., the pretest task; see above).

Given the desire that some people have for presenting themselves in a positive light, what some psychologists have referred to as social desirability (Crowne & Marlowe, 1960), I considered the role that this self-presentational factor may have in how participants answered the questions concerning their interest in dating the relative of a deceased criminal. Thus, after rating the degree of (im)morality for each crime, participants completed the 13-item version of the Marlowe Crowne Social Desirability Scale, which consists of true or false items such as "I'm always willing to admit it when I make a mistake" and "I am always courteous, even to people who are disagreeable" (Reynold, 1982).

Lastly, participants were asked if they honestly answered the questions in the survey to eliminate data from any participants who indicated that their answers were unreliable.

Results

Twenty-seven participants were deleted from the data set due to incomplete or unreliable data, resulting in a total sample of 186 participants (Male = 107, Female = 79). The mean age of the participants was $M=35.97$ (range 20-69 years; $SD=9.26$).

Dating Preferences

Mean dating preferences appear in Table 6.2. The five crimes with the highest mean rating (i.e., indicating greater willingness to go on a date with the person) were speeding (6.58), littering (6.47), shoplifting (6.04), tax evasion (5.96), and pollution (5.82). The results also indicated that on average, a family member committing one of the more severe crimes did negatively affect participants' willingness to date their match. The five crimes with the lowest mean rating (i.e., indicating less willingness to go on a date with the person) were child pornography (3.46), bestiality (3.51), rape (3.62), child abuse (3.65) and incest (3.69). A one-sample t test was used to assess which crimes negatively affected participants interest in dating their match. I compared crimes against the midpoint of the scale, which indicated no change in interest. The crimes that were significant are reported in the table alone with an asterisk.

Table 6.2. *Mean scores and standard deviations for participants' desire to go on a date with their match for each crime. Higher mean scores reflect higher interest to date their romantic match. Crimes with an asterisk represent significant effects on dating preference*

Crime	M	SD
Speeding	6.58	1.94
Littering	6.47	1.91
Shoplifting	6.04	2.04
Tax Evasion	5.96	2.06
Pollution	5.82	2.13
Vandalism	5.78	2.13
Drug Possession	5.62	2.11
Drunk Driving	5.57	2.18
Embezzlement	5.49	2.03
Prostitution	5.41	2.23
Grand Theft Auto	5.32	2.05
Extortion	5.11	2.09
Identity Theft	5.00	2.10
Arson	4.97	2.32
Aggravated Assault	4.75	2.32
Manslaughter	4.54	2.41
Armed Robbery	4.52	2.42
Animal Cruelty	4.19	2.43
Hate Crime	4.18	2.60

Second Degree Murder	4.10	2.45
Kidnapping	4.08	2.39
First Degree Murder	3.74	2.48
Incest	3.69	2.53
Child Abuse*	3.65	2.41
Rape*	3.62	2.44
Bestiality*	3.51	2.45
Child Pornography*	3.46	2.47

Responses to the open-ended question (as to whether family history affects willingness to date) were coded as "Yes", "No", and "Yes, but it depends" (See table 6.3). This last category consisted of answers that expressed a disinterest in dating the family member of the criminal, but with the disinterest depending on certain factors such as closeness to the family member, or the severity of the crime (e.g., "It depends on the crime, but generally it would influence my choices given that the crime could have had some impact on the person I am seeing"). Participants responses were also coded in terms of whether they reflect primarily genetic concerns (i.e., that a potential partner might have inherited negative proclivities from their deceased relative), or environmental concerns (that their partner might have been raised and socialized with negative or dangerous values, or that their other family members were likely to be a reason for concern), or both.

Participant responses that mentioned neither genetic or environmental concerns were coded into a "Neither" category. A separate coder categorized 20% of the answer's participants provided concerning their disinterest in dating the potential mate. An interrater reliability analysis using the Kappa statistic was performed to determine consistency among raters. The interrater reliability for the raters was found to be Kappa =.43 (95% CI, .245 to .617), $p < .001$. The percentage of participants who belonged to each category is displayed in table 6.4 below.

Table 6.3. *Percentage of participants willingness to date their match.*

Category	Percentage
Yes	24.9%
No	25.4%
Yes, but it depends on the crime/relationship	49.7%

Table 6.4. *Percentage of reasons for reluctance to date.*

Category	Percentage
Genetics	6.5%

Environmental	45.2%
Genetics & Environment	7.0%
Neither	41.3%

Crime Immorality

Mean immorality ratings appear in Table 6.5.

Table 6.5. *Mean scores and standard deviations for participants' ratings for immorality of each crime.*

Crime	Mean	SD
Rape	6.60	.970
First Degree Murder	6.53	1.02
Child Abuse	6.48	.999
Kidnapping	6.32	.987
Second Degree Murder	6.22	1.21

Animal Cruelty	6.11	1.21
Bestiality	6.09	1.39
Hate Crime	6.09	1.39
Incest	5.95	1.61
Armed Robbery	5.87	1.21
Aggravated Assault	5.77	1.25
Arson	5.66	1.23
Manslaughter	5.53	1.51
Identity Theft	5.46	1.28
Extortion	5.37	1.29
Drunk Driving	5.27	1.43
Grand Theft Auto	5.20	1.33
Embezzlement	5.16	1.41
Pollution	4.53	1.61
Vandalism	4.51	1.59
Tax Evasion	4.48	1.72
Shoplifting	4.46	1.63
Prostitution	4.03	2.06
Drug Possession	3.94	1.92
Littering	3.92	1.76

Speeding	3.59	1.94

Pearson correlations were used to test the association between pretest immorality rating, main study immorality ratings, and dating preferences. The results showed a strong correlation between the pre-test and Study 8 immorality ratings (r (182) = .89, p < .01), and a strong correlation between the Study 8 immorality ratings and date-ability (r (182) = -.93, p < .01).

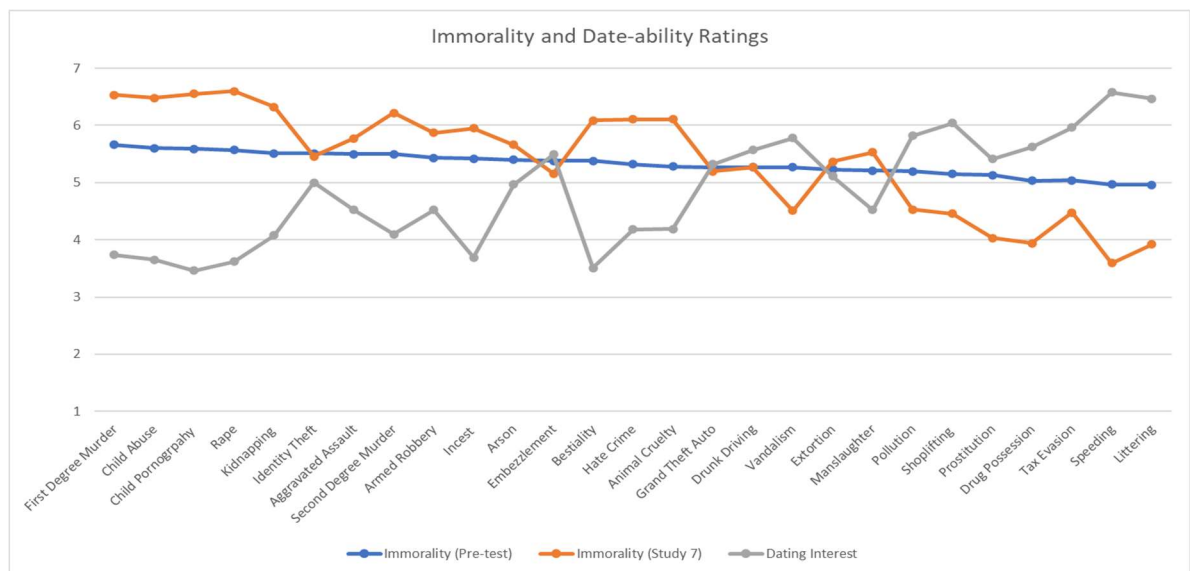**Figure 2.** *Participants' ratings for pretest and study 8 immorality, and study 8 date-ability.* *Note: Ratings for pre-test immorality were plotted based on participants' ratings from most immoral to least immoral*

Social Desirability

The relationship between social desirability and dating judgments was also examined, separately for minor crimes (date-ability ratings below the median score of 4)

and severe crimes (date-ability ratings above the median score of 4). Pearson correlations indicated only a very weak relationship, which was significant for severe crimes (r (182) = -.15, p = .03), but not for minor crimes (r (182) = -.08, p = .26).

Discussion

Chapter 3 of this thesis explored the different motivations that play a role in the desire to leave a legacy. These motivations seem valid and have been replicated in previous studies (Hunter, 2008; Hunter & Rowles, 2005). In the current context, motivations for legacy, such as the desire to transcend death or to transmit one's values, are *proximate* causes of legacy seeking behaviors. The current study, in contrast, begins to explore *ultimate* causes – *why*, for example, a desire to transmit one's values should persist in our cognitive repertoire. One reason is that behaviors that, for whatever reason, foster a relatively positive postmortem reputation, may have benefits to evolutionary fitness, in the form of advantages to one's offspring.

The findings from the current study indeed suggest that a *negative* posthumous reputation, at least, might damage the mating prospects of one's descendants, specifically if the legacy involves a crime that others judge to be morally reprehensible. The potential combination of both proximate and ultimate causes behind legacy-seeking behaviors makes the motivations behind legacies complex. A psychology of legacy desires isn't simply the result of a desire for immortality and enduring social status, but potentially also intermingled with evolutionary drives for reproductive success and preservation of one's family reputation for the sake of genetic fitness.

The results of the present study show that people do not consider a love interest's criminal family history as detrimental to their willingness to date a person if the crimes do not cause substantial direct harm to a single person or group of people. However, people's willingness to date a person does diminish when the crimes their relative committed are severe moral transgressions that are dangerous and cause others severe harm. Additionally, crimes that are typically seen as disturbing or disgusting (incest, bestiality) also affect a person's willingness to date, if they have been committed by a relative of their potential date. These results are interesting in that they show that the love interest themselves need not commit the crime to have their perceived date-ability diminished; rather, simply being related to someone who committed the crimes is enough.

Another intriguing result is that for crimes with the highest immorality ratings, participants' judgements concerning their immorality were all higher in Study 1 compared to the pretest, suggesting that when placed in a dating/romantic context, participants' view these more significant crimes as more reprehensible than in a neutral context. Likewise, in Study 1 participants were more likely to view the crimes with the lowest immorality ratings as less severe than they did in the pretest, also suggesting that when participants are interested in someone romantically, they may be willing to downplay crimes in a romantic interest's family history, as long as they do not view the crimes as severe.

Both genetic and environmental factors played a large role in participants' self-reported explanations of their judgements, but they expressed more of a concern about the latter than the former. Specifically, the leading reason why participants were not willing to date someone related to a deceased criminal is due to the potential influence that the

deceased relative may have had on their match during their childhood and upbringing, as well as the potential influence this relative has had on the extended family's values. Indeed, the influence that a relative such as a parent has on a child is significant (Nikoogoftar & Seghatoleslam, 2015) and given the extent to which parents and other close relatives are crucial to the formation of a person's values at a young age, it seems a valid cause of concern if the relative has influenced a child by perpetuating negative and dangerous values. Additionally, adverse childhood experiences have been shown to influence antisocial behavior, although these findings suggest that the root cause of these antisocial behaviors is more complex than just adverse childhood experiences (Connolley, 2020; Knafo & Jaffee, 2013).

Furthermore, some participants also expressed a concern that certain dangerous propensities in the deceased relative could be passed on genetically to their potential date. These concerns may also be justified, given some research indicating a connection between genetics and criminal behaviors (Tehrani & Mednick, 2000). Although environmental influences from being reared in an unstable familial environment in which criminality occurs are genuine, this aversion to dating relatives of serious criminals may also underlies a concern (explicit or implicit) about potentially maladaptive heritable traits (e.g., impulsiveness, anger management, sexual decision-making, etc.) known to play a role in antisocial behaviors (Eley et al., 2003; Baker et al., 2006; Gard et al., 2006). Given this heritability concern, a fear may exist those undesirable traits of a transgressive relative may also be present in that person's biological kin. In the present study, this fear played a role in diminishing the perceived date-ability of the hypothetical potential date.

Although judgments in the current study were hypothetical, if the results are borne out in "real" judgments of partner suitability, they would suggest a very real downstream effect of negative legacy on reproductive fitness (Reynolds et al., 2018). The cost of a negative reputation may result in a decrease in perceived value as a mate and have detrimental effects on one's reproductive success. As humans utilized language for the use of gossip and spreading information about people in their group (Dunbar, 1996) it would be imperative to avoid a negative reputation through one's actions, given the importance that one's social status and perceived trustworthiness have on others desire to cooperate (Ferrin et al., 2008; Quin et al., 2011). Legacy largely consists of one's reputation after one has passed away, showing that the influence of one's social standing still exists after one's death rather than becoming inconsequential. Conversely, leaving a positive legacy, based on noble accomplishments and contributions, may provide benefits for descendants based on the advantages that a reputation of values, innovation, or hard work may ingrain in one's family.

One limitation of Study 8 is that the relationship between the hypothetical date and the transgressive family member (e.g., parent, grandparent, sibling, cousin, etc.) was not specified. Given that a parent's values and behaviors are likely to have more of an influence on a child's values and behavior than, say, an uncles or a cousin's, clarification on the nature of this familial relationship might have resulted in different ratings. Indeed, this issue was mentioned explicitly by several participants in their rating explanations.

To address these issues mentioned above, I conducted a follow-up study in which the potential date's "closeness" to the criminal family member was specified as his or her

father. Furthermore, to disentangle the perceived role of environmental influences and those of genetic transmission of maladaptive psychosocial traits, half of the participants were told that the relative was the date's biological father, and half that he was the person's adoptive father. I predicted that participants would report less interest in dating someone who was biologically related to a criminal compared to someone who was adopted, and therefore shared no genetic relationship to the criminal family member. Additionally, I predicted that participants would report less interest in dating someone who was related to a criminal (both genetic and adopted) compared to a control condition with someone who was not related to a criminal.

In addition to clarifying the nature of the familial relationship, in Study 9 I also measured how physically attractive the potential date was perceived to be. In other words, I sought to understand how knowledge of a criminal family member having might influence people's subjective judgments of a person's appearance. This was important, as ratings of physical attractiveness in particular have been shown to be related to reproductive success, health status, and fecundity (Grammar et al., 2003).

Based on this evidence showing the relation between physical attractiveness and mate selection, I predicted participants would rate potential dates who were related to a criminal as less physically attractive than potential dates who were not related to a criminal. I based this prediction on the notion that a negative family background would subvert perceptions of physical attractiveness due to the potential negative affects this can have on the perceived quality on the person as a potential mate. Lastly, I was also interested to examine the role that relationship status played in participants' attractiveness

and date-ability ratings, specifically for single people compared to those of other relationship statuses, given that single people are the demographic typically invested in dating.

Study 9

Participants

A total of 501 participants (Male = 325, Female = 167, Another gender = 1, Missing = 8) were recruited through Amazon's Mechanical Turk to participate in the survey designed in Qualtrics in exchange US$1 payment for their participation, and an additional US$.50 for reliable data. The mean age of the participants was M=37.17 (range 20-69 years; SD= 9.93).

Measures

Participants completed the Legacy Motivations Scale (LMS) consisting of twenty items measuring participants desires and motivations to leave a legacy. The LMS was included to examine how participants' ratings on parenting and values might predict how they answered the dating questions.

Before participants completed the scale, they were given the following instructions: "Please rate the extent to which each item applies to you (1= not at all, 7= very much so). Please note that there are no right or wrong answers. We are interested only in your personal opinions."

After the completion of the LMS, participants completed the Ten Item Personality Inventory (TIPI) (Gosling, Rentfrow, and Swann 2003), which measures the Big Five traits

with two items for each trait, each on a seven point scale (1=strongly disagree, 7=strongly agree). The TIPI was included to assess how ratings on openness to experience might affect participants' preferences toward the hypothetical dates.

Both the LMS and the TIPI were presented consecutively and were counterbalanced to appear either before or after the dating questions.

Next, participants were given the following instructions in advance of the dating survey:

*"At this point, we would like to gain insight into your personal dating preferences. On the following pages, you will be provided with information concerning the hypothetical date's family background and history, along with a picture of the date. Please give your honest answer as to how **physically attractive** you find them as a potential date. If you are currently in a relationship, imagine that you are single. Remember, there are no right or wrong answers. These are simply your personal preferences, and you will not be dating any of the people presented".*

After reading these instructions, for each participant, three hypothetical dates were shown, with one of the hypothetical dates being the "target date" of interest. For the female hypothetical dates, *Maria* was the target date, and for the male, *Mark* was the target date, with the image being held constant for these. Thus, attractiveness and date-ability ratings for Maria (for male participants) and Mark (for female participants) served as the key dependent variables, with three different levels of crime (biological father guilty of rape, adoptive father guilty of rape, and no rape) serving as the independent variable.

Participants were shown background information, a picture, and a rating scale for their interest in the three hypothetical dates of opposite gender to the participant, in that order (i.e., participants were first given background information about the candidate before viewing their photograph). The background information consisted of facts about the hypothetical date and his/her family, including the person's first name age, parents' marital status, number of siblings, medical family background, family criminal history background (between subjects: biological father guilty of rape; adoptive father guilty of rape; control), and family mental health background.

Following this, participants were shown a picture of the hypothetical date along with the questions "how physically attractive do you find [specific hypothetical date's name]?" Images of the date were taken from "This Person Does Not Exist.com", a website that uses artificial intelligence to produce images of nonexistent individuals indistinguishable from real photographs. Each of the images displayed the face of the potential date facing forward. The images were presented in the same order (see above) in all conditions. The physical attraction scale was a ten-point Likert Scale with 1 being '*very unattractive*' and 10 'very attractive.

For the two other 'filler' hypothetical dates (Stephanie and Catherine for the male participants and Steve and Jose for the female participants), Stephanie (or Steve) both had "depression in father's side of the family" listed in their mental health background, whereas Jose (or Catherine) was described as having "diabetes on mother's side" in their family medical background. These filler dates were held constant across participants. The purpose of including these two additional date profiles was to disguise the extent of my

interest in how a family criminal background affects attractiveness and date-ability, and hence, diminish the chance of demand characteristics. However, data from these two filler dates were not analyzed, as they were not of relevance to the primary research questions (of criminal legacy and sexual decision-making) being investigated.

<u>Hypothetical Date #3</u>

Name: Mark

Age: 29

Parents: Parents divorced

Siblings: Brother

Family medical background: None

Family criminal background: Father was convicted of rape (of a stranger)

Family mental health background: None

Here is a photo of Mark:

How interested would you be in dating Mark?

| No interest 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | Very interested 10 |

Figure 3. *Information and Image of Mark.*

After rating the hypothetical dates on their attractiveness, participants were given the following instructions:

*"At this point we would like to gain insight into your personal preferences concerning the **date-ability** of the potential dates you just rated. On the following pages, you will be provided with the same information concerning the hypothetical date's family background and history, along with a picture of the date. Please give your honest answer as to how interested you would be to go on a date with each of them. If you are currently in a relationship, imagine that you are single. Remember, there are no right or wrong answers. These are simply your personal preferences, and you will not be dating any of the people presented."*

After reading these instructions, participants were once again shown the same information about the hypothetical dates, with the only difference being that participants were now asked the question, "How interested would you be in *dating* (specific hypothetical date's name)?". To maintain consistency between the attractiveness questions, participants rated their interest to date the hypothetical person on a ten-point Likert scale with 1 being "*have no interest*" and 10 being "*very interested.*" After rating their degree of dating interest, participants were provided with an open-ended text box and asked, "What specific factors about (specific hypothetical date's name) profile most influenced your ratings of her/him?".

After rating the dates on both attractiveness and date-ability, participants were asked, as an attention check "To ensure you paid attention during the study, please select the crime that Maria's [Mark's] father [adoptive father] was guilty of." Participants selected an answer from among aggravated assault; rape; child abuse, and "I can't remember". For the control condition, the child abuse option was replaced by the option "there was no crime in her family background."

Procedure

After providing informed consent, participants were asked about their gender, sexual orientation, and relationship status. Those who indicated a sexual orientation of homosexual, bisexual, or 'other' were exited from the study. The remaining demographic questions were age, country, and religious affiliation.

Next, participants were asked to select the gender of individuals they typically date so they could be presented with appropriate stimuli. Half of the participants were randomly

assigned to first complete the dating questions followed by the LMS and TIPI, whereas the other half were randomly assigned to first complete the LMS and TIPI before the dating questions.

After completing the questions and scales, participants were given an attention check question. Specifically, participants were asked to select from multiple choice which one of the crimes were present in Mark or Maria's family background. This was to ensure that participants had read and ascertained the relevant information for the studies purposes.

Lastly, to ensure data quality, participants were asked if they answered the questions in the survey honestly.

Results

Unexpectedly, although all participants were selected for their self-reported heterosexuality, 270 participants indicated that they would prefer to date same-sex partners. These participants, along with an additional 83 participants who failed the attention check, were not included in the final data set. This resulted in a final sample of 148 participants (Males= 91, Females = 57). The mean age of the participants was M=36.66 (range = 21-67; SD= 9.89).

Attractiveness and date-ability

Two 3(condition) x 2(gender) x 2(single vs. non-single) univariate ANOVAs were used to examine effects on attractiveness and date-ability ratings, respectively. The results revealed significant effects of both factors on date-ability (condition $F_{(2, 145)} = 4.08$, $p = .01$; gender $F_{(2, 146)} = 5.29$, $p = .02$). Follow-up t tests indicated that

participants were more interested in dating someone with no history of rape in the family than someone whose father (biological or adoptive) was a convicted rapist revealed no effect of either condition. Date-ability was also higher among men than women. There was no interactions, and no effects on attractiveness for condition and gender. There was, however, a significant effect of relationship status on attractiveness, with single participants finding their hypothetical date less attractive than participants of other relationship backgrounds, $F(2, 145) = 4.03$, $p = .04$. The date-ability results are presented in Table 6.8.

Table 6.6. *Date-ability means and standard deviations for each condition.*

Condition	Mean	SD
Biological Father	6,65	2.74
Adoptive Father	5.95	3.09
Control	7.56	2.29

Furthermore, there was also a significant difference between a desire to date people in the biological father condition compared to the adoptive father condition, with participants expressing more interest to date people in the biological father condition.
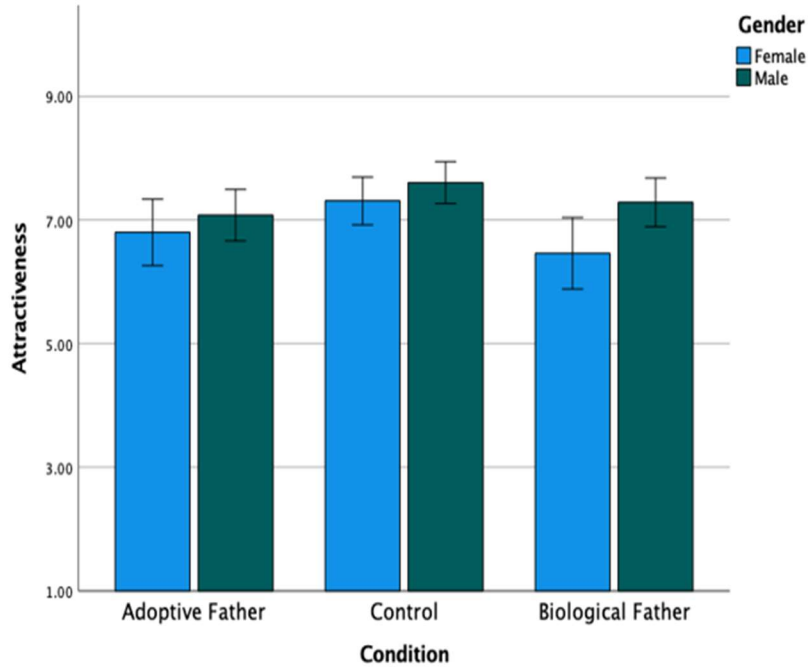
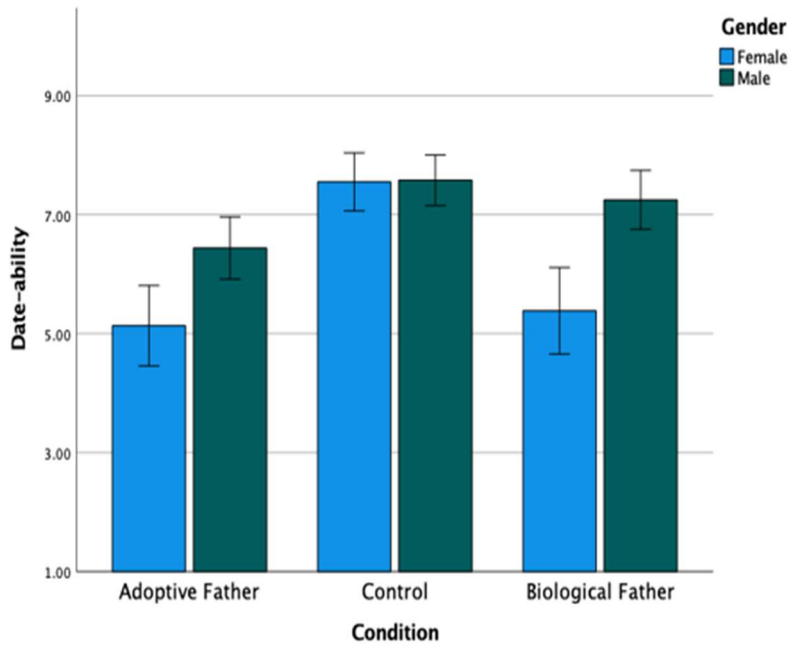**Figure 4.** *Bar chart displaying participants' attractiveness ratings across conditions.*

Figure 5. *Bar chart displaying participants' date-ability ratings across conditions.*

Legacy Desire and Personality

A Pearson Correlation was conducted to test for a correlation between legacy desires and interest in dating the match. The results indicated a weak positive correlation between the values (r (148) = .21, $p < .01$), social contribution (r (148) = .23, $p < .01$), and the immortality (r (148) = .40, $p < .01$) factors of the LMS and interest in dating the match.

A Pearson Correlation was also conducted to test for a correlation between the personality dimensions of the TIPI and interest in dating the match. The results indicated a weak positive correlation between extraversion and interest in dating the match (r (148) = .24, $p < .01$).

Discussion

The results failed to confirm the hypothesis that participants would rate Mark/Maria as more attractive in the control condition than in the biological father and adoptive father conditions. However, the results did confirm the hypothesis that participants would have more interest in dating Mark/Maria in the control condition compared to biological father and adoptive father condition. Additionally, the results failed to support the hypothesis that participants would have more interest in dating the adoptive father than the biological father, with the data showing a preference for the biological father compared to the adoptive father.

While these data did confirm the hypothesis for date-ability, as noted above, there were practical problems. When providing participants with a question to select the gender they are interested in dating, many participants deliberately chose a gender that was, as self-identified heterosexuals, inconsistent with their sexual preferences. It was uncertain as

to why many participants did this. Given that the theoretical foundation for the study was rooted in an evolutionary and reproductive approach, the intention of the study was to acquire data specifically from heterosexual participants. Due to the potential misunderstanding in these instructions, heterosexual participants who selected the same gender as themselves were deleted from the data set, resulting in significant data loss.

Furthermore, several participants failed the attention checks. While these participants were removed from the analyses, these issues suggested that the data in question may not be trustworthy for drawing inferences about dating preferences. Due to these concerns, slight adjustments were made to the present study to make it less confusing and reduce data loss. The changes I made to improve the study are mentioned below.

Study 10

Methods

Participants

A total of 541 participants (Male = 240, Female = 277, Missing = 24) were recruited through Amazon's Mechanical Turk to participate in the survey designed in Qualtrics in exchange for US $1 payment for their participation, and an additional US $.50 for reliable data. The mean age of the participants was M=38.11 (range 19-77 years; SD= 10.83).

Measures and procedure

The methods were identical to the previous study, with the following exceptions. First, for gender identity demographics, participants could only select one of two genders (male and female) and were automatically presented with targets of the other gender. All other demographics questions were similar to the previous study, including sexual orientation and relationship status.

Second, to increase attention to the relevant information about the targets, family background information for each potential date was bolded, and participants were informed that they would be asked to recall the bolded family information at the end of the study, with correct answers rewarded with an additional fifty cent payment. The family background information was reduced to only the potential date's name and the bolded and (where relevant) the father's rape conviction.

Hypothetical Date #3

Name: Mark

Family criminal background: Father (now deceased) was convicted of rape of a stranger

Here is a photo of Mark:

How interested would you be in dating Mark?

| No interest 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | Very interested 10 |

Figure 6. *Reduced Information and Image of Mark*

Third, the manipulation check item was modified to better detect participants who failed to pay sufficient attention in the study. These answers for the attention check were: "Grand theft auto", "Rape", "Embezzlement", "There was no crime in Maria's [Mark's] family history", and "I can't remember".

Results

Data from 84 participants who selected a sexual orientation other than heterosexual, 35 participants who provided incomplete data, 49 who failed to answer the attention checks correctly, as well as 39 cases of duplicate data were not analyzed. This resulted in a final sample of 334 participants (Male = 168, Female = 166). The mean age of the participants was M=38.56 (range 19-77 years; SD= 10. 79).

A univariate ANOVA was used to examine the effect that the different conditions (father, adoptive father, control) had on participants attractiveness ratings for Mark and Maria, as well as gender and relationship status. The results indicated no significant difference between the conditions in their attractiveness ratings, F (2, 256) = 1.26, p=.28, and no significant difference based on relationship status, F (2, 256) = 1.14, p=.28, but did indicate a significant difference of gender on attractiveness, F (2, 344) = 94.53, p<.01 with women providing far lower attractiveness ratings for Mark than men did for Maria across all conditions.

A univariate ANOVA was also used to examine the main effect that condition had on participants date-ability ratings for Mark and Maria. The results indicated a significant difference between the conditions in their date-ability ratings, F (2, 256) = 4.20, p=.01, but no significant difference based on relationship status (single vs non-single participants), although there was a marginal effect, F (2, 256) = 3.00, p=.08. The analysis also indicated a significant effect of gender on date-ability, F (2, 256) = 121.39, p<.01, with women reporting less of a desire to date Mark.
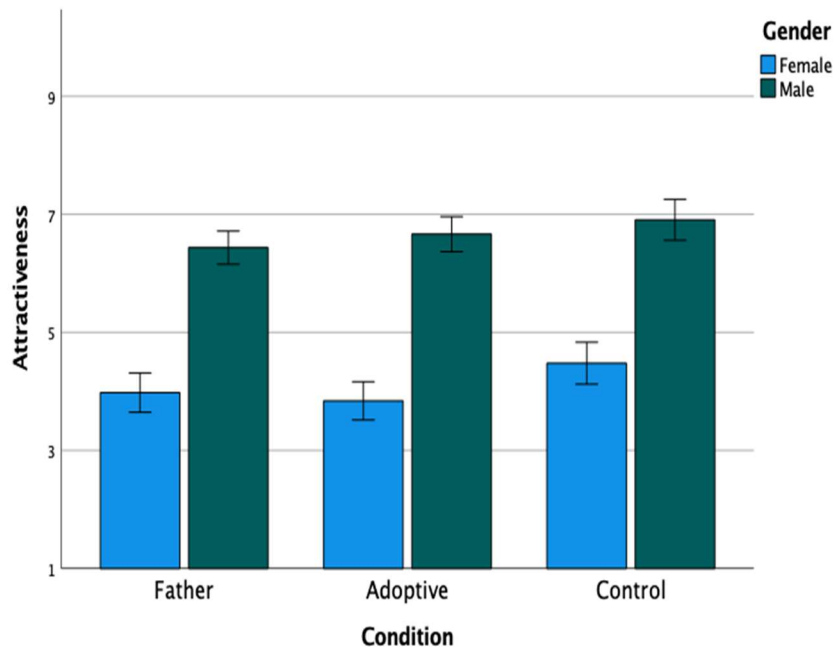
Figure 7. *Bar chart displaying participants' attractiveness ratings across conditions.*
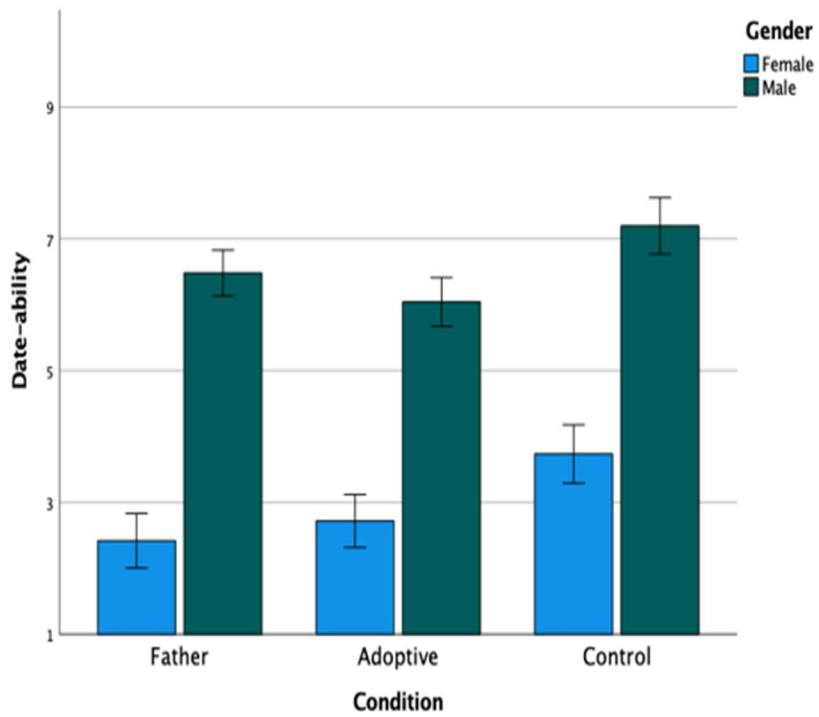
Figure 8. *Bar chart displaying participants' date-ability ratings across conditions.*

As mentioned above, women, overall, had very negative opinions about Mark across all conditions, with female participants providing a mean rating of 2.77 for Mark compared with men providing a mean rating of 6.59 for Maria across all conditions.

Legacy Desire and Personality

A reliability analysis was used to examine the consistency of the LMS. The results revealed a Cronbach's alpha of .92, demonstrating high consistency between the items of the LMS.

A Pearson Correlation was conducted to test for a correlation between legacy desires and interest in dating the match. The results indicated a weak positive correlation between the immortality, (r (329) = .13, p = .01) factors of the LMS and interest in dating the match.

A Pearson Correlation was also conducted to test for a correlation between the personality dimensions of the TIPI and interest in dating the match. The results indicated no relationship between personality traits and interest in dating the match.

Discussion

The results of the current study failed to reject the null hypothesis concerning participants' attractiveness ratings between conditions but supported the hypothesis that participants would be less willing to date their match in the biological and adoptive father

conditions than in the control condition. Additionally, the findings suggest that there is no difference in perceived date-ability of Mark or Maria between relationship status.

These findings, similar to Study 8 and Study 9, suggest that when there is a criminal history in one's family, specifically for a severe crime, people are less likely to find the potential mate as eligible compared to mates who do not have a severe criminal history in their family.

A limitation of the present study is that the data is derived from hypothetical scenarios, and therefore may not provide an accurate indication of how participants may react and behave toward a potential mate in a legitimate dating context. While online dating is initially devoid of in-person contact, there is communication with a person with the potential to result in a date. Participants in the present study knew they would not actually date the hypothetical dates, which may have affected their responses.

Another limitation is that the present study only used one crime, which was a sex-related crime. While other non-sex related crimes, that a negative legacy may consist of, may have been perceived as unproblematic regarding the family criminal history of a potential date, the sexual nature of the crime presented to participants may have been viewed as more adverse specifically in a dating context.

General Discussion

The present research provides insight concerning the role a negative legacy has on descendants' perceived quality as a potential mate. Study 8 provided evidence that people

are open to dating someone with a relative who left a negative legacy if the crime is minor, but less so if the crime is severe. Study 9 provided evidence that people are less likely to date someone whose father (either biological or adoptive) left a negative legacy compared to people in a control condition. However, due to loss of data, more data was collected after making improvements to the study design. Study 10 verified the findings from Study 9 that people are less likely to date someone whose father (either biological or adoptive) left a negative legacy compared to people in a control condition.

These findings suggest that there may be an evolutionary benefit to ensuring that one's posthumous reputation is positive, as negative posthumous reputations may have inadvertent detrimental effects on descendants perceived quality as potential mates. An evolved desire to maintain that one's reputation is positive overall when one passes may be one of the ways that a negative legacy is avoided. While someone may find a potential mate physically attractive, if their relative left a negative legacy, this may have detrimental effects on the perceived trustworthiness and quality of their descendants as potential mates.

Lastly, there was a significant difference between men and women in their attractiveness and date-ability for their hypothetical date than men. Specifically, women reported lower attraction and interest in dating Mark than men did Maria. Although previous research does suggest women tend to be pickier in mate selection than men, given that women make much more of a parental investment than men do (Alterovitz & Mendelzohn, 2009; Fiore, et al. 2010), the reason for women's pickiness in the present study stems from the fact that women participants reported finding Mark unattractive and

too feminine, even in the control conditions where no previous criminal background in the family was mentioned.

These findings suggest that along with proximate causes (existential and social factors), ultimate causes (evolutionary factors) may also contribute to desires to leave a positive legacy and avoid a negative post-mortem reputation.

Chapter 7: General Discussion

The aim of this thesis was to systematically explore the understudied concept of legacy through theoretical reductionism and by conducting target empirical research. In particular, I sought to discern the causal factors that motivate people to leave legacies. In addition to being scant, prior literature in this area has typically conflated legacy with generativity. When investigated as a form of symbolic immortality, previous research has only explored it as a tool for assuaging death anxiety, with little to no attention to the other motivational factors (evolutionary or cognitive) that may play a role in people's legacy desires. Throughout this thesis, my goal has been to investigate alternative factors that motivate people to invest in their posthumous reputation.

Humans are fundamentally social creatures, often devoting much of their time toward acquiring status, recognition, admiration, and fame (Anderson et al., 2015; Barkow et al., 1975; Greenwood et al., 2013; Mitchell, et al., 2020) either by personal achievements or helping others. Chapter 1 elaborated on these social drives in humans and postulated that legacy desires may result from an extension of these same social goals and proclivities after death, as well as identifying potential factors responsible for legacy desires and motivations (death anxiety, evolutionary factors, narrative identity, and simulation constraints).

However, legacy is not exclusively a post-mortem phenomenon, as people in various occupations (scientists, athletes, musicians, entrepreneurs, etc.) can leave legacies in their field before their death. Additionally, previous research suggests that mindfulness and living in the present moment benefits psychological wellbeing (Brown & Ryan, 2003;

Hitchcock et al., 2016; Hoffman et al., 2010) as opposed to spending one's time focusing on the past and future. For those who primarily fixate their efforts toward their post-mortem legacy, a potential conflict may arise between directing their attention and peace of mind to the present moment and lived experiences as opposed to the future when their legacy is successfully established. Chapter 2 explored these potentially conflicting priorities by separating people's pre-mortem reputation and lived experiences from their post-mortem legacy by providing participants with two forced-choice scenarios that pitted admiration/reputation when alive against admiration/reputation after death and examined how afterlife beliefs interacted with participants' preferences for one over the other.

Chapter 2 provided participants with two forced-choice scenarios that pitted admiration/reputation when alive against admiration/reputation after death, and examined how afterlife beliefs interacted with participants' preferences for one over the other. Studies 1 and 2 explored participants' preferences between two scenarios, one which provided either a successful/moral reputation during a person's life, and the other which provided a successful/moral reputation as one's legacy. The results showed that participants were nearly evenly split in their choices, with a little over half choosing the scenarios in each study that provided a successful/moral legacy. These findings demonstrated that for some people, legacy is important enough to choose a life of struggle and obscurity if it means that their legacy will transcend their death and influence others. While afterlife beliefs did not interact with participants' preferences for the successful scenario, afterlife beliefs did play a role in their preferences for the moral scenario with more survivalists preferring a positive reputation as legacy, and more extinctivists preferring a positive reputation in life.

Previous research related to legacy suggests that the concept is multifaceted (Hunter, 2005, 2008) with people providing various desires in the type of legacy they want to leave. Specifically, prior qualitative work found that participants' legacy desires were typically expressed in three different themes: biological, material, and values. Each of these themes were accomplished through multiple subcategories (Hunter & Rowles, 2005). To learn more about this multidimensionality and people's general opinions about legacy, Study 3 (Chapter 3) sought to examine legacy as a concept as well as assessing participants' desires, goals, and motivations concerning their own legacy. The study revealed that that majority of participants (64%) wanted to leave a legacy.

It also revealed several legacy categories/typologies: a legacy of family/children, giving/serving, inspiration, positive reputation, values, and wealth/success. Some of these legacy typologies, specifically inspiration, values, family/children, and social contribution (helping others and one's community) are consistent with the previous research (Hunter, 2005) investigating the types of legacies that people want to leave. Study 3 also provided insight into the motivations underlying people's legacy desires. In study (Chapter 4) I used these motivations as the foundation for the Legacy Motivations Scale, and verified it's construct (Study 5) and predictive validity (Study 6).

Research in existential psychology has investigated people's desires to transcend their impermanence by achieving immortality via one's culture, either literal or symbolic. Terror Management Theory (TMT) has explored the appeal of literal immortality gained through the belief in a survival of consciousness in an afterlife, typically through religion (Vail et al., 2019). Additionally, one may also acquire immortality through symbolic

means, such as through a legacy based on one's personal achievements or through uniting one's identity to something that transcends the individual self, such as one's country or religious group (Lifshin et al., 2021; Florian & Mikulincer, 1998). However, no previous research has investigated the role that beliefs concerning literal immortality and the survival of consciousness after death have on the desire to acquire symbolic immortality through one's legacy.

In Study 7 (Chapter 5), I investigated the role that afterlife beliefs had on desires to leave a legacy by manipulating fake scientific articles participants read, either affirming or disconfirming evidence for the survival of consciousness after death compared to a control group. While the results did suggest a significant difference in desire for legacy based on afterlife beliefs, there was no significant difference between conditions for legacy desires.

To date, most research analyzing legacy desires and motivations has relied on proximate mechanisms, such as death anxiety (Lifhsin et al., 2021; Slight et al., 2013) as well as the role that narrative identity serves in related concepts such as generativity (McAdams, 1993). However, human behavior is not limited to proximate causes for behavior, but also consists of ultimate causes, based on evolutionary factors (Daly & Wilson, 1983; Tinbergen, 1963; Zietsch et al., 2020). Prior to civilization, the acquisition of both sophisticated social cognition and language made reputation in social groups a priority (Suzuki & Akiyama, 2005).

The ability to gossip (Dunbar, 1996) ensured that one's behavior, both positive and negative, could be disseminated amongst fellow ingroup members, and impact the way one

was perceived by one's tribe. Given that research has demonstrated the importance of "social capital" in public interactions (Ferrin et al., 2008; Quin et al., 2011), as well as trustworthiness in successful mating (Valentine et al., 2019), knowledge of negative behaviors may have proven costly, and adversely impacted one's social status and mating success.

If legacy is the continuation of one's reputation after death, it stands to reason that the same adaptive benefits that apply to avoiding a negative legacy while alive may also apply to one's post-mortem reputation as well. Specifically, leaving a negative legacy may have detrimental effects on the social capital and mating success of one's progeny. In Studies 8, 9, and 10 (Chapter 6), I tested the effect that a negative legacy has on people's descendants. In Study 8, participants expressed less interest in dating targets whose ancestors had committed more (relative to less) immoral crimes, and in particular crimes that cause significant harm to a person (child abuse, rape, etc.) and sexually taboo crimes (incest and bestiality). Studies 9 and 10 expanded on this investigation by comparing participants' interest in dating someone whose father or adoptive father committed a highly immoral crime compared to someone who had no history of criminal activity in their family background. The findings for both studies indicated participants were less likely to date the targets whose fathers were guilty of rape. This suggests that negative posthumous reputations may have negative effects on descendants, precisely regarding dating and mate procurement.

Altogether, the present research has provided multiple contributions to the study of legacy desires and motivations.

Theoretical Implications & Contributions

I have argued throughout this thesis that there are multiple explanations for why people are motivated to create a post-mortem legacy, and multiple psychological factors that influence these motivations. I have found that in addition to a desire to be remembered after death through a positive reputation, or to be remembered on a larger scale by gaining immortality through one's creative activities, people also seek legacies for the benefit of their family members, to contribute to their community, and to ensure that their values are preserved in future generations. These motivations may vary from person to person and are not mutually exclusive.

One can also ask why these motivations seem worthy of pursuit, the question of what evolutionary function they may have served. Although the current thesis only scratches the surface of this question, the results do suggest that, even in a very crude, hypothetical scenario, individuals' intuitions are that potential mates with dubious family histories should be avoided. Thus, early ancestors who pondered over and made efforts toward ensuring a positive reputation and avoiding a negative reputation after their death may have provided their offspring and family with social and evolutionary benefits, including a perception of belonging to a trustworthy family with positive values (and/or potentially avoiding heritable personality and behavioral traits that negatively affect inclusive fitness). Indeed, one of the reasons ingroup cooperation is effective is due to the network of reputation-based trust built on reciprocity (Yamagishi & Mifune, 2008).

Furthermore, the cumulative evolution of civilization through cultural transmission, which consists of the accumulation of valuable information through trial and error and

successfully propagating such information to descendants, was fundamental to the success of the human species (Mace & Jordan, 2011; Tomasello, 2003). In addition to trust through cooperation, passing down valuable information that benefited one's culture over time would have been another way to establish one's descendants as belonging to a respected and useful family.

Additionally, in the present thesis I was interested in examining how *cognitive* factors may contribute to legacy pursuits, in particular the role of simulation constraints (Bering, 2002). That is, it may be that individuals simply struggle to imagine a postmortem future without conscious awareness, creating a sense that they might appreciate their own legacies even after their death. While my research did find evidence that belief in an afterlife was associated with a stronger desire for legacy, it did not provide evidence that such beliefs are the cause of legacy desires, although there are reasons to believe that the reported experiment did not provide a definitive test. In particular, it was not clear whether the experimental manipulation successfully shifted participants' afterlife beliefs, perhaps unsurprisingly in retrospect, given how rigid supernatural beliefs can be (Heiser, 2005). While simulation constraints may play no role in legacy desires, future research is still needed to sufficiently explore this possibility before dismissing it entirely.

Simulation constraints are not the only way that cognitive mechanisms might influence legacy motivations. As humans' cognitive hardware evolved, the ability to ascertain the inevitability of one's death would potentially cause concern over one's impermanence and ultimate insignificance (Greenberg et al., 1986; Greenberg et al., 1997). As culture became more complex, humans may have utilized the ingroup ideologies,

customs, and stories produced by culture for immortality purposes as a coping mechanism to assuage the anxieties produced by advanced cognition. While a belief in the continuity of consciousness after death may have been due to instincts arising from cognitive factors (Bering, 2002, 2006), it is possible that as culture constructed stories, norms, and institutions built on these instincts, humans utilized these cultural assets as a means of coping with certain existential concerns. Indeed, TMT theorists postulate such a complementary interpretation regarding evolutionary explanations underlying human cognition and behavior, and the practical benefit these evolved factors may have played in helping humans cope with existential concerns in the process (Pyszczynski, 2019).

These cultural factors, such as the ability to be remembered through one's contribution to their group/community, creative accomplishments, and cultural values may have provided a means of creating a positive reputation capable of outliving the self (Becker, 1973; Lifton & Olson, 1964). This ability to attain a symbolic form of immortality may have been helpful in buffering existential anxiety, as empirical research suggests (Slight et al., 2013). Altogether, legacy desires based on ultimate evolutionary factors to leave a positive reputation, would be bolstered by the proximate opportunity to also attain symbolic immortality, and provide a strong incentive for some individuals to leave a legacy.

These existential concerns are consistent with the notion of narrative identity. Indeed, one of the main claims of TMT theorists is that one of the psychological functions of self-esteem is to mollify the existential concerns that one will die, by constructing the idea that one is a valued contributor to a permanent culture (Greenberg et al., 1986;

Harmon-Jones et al., 1997). Previous research suggests a relationship between a belief that one will attain symbolic immortality and self-esteem (Lifshin, et al. 2021), and between posthumous self-verification (being remembered in a way that is consistent with who one really is as opposed to an inflated sense of self) and self-esteem, generativity, and meaning in life (Heintzelman et al., 2015). McAdams (1993, 2014; McAdams et al., 1998) has argued that narrative identity plays an important role throughout the lifespan in the development of one's self-concept and a meaningful value system that makes sense of one's life and goals.

Similarly, Erikson (1968) noted that after an adult reaches a certain point in their life, they were more likely to believe "I am what survives me" (p. 141). A potential explanation for this relationship between symbolic immortality and self-esteem may be that acquiring symbolic immortality is a satisfying and fulfilling contribution to one's life narrative, which further strengthens one's self esteem and belief that one is a valuable individual in the world, rather than someone who will be forgotten after death. As humans construct a life story and narrative to connect a plethora of scattered and disconnected life events, make sense of them, and form an identity in the process (McAdams, 1998), they may wish for a suitable "end" to their story, in which they and their achievements are remembered positively into the future.

Lastly, the present thesis found no relationship between age and desire for legacy. This is a surprising finding given previous work suggesting legacy desires may become more important as one grows older (Zacher et al., 2011), and the similar findings concerning age and concepts related to legacy, such as generativity (McAdams, et al.,

1993). This lack of a relationship between age and legacy desires in the present thesis suggests that goals for leaving a legacy are not confined to a specific age and are capable of manifesting themselves within any given point in during one's lifespan.

Applications

The psychology of legacy desires is not only of theoretical interest, but also has the potential to inform various applied problems, in particular those that require cross-generational cooperation. For example, one of the primary threats to humanity is climate change and ecological collapse (Poushter & Huang, 2019). These problems, the vast majority of scientists agree (Oreskes, 2018), are a result of humanity's own behavior, and particularly our fossil fuel emissions, which have continued largely unabated despite the evidence showing their negative effects on the planet.

The ability to strategically tackle the problem of climate change may be partly due to what Kydland and Prescott (1997) termed *time inconsistency*, the notion that optimal choices in the present may be at odds with optimal choices in the future. With regard to climate change, future generations may require substantial sacrifice from reluctant present ones. Wade-Benzoni (2019) makes a similar point, naming "psychological distance" as an obstacle to combatting future problems. In everyday life, it can be difficult for the average person to realize the significant impact their present behaviors have on the environment, while simultaneously failing to accurately comprehend the impact such gradual damage to the environment has on future generations that will inhabit the world when the present generations are long gone.

In this case, particular legacy motivations may be utilized to motivate people in the present day to engage in inter-generational thinking by considering how their actions will affect the world people will inhabit in the future (Frumkin, et al., 2012; Vandenbergh & Raimi, 2015). Specifically, in one study, participants were asked to imagine how having their behaviors related to climate change known to various groups of people (people they knew, strangers, children, grand-children, related future generations, and un-related future generations) would change the groups' opinions of them. They were also asked how likely they would be to increase their climate-related behavior if their actions were made known to these same groups. The results showed that the groups who most motivated behavioral mitigation were children and grandchildren, with strangers and related future generations following closely behind. These results demonstrate the effect future reputation can have on motivating climate change behaviors.

Given the results that my research provides showing that over half of people tend to want to leave a legacy, and nearly half of people consider legacy such a priority that they claim to prefer a quality legacy over a quality life, legacy may prove to be a valuable incentive for people to consider how their behaviors will influence, and be perceived by future generations. In particular, participants who are motivated by the desire to be remembered well by their future family (children, grandchildren, great-grandchildren, etc.) may be more likely to be inspired toward behavior change that benefits the climate when made aware of how their reputation would be assessed by these future generations. Those who also tend to place a high priority on having a legacy that ensures the continuation of their values, may be motivated to ensure that their values reflect principles that will be

embraced and admired by future generations dealing with the issues of climate change in the future.

Another application of the present thesis is the potential benefits that the various motivations discovered in the survey in Chapter 3 and demonstrated in the LMS have on identifying which factors of legacy may motivate a person. Specifically, charitable organizations seeking generous contributions from potential donors may utilize the appeal of leaving a legacy through one's donation to motivate potential philanthropists to give toward charitable causes. If potential donors place higher value on the social contribution factor of legacy, organizations may focus their selling point on the impact future impact a donor's contribution will have on future generations on one's community. Alternatively, if a potential donor places higher value on the immortality factor of legacy, organizations may provide possible avenues for achieving immortality through one's donation, such as their name on a building or bench.

Limitations

By necessity, any attempt to explore the motivational, cognitive, and evolutionary aspects of legacy is bound to have many limitations. One obvious one is that the current research was conducted online, using participants on Amazon Mechanical Turk (MTurk). While using online participants provides certain benefits, such as a more diverse sample of participants than in lab studies (Chandler et al., 2019), there are some concerns with online research such as a lack of a controlled environment (Kees et al., 2017). However, despite these concerns, multiple studies have investigated and confirmed the validity of MTurk research, showing no difference between online participants compared to in-lab

participants (Jonell et al., 2020) and in validating the quality of data acquired online (Arechar et al., 2018). Additionally, the use of attention checks and data validity questions throughout this thesis served as useful methods to distinguish between reliable and unreliable, ensuring quality responses.

While the use of an online sample, per se, poses minimal threats to validity, the fact that the participants were restricted to one (diverse) cultural group is more significant. Cultures obviously vary in their beliefs about death, and so likely vary in how (or whether) they want to be known afterwards. For example, some societies perceive the dead as gone and belonging to the past (e.g., United States, Western European countries), others believe that the past, present, and future exist together as one and that ancestors still play an active role in society (MacGregor, 2018; Mathijssen, 2018). Cross-cultural differences like these could potentially qualify findings in the research presented in the LMS and include diverse ways of thinking about legacy and posthumous reputation.

Additionally, cross cultural differences between individualist and collectivist cultures regarding the self and the extent to which one's reputation may influence the reputation of one's kin also differ from culture to culture (Triandis, 1989). In collectivist cultures, the negative reputation of a single family member has a higher likelihood of negatively contaminating the family as a while. This cultural difference suggests that a person's legacy will have even stronger effects on their offspring following their death.

In the moral scenarios presented in Chapters 2, 4, and 5, for instance, participants from collectivist cultures may be more likely that those from individualistic cultures to forgo the moral legacy option, given the potential shame it may cause their family if they

suffered an immoral reputation during their lifetime (Stadter, & Jun, 2020). These same cultural differences may also exacerbate the findings in Chapter 6, given that the actions of a family member tend to have more of an impact on the family as a whole in collectivist cultures (Stadter, & Jun, 2020). Other cultural differences may also qualify the findings of my survey in Chapter 3, therefore influencing the LMS and its ability to accurately measure cross-cultural legacy motivations. A critical area for future research, therefore, is to investigate the cross-cultural conceptions of legacy and how cultural differences in the perception of dead agents may play a role in differences in legacy goals and motivations.

Furthermore, there were also limitations in the successful/moral legacy scenarios presented to participants in Chapters 2, 4, and 5. Specifically, while these scenarios do serve the purpose of separating pre-mortem reputation from post-mortem reputation, they are flawed as a means of assessing desire for legacy. A preference for a successful/moral life does not indicate that a person lacks a desire to leave a legacy; only that this person does not prioritize a successful/moral legacy over their lived experiences. Additionally, these scenarios were based on hypothetical scenarios of another person, rather than themselves. Although participants were asked to imagine that they were in Bob's position, they may have preferred the alternative option from which they chose in a real-life context consisting of their own life and legacy.

The limitation of hypothetical situations also applies to the dating studies in Chapter 6, as participants were asked to imagine they had matched with a potential romantic interest on a dating site. It may be the case, that in a real-life context as opposed to a

hypothetical situation, participants may have been more willing to date someone with a negative family background than reported in Studies 8, 9, and 10.

Conclusion

At the outset of this thesis, my initial goals were to acquire a deeper understanding of what is colloquially referred to as legacy, to describe what kinds of legacy desires people have, and to distinguish legacy from related concepts in psychological science.

As mentioned previously, the additions to the study of legacy made by this thesis can be applied, specifically to intergenerational problems currently facing humanity. As a concept that transcends generations through its influence, legacy may prove a useful tool in motivating to take action in the present to preserve the planet and ensure the quality of life for the descendants of those alive today. The LMS may be useful in measuring exactly what kind of legacy motivations are effective at influencing people to behave in a way that is conducive to ecological preservation.

Altogether, while the present work provides some valuable insight into an important yet understudied concept in the psychological literature, it is only a first quantitative investigation in the topic, and still leaves many more questions yet to be explored and answered sufficiently. While this thesis contributes to a scientific understanding of legacy by providing the LMS as a useful tool to assess people's complex legacy desires, further work is needed to uncover the cross-cultural dynamics of the concept, as well as the motivations and psychological factors underlying the desire to be remembered after death.

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Appendix

Ten-Item Personality Inventory-(TIPI)

1= Strongly Disagree, 2= Disagree, 3= Slightly Disagree, 4= Neutral, 5= Slightly Agree, 6= Agree, 7= Strongly Agree

I see myself as:

1. _____ Extraverted, enthusiastic.

2. _____ Critical, quarrelsome.

3. _____ Dependable, self-disciplined.

4. _____ Anxious, easily upset.

5. _____ Open to new experiences, complex.

6. _____ Reserved, quiet.

7. _____ Sympathetic, warm.

8. _____ Disorganized, careless.

9. _____ Calm, emotionally stable.

10. _____ Conventional, uncreative

Death Anxiety Questionnaire (DAQ)

0= (Not at all), 1= (somewhat), 2 (very much)

1. Do you worry about dying?
2. Does it bother you that you may die before you have done everything you wanted to do?
3. Do you worry that you may be very ill for a long time before you die?
4. Does it upset you to think that others may see you suffering when you die?
5. Do you worry that dying may be very painful?
6. Do you worry that the persons most close to you won't be with you when you are dying?
7. Do you worry that you may be alone when you are dying?
8. Does the thought bother you that you might lose control of your mind before death?
9. Do you worry that expenses connected with your dying will be a burden for other people?
10. Does it worry you that your instructions or will about your belongings may not be carried out after you die?

11. Are you afraid that you may be buried before you are really dead?
12. Does the thought of leaving loved ones behind when you die disturb you?
13. Do you worry that those you care about may not remember you after your death?
14. Does the thought worry you that with death you may be gone forever?
15. Are you worried about not knowing what to expect after death?

Lemon Test

Please read the following text:

Imagine you are in a kitchen somewhere.
On a bench is a basket of lemons. You reach out and select a ripe yellow lemon. You feel the weight of the lemon in your hand..., you slide your fingers over the smooth waxy skin... feel the dimpled texture... You lift the lemon to your face and breathe in that lemony smell... and then you slice the lemon open. As the bright yellow flesh is exposed you see the juice run out... a lovely lemony citrus aroma fills the room. You cut a slice and put it in your mouth. You bite down on it .... the juice runs over your tongue... your mouth fills with the taste of lemon juice...

 Please select the option that best describes your reading of the previous text:

Strongly Disagree				Neutral			Strongly Agree
0	1	2	3	4	5	6	7

1. I could vividly imagine the lemon as I read the text.

2. I could vividly imagine the texture of the lemon.

3. I could vividly imagine the color of the lemon.

4. I could vividly imagine the taste of the lemon.

5. I could feel myself salivating as I read the text.

Transportability Scale

When reading for pleasure:

1. I can easily envision the events in the story.
2. I find I can easily lose myself in the story.

3. I find it difficult to tune out activity around me.
4. I can easily envision myself in the events described in a story.
5. I get mentally involved in the story.
    6. I can easily put stories out of my mind after I've finished reading them.
    7. I sometimes feel as if I am part of the story.
    8. I am often impatient to find out how the story ends.
    9. I find that I can easily take the perspective of the character(s) in the story.
    10. I am often emotionally affected by what I've read.
    11. I have vivid images of the characters.
    12. I find myself accepting events that I might have otherwise considered unrealistic.
    13. I find myself thinking what the characters may be thinking.
    14. I find myself thinking of other ways the story could have ended.
    15. My mind often wanders.
    16. I find myself feeling what the characters may feel.
    17. I find that events in the story are relevant to my everyday life.
    18. I often find that reading stories has an impact on the way I see things.
    19. I easily identify with characters in the story.
    20. I have vivid images of the events in the story.

Survey of Belief in an Afterlife

Read each of the following sentences carefully and choose the one that **best** describes your beliefs about life after death:

1. What we think of as the "soul", or conscious personality of a person, ceases permanently when the body dies.
2. After death, the "conscious personality" continues for a while on a different plane and then is reincarnated into a new body on Earth or elsewhere; this reincarnation process occurs over and over again, and may culminate in the individual being absorbed into a Universal Consciousness.
3. The "conscious personality" survives the death of the body; it does not reincarnate into another body, but continues to exist forever; there may (or may not) be a day when the dead rise again from the grave.
4. The "conscious personality" survives the death of the body, and indeed is immortal; it may be reincarnated into a new body, this process occurring over and over again; there may (or may not) be a "Resurrection of the Dead".
5. The "conscious personality" survives the death of the body, but I am completely unsure as to what happens to it after that.
6. I am completely uncertain as to what happens to the "conscious personality" at the death of the physical body.

Supernatural Belief Scale (SBS) – 6

Please indicate whether you <u>currently</u> agree or disagree with the following statement:

1. There exists an all-powerful and all-knowing spiritual being, whom we might call God.
2. There exist spiritual beings, who might be good or evil, such as angels or demons.
3. Every human being has a spirit or soul that is separate from the physical body.
4. There is some kind of life after death.
5. There is a spiritual realm besides the physical one.
6. Supernatural events that have no scientific explanation (e.g. miracles) can and do happen.

Legacy Definition Explanations and Examples

1. Something tangible/intangible that a person is remembered by (Definition based on an object, creative work, product, brand, or idea/belief that a person is remembered for after they are deceased).

Example 1a. "Something that is left behind for others to remember you by."

Example 1b. "A legacy is what you are remembered for after you pass away. It's the impact that you had on the lives during and after your time."

Example 1c. "It is something significant that people remember you by. Achieving a wildly recognized goal, being the best at something popular (sports, music, etc.) or just being a very charitable person who helped a lot of people. It is creating an impact on society so much that people you don't even know remember your life and accomplishments."

2. Money/Inheritance passed on to descendant (Definition based on the inheritance someone leaves behind for their children/family/descendants).

Example 2a. "Property or will left by someone."

Example 2b. "A gift of property, especially personal property, as money, by will a bequest. anything handed down from the past, as from an ancestor or predecessor."

Example 2c. "Material possessions left in a will or transmitted from parents to children."

3. An inter-generational process (Definition based on legacy as a connection between multiple generations; a connection between past, present, and future).

Example 3a. "Something that is carried on."

Example 3b. "A legacy is something that is enjoyed and passed on for generations."

Example 3c. "It's leaving something for the next generation."

4. Other (Answer that did not fit any of the above categories or was incoherent/gibberish).

Example 4a. "I don't know."

Example 4b. "Helping out."

Example 4c. "A perk of having connections or wealth because most ordinary people aren't able to leave legacies because they're not loud enough, pushy enough to get things done the right way as they hope for because others with no talent have all the power and control."

The Pattern Matrix of Factor Loadings for the five factors extracted with Principal Component Analysis.

Item	Loadings
Social Contribution	
1. Contribute to solving social issues.	.759
2. Use my previous experience to help the less fortunate.	.744
3. Make the world a less selfish place.	.736
4. Help underrepresented people.	.731

5. Have a charitable impact on the world.   .713

6. Be remembered as someone who cared for the environment.   .710

7. Have an impact on my society.   .679

8. Save people across the globe from severe issues.   .666

9. Give something back.   .666

10. Give to charity.   .652

11. Do something that will be important for people in the future.   .632

12. Be remembered for contributing to progress in the world.   .629

13. Leave the world a better place than I found it.   .627

14. Be a positive benefit to the world, whether large or small.   .626

15. Be remembered as an advocate for a positive cause.   .625

16. Be an arbiter of change in a world with so much injustice.   .623

17. Be philanthropic.   .617

18. Preserve the earth for future generations.   .610

19. Leave a positive impact on the world.   .610

20. Be excited about improving the next generation.   .586

21. Create different potential futures for the world.   .559

22. Become a philanthropist.   .559

23. Impact people positively.   .534

24. Use my skills and career to help people.   .519

25. Improve the lives of children.   .516

26. Inspire hope in others   .515

27. Help others to avoid being a parasite on the planet.   .484

28. Touch the lives of children.   .434

29. Be kind to people who hurt me, rather than lashing out at them.   .398

30. Have people in the future who pick up where I left off.   .378

31. Inspire others.   .356

32. Pass down useful information that I have learned from my own life.

experiences to the next generation.

Parenting

33. Be remembered by my children for how much I loved them.   .922

34. Raise my children to be responsible.   .904

35. Instill valuable life advice to my children.   .902

36. Help my children succeed in the world.   .900

37. Be remembered as a loving parent who worked hard for their kids.   .890

38. Have a positive reputation amongst my children and my grandchildren.   .880

39. Pass down the things I have to my children. .828

40. Have my values survive through my children and grandchildren. .756

41. Live on through what I taught my children. .739

42. Create a better life for my family and descendants. .680

43. Leave behind a gift for my family. .547

44. Make the most out of my relationship with my family. .532

45. Pass on my talents and skills to my family. .501

46. Be motivated by my family to achieve something. .483

47. Leave something behind for my loved ones. .475

48. Leave a positive reputation so that my family can benefit from it. .435

49. Be remembered for being very kind and generous to my family. .424

50. Pass down things from the past. .323

51. Be remembered as a hard worker. .306

Values

52. Leave a legacy so that my loved ones will never forget about .610

me and will remember me.

53. Pass on the virtues I believe in. .556

54. Pass down my beliefs to the next generation. .550

55. Leave behind my values. .533

56. Be remembered after I die. .515

57. Pass down my values so people have a strong foundation on .514

which to build their lives.

58. Serve as a moral example to future generations. .508

59. Be remembered for my values. .498

60. Be remembered by a community of people who carry on the .497

values and beliefs that I taught.

61. Leave a legacy so that part of me never truly dies. .475

62. Leave something behind that made my life "matter". .437

63. Inspire people spiritually. .395

64. Stick out in this immoral world. .359

Positive Reputation

65. Be remembered positively. -.648

66. Be remembered as a loving friend. -.615

67. Live a life filled with meaning and purpose. -.538

68. Leave a legacy that is good and positive. -.581

69. Be remembered for being honest. -.542

70. Be remembered for dealing with people honestly and ethically.   -.541

71. Be remembered as a good person by my family.   .508

72. Be remembered for staying true to what I believed.   .311

73. Follow in my parents' footsteps.   .387

74. Be remembered for the good things I've done for others.   .340

Immortality

75. Be remembered through my creative projects.   .734

76. Push the boundaries in my field.   .718

77. Be the first person to accomplish some great task.   .717

78. Be remembered as a great icon/figure.   .679

79. Inspire people through my creations.   .662

80. Contribute to the advancement of my field.   .657

81. Be remembered for what I created.   .655

82. Make lots of money.   .653

83. Be the first person in my family to accomplish something.   .643

84. Inspire people in my area of expertise.   .626

85. Be successful in my career.   .582

86. Create something that will be enjoyed by the general public after my death.   .579

87. Be honored by others.   .576

88. Have benefits that come with leaving a great legacy.   .574

89. Be remembered for having smart ideas that helped the world.   .573

90. Be remembered for my uniqueness.   .550

91. Create something that people enjoy.   .530

92. Accomplish my goals to show others that it can be done.   .477

93. Make accomplishments in my life inspired by historical figures. .471

94. Be remembered in my community.   .469

95. Be cherished for what I did in my life.   .393

Loyola Generativity Scale

1. I try to pass along the knowledge I have gained through my experiences.
2. I do not feel that other people need me.
3. I think I would like the work of a teacher.
4. I feel as though I have made a difference to many people.
5. I do not volunteer to work for a charity.
6. I have made and created things that have had an impact on other people.
7. I try to be creative in most things that I do.
8. I think that I will be remembered for a long time after I die.
9. I believe that society cannot be responsible for providing food and shelter for all homeless people.
10. Others would say that I have made unique contributions to society.
11. If I were unable to have children of my own, I would like to adopt children.
12. I have important skills that I try to teach others.
13. I feel that I have done nothing that will survive after I die.
14. In general, my actions do not have a positive effect on other people.
15. I feel as though I have done nothing of worth to contribute to others.

16. I have made many commitments to many different kinds of people, groups, and activities in my life.
17. Other people say that I am a very productive person.
18. I have a responsibility to improve the neighborhood in which I live.
19. People come to me for advice.
20. I feel as though my contributions will exist after I die.

Social Generativity Scale

1. I carry out activities in order to ensure a better world for future generations.
2. I have a personal responsibility to improve the area in which I live.
3. I give up part of my daily comforts to foster the development of the next generations.
4. I think that I am responsible for ensuring a state of well-being for future generations.
5. I commit myself to do things that will survive even after I die.
6. I help people to improve themselves.

Gen-Parental Scale

It was my desire that:

1. I would be a positive role model for my child/children regarding marriage and relationships.
2. My child/children would have character similar to mine.
3. I would read and tell stories to my child/children that have important meanings to me.
4. I would prepare my child/children for having their own family.
5. I would have my own biological child/children.
6. I would be a role model of how to maintain relationships with other relatives (aunts, uncles, grandparents, etc.).
7. I would support my child's/children's career decisions.
8. The continuity of my family would be ensured through further descendants (grandchildren, great-grand-children, etc.).
9. I would support my child/children in their recreational activities (sports, dancing, musical instruments, etc.).
10. I would pass on my experiences to my child/children.
11. My child/children would look like me physically.
12. I would support my child/children by teaching them how to build and maintain friendships (share, don't hit, be nice, etc.).

13. I would pass on certain values to my child/children.
14. I would advise my child/children on having successful relationships.
15. I would be a support for my child/children for dealing with the expectations of life (school, training, and future work).
16. My child would choose a career/profession similar to mine.
17. I would pay attention to who my child/children were friends with (who I approve of).
18. I would provide my child/children with a family identity.
19. I would be a role model for my child/children on how to deal with work.

Afterlife Affirmation/Disconfirmation "Scientific" Articles

Afterlife Affirmation Essay

"People who have Near-Death Experiences (also known as "NDEs") often report having had vivid encounters with an afterlife (e.g., having "left their bodies," being in "another realm," etc.). Intriguingly, recent research (Barkowski, 2019) has now revealed that NDEs cannot simply be explained in terms of chemical changes in the brain that occur during the dying process. Moreover, the nature of NDEs show striking similarities across cultures, with people who report such experiences reporting the same phenomena despite their society's prevailing beliefs. Together, the scientific consensus is that NDEs reflect an otherworldly reality rather than being just a product of imagination. These findings are strong scientific evidence for the existence of life after death."

Afterlife Disconfirmation Essay

"People who have Near-Death Experiences (also known as "NDEs") often report having had vivid encounters with an afterlife (e.g., having "left their bodies," being in "another realm," etc.). However, recent research (Barkowski, 2019) has now revealed clearly that NDEs can be explained in terms of chemical changes in the brain that occur during the dying process. Moreover, the nature of NDEs show striking differences across cultures, with people who report such experiences having similar "scripts" about the afterlife in line with their society's prevailing beliefs. Together, the scientific consensus is that NDEs are a product of the dying brain, filled in by the person's cultural expectations about what happens after death, rather than a product of an otherworldly reality. These findings suggest that there is no support for the existence of life after death."