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THE EFFECTS OF OPTIMISM ON ANTI-NATALISM

by

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A Thesis

Submitted to the Graduate School,
the College of Education and Human Sciences
and the School of Psychology
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in Partial Fulfillment of the Requirements
for the Degree of Master of Arts

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ABSTRACT

People sometimes hold opinions on others' choices, particularly their reproductive decisions, as these choices are important decisions that impact the lives of multiple people. People can believe that everyone should have children (*pro-natalism*) or that everyone should refrain from having children (*anti-natalism*) or they can hold no position on the reproduction of others. The main justification for anti-natalism is that life contains more suffering than pleasure and that it would be better if new people were not born to experience this suffering. This is why some theorists argue that people reject anti-natalism irrespective of how bad life is because of an optimism bias (Benatar, 2006). I tested this theory by assessing the effects of optimism on people's opinions of and support for anti-natalism. Overall, optimism did not significantly reduce anti-natalism, though optimism specifically about future children did reduce support for anti-natalism. Additionally, nostalgia significantly reduced support for anti-natalism.

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CHAPTER I – THE EFFECTS OF OPTIMISM ON ANTI-NATALISM

Choosing to have children is a life-changing decision for both parent and child, it is also a decision that most people decide to make at some point in their life. While the birthrate has steadily dropped over the past fifty years around the world (The World Bank, 2017), this reduced birthrate does not imply that most people refrain from having children. For example, while voluntary childlessness has greatly increased in the United States, the majority of the population is continuing to reproduce and women in their 40s are now less likely to be childless than they were a decade ago (Livingston, 2015). Around much of the world, people are choosing to have fewer children, but most are continuing to have some.

What beliefs guide people in the decision to reproduce (or not)? Some research suggests that people's beliefs about when they will have children typically closely match when their parents expect them to have children, suggesting that parental socialization influences the parenthood decisions of their children (Starrels & Holms, 2000). Other beliefs have a specifically moral character: It is commonly believed that reproduction is morally obligatory and, as a result, people who willingly choose to not have children are seen as less fulfilled in life than people who have chosen to become parents (Ashburn-Nardo, 2017). People also feel more anger and disgust toward voluntarily childless individuals than they do toward parents, further suggesting that reproduction is seen as a moral imperative that is reason for condemnation when violated (Ashburn-Nardo, 2017).

Likewise, certain groups hold specific views about their group's (or sometimes all of humanity's) reproductive behaviors. For example, some denominations of Christianity, such as Catholicism, believe that it is morally wrong for people to actively take steps to

prevent having children, especially if they are choosing to not have children solely because they do not want or cannot support a child (Burke & Cohen, 2016). The Roman Catholic Church continues to stand against the use of contraception, the-morning-after-pill, sterilization, and abortion (Levada, 2008). Additionally, the Roman Catholic Church sometimes actively works to prevent individuals from forgoing parenthood by forbidding doctors in Catholic hospitals from offering contraception and performing sterilization. More broadly, the Catholic church sometimes attempts to influence governmental policies to restrict the reproductive choices of citizens (Stulberg, Hoffman, Dahlquist, & Freedman, 2014).

Additionally, some governments have been known to push pro-natalist policies in order to increase their birthrate. An extreme example of a pro-natalist country is Romania under the rule of Nicolae Ceausescu. Ceausescu mandated births to increase the country's birthrate by forbidding contraception, sterilization, and abortion, restricting the availability of divorce, taxing unmarried individuals over the age of 25, and instituting mandated monthly physicals for all working women to check for pregnancy and investigate any women who were found to be pregnant and did not soon give birth (Berelson, 1979; David, 1990). Romania's enforced pro-natalist policies had immediate success with an extreme increase in births the year after its inception, but after a year births dropped to near the previous level as people found ways to import contraception from the black market and obtain illegal abortions. More so, the law did not work to institute a stable increase in the number of children parents cared for. Immediately after the law took effect orphanages were overrun by newly abandoned babies, which created an international orphanage crisis as the children grew older and began experiencing

developmental delays from a lack of proper care and affection (David, 1990; The World Bank, 2017).

More recently, as birthrates have continued to fall, some countries have attempted to implement less extreme pro-natalist policies. Many countries have attempted to raise their birthrate by guaranteeing and subsidizing paid parental leave and providing bonuses and tax credits to people who have children (United Nations, 2017).

This paper attempts to explore the moral foundation of beliefs about reproductive ethics. The aims of this paper are to 1) introduce the philosophical topic of anti-natalism, the countervailing view that reproduction is immoral, 2) discuss optimism as it relates to anti-natalism, 3) discuss nostalgia as a possible contrast to optimism, and 4) report a study examining the effects of optimism and nostalgia manipulations on individuals' thoughts about anti-natalism.

1.1 Anti-Natalism

The philosophical view that argues against human reproduction is anti-natalism. Anti-natalism is the view that it is morally wrong for any person to reproduce. According to anti-natalist thought, all people should refrain from having children in order to prevent the potential child from suffering or to prevent the potential child from causing others to suffer (Benatar, 1997; 2006). In the next sections, I introduce philosophical views on anti-natalism and discuss their potential for research in psychology.

1.1.1 Historical Background

Though having become popularized in philosophy only recently, the main historical voice for anti-natalism was 19th-century philosopher Arthur Schopenhauer (1851). Schopenhauer (1851) thought that life was filled with misery and that humans

were not only sentenced to eventual death, but also to all of the many miseries that life contains. According to Schopenhauer (1851) people typically have children because for many it is a natural consequence of sex, instead of a rational choice made without any influence of a person's libido: If people were thinking completely rationally, free from any influence of their libido, they would choose to forgo having children in order to prevent those children from being born, thus being forced to experience all of life's suffering.

1.1.2 Contemporary Anti-Natalism

More recently anti-natalism has been popularized by David Benatar (1997; 2006; 2015; 2017). The main justification given by Benatar (1997; 2006) for anti-natalism is the asymmetry between the good things in life and the bad. Specifically, he argues that people experience more suffering than pleasure in life. Many people are forced to endure extremely bad lives that are filled with disease, disability, starvation, and poverty (2006; 2017). And even middle-class individuals who seemingly have good lives must experience life's monotony and eventual death. Benatar (2006; 2017) compared the life of an average person to sort of a hamster on a wheel: In order to be relatively comfortable in life, people must do a never ending list of things that they might otherwise not want to do, like cook, clean, bathe, care for parents and other family members, go to school, work at a job, and commute in traffic. Additionally, everyone eventually dies. Many people experience painful deaths that are filled with intense suffering and a steady decline in health, though death is bad even for those who do not experience a painful death. Once people are brought into existence by being born, they usually have an interest in continuing to exist; People usually have commitments and goals they want to accomplish

before their death and an ingrained fear of death. Death is bad because it goes against people's interest in continuing to exist and prevents them from achieving the goals they have for their life (Benatar, 2006).

Benatar (2006) argues that the only way to prevent people from experiencing all of this suffering and monotony is by them never being brought into existence. To Benatar (2006), it is a good thing for people to miss out on all of the guaranteed misery that life contains by not being born, this is because all suffering can be prevented by never being born: Someone who is never brought into existence cannot suffer. In contrast, it is not bad for people to miss out on the good things that life might contain for them by not being born, as only existing people can be deprived of potential good things. Benatar (2006) concludes that people should refrain from having children in order to prevent those future children from suffering.

Another anti-natalist position is *misanthropic anti-natalism*, which is the view that people should not have children because those children will cause suffering to existing people (Benatar, 2015). Benatar has recently offered support for this misanthropic view, though he states that this is only a conditional opposition to having children and is contingent on other factors, such as the impending threat of overpopulation or climate change (2015; 2019). If the threat of overpopulation or climate change were resolved, the people who support this position would no longer have a reason to be against people having children. This contrasts the *altruistic* form of anti-natalism described above in which people oppose having children in order to prevent children from suffering from the inevitable misery of existence.

In contrast to Schopenhauer's (1851) view that people continue to have children as a consequence of sexual activity without much forethought for the potential child, one of Benatar's (2006) main arguments is that people continue to have children because of an innate bias toward optimism. Benatar (2006) says that people largely see their lives as being better than they actually are and expect their children's lives to be similarly good, so they view being born as a good thing. Without an innate optimism bias, people might be less likely to reproduce (Benatar, 2006).

1.2 Optimism

Optimists are people who expect future events to turn out positively. Dispositional optimism is measured in terms of outcome expectancies: To be high in optimism means that a person has a positive view of their expected future life outcomes (Scheier & Carver, 1985). Individuals high in optimism do not always hold this view for good reasons; sometimes individuals are overly optimistic, and their future does not turn out as positively as they expected it would. This brings us to optimism bias, which will be discussed in detail next.

1.2.1 Optimism Bias

Research is largely in agreement with Benatar's supposition that people are biased toward optimism. The *optimism bias* (Sharot, 2011) is the commonly held belief that someone's future will be better than it is actually likely to be. An example of this is the *planning fallacy*, which says that people have a tendency to be overly optimistic about how little time it will take them to complete tasks (Buehler, Griffin, & Ross, 2002). Additionally, people have a tendency to overestimate how likely they are to remain in good health into old age and how long they will live, while they have a tendency to

underestimate how likely they are to experience bad events, like divorce (Sharot, Riccardi, Raio, & Phelps, 2007; Sharot, 2011).

This optimism bias might provide some positive benefits for the individual. A small bias toward optimism can encourage individuals to achieve goals that would be advantageous if achieved, even when success at this goal is unlikely (Sharot et al., 2007). Also, higher levels of optimism promote positive physical and mental well-being (Sharot et al., 2007). Haselton & Nettle (2006) reasoned that it is better for people to have a modest optimism bias, as opposed to seeing life realistically or holding a more pessimistic view on life, as long as the cost of a false alarm for a positive event is low in comparison to a false alarm for a negative event.

On the whole, research suggests that individuals benefit from seeing life more optimistically than it actually is. However, Benatar (2006) argues that an optimism bias might only be beneficial to the optimist, and instead harmful to their children who will be condemned to existence because of this bias.

1.2.2 Manipulating Optimism

Optimism is an individual difference in personality: some people are dispositionally higher in optimism, while others are lower (Scheier & Carver, 1985). Accordingly, some individuals experience more or less of an optimism bias (Sharot, Riccardi, Raio, & Phelps, 2007; Sharot, 2011).

Although optimism varies among individuals, it is not a stable personality trait. For example, optimism increases throughout early and middle adulthood as people succeed in their life goals before their amount of optimism plateaus somewhere around 55 to 70 years of age (Chopik, Kim, & Smith, 2015; Schwaba, Robins, Sanghavi, &

Bleidorn, 2019). The thought with this research is that as most adults successfully achieve life goals like getting married, having children, receiving a degree, and becoming a part of the workforce, they think that they will continue to experience positive events in the future. This changes later in life as people achieve most of these goals and retire, therefore having less to look forward to in their future (Schwaba et al., 2019).

Can we determine if optimism causes individuals to reject anti-natalism, as Benatar proposes? To examine if general optimism causes people to reject anti-natalism, I employed an experimental design drawing on past research demonstrating that optimism can be manipulated. Past research has changed optimism in several ways. The most popular manipulation of optimism, the Best Possible Self (BPS) prime, was developed by King (2001) and later adapted by Peters, Flink, Boersma, & Linton (2010). In the King (2001) manipulation, participants were given a positive writing prompt about their future each day for four days and were asked to spend 20 minutes writing about the topic each time. In the adapted manipulation used by Peters et al. (2010), in a single day, participants were given a positive essay topic about their future and were asked to spend 15 minutes writing about it and then 5 minutes imagining the story that they had just written about their future. Both methods were found to effectively manipulate optimism.

Fosnaugh, Geers, & Wellman (2009) argued that shorter optimism manipulations should be developed, they sought to develop a shorter manipulation that would effectively manipulate optimism, they developed two methods that had similarly positive results. Fosnaugh et al. (2009) gave participants a future-thinking manipulation where participants were asked to think of positive future life events in a questionnaire that was aimed at undergraduates, the questions were based on a questionnaire developed by

Weinstein (1980). Fosnaugh et al, (2009) gave another set of participants a 15-item scrambled-sentence test with 11 words having to do with optimism. This second manipulation was later used by Bosch-Meevissen, Peters, & Alberts (2014). The two optimism manipulations developed by Fosnaugh and colleagues (2009) successfully primed optimism. This success of shorter optimism manipulations suggests that optimism can be manipulated in multiple manners, including using shorter writing tasks.

1.3 Nostalgia

To determine the unique impact of optimism on moral views of reproduction, I compared its effects to a similarly positive view on time. In contrast to optimism, nostalgia is defined as wanting to return to some positive event in a person's past (Sedikides, Wildschut, Arndt, & Routledge, 2008; Baldwin, Biernat, & Landau, 2015). In the past nostalgia was thought to negatively affect individuals and cause clinical symptoms, such as depression, because nostalgia was thought to mean that a person was homesick for some time in the past (Sedikides et al., 2008). More recently, nostalgia has been found to provide individuals with a sense of meaning in life and increased self-esteem and positive affect (Sedikides et al., 2008; Cheung, Wildschut, Sedikides, Hepper, Arndt, & Vingerhoets, 2013). Additionally, nostalgia increases individuals' amount of optimism: This is thought to be because both nostalgia and optimism are related to increased self-esteem (Cheung et al., 2013).

1.3.1 Nostalgia Priming

In order to see if positive thoughts of the past have different implications for anti-natalism than positive thoughts of the future, nostalgia needs to also be manipulated. Nostalgia has been primed by researchers in several ways. Some researchers (Cheung et

al., 2013; Baldwin, Biernat, & Landau, 2015) asked participants to think of a nostalgic memory from their past and to write about it in detail for a few minutes or however long the participant felt was sufficient. Cheung et al. (2013) also used music as a way to prime nostalgia. In one study participants were asked to listen to a nostalgic song, and in another study, participants were asked to first name a song that they thought was nostalgic and then later read the lyrics of the song that they had named (Cheung et al., 2013). These past nostalgia manipulations show that nostalgia is manipulatable and can be primed in a number of ways.

CHAPTER II – THE CURRENT STUDY

To date, research has not been published on anti-natalism as a moral position; Nevertheless, I believe it offers considerable potential as a new area of psychology. Accordingly, research has not looked at who holds or rejects anti-natalist positions and why they feel the way they do about anti-natalism. The purpose of the current study was to conduct psychological research on anti-natalism as a moral position. I am particularly interested in the effect of peoples' levels of optimism on positions for or against anti-natalism. As noted above, the personality factor I examined in the current study is optimism. I hypothesized that individuals in the optimism condition would be lower in anti-natalism compared to individuals in the control group and that individuals in the nostalgia condition will be similar to the control group or at least higher in anti-natalism than the optimism group, as nostalgia has been shown to increase optimism (Cheung et al., 2013).

I focused on optimism because of Benatar's (2006) supposition that people continue to have children irrespective of how bad life is because they have an innate bias toward optimism. While not specifically getting at whether individuals' level of optimism is misguided or not this research will look at the effect of state optimism on anti-natalism. Additionally, some currently unpublished correlational data I have collected shows that people higher in optimism are lower in both misanthropic $r = -.16, p = .005$ and altruistic $r = -.20, p < .001$ anti-natalism (Brown & Keefer, in prep). With this current study, I wanted to see if priming people to be more optimistic would further decrease their support for anti-natalism.

In the present study, I tested the hypothesis that optimism motivates individuals to reject anti-natalist positions. In order to test this, I manipulated optimism, nostalgia, or gave participants a neutral/control topic. As noted above, nostalgia allowed me to see if optimism is exclusively important to reduced levels of anti-natalism, or if positive thoughts in general are important to lowered amounts of anti-natalism. Additionally, as nostalgia has been shown to increase optimism (Cheung et al., 2013), it could be that nostalgia also decreases support for anti-natalism (compared to control) by raising optimism. The control group was meant to serve as a baseline for support for anti-natalism. If positive thoughts of the future are exclusively important in palliating people's support for reproduction, then nostalgia priming should either not show a difference from the control or not show as much of a difference as optimism.

As I developed a novel optimism and nostalgia prime for the current study, it is important to remember that priming is not always successful. Primes sometimes do not work as intended for a variety of reasons. For example, primes might not have a direct effect on the participant (Loersch & Payne, 2011). Additionally, priming effects might not be found in all participants and under every circumstance (Cesario, 2014). As such, it could be that my prime might not influence my sample but may be effective with another sample.

In order to assess potential indirect effects of the manipulation on support for anti-natalism, the study included several candidate mediators. These included brief measures of global optimism, optimism about one's future children, and state self-esteem (described below). Exploratory analysis tested whether condition effects on the outcomes may be due to changes in optimism or self-perceptions.

CHAPTER III – METHOD

3.1 Participants

Based on a power analysis using the software G*power, I sought to recruit 144 participants through the online participant pool SONA at the University of Southern Mississippi. My power analysis was based on my plan to test my hypothesis using a 3 x 2 mixed-model ANOVA two-tailed test with a power of .80 and a predicted medium effect size ($f=.25$). I chose to oversample in order to remove any participants who missed one of the two attention checks from analysis. Data was collected from 159 participants, with 141 not failing an attention check and thus being included in the analysis. Of the 141 participants 118 were female, 22 were male, and one did not identify as male, female, or transgender. Participants' age ranged from 18 to 46 with a mean age of 20. The sample was ethnically diverse. 70 identified as white/Caucasian, 56 as black/African American, seven as Latino(a) or Hispanic, three as Asian/Pacific Islander, and five as multiracial. Additionally, most participants wanted children in the future but did not yet have them. Seven participants had children, while 134 did not. And 118 reported desiring them in the future, 15 were unsure if they wanted children, five did not want children, and three had children and did not want anymore. Given the relatively small representation of these categories, we did not use these variables in the analysis but report them for the sake of completeness.

3.2 Materials

3.2.1 Demographics Questionnaire

Participants received a demographics questionnaire asking them their age, sex, religious and ethnic background, if they have children, and the number of children they

want to have in the future. I did not expect to find a difference in sex, age, or ethnic background, but it is standard practice to report these data. I did not expect to have enough variability to find religious differences, though I included religious affiliation for exploratory purposes in case there was enough variability to test for differences. Past data suggest denominational differences in anti-natalism (Brown & Keefer, in prep), but I was unsure if I would find sufficiently large group sizes to detect differences in parental goals or ethical opinions. In the final sample, religious categories were largely weighted toward Baptist, (48% Baptist, 16% Christian other, 11% Catholic, 6% Methodist, 6% non-religious, 5% agnostic, 3% Presbyterian, all other religions <1%). As a result, I decided against testing differences between specific categories.

3.2.2 Priming Material

In order to manipulate optimism and nostalgia, I developed an essay response task based off of the King (2001) optimism manipulation and Cheung and colleagues (2013) nostalgia manipulation. For my study, I developed three essay topics representing optimism (Figure 2), nostalgia (Figure 3), or a neutral control (Figure 1). Participants were randomly assigned to complete one of these prompts. Participants had to spend a minimum of five minutes thinking about the topic and then typing out reflections on a positive future event (optimism), a positive past event (nostalgia), or an average day in their lives (control). I used this novel essay task for each condition in order to standardize the types of manipulations for optimism and nostalgia so that the primes would be comparable and to prevent disparity in the amount of time it would take to complete the primes.

3.2.3 Manipulation Checks

I checked that the manipulations worked as intended by including a manipulation check on both optimism and nostalgia. To perform a manipulation check on the optimism prime, I gave participants the Life Orientation Test-Revised (Figure 4), which is the most commonly used measure of optimism (Scheier, Carver, & Bridges, 1994). To assess nostalgia, I gave participants three previously validated items asking them how nostalgic they felt (Figure 5) (Sedikides, Wildschut, Arndt, Routledge, 2008; Cheung et al., 2013). As optimism and nostalgia have been shown to be related and nostalgia has been shown to increase optimism (Cheung et al., 2013), I gave each group both manipulation checks in randomized order. Reliabilities and descriptive statistics for these and all subsequent scales are presented in Table 2.

3.2.4 Self-Esteem Measure

Because both optimism and nostalgia have been found to be related to positive self-esteem (Cheung et al., 2013), I then measured state self-esteem using the State Self-Esteem Scale (Figure 6) (Heatherton & Polivy, 1991). Composite State Self-Esteem scores were calculated to measure global self-esteem at that present moment. The scale proved to be highly reliable and scores were averaged across all items.

3.2.5 Better Than Average Children Beliefs

In order to examine if feeling that one's children or future children are better than the children or future children of other people participants were asked three questions about how good and successful their children are (or will be) compared to other children (Figure 7). This *ad hoc* measure also provided high reliability and scores were averaged across the items.

3.2.6 Essay Responses

To gauge individuals' feelings on anti-natalism and anti-natalists I developed two essays. One essay is a shortened version of (Benatar, 1997), which argues that it is immoral for humans to reproduce (Figure 8). Another is a shortened version of (Spera, 2005) a paper arguing in support of more parental involvement in education (Figure 9). I have used perceptions of both edited essays in past research to indirectly assess views on anti-natalism (Brown & Keefer, in prep). These two essays were given to participants in random order to measure individuals' feelings on anti-natalism and a parental essay that is not directly pro-natalist. For both essays, participants were asked how friendly, responsible, ethical, kind, and fulfilled in life they felt the author was (Figure 10). Participants were also asked to assign a grade for the essay out of 100 (Figure 11). Participants were asked to both answer questions about the authors of the essays they received and grade the essays in order to gauge their feelings on the essays and on the authors of the essays. Another reason to include the essays in the study was to compare individuals' ratings on the essays to their responses to the anti-natalism scale that is to follow. As the anti-natalism scale is a relatively new scale that has currently been used in only two studies (Brown & Keefer, in prep), the use of the essays helps to further validate the scale. If the scale is measuring anti-natalism, then individuals' ratings on the scale should closely match how negatively or positively individuals feel about the edited version of Benatar's original article on anti-natalism (1997).

3.2.7 Anti-Natalism Scale

In the study, I measured people's level of anti-natalism using the scale. I created measuring individuals' support for anti-natalism (Brown & Keefer, in prep). The scale

measures anti-natalism in general (Figure 12), altruistic anti-natalism (Figure 13), and misanthropic anti-natalism (Figure 14). All three subscales yielded extremely high reliabilities and scores were averaged for each.

3.3 Procedure

Participants were recruited through SONA, they then set up a time to take the study in lab, once they came into the lab they were given an informed consent statement and asked to read over and sign it if they chose to participate. Consenting participants completed the study on a lab computer. They filled out the demographics questionnaire, were randomly assigned to one of the three conditions (optimism vs. nostalgia vs. control). Next, they took the two manipulation checks in randomized order to confirm that my manipulations worked as planned, then the state self-esteem and child perception measures. Then they were given two essays in randomized order and asked to rate and grade the authors. Finally, they completed the anti-natalism scale and debriefing.

3.4 Analysis

I used a 3 (between-subjects: optimism vs. nostalgia vs. control) x 2 (repeated measure: anti-natalism vs. control) mixed-model ANOVA to test for mean level differences between my primes and peoples' opinions of the essays; Scores on the anti-natalism scale dimensions were tested with a series of one-way ANOVAs by prime condition. These ANOVA models were run both as ANOVAs and again as ANCOVAs controlling for baseline variation in self-esteem.

In addition to testing effects on each specific outcome, and assuming sufficient overlap in essay ratings and scale scores, I analyzed an omnibus anti-natalism score taken

by averaging participants' (standardized) ratings on the essays, grading of the essays, and scores on the anti-natalism scale in order to look at a composite anti-natalism average.

The multifaceted scale measuring anti-natalism also allowed for exploratory analysis of potential boundary conditions for optimism effects; For instance, it might have been that optimism decreased altruistic, but not misanthropic anti-natalism.

CHAPTER IV – RESULTS

4.1 Manipulation Checks

I first ran an ANOVA by priming condition on the manipulation check measures of optimism and nostalgia. Using the Life Orientation Test-Revised to check that my optimism manipulation was successful, the prime did not significantly alter global optimism (see Table 1 for all means and test statistics). In contrast, the nostalgia manipulation significantly increased nostalgia.

4.2 Essay Ratings/Grades

I then submitted essay ratings to a 3 (condition; between-subjects) \times 2 (essay; within-subjects) mixed-model ANOVA which indicated a significant interaction, $F(2, 138) = 3.98, p = .021, \eta_p^2 = .06$. To decompose this interaction, I tested the effects of condition for each essay separately. There was a significant effect on the rating of the anti-natalist article (see Table 1); participants in the nostalgia condition rated the anti-natalism article significantly lower than those in the control condition. The anti-natalism article ratings in the optimism condition were not significantly different from the control condition. Additionally, anti-natalism article ratings did not significantly differ between optimism and nostalgia. As expected, there was not a significant effect on the control essay rating.

To determine whether results were explained by state self-esteem in response to the manipulation, I then submitted essay ratings to a 3 (condition) \times 2 (essay) mixed model ANCOVA controlling for self-esteem. The interaction did not change from the original ANOVA, $F(2, 137) = 3.94, p = .022, \eta_p^2 = .05$. There was no effect of state self-esteem on essay ratings ($p = .48$).

Submitting essay grades to the same 3×2 mixed-model ANOVA returned only a main effect of essay [$F(2, 134) = 148.62, p < .001, \eta_p^2 = .53$], indicating that participants overwhelmingly gave higher scores to the control essay as compared to the anti-natalist essay. The interaction was not significant [$F(2, 134) = 1.91, p = .15$]. There were no main effects of condition on the grades for either essay (Table 1). Nevertheless, pairwise t-tests did indicate that participants in the nostalgia condition graded the anti-natalist essay as worse than participants in the control condition ($p = .04$), matching the pattern we saw in essay ratings (Table 1). As expected, there was not a significant difference in the control essay grading. Controlling for State Self-Esteem did not change the pattern of the interaction between condition and essay type [$F(2, 133) = 1.99, p = .14$] and self-esteem had no effect ($p = .45$).

4.3 Anti-Natalism Scale

One-way ANOVAs on the three scale components (anti-natalism in general, altruistic anti-natalism, and misanthropic anti-natalism) were all non-significant (Table 1).

Correlations between the measures of anti-natalism and our supplemental measures indicated several notable associations (see Table 2). Unsurprisingly, the grading and rating of the anti-natalism essay was found to have a strong positive correlation. The anti-natalism essay rating and responses to the altruistic anti-natalism scale components were significantly positively correlated. General anti-natalism was significantly positively correlated with both misanthropic and altruistic anti-natalism. And misanthropic and altruistic anti-natalism were positively correlated with each other. In summary, the anti-natalism measures showed some degree of overlap, although many

associations (e.g., between essay grades and scale scores) were non-significant.

Nevertheless, I then standardized the anti-natalism variables as planned and looked at the composite anti-natalism score ($\alpha = .63$). The effect of condition on the composite anti-natalism score was not significant, $F(2,137) = 1.15, p = .32$.

4.4 Better-than-Average Children

I then analyzed better-than-average beliefs about future children. There was a main effect of condition on optimism about future children. The differences between both optimism and nostalgia and control were significant, and these two priming conditions did not differ (Table 1).

Although the optimism condition did not have a direct effect on my outcomes, it is possible that it had indirect effects on essay evaluations through these specific optimistic perceptions about future offspring. As noted in Table 2, there was a small negative correlation between perceptions of the superiority of one's future offspring and ratings of the anti-natalist essay ($r = -.21$).

To conduct an exploratory test of these indirect effects, I then examined if positive perceptions of future children might mediate the relationship between condition and anti-natalism scores. The mediation models found weak evidence for a mediated effect of the optimism condition on anti-natalism essay ratings through better than average thoughts about children, indirect effect of optimism: $-.11$; 95% CI with 5000 resamples = $(-.30, .01)$, $p = .052$. There was, however, evidence that the observed effect of nostalgia condition on the essay ratings was at least partially explained by optimism about one's future offspring: indirect effect = $-.12$; 95% CI with 5000 resamples = $(-.31, -.01)$, $p = .046$.

Additionally, these better than average beliefs about future children were negatively related to anti-natalism in general, misanthropic anti-natalism, altruistic anti-natalism, and the anti-natalism article rating. These findings generally support Benatar's thesis that optimism about future offspring in part explains why people are resistant toward anti-natalism.

CHAPTER V – GENERAL DISCUSSION

The goal of this paper was to examine if an optimism manipulation would influence people to reject anti-natalism. Benatar (2006) proposes that one of the main reasons individuals continue to reproduce even though life is filled with suffering is because of an evolutionarily adaptive optimism bias. Prior research supports the idea that people are likely to possess some degree of optimism bias. As such, the goal of this study, while not directly assessing an optimism bias, was to offer a first examination of Benatar's thesis that optimism inoculates individuals from anti-natalism.

To clarify whether any effects of this manipulation were specific to optimism or whether positive thoughts about time in general would influence people to further reject anti-natalism, I also manipulated positive thoughts about the past. As such, I sought to test whether optimism exclusively causes people to reject anti-natalism more or if nostalgia would also cause people to reject anti-natalism.

Interestingly, individuals primed with nostalgia were lower in support for anti-natalism (as measured by essay evaluations) compared to individuals in the optimism or control conditions. It is difficult to say whether the lack of an effect of optimism was due to the weakness of the manipulation; After all, it did not influence scores on my global optimism manipulation check. These data suggest that recalling positive experiences from one's own childhood (my participants were overwhelmingly young adults), may cause people to be more resistant to a moral stance that opposes reproduction.

Nevertheless, both the optimism and nostalgia conditions did increase specific optimism about future offspring. While optimism in general (as assessed by the LOT-R) was not shown to have a direct relationship with most measures of anti-natalism,

individuals higher in optimism about future offspring supported anti-natalism less. This more specific form of optimism partially explained the effects of the nostalgia priming condition on anti-natalism essay ratings.

Additionally, there was marginal ($p = .052$) evidence that the optimism condition did lower ratings of the anti-natalism essay in part through changes in these specific perceptions of future offspring. It is possible that the optimism condition did not show a main effect because this indirect effect was eliminated by other unobserved processes; For example, optimism priming may have increased optimism about future children (thereby lowering support for anti-natalism) but also increased expectations about one's career prospects (increasing support for anti-natalism) or some other unobserved variables. Nevertheless, this indirect effect of optimism condition on the outcome lacked a direct effect and is marginal and should therefore be interpreted cautiously.

5.1 Limitations

A potential limitation for this study is the general lack of support for anti-natalism; For example, average scores of the self-report scales were less than 2 on a 7-point response scale (Table 2). While I did find significant differences in support for anti-natalism on the essay ratings, support for anti-natalism remained low. In general, individuals were not likely to rate the anti-natalism essay positively or support the statements in the anti-natalism scale. Most people eventually reproduce and while it is growing in popularity, anti-natalism remains an unpopular opinion. As such, it is uncertain if a more appropriate anti-natalist sample would have responded differently to the study design.

A related concern is the undergraduate sample. All of the participants for the study were college students around the age of 20. As my sample was young and in the process of pursuing a degree, they might not think much about having children and the ethics of reproduction. Almost the entire sample either wanted children or were undecided and most did not yet have children. Results might be different for an older sample who might be actively thinking of reproducing or have children already.

As noted, the partial reliance on direct self-report may have restricted range somewhat dramatically in the analysis. Given the significant effect of condition on ratings of the anti-natalist essay, the clear implication is that future studies should rely on other more indirect measures of support for (and resistance to) anti-natalist beliefs.

5.2 Future Research

This study offers several possibilities for future research. Future studies might consider different optimism measures and manipulations. As noted, the manipulation check used in this study (the LOT-R, a standard optimism measure) was not affected by the manipulation. This could be because the manipulation was not strong enough to prime participants for optimism, or this could be because the LOT-R is a trait measure of optimism that may not be sensitive to state variation. Past studies have typically used the LOT-R to measure optimism post-manipulation (Fosnaugh et al. 2009; Schwaba et al., 2019). As such, I chose to use the LOT-R as a manipulation check in my study, although perhaps a more appropriate state measure of optimism should be developed to improve this kind of experimental research. Future research should use different manipulations and optimism measures in order to determine the specific effect of optimism priming on anti-natalist beliefs.

Additionally, future studies could look at anti-natalism with a more diverse sample. As most of the sample for the present study was young, childless, and eventually desiring children it is uncertain how older adults or adults with more diverse parental goals would react to anti-natalism. Future research with more parents and childless-by-choice individuals would offer the possibility to run exploratory analyses looking at the potential that parental status and desire for children might influence peoples' support or rejection of anti-natalism. For example, parents and people desiring to become parents would not be expected to support anti-natalism because doing so would be inconsistent with their actions and desires and people are motivated to hold beliefs consistent with their behavior (Matz & Hinsz, 2003; Koestner, Bernieri, & Zuckerman, 1992).

On the same token, future research could examine the effect of optimism manipulation on anti-natalism in a more anti-natalist sample. A more anti-natalist sample would be expected to be higher in support on the anti-natalism scale items compared to the general population, which from this study remained low regardless of condition. Additionally, while a more anti-natalist sample might be higher on some components of the anti-natalism scale, they may show greater sensitivity to different anti-natalism positions. For example, some might be high in altruistic anti-natalism because they support anti-natalism to prevent future people from suffering by being born, others might be high in misanthropic anti-natalism because they want to prevent current people from suffering from the ill effects of new people being born, and others might be high in both because they support multiple justifications for anti-natalism. A more anti-natalist sample should also be much higher in support for anti-natalism on both the essay questions as they should support anti-natalism in general. Also, an anti-natalist sample might be more

resistant to optimism priming than an undergraduate sample as, going along with Benatar's (2006) previously mentioned supposition, they are expected to be less likely to have an optimism bias and be optimistic about their future and the future of potential offspring.

Furthermore, the present study does not directly test the specific possibility that an optimism bias influences rejection of anti-natalism. The present study instead offered a first look at optimism as a potential cause of rejection of anti-natalism. As such, future research should use past optimism bias measures (e.g., Dejoy, 1989; Weinstein, 1980) to measure peoples' tendency toward optimism and their rejection (or support) of anti-natalism. Additionally, future research could manipulate peoples' optimism bias by telling them that their lives or their children's lives will be better than their lives are likely to be on average and then measure their support (or rejection) of anti-natalism. If Benatar's (2006) thesis is correct, then overly optimistic people and people primed for an optimism bias should report less endorsement of anti-natalism even when faced with the potential harsh realities future children will face.

5.3 Conclusion

Building on Benatar's (2006) argument, I tested whether an optimism manipulation would decrease anti-natalism, but this prediction was not directly supported. Instead nostalgia directly reduced anti-natalism, while optimism did not. Additionally, though overall optimism was not linked to reduced support for anti-natalism, optimism about future children specifically was linked to less support for anti-natalism. These findings suggest that though optimism in general might not inoculate people from supporting anti-natalism, more focused optimism about one's children might

lead to a rejection of anti-natalism. There was evidence that both optimism and nostalgia priming increased this specific optimism about future children and, indirectly, lowered support for anti-natalism. The finding that people who are optimistic about future children are lower in anti-natalism corresponds to Benatar's supposition that thinking future children will have a good life leads people to reject anti-natalism.

APPENDIX A - Tables

Table 1. Condition

	Optimism	Nostalgia	Control	
Optimism	3.42 (.66) ^a	3.48 (.72) ^a	3.60 (.77) ^a	$F(2,138) = .82, p = .44, \eta_p^2 = .01$
Nostalgia	3.27 (1.79) ^a	5.16 (1.99) ^b	3.16 (1.55) ^a	$F(2,138) = 18.31, p < .001, \eta_p^2 = .21$
State SE	3.3 (.72) ^a	3.5 (.74) ^a	3.6 (.69) ^a	$F(2,138) = 2.12, p = .12, \eta_p^2 = .03$
BTA Children	5.23 (.93) ^a	5.27 (1.03) ^a	4.78 (1.09) ^b	$F(2,138) = 3.32, p = .039, \eta_p^2 = .05$
AN Essay	2.73 (1.27) ^a	2.32 (1.20) ^b	3.05 (1.45) ^a	$F(2, 138) = 3.57, p = .03, \eta_p^2 = .05$
AN Grade	78.23 (12.86) ^{ab}	75.22 (13.76) ^b	80.84 (12.55) ^a	$F(2, 134) = 2.06, p = .13, \eta_p^2 = .03$
Control Essay	5.72 (.85) ^a	5.93 (.79) ^a	5.75 (.86) ^a	$F(2, 138) = .85, p = .43, \eta_p^2 = .01$
Control Grade	92.47 (5.85) ^a	92.27 (6.67) ^a	92.35 (5.52) ^a	$F(2,137) = .014, p = .99, \eta_p^2 < .001$
General AN	1.28 (.67) ^a	1.37 (.74) ^a	1.22 (.49) ^a	$F(2,138) = .68, p = .51, \eta_p^2 = .01$
Altruistic AN	1.82 (.99) ^a	1.94 (.86) ^a	2.18 (1.08) ^a	$F(2,138) = 1.54, p = .22, \eta_p^2 = .02$
Misanthropic AN	2.03 (1.24) ^a	1.85 (.94) ^a	1.88 (1.00) ^a	$F(2,138) = .42, p = .66, \eta_p^2 = .006$

Note. Means with different superscripts differ at $p < .05$.

Means and standard deviations of all variables by condition

Table 2. Observed correlations between all variables.

	1	2	3	4	5	6	7	8	9	10	11
1. Optimism	-	-.20*	.47***	.14†	-0.1	-0.08	0.1	0.12	-0.04	-.15†	-0.1
2. Nostalgia		-	-.27**	0.007	-0.07	-0.01	0.08	0.07	.15†	-0.04	-0.02
3. State SE			-	0.08	-0.004	-0.04	-0.08	0.04	-0.009	-0.07	-0.04
4. BTA Children				-	-.21**	-0.11	.21*	.15†	-.21*	-.21*	-.15†
5. AN Essay					-	.54***	-0.05	0.03	0.07	.23**	0.1
6. AN Grade						-	-.15†	0.13	0.01	0.12	0.09
7. Control Essay							-	.49***	-.24**	-0.08	-.27**
8. Control Grade								-	-.27**	-0.12	-0.08
9. General AN									-	.37***	.55***
10. Altruistic AN										-	.42***
11. Misanthropic AN											-
α	0.78	0.98	0.92	0.84	0.89	NA	0.85	NA	0.82	0.69	0.83
M (SD)	3.50 (.72)	3.83 (2.00)	3.46 (.72)	5.09 (1.04)	2.71 (1.34)	78.08 (13.17)	5.80 (.84)	92.36 (5.98)	1.29 (.64)	1.98 (.99)	1.92 (1.07)

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

APPENDIX B – Figures

For the next few minutes we would like you to write about an average day for you, tell us about what you do on a typical day. Write about the experience in as much detail as you can. Really get into it and freely express any and all emotions or thoughts that you have about this typical day. As you write do not worry about punctuation or grammar just really let go and write as much as you can about your average day.


A large, empty rectangular box with a thin black border, intended for the user to write their response to the prompt above. A small cursor icon is visible in the bottom right corner of the box.

Figure 1: Control Task

For the next few minutes we would like you to write about some happy event that you expect to happen or goal you expect to achieve in your future. Write about the desired experience in as much detail as you can. Really get into it and freely express any and all emotions or thoughts that you have about this good experience in your future. As you write do not worry about punctuation or grammar just really let go and write as much as you can about this future experience.

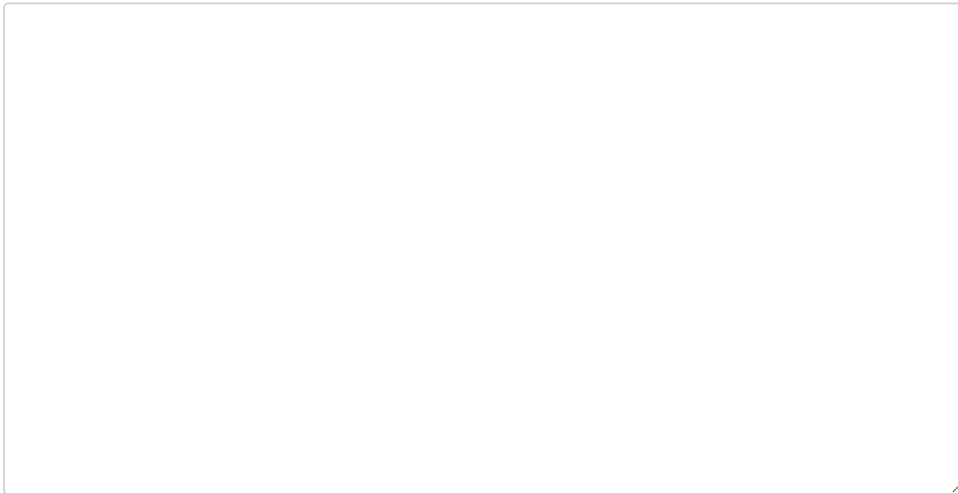
A large, empty rectangular box with a thin black border, intended for the user to write their response to the prompt above. A small cursor icon is visible in the bottom right corner of the box.

Figure 2: Optimism Task

For the next few minutes we would like you to write about some happy event that happened in your past that you would like to relive again if you could. Write about the experience in as much detail as you can. Really get into it and freely express any and all emotions or thoughts that you have about this good experience in your past. As you write do not worry about punctuation or grammar just really let go and write as much as you can about this past experience.

A large, empty rectangular box with a thin black border, intended for the user to write their response to the prompt above. The box is currently blank.

Figure 3: Nostalgia Task

Please be as honest and accurate as you can throughout. Try not to let your response to one statement influence your responses to other statements. There are no "correct" or "incorrect" answers. Answer according to your own feelings, rather than how you think "most people" would answer.

	Strongly Disagree	-	Neutral	-	Strongly Agree
In uncertain times, I usually expect the best.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It's easy for me to relax.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If something can go wrong for me, it will.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I'm always optimistic about my future.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I enjoy my friends a lot.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Strongly Disagree	-	Neutral	-	Strongly Agree
It's important for me to keep busy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I hardly ever expect things to go my way.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I don't get upset too easily.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I rarely count on good things happening to me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overall, I expect more good things to happen to me than bad.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure 4: LOT-R

Now please think carefully and rate how you feel about each of these questions. Keep in mind that nostalgia means a sentimental longing or affection for the past.

	Strongly Disagree	-	-	Neutral	-	-	Strongly Agree
Right now, I am feeling quite nostalgic.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Right now, I am having nostalgic feelings.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel nostalgic at the moment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure 5: Nostalgia Manipulation Check

This is a questionnaire designed to measure what you are thinking at this moment. There is of course, no right answer for any statement. The best answer is what you feel is true of yourself at the moment. Be sure to answer all of the items, even if you are not certain of the best answer. Again, answer these questions as they are true for you **RIGHT NOW**.

	Not at all	A little bit	Somewhat	Very Much	Extremely
I feel confident about my abilities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am worried about whether I am regarded as a success or failure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel satisfied with the way my body looks right now.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel frustrated or rattled about my performance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel that I am having trouble understanding things that I read.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel that others respect and admire me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am dissatisfied with my weight.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Not at all	A little bit	Somewhat	Very Much	Extremely
I feel self-conscious.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel as smart as others.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel displeased with myself.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel good about myself.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel pleased with my appearance right now.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am worried about what other people think of me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel confident that I understand things.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Not at all	A little bit	Somewhat	Very Much	Extremely
I feel inferior to others at this moment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel unattractive.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel concerned about the impression I am making.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel that I have less scholastic ability right now than others.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel like I'm not doing well.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am worried about looking foolish.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure 6: State Self-Esteem Scale

Below please rate your feelings on your children or future children. If you do not want to have children choose neutral.

	Strongly Disagree		Neutral			Strongly Agree	
I think that my children will be smarter than other people's children.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think that my children will be more successful than other people's children.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think that my children will be happier than other people's children.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure 7: Better-Than-Average Children Questions

Please read over the following essay, it is important to pay close attention.

Having children is immoral because bringing someone into existence is not a benefit, but always an overall harm. As a matter of fact, bad things happen to all of us. No life is without hardship. It is easy to think of the millions who live in poverty or of those who live much of their lives with some disability. Some of us are lucky enough to be spared these fates, but most of us nonetheless suffer poor health at some stage during our lives.

Often the suffering is excruciating, even if it is only in our final days. Some are condemned by nature to years of frailty. We all face death. We rarely contemplate the harms that await any newborn child: pain, disappointment, anxiety, grief and ultimately dying. For any given child we cannot predict what form these harms will take or how severe they will be, but we can be sure that at least some of them will occur. None of this befalls people who are never born.

Only those who exist have to suffer. That existence is a harm may be a hard conclusion to swallow. Most people do not regret their existence. Many are happy to have come into being because they enjoy their lives. But these assessments are mistaken. The fact that one enjoys one's life does not make one's existence better than non-existence, because if one had not come into existence there would have been nobody to have missed out. That is why I believe that it is wrong for anybody to create more human life.

Figure 8: Anti-Natalism Essay

Please read over the following essay, it is important to pay close attention.

Interacting and becoming involved with their children's life on a daily basis is a way parents can help teach their children to be effective members of society. With respect to the socialization of school achievement, parental involvement consists of attending parent-teacher conferences, helping their children with homework, volunteering for leadership roles within their children's school, and attending children's extracurricular activities.

Although it may seem small, these everyday behaviors help children see the value of contributing to their community and supporting others. Other involvement practices initiated by parents represent parental efforts to become directly involved with school decisions and activities. For example, parent-initiated involvement includes parents serving on school boards or parent organizations. This teaches children the value of initiative and being more than just a passive observer of their social environment. They also include ways parents get involved with their children's school-related activities within the home, such as helping their children with homework.

As minor as it may seem, working with children to solve difficult math problems or write a paper can help children learn that it is okay to seek help when a problem is too complex. It also directly teaches children the values of communication and cooperation, which will help those children become more effective citizens when they get older. It is important for parents to remain involved in their children's lives in and outside of school so that their children can be socialized properly and can become productive members of society.

Figure 9: Parenting Essay

After reading the previous article, please rate how much you agree or disagree with each statement below.

	Strongly Disagree	-	-	Neutral	-	-	Strongly Agree
How friendly do you think the author of this essay is?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How fulfilled in life do you think the author of this essay is?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How ethical do you think the author of this essay is?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How kind do you think the author of this essay is?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How responsible do you think the author of this essay is?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure 10: Questions for each essay

Using a percentage score (50% to 100%) what grade would you give this essay if you were grading it?

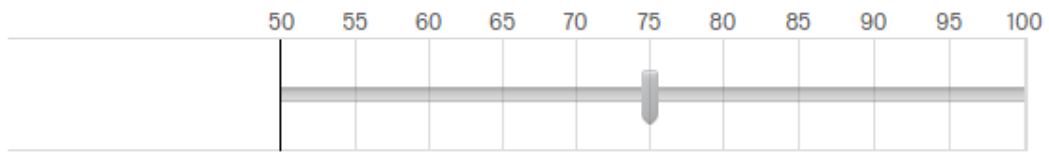


Figure 11: Grading scale for each essay

Please rate how much you agree or disagree with each statement below.

	Strongly Disagree	-	-	Neutral	-	-	Strongly Agree
It is morally wrong to have children.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People should not have children.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People should not bring new humans into existence.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is bad to have children.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I do not think it is morally wrong to have children.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I do not think it is bad to have children.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Please choose strongly agree for this response.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure 12: General Anti-Natalism Scale Questions

Please rate how much you agree or disagree with each statement below.

	Strongly Disagree	-	-	Neutral	-	-	Strongly Agree
People should not have children because those children will eventually suffer.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People should not have children because those children will eventually experience pain.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People should not have children because those children will eventually die.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People should not have children because those children will eventually have a hard life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People should not refrain from having reproducing simply because there is suffering in the world.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Please choose strongly disagree for this response.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People should not refrain from having children simply because their children might suffer.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure 13: Altruistic Anti-Natalism Scale Questions

Please rate how much you agree or disagree with each statement below.

	Strongly Disagree	-	-	Neutral	-	-	Strongly Agree
People should not have children in order to prevent harm to the planet.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People should not have children in order to prevent overpopulation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People should not have children because those children will eventually harm animals.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People should not have children because those children will cause harm to others.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I do not agree that people should not reproduce to prevent harming the planet.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I do not agree that people should not reproduce to prevent harming other people.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure 14: Misanthropic Anti-Natalism Scale Questions

APPENDIX C – IRB Approval Letter

IRB-19-361 - Initial: Sacco Committee Letter - Expedited and Full

irb@usm.edu <irb@usm.edu>

Tue 8/6/2019 11:46 AM

To: Faith Brown <Faith.Brown@usm.edu>; Lucas Keefer <Lucas.Keefer@usm.edu>; Sue Fayard <Sue.Fayard@usm.edu>; Michaela Donohue <Michaela.Donohue@usm.edu>

**Office of
Research Integrity**



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NOTICE OF INSTITUTIONAL REVIEW BOARD ACTION

The project below has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services regulations (45 CFR Part 46), and University Policy to ensure:

- The risks to subjects are minimized and reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered involving risks to subjects must be reported immediately. Problems should be reported to ORI via the Incident template on Cayuse IRB.
- The period of approval is twelve months. An application for renewal must be submitted for projects exceeding twelve months.

PROTOCOL NUMBER: IRB-19-361

PROJECT TITLE: Life Events Questionnaire

SCHOOL/PROGRAM: School of Psychology, Psychology

RESEARCHER(S): Faith Brown, Lucas Keefer

IRB COMMITTEE ACTION: Approved

CATEGORY: Expedited

7. Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

PERIOD OF APPROVAL: August 4, 2019 to August 3, 2020

A handwritten signature in cursive script that reads "Donald Sacco".

Donald Sacco, Ph.D.

Institutional Review Board Chairperson

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