

**Factors that Impact Infidelity Forgiveness**

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### **Abstract**

Each romantic relationship has unique qualities and circumstances. However, there are ways to predict the behaviors that people engage in while in these companionships. Carol Dweck's Mindset theory has many domains that it can be applied to, however in this paper the focus is romance. This paper reviews relevant literature and the completed undergraduate study that examined the connection between the two implicit theories, growth and destiny, and its impact on people's willingness to forgive. In this study infidelity is split into four subtypes: emotional, online/technology, sexual/explicit, and solitary. After replicating the methods of Thompson et al. (2020) with recruited PSYC1000 students and using additional priming techniques, we assessed the similarities and differences between the results of the previous study and the current study. We found that the priming techniques, a short article and reflection questions, were not successful in enforcing either of the implicit theories. These findings were not consistent with Thompson et al. (2020). However, in line with the previous study, women were less likely than men to forgive all subtypes of infidelity. Also, among all participants, the most forgivable subtype was solitary infidelity and the least forgivable was sexual/explicit infidelity.

## **Factors that Impact Infidelity Forgiveness**

### **Overview of Dweck's Mindset Theory**

Dweck (1975) started her research assessing the motivation behind how children behave academically. There were students who failed, and instead of accepting the challenge, they gave up. She focused on students who had learned a sense of helplessness and she wanted to know if changing what they perceived as the cause of their failure would change their behavior from maladaptive to adaptive. Dweck found that by convincing the children that success was deemed by their effort, rather than intelligence, they were more motivated to keep trying (Dweck, 1975). Her research in the years after her dissertation allowed for deeper understanding. As the research progressed, Dweck and Leggett (1988) wanted to understand the goals behind these behaviors even further. The researchers called those who had the adaptive behaviors mastery oriented and those who had maladaptive behaviors helplessness oriented. The researchers found that people with mastery orientations dedicated time to improving their skills after failures because they valued learning. Whereas people with helpless orientations did not want to improve, they would have rather demonstrated an innate talent. They valued their performance. Therefore, when those with helplessness beliefs encountered failure or struggle, they did not attempt to move forward as that would continue the show of inadequacy and would be devastating to self-esteem (Dweck & Leggett, 1988).

### **The Mindsets: Growth and Fixed**

#### ***Terminology***

Carr et al. (2012) explain that implicit theories are ways in which people perceive the characteristics of humans. This affects how they interpret the ability to change in themselves and in other people. Furthermore, Yeager and Dweck (2012) explain that the term implicit theories

can be broken down and explained. The beliefs are implicit due to the subconscious nature of these attributions. The beliefs are theories due to their predictive qualities; they allow the person to make judgements about others and themselves.

For these implicit mindsets, researchers often use two phrases: the growth mindset and the fixed mindset. Those with a growth mindset attribute performance to their effort, which is changeable, whereas those with a fixed mindset attribute performance to ability which is not changeable (Chiu et al., 1997; Dweck & Leggett, 1988). The mindsets show how much control the person believes they have over their success (Hong et al., 1999). The phrase helplessness is directly related to the fixed mindset because those with a fixed mindset develop a feeling of helplessness when they face struggle. The alternate is true as well, persistence goes hand and hand with a growth mindset because those with growth mindsets will persist through struggle (Dweck & Leggett, 1988). Although fixed and growth are the phrases that are commonly used, many researchers use different labels that are more localized to their domain of research, such as sexual growth mindset, cultivation and evaluation mindsets, incremental and entity, and the list goes on. However, although the terms vary, the dynamics stay mostly the same (Cultice et al., 2021; Knee, 1998; Knee et al., 2001).

### ***Implicit Theories of Intelligence***

The following literature that is described is pivotal in understanding how Carol Dweck's mindsets have been manipulated in different populations, such as college students (Aronson et al., 2002; Hong et al., 1999) or children (Blackwell et al., 2007; Good et al., 2003). These studies have shown both temporary (Hong et al., 1999) and long-term (Blackwell et al. 2007) impacts on participants' implicit theories with the use of interventions and experiments. The mindsets engender different perceptions of intellectual ability and therefore different academic responses

(Blackwell et al., 2007; Hong et al., 1999; Paunesku et al., 2015). Furthermore, the use of implicit theories can act as a buffer against disadvantageous factors such as social pressures (Aronson et al., 2002; Good et al., 2003).

In Hong et al. (1999), three studies were enacted to find how implicit theory predicts effort attribution and how that predicts coping style. The first was to assess the different reactions (their perception of effort) to negative feedback from growth and fixed mindsets. The second and third measured which mindset would take action to practice when work was deemed unsatisfactory by a researcher. The participants, college students, were told that their English proficiency and conceptual problem solving were going to be examined. The reading proficiency task was an implicit theory manipulation (faux *Psychology Today* article). To check understanding they were asked to summarize the ideas in the article. The next task was an intelligence test with 12 practice problems, and they were given feedback afterwards. In regard to the feedback, half of the participants were told they scored in 66th percentile. They were then given the option to take a remedial task or unrelated task. They were also asked if they would rather have an easy task or challenging task and what they thought the cause of their score was (effort or ability). In the results, when given unsatisfactory feedback the growth theorists chose to take a remedial task that would help improve their future performance whereas the fixed condition participants did not. However, the fixed condition participants were just as likely to pick the remedial task when they were given a satisfactory score compared to growth. These findings suggest that faux articles are enough to temporarily induce a mindset and that implicit theories impact the behavioral response to failure.

In the Blackwell et al. (2007) study, the research was centered on exploring the long-term impacts of implicit theory interventions on junior high students and whether these interventions

work better than other conditions. The intervention included 8 sessions of 25 minutes. The students participated in one of these once a week. They were expected to read an interesting reading about the brain and the manner in which neurons grow and develop as learning happens. To support the readings the students' completed activities and discussions. For example, in sessions 7 and 8 the students read about the importance of avoiding labels like dumb and how learning makes you smarter. This was followed up by a discussion such as "memory and the brain." The results from the second study demonstrated that the growth mindset intervention led to more motivation in the classroom and subsequently a growth in mathematical achievement. The opposite was demonstrated in the control group. Not only does this study indicate that growth mindset encourages beneficial academic behavior, but that the mindset can be induced for longer periods of time than demonstrated in Hong et al. (1999).

Aronson et al. (2002) focused on using growth mindset as an intervention for the negative effects of stereotype threat on the academic performance of African American college students. African American students face the stereotype that they are intellectually inferior to their white peers which negatively impacts their real-life performance. This phenomenon is referred to as a stereotype threat. The goal of this study was to see if teaching a growth mindset to students would act as a buffer to this phenomenon. The participants were asked to participate in long distance mentoring to young, impoverished students who needed role models. The participants had three 1-hour long lab sessions, each 10 days apart from each other. Those in the malleable condition (growth mindset) were asked to encourage the children to persevere despite difficulties. They were asked to explain to the children that they were mentoring that intelligence is a muscle that can grow. These participants were then shown a video explaining this concept as well. Those in the control condition were asked to encourage the children and to explain to them

that everyone has their own talents. They were shown a video explaining this concept. All of the participants were asked to include a picture of themselves in their letters and speak about their own experiences in the letter that acted as an example of the type of intelligence they were assigned. They also wrote two other letters like this, and they made a video recording of them reading the letter twice. In the results they found that African American students based their worth less on academics than did the white students in all experimental groups. Furthermore, the interventions were not found to reduce stereotype threat. However, malleable condition African Americans received higher grades and reported valuing education more. The white students in this condition received higher grades but not higher value of education. Although stereotype threat was not impacted, the study showed encouraging a mindset to someone else can self-induce a mindset long-term.

The Good et al. (2003) study explores the stereotype threats that impact the academic success of girls and minority groups in the 7<sup>th</sup> grade. The participants were randomly assigned a mentor. Each of the mentors had a three-hour training session. The students had two 90-minute meetings with the mentor and there was weekly correspondence. Each student was also assigned a condition. The growth condition suggested to the participants that the nature of intelligence is expandable. The attribution condition suggested to the participants that all students will struggle due to change but see improvement when they bounce back. The anti-drug condition focused on teaching the participants about the harmful nature of drug use. There was also a combination condition. Each condition also had a restricted webspace that further pushed the condition, using that info they were asked to create their own webpage. In regard to the results, the women achieved higher math scores and minorities got higher reading scores in the experimental conditions (growth, attribution, combination). The study suggests that not only can mentors and

their resources (the website) impress a growth mindset on mentees, but that growth mindset increases academic success of women and minority groups.

In the Paunesku et al. (2015) study the goal was to assess the ability of mindset interventions to be upscaled to larger populations. In this study, high school participants had access to a school computer to access the website [www.pert.net](http://www.pert.net) for modules. The participants either participated in modules for sense of purpose or for growth mindset. These two interventions are expected to impact the students' beliefs about education. Growth mindset intervention gave the students an insight into the potential benefits of struggle. The sense of purpose intervention showed the students that their handwork in school can give meaning to their life. The other two conditions were a combination of both growth and sense of purpose as well as a control condition. They visited the website two times about a week apart and each session was 45 minutes long. There were four conditions. However, specifically in the growth mindset condition, the participants were expected to read a growth mindset article, explain it, and the student would be helped. Both the growth mindset and sense of purpose interventions increased the academic success of participants. Although this study did not show that growth mindsets were better than sense of purpose or combined conditions, it did show that these conditions were better than the control. This finding suggests that growth mindset intervention can be done on larger populations and that it had positive outcomes regarding academic success.

One of the primary domains of research when implicit mindsets are studied is intelligence (Aronson et al., 2002; Blackwell et al., 2007; Good et al., 2003; Hong et al., 1999; Paunesku et al., 2015). The mindsets impact the success of students and how they view their own intelligence. The fixed mindset creates a disadvantage for students when it comes to unsatisfactory work as they believe that they do not have the abilities necessary for success,



whereas those with growth mindsets believe that effort is the cause for performance (Hong et al., 1999). Furthermore, students with fixed mindsets who face societal pressures, such as minority groups (Aronson et al., 2002; Good et al. 2003) and women (Good et al., 2003) show less academic success when they have a fixed mindset, compared to growth mindsets. Fortunately, interventions that enforce and manipulate a growth mindset are powerful in combating this issue (Aronson et al., 2002; Blackwell et al., 2007; Good et al., 2003; Paunesku et al., 2015). As seen in the Blackwell et al. (2007) study that followed the success of students from 6th to 8th grade, the impacts of the interventions stay with students, and they subsequently experience growth in their academic achievement.

### ***Implicit Theories of Intelligence Interventions***

The implicit theory interventions started as a way to manipulate students into approaching education with a growth mindset, rather than a fixed mindset, which can be done in many ways (Aronson et al. 2002; Blackwell et al., 2007; Good et al., 2003; Hong et al., 1999; Paunesku et al., 2015). Hong et al. 1999 researched the impact of mindset on undergraduates' responses to unsatisfactory work, ultimately finding that students with fixed mindsets did not attempt remedial work despite the potential of it helping their academic success. The researchers manipulated the mindset by having the students read one of two articles that resembled a psychology today article. The article had scientific evidence that either intelligence was based on genetics, the fixed mindset, or that intelligence was based on environmental factors, the growth mindset. Most of the participants passed the manipulation check. The check included summarizing the theme of the article and stating evidence they thought was the most impactful (Hong et al., 1999).

Literature is a commonly used to manipulate mindsets and appears in different forms such as reading brief “scientific” articles (Blackwell et al., 2007; Hong et al., 1999; Paunesku et al., 2015; Thompson et al., 2020), surfing restricted internet or modules (Good et al., 2003; Paunesku et al., 2015), and even writing mindset ideals in a letter form to a mentee (Aronson et al., 2002). Good et al. (2003) used a restricted webspace that had specific information students could access. For example, there were animated pictures of brain systems such as neurons, there were testimonies, and it provided leading statements such as “the mind is a muscle” (Good et al., 2003). Paunesku et al. (2015) used the internet as well, for clarification they used academic modules. Aronson et al. (2002) advanced their manipulation of writing letters to mentees by also having the participants record and watch a video teaching their mentees the value of a growth mindset. Furthermore, Good et al. (2003) used in person meetings with a mentor who encouraged growth mindsets when it came to specific struggles was enforced. Another tactic is having workshops or modules to instruct the children about the malleability of the mind and the ability for progress through practice, which encompasses the ideals of a growth mindset (Blackwell et al., 2007).

The findings of these studies are important for expanding knowledge about intelligence beliefs and education. Many studies demonstrate that a growth mindset is beneficial in the academic sphere whereas a fixed mindset can be detrimental (Aronson et al., 2002; Blackwell et al., 2007; Good et al., 2003; Paunesku et al., 2015). However, it is just as important to recognize that these studies show that a mindset can be changed and manipulated. Not only can these mindsets be changed in short term studies, but also long term (Blackwell et al., 2007; Paunesku et al., 2015). This has major implications for the manner in which education should be addressed in the future to maximize student performance.

### *Implicit Theories of Personality*

Although implicit theories of intelligence and implicit theories of personality may at first seem to be the same, they are not. Theories of intelligence uses the idea of a growth and fixed mindset and applies it to how people view their own intelligence and how much they attribute to effort versus talent (Dweck & Leggett, 1988). Once someone's mindset is established in this domain it is easier to make predictions for how they will act after academic failure, such as a fixed theorist refusing a remedial class when it would boost success (Hong et al., 1999). Implicit theories of personality focus on the response people have to others and how they perceive their control over their personalities and actions. The question with implicit theories of personality is how much someone's personality changes or, alternatively, how constant it is (Chiu et al., 1997). This finding of growth and fixed mindsets being related to beliefs about personality has been shown in studies done on a field of topics. Yeager and Dweck (2012) found that when it comes to bullying and victimization among grade school children, a growth mindset regarding social competence can reduce stress and aggression. Even more, researchers found that having a growth mindset towards personality was found to have a negative relationship with stereotypes and prejudice as people who view others as changeable rather than having innate and fixed traits were less likely to hold those negative beliefs (Carr et al., 2012; Rattan & Dweck, 2010). Implicit theories regarding personality have been researched regarding forgiveness as well (Ng & Tong, 2012).

Ng and Tong (2012) focused on the relationship between participants' implicit theories of personality and their proclivity for forgiveness. Female participants were assigned the growth condition or the fixed condition. In the first task, they were asked to recall and write about an event in which someone had hurt them. Prompts were given in order to maximize the use of

feelings in their descriptions. The second task was to read and summarize a scientific *Psychology Today* article that described their assigned condition. Those in the growth condition read about how personality can change and those in the fixed read that personality is unchangeable. After this they answered a questionnaire about their forgiveness for the transgression they described earlier in the study and their perceived responsibility of the transgressor. As a result, the researchers found that those primed with a growth mindset were less likely to forgive than those primed with a fixed mindset.

In the second study, the participants were asked to give the name of the person from the transgression. If the participants were assigned the transgressor priming condition, they would see this name in the next session. If they were assigned the control condition, they would see the name Alexis. The names were used to prime a sensation of anger in the transgressor condition. Following the priming, the participants were shown a string of letters and were asked to indicate as quickly as possible if it was a word or nonword. The researchers found that the growth theorists in the transgressor condition responded quicker to the anger words than neutral words compared to those in the control condition. Also, growth theorists in the transgressor condition responded quicker to anger words than the fixed theorists. Again, the data shows that those with growth theory beliefs were less inclined to forgive. This implies that by believing that personality is changeable, a characteristic of the growth mindset, a person deems the transgressor as having more control over their actions and therefore should assume more blame (Ng & Tong, 2012).

People have certain implicit theories about personality. People who have a fixed mindset about personality believe in fixed traits and those who have a growth mindset towards personality would be more willing to attribute actions to more malleable factors, such as mood.

For clarification, in predicting how someone would act, fixed theorists will base their assumptions on specific traits they assume the person has, such as honesty, whereas growth theorists will base their assumption on the circumstances, such as how much the person will lose by telling the truth. To be frank, growth theorists see people's personality as flexible and fixed theorists see people's personality as constant (Chiu et al., 1997). A more specific example of this can be seen in the Ng and Tong (2012) study, as they found growth theorists are less likely to forgive because they attribute the responsibility to the transgressor and their decisions (Ng & Tong, 2012).

### **Implicit Theories of Romantic Relationships**

#### ***Overview***

Although Dweck's Mindset theory covers intelligence and personality, it has also been expanded to the domain of romance (Knee, 1998). Following with the common theme of Dweck's mindset, the romance domain has two different ways of thinking which may go by different names depending on the specific research (Cultice et al., 2021; Knee, 1998; Knee et al., 2001). Although the growth mindset in romance is often referred to as just a growth mindset, the fixed mindset is referred to as the destiny mindset. The reasoning behind this name is directly related to the motivation behind the mindset. Although those with a growth mindset may perceive conflicts to be building blocks and flaws to be changeable, those with a destiny mindset are entirely focused on finding a perfect match. Those with this destiny mindset do not expect that a partner can change and rather see flaws and conflicts as a signal of incompatibility (Kammrath & Dweck, 2006; Knee et al., 2001; Shashwati & Kansal, 2019; Thompson et al., 2020).

#### ***Growth Mindset***

In the Knee (1998) study, romantic relationship theories and their connection to relationship initiation, longevity, and coping were explored. Undergraduate students in relationships answered questionnaires twice within the span of two months. The questionnaires included: measurement of destiny and growth mindset, dating behavior, COPE (coping strategies), perceived partner changeability, storge (familial love) and pragma (long-term oriented love) scales, the big five scale, relationship information, the quality of relationship index, and inclusion of other in the self-scale. After this, they were then called for a follow-up phone call four months later to assess whether their relationship had dissolved. The results of this study showed that destiny mindsets were positively correlated with pragma and negatively correlated with storge, vice versa with growth mindset. There was no significant relationship with the big 5 scale. Growth mindsets were correlated with more committed long-term approaches to dating. When it comes to coping, those with destiny beliefs were more likely to disengage from the relationship, whereas growth mindset was more likely to use relationship maintenance strategies. Initial relationship satisfaction predicted relationship longevity for those with destiny mindsets. Those with destiny beliefs were also more likely to take responsibility for ending the relationship, less likely to admit they did not try hard enough, and less likely to remain friends after splitting up.

In the Knee et al. (2001) research, they had two studies. In the first study, they had undergraduate students in relationships as the participants. They answered several questionnaires: implicit theories of relationships scale (ITRs), quality of relationship index, questions about the discrepancy from real and ideal partner, and implicit theories of personality. The participants who struggled with their partner not matching their ideal partner had low satisfaction unless they were high in growth and low in destiny. In the second study, there were

two-hour sessions with two phases. In the first session the following were assessed: perception of self and partner, ITRs, and relationship satisfaction. In session two the researchers retrieved information during videotaped interviews. These were meant to show differences in how the partners perceive their relationship. They were videotaped for 5 minutes individually and 10 minutes together so they could discuss their relationship. The goal was to find discrepancies within the partners. The researchers found that when a high in destiny and low in growth participant saw themselves in a positive light, they subsequently felt more relationship satisfaction. Those with high destiny and low growth responded in a hostile manner towards their partner when they noticed discrepancies in the interviews. However, participants with high growth low destiny, on the other hand, responded in a positive manner towards discrepancies.

Kammrath and Peetz (2012) hypothesized that people with growth mindsets have high expectations for others when they promise change, and that there could be negative results when the “change-striver” fails. The researchers brought 95 heterosexual couples into the lab and had the assigned “change-striver” promise to change a behavior that caused an issue within the relationship. The “change-striver” would then create a list of goals that would be completed, ensuring concrete changes. The other partner would take a mindset self-report. They were asked to follow up with the results 2 weeks later. The hypothesis for the first session was that the partner with the growth mindset would be very hopeful of their partner's ability to change. However, the hypothesis for the second session was that the growth mindset partner would have a different opinion of their partner based on how well they did with the desired change. The reasoning behind these two hypotheses was that people with growth mindsets accept failure and flaws, however; they do not accept a failure to change after the attempt has started. For the partner with the growth mindset, they see this failure to change as a sign that the “change-

striver” did not try. The growth mindset does not permit the level of difficulty to be factored in. A partner with a fixed mindset would have assumed that the change was impossible to reach from the start. The results of this study showed that after the “change-striver” failed, the partner with the growth mindset had a distrust for their partner. The partners who had a fixed mindset did not have a change in trust after a “change-striver” failed.

The growth romantic mindset is portrayed as the healthier mindset of the two implicit mindsets, which is rooted in Dweck’s early work with children and academics where growth mindsets were often favorable (Dweck et al., 1995; Dweck & Leggett, 1988). People with a growth mindset tend to have longer relationships due to the focus on maintenance in the relationship and adaptive coping mechanisms after conflict (Knee, 1998; Knee et al., 2001). However, the mindsets can be examined separately (Knee, 1998). In contrast, Kammrath and Peetz (2012) found a negative reaction from those with growth mindsets in romantic relationships. Growth theorists are distrustful of a partner who has promised to change and has not. Growth mindsets can be praised for their belief in change, however the inability to accept that change or improvement may be too hard in certain circumstances can be a weakness (Kammrath & Peetz, 2012).

### ***Destiny mindset***

In Freedman et al. (2019), there are two studies examining the relationship between ghosting, or the termination of all communication without warning, and implicit theories. There were 747 participants. In both studies they used an attention check, a measure to assess perceptions of ghosting, a measure for implicit theories of relationships (with both romantic and platonic questions), and a demographics questionnaire. The findings of study one was seen again in study two. Those with destiny beliefs were more likely to find platonic ghosting positive,



whereas growth theorists found it negative. Those with destiny beliefs were also more likely to ghost a friend. The researchers found that those with destiny mindsets were more likely to ghost someone, to have ghosted in the past, and to view ghosting as beneficial.

Destiny theorists tend to use maladaptive strategies after conflict which results in terminating relationships and less commitment (Knee, 1998). However, in addition to the idea growth mindsets are not perfect and come with flaws, the destiny mindsets are not always fruitless and can have benefits. In the age of technology, romantic behavior is consistently changing and being modified. Dating apps and hook-up culture have taken over, even among the younger crowd, such as college students (Frazetto, 2010; Lefebvre, 2017). A specific courting behavior that is relevant now is ghosting (Freedman et al., 2019). According to Freedman et al. (2019) when it comes to ghosting, destiny mindsets handle it best. Those with destiny mindsets are more willing to use this dating tactic and they are also better at handling it when it is used on them. Those with destiny mindsets accept ghosting as a manifestation of the lack of compatibility and move on (Freedman et al., 2019). Furthermore, in the state of relationship conflict, Kammrath and Dweck (2006) found that not only did mindset affect which battles people picked but also impacted the response. Although those who believe that conflict is risk, destiny mindset, will pick petty fights and exit strategies. Furthermore, those who believe in the usefulness of conflict, growth mindsets, will stick to bigger-picture arguments rather than stressing on petty arguments (Kammrath & Dweck, 2006). According to Knee et al. (2001), those with a destiny mindset are preoccupied with their imagined ideal partner so much so that perceived differences between the ideal and their actual partner led to feelings of hostility towards the relationship.

### ***Two Independent Mindsets***

There are complexities to the use of the two mindsets: fixed and growth. A person, depending on the domain of the implicit theory, may not just be high in one or the other. This means that someone could have high destiny beliefs and high growth beliefs and have strong mindsets for both. Alternatively, someone could be low on both theories and not show the thought processes of either of the mindsets very strongly. As argued by researcher Knee (1998), rather than expecting people to have a destiny mindset or a growth mindset, the other option is to ditch the spectrum and see that the two mindsets are independent measures of implicit theory. The theory that these two mindsets are independent allows for the broadening of research in which only one measure, growth or destiny, is the focus (Blackwell et al., 2007; Dweck & Leggett 1988; Paunesku et al., 2015). One of the complexities can be seen in the research of Dweck and Leggett (1988). They argue that fixed theorists have the same mastery orientation as growth theorists when they perceive that their ability is high. The difference only happens when fixed theorists are perceiving their abilities as low, that is when the person feels helpless. Blackwell et al. (2007) and Paunesku et al. (2015) focused on the growth mindset and the use of intervention to enforce the growth beliefs. The focus in these studies was whether or not the intervention was successful in creating a growth mindset, rather than if growth mindset could replace a fixed mindset.

### ***Implicit Theories of Relationships Manipulation***

Manipulating which mindset, growth or destiny, the participant has is important in assessing the effects of the mindset. The use of articles to prime the participants is common (Chen et al., 2012; Thompson et al., 2020). In the Thompson et al. (2020) study, the participants were asked to read one of two articles that looked like they came from *Psychology Today* which either primed for destiny or growth mindsets. The articles explained the most beneficial approach

to romantic relationships was either to find an ideal partner, leaving those who are not compatible, or to work through conflicts and develop the relationship. After having read the article, the participants were only expected to complete a one item comprehension check. Although the brief article did not induce mindset on the women, it did impress the primed mindset on the men (Thompson et al., 2020). Chen et al. (2012) used articles that appeared to be from a BBC website and written by a Harvard psychologist. The growth article explained the scientific findings that fate is not real but hard work surely is, which implies that effort is important in relationship success. On the other hand, the destiny priming article explained that effort has no impact on relationship success and that you need to find the right person. To check the reliability of these two manipulations they asked the participants a few manipulation checks such as how convincing the articles were and how much relationships can improve. The participants in both mindset conditions passed the manipulation checks. (Chen et al., 2012)

### **Infidelity Forgiveness and Mindsets**

#### ***Infidelity Forgiveness***

Burnette and Franiuk (2010) hypothesized that mindset impacts the evaluation of partner fit on further deciding whether or not to forgive a partner. Forgiveness is given if the relationship is valued. The participants were 50 heterosexual couples with an average of 2 months together. They completed the relationship theory questionnaire and the partner fit measure. The participants were then asked to reflect on the most hurtful act their partner committed. From this encounter they measured the transgression related interpersonal motivations (forgiveness) questions and indicated the severity of the offense. The conclusion from the data was that strong destiny theorists evaluate the partner fit based on their mindset; these evaluations determine

forgiveness. Those with a destiny mindset who believe their partner is not an ideal match will be less likely to forgive interactions.

Shumann and Dweck (2014) explored the relationship between implicit theories and accepting responsibility. In one study, there were 78 participants found through MTurk. In one study they used the implicit theories of personality scale. For the experiment they gave the participants a scenario. In one of the scenarios the participant was supposed to water a neighbor's plants but forgot. Subsequently, the plant dies. The other scenario was that a person sent the participant a time sensitive email, however the participant blew them off. When the participant met said person in real life the participant ignored them. The participants had to rate the anger of the victim and the impact on the victim in each of these scenarios. They then rated their willingness to learn from the experience. Following this, they were asked what statement they would say to the victim. Those with growth mindsets are more likely to learn something about themselves and their relationship with the victim when responding to the victim, and that this motivation to learn, in turn, predicted greater willingness to accept responsibility. People with growth mindsets are more willing to accept blame because they see it as something they can grow from.

Thompson et al. (2020) manipulated implicit theories of relationships in order to explore their relationship with infidelity forgiveness. The first study explored multiple factors: the relationship between ITRs (destiny or growth beliefs), sex of forgiver, type of behavior, and infidelity forgiveness. For further clarification, the types of infidelity were sexual/explicit infidelity, tech/online infidelity, emotional/affectionate infidelity, and solitary behaviors. There were 259 participants in the first study who had a 6 month or longer relationship. They were recruited from MTurk and were majority white and heterosexual. The measures included

demographic questionnaire, definitions of infidelity questionnaire (they manipulated these 32 questions to show their forgiveness of the different types of cheating), and the implicit theories of relationships scale. In the results the men were more likely than the women to forgive on all types of infidelity with sexual/explicit infidelity being the least forgivable and solitary being the most forgivable. Furthermore, those with destiny mindsets were less likely to forgive, whereas those with growth mindsets were more likely to forgive.

The second study was experimental and explores the causal relationship between ITRs and infidelity forgiveness. There were 318 participants collected from the MTurk. The questionnaires remained the same as the first study with an addition of adulthood attachment style assessed with experiences in close relationships scale. The manipulation that was used was in a *Psychology Today* article intended to prime them into either destiny or growth mindset. Following the articles, a manipulation check was used. In respect to the findings, men were more likely to forgive than women on all types of infidelity. However, the ITRS manipulation worked with men and not women. Those who were primed for the growth mindset were more likely to forgive when changeability was possible (aka emotional/affectionate and solitary). In the results, it was also found that attachment insecurity successfully acted as a moderator to forgiveness.

The aforementioned aspects of romantic relationships and their connection to Dweck's mindsets have significance in understanding the basis of implicit theory. However, there are questions in the domain of romance that may require more extensive research in order to broaden comprehension in this field of psychology. The relationship between infidelity, forgiveness and mindset is one of these research topics (Burnette & Franuik, 2010; Thompson et al., 2020). Burnette and Franuik (2010) found that people with destiny mindsets only forgave if they felt their partner exhibited ideal partner characteristics, more specifically, if they valued their partner

as meant to be. Giving forgiveness is an important part of infidelity research, but knowing who accepts the responsibility for infidelity is important too. Researchers, Schumann and Dweck (2014), found that those with growth mindsets were more likely to accept responsibility when they felt that there was something to learn. Not only did they take responsibility more often, but those with growth mindsets were more willing to change their behavior (Schumann & Dweck, 2014).

According to the research from Thompson et al. (2020) people with growth mindsets were the most likely to forgive in instances of infidelity when it leaves room for change such as emotional/affectionate or solitary cheating, but not with sexual or online cheating. Interestingly, the researchers in this study also found that the men were more forgiving than the women in all instances of cheating. In the domain of romance, the findings suggest that growth theorists are more inclined to forgive, which contradicts the findings of those such as Ng and Tong (2012). However, Ng and Tong (2012) directly mention Knee (1998) and explain that these differences are due to the differences in domain: implicit theories of personality versus implicit theories of relationships.

### **The Current Research**

The current study replicates the Thompson et al. (2020) study with some adjustments. In the study, the researchers mentioned several limitations that could be examined in future studies, such as the use of online websites to find participants and the use of hypothetical scenarios instead of the participants' real-life experiences. However, although these may be significant to the results, the current study addressed a different limitation. In the original study, the mindset priming worked on the men but did not impact the women. Despite the failures of the priming, the women did pass the manipulation check. The priming was a short article to read and the

manipulation check was one item. In the current study, a major goal was to increase the success of priming growth and destiny mindsets.

Helsin and Vanderwalle (2008) offer important advice on how to strengthen growth mindset interventions, particularly in the real-world setting of training business managers. The interventions for growth mindsets involved five parts: scientific proof, idea generation, reflection, advocacy, and cognitive dissonance. For scientific proof they recommend that employees watch a video showing the science behind a growth mindset. The idea generation portion suggested employees list 3 reasons why it is important to realize that people can develop their abilities. In the reflection part of the intervention, the researchers recommend employees be asked to describe when they and people they knew developed abilities over time. The advocacy portion was to write an email to a protege about evidence and anecdotes proving abilities can develop. Last, cognitive dissonance involved the employees identifying three instances when someone did something that they did not think they could, why they thought that happened, and what are the implications of having doubted themselves or someone else. Furthermore, after these portions were completed, the participants were expected to read the advocacy and cognitive dissonance portions in a group of three. The researchers stated that six weeks after the interventions, those who had fixed mindsets were showing growth mindsets and the subsequent benefits. The advice given by the researchers in this article was taken to improve the mindset intervention in the current study.

In the current study, changes have been made to address the previously described issue. The current study's article intervention has been combined with other forms of manipulation, such as those recommended by Helsin and Vanderwalle (2008). Specifically, the forms of priming, reflection and cognitive dissonance, were molded to fit the Thompson et al. (2020)

study in hopes that they would create a clearer impact on the women. For clarification of the priming, Helsin and Vanderwalle (2008) suggested that potential participants explain when they, or someone they knew, had developed their abilities over time (reflection). They also recommended that participants list three times when someone did something that they did not imagine was in their skill set and explain the implications behind doubting this person (cognitive dissonance). Ideas and language from Thompson et al. (2020) articles were used while adapting these suggestions to the current study. For example, the growth mindset language pertained to the goal of building relationships and the destiny mindset focused on finding compatibility.

In the current study, it was expected that the results of Thompson et al. (2020) would remain the same. Firstly, H1 was that men would be more forgiving than women on all types of infidelity (sexual/explicit, technology/online, emotional/affectionate, solitary). H2 was that growth theorists would be more forgiving of emotional/affectionate and solitary infidelity than destiny theorists. H3 was that sexual/explicit infidelity would be the least forgivable and solitary would be the most forgivable. However, the intervention was expected to have more success on women than it did in Thompson et al. (2020) due to the advice taken from the Helsin and Vanderwalle (2008) study. Furthermore, we developed our own unique hypotheses including H5 that religiosity would be negatively correlated with infidelity forgiveness and H6 that more sexual partners and more romantic relationships would positively correlate with forgiveness for all subtypes of infidelity.

## **Methods**

### ***Participants***

The participants came from East Carolina University's freshman class. Participants were volunteers from PSYC 1000 courses (Psychology Department Research Participants Pool). All



students enrolled in PSYC 1000 age 18 and older were eligible to participate. There were 90 women and 48 men (there was no disparity between sex and gender within the demographic). The ages ranged from 18 to 28 with a median of 18. Of the participants, 97 identified as white, 25 as African American/black, 18 as Latino/Hispanic, 9 as Asian, 1 as Native-American and two participants checked “other.” Regarding sexual identity, most of the participants were heterosexual (108 participants), however, 15 identified as bisexual, 4 identified as pansexual, 1 as lesbian, 2 as gay, 1 as asexual, 4 as other, and 1 preferred not to say.

### ***Materials***

The growth mindset and destiny mindset articles are presented in Appendix A. One of the articles explained the research of the growth implicit theory and the other explained the research of the destiny implicit theory. An excerpt from the growth article is “you come to love not by finding the perfect person, but by seeing an imperfect person perfectly”. Alternatively, an excerpt from the destiny article is “sometimes you have to move on without certain people”.

The manipulation check (See Appendix B) was 1 item with 3 possible responses used to assess the comprehension of the articles.

The reflection questions (See Appendix C) had a growth implicit mindset set and a destiny implicit mindset set. The sets had three open-ended questions related to the participant’s assigned article. These questions were meant to enhance the manipulation function of the articles. The first question of the set asked the participant why the mindset from the articles was important to have in romantic relationships. The second question asked the participants to relate the mindset in the article to their own life and experiences. The third question was a hypothetical situation, in which the participant had to give advice to a friend using the article’s information.

The Definitions of Infidelity questionnaire (See Appendix D) came from Thompson et al. (2020). The measure was 32 items divided into 4 subscales of infidelity: solitary, technology/online, emotional/affectionate, sexual/explicit. Sample items included solitary infidelity *watching pornographic videos alone*, technology/online infidelity as *using dating apps*, emotional/affectionate infidelity with *flirting with someone*, and sexual/explicit infidelity with *engaging in anal intercourse*. The questionnaire used a Likert scale with 1 showing they *would not forgive at all* and 7 showing they *would completely forgive*. A mean score was taken from the subscales. The order of the questions were as follows: Sexual/Explicit infidelity: 1-7, Technology/Online infidelity: 8-14, Emotional/Affectionate infidelity: 15-23, 26, 28-30 and Solitary infidelity: 24, 25, 27, 31, 32.

The Implicit theories of relationships scale (See Appendix E) was taken from the Knee 1998 study. The measure was 8 items split into 2 subscales: growth and destiny. Sample items included "The ideal relationship gradually changes over time" for growth and "A successful relationship is mostly the matter of finding a compatible partner." A Likert scale, 1 as strongly agree to 7 as strongly disagree, was used with to measure how much they agreed with the statements. The destiny belief items, and the growth items were summed separately. The destiny belief items included a. Potential relationship partners are either compatible or they are not. b. A successful relationship is mostly a matter of finding a compatible partner right from the start. c. Potential relationship partners are either destined to get along or they are not d. Relationships that do not start off well inevitably fail. The Growth Belief Items included a. The ideal relationship develops gradually over time. b. A successful relationship evolves through hard work and resolution of incompatibilities. c. A successful relationship is mostly a matter of

learning to resolve conflicts with a partner. d. Challenges and obstacles in a relationship can make love even stronger.

The Demographic Questionnaire (See Appendix F) collected information about sexual orientation, religious affiliation, experience with infidelity, and relationship status.

### *Procedure*

The study plans had to pass through the institutional review board (IRB) for approval before the participants could be collected. After the plans successfully passed through review, participants that volunteered from the ECU PSYC 1000 courses were accepted. They were told they were participating in a study about 'romantic relationships and forgiveness'. Before starting participation, the students were taken into a lab in groups in order to voluntarily complete an informed consent form. These participants were randomly assigned tasks for priming either growth beliefs or destiny beliefs. The participants would then complete a task (read articles) online, answer 3 related short answer questions, and fill out 3 questionnaires including a demographic questionnaire.

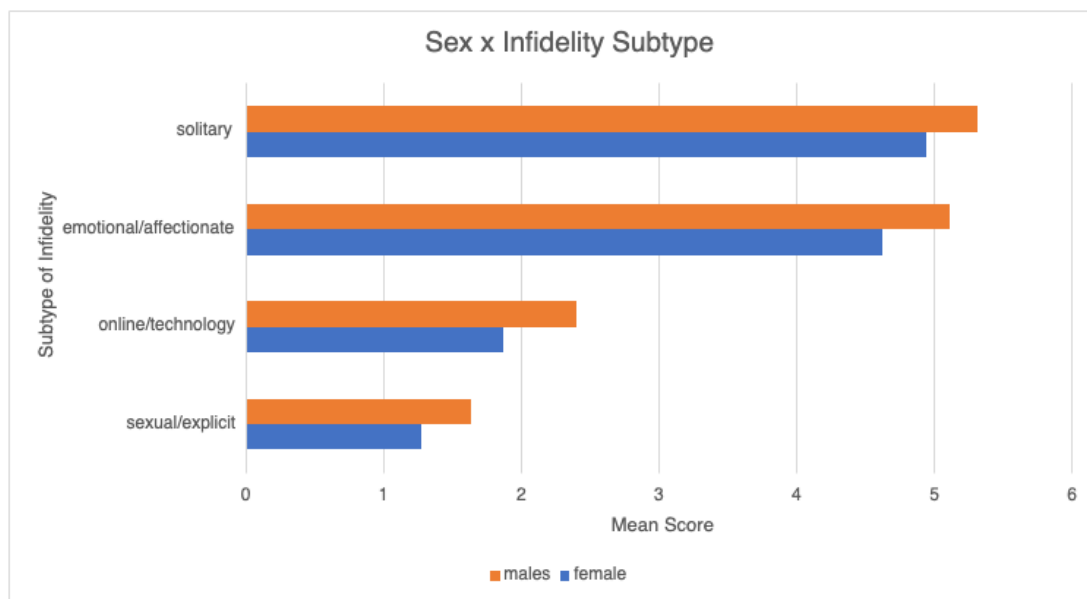
The assigned experimental manipulation was a combination of the priming methods used in Thompson et al., 2020 and in Helsin and Vanderwalle, 2008 (See appendix A; appendix C). The first task for the participants was to read one of two articles from Thompson et al. (2020) as shown in appendix A. To enhance the impact of the articles on the participants, the questioning tactics from the Helsin and Vanderwalle (2008) study were employed. After the follow-up reading questions, participants were asked to fill out the implicit theories of relationships scale (See Appendix E) and then the definitions of infidelity questionnaire (See Appendix D). The participants answered a manipulation check which was used to assess whether or not the

participants read the article, paid attention, and remembered relevant details (See appendix B). Following a demographic questionnaire, the participants were involved in a debriefing process.

## Results

### Hypotheses 1 and 2

The first two hypotheses were tested with a 2 (sex) x 4 (infidelity subtype) mixed factorial ANOVA with forgiveness ratings as the dependent measure (see means and standard deviations in Table 1). The main effect for sex was significant,  $F(1,135) = 10.08, p = .002, \eta_p^2 = .07$ . Supporting H1, men had stronger overall ratings of infidelity forgiveness than women. The main effect for infidelity forgiveness category was significant,  $F(3,405) = 454.60, p < .001, \eta_p^2 = .76$ . Pairwise comparisons were made using Tukey LSD tests, and every comparison was significant. Supporting H2, sexual infidelity was rated as least forgivable, next was online infidelity and then emotional infidelity, and solitary infidelity was rated as most forgivable. The interaction was not significant,  $F < 1$ . These findings are illustrated in Figure 1.



Subtype of Infidelity	Females	Males	Total
SOL (1)	4.94 (1.34)	5.32 (1.32)	5.07 (1.34)
ONL (2)	1.87 (0.89)	2.40 (1.05)	2.05 (0.98)
EMO (3)	4.63 (1.37)	5.11 (1.31)	4.80 (1.36)
SEX (4)	1.28 (0.74)	1.64 (1.13)	1.41 (0.91)
Total	3.18	3.62	

Note. Standard Deviation are in parenthesis

### Hypothesis 3

The participants were randomly assigned to either the growth condition or the destiny condition. There were 65 participants in the growth condition (46 women, 19 men) with ages ranging from 18 to 23 (mean = 18.66). There were 73 participants in the destiny condition (44 women, 29 men) with ages ranging from 18 to 28 (mean = 18.89). For both conditions, there was little diversity as the sample was mainly white and heterosexual.

In Thompson et al. (2020), both the women and the men passed the manipulation check however the women were not affected by the manipulation. We hypothesized that with the current changes designed to strengthen the mindset manipulation, men and women would both pass the manipulation check and that both would be affected by the manipulation conditions (H3). The current data showed that both sexes passed the manipulation check at equal rates (87% for women and 81% for men). However, this differed by condition. Whereas 98% of participants in the destiny condition passed the manipulation check, only 77% passed in the growth condition.

If participants were influenced by the mindset manipulation, then their scores on the ITRS (which measures growth and destiny mindsets) should be consistent with their mindset condition. Participants in the growth mindset condition should show higher scores on the growth ITRS than on the destiny ITRS, and participants in the destiny mindset condition should show higher scores on the destiny ITRS than on the growth ITRS. H3 was that this would hold true for both women and men, contrary to the Thompson et al. (2020) findings. H3 was thus further tested with a 2 (sex) x 2 (mindset condition) x 2 (ITRS) mixed factorial ANOVA with ITRS mindset score as the dependent measure. Only two findings were significant—the main effect for ITRS and the interaction between ITRS and mindset condition. Overall, participants had significantly higher growth ITRS scores ( $M = 6.17$ ) than destiny ITRS scores ( $M = 4.06$ ),  $F(1,134) = 349.02, p < .001, \eta_p^2 = .72$ . However, this main effect is qualified by a significant interaction with mindset condition (see Table 2),  $F(1,134) = 8.77, p = .004, \eta_p^2 = .061$ . Pairwise comparisons were made using Tukey LSD tests. Growth mindset ITRS scores were higher than destiny ITRS scores for both conditions (6.27 vs 3.84 for the growth mindset condition and 6.06 vs 4.29 for the destiny condition). Importantly, destiny ITRS scores were higher in the destiny mindset condition than in the growth mindset condition (4.29 vs 3.84), but growth ITRS scores did not differ for the two conditions (6.27 vs 6.06). These findings do not support Thompson et al. (2020) because there was no significant interaction for sex—women and men were equally influenced or not influenced by the mindset manipulation. The more important factor in these results was that participants appeared to strongly favor a growth mindset.

	Growth Mindset Condition	Destiny Mindset Condition
Growth ITRS	6.27 (.61)	6.06 (.71)
Destiny ITRS	3.84 (1.11)	4.29 (1.07)

Another way to test H3 is to see if there were differences for the two mindset conditions in participants' responses to the four categories of infidelity. Did mindset condition affect forgiveness scores for infidelity in predicted ways? This was tested with a 2 (sex) x 2 (mindset condition) x 4 (infidelity subtype) mixed factorial ANOVA with forgiveness ratings as the dependent measure. Only two findings were significant—the main effect for sex and the main effect for infidelity subtype (see relevant means in Table 1). Overall, men had higher ratings of infidelity forgiveness than women,  $F(1,133) = 10.74, p = .001, \eta_p^2 = .07$ . The findings for infidelity category was the same as in the previous analysis, with sexual infidelity rated as least forgivable, then online infidelity, then emotional infidelity, and least forgivable was solitary infidelity,  $F(3,399) = 437.97, p < .001, \eta_p^2 = .77$ . We also tried dropping all participants who failed the manipulation check question from the analysis, but results were the same. Again, these findings do not support Thompson et al. (2020) because there was no significant interaction for sex. The important finding here is that mindset condition had no significant impact on either women or men's ratings of infidelity forgiveness.

#### **Hypothesis 4**

We hypothesized that participants in the growth mindset condition would be more forgiving of emotional/affectionate and solitary infidelity than those in the destiny mindset condition (H4). This was found in Thompson et al. (2020), however it was not replicated in the current study. From the previous analysis, only the main effect for infidelity subtype was

significant, not effect for mindset condition nor, more importantly, the interaction between these two variables. Thus, H4 was not supported.

### **Hypothesis 5**

We hypothesized that religiosity would be negatively correlated with infidelity forgiveness. We assumed that stronger religious convictions would be related to less tolerance of unfaithful behaviors. However, all correlations were near zero. There were no significant correlations between religiosity and four types of infidelity forgiveness. Further investigation, however, showed a significant correlation between the religiosity question (#5) and the religion + forgiveness question (#6) ( $-.55, p < .001$ ). The more religious someone was the less likely they would be to answer that their religion indicated infidelity was forgivable. There were no significant correlations between religion + forgiveness question and four types of infidelity forgiveness. In short, while the religiosity question and the religion + forgiveness question had a negative relationship, neither had a correlation with the infidelity subtypes.

### **Hypothesis 6**

We hypothesized that more sexual partners and more romantic relationships would positively correlate with forgiveness for all subtypes of infidelity. The reasoning for this was that unexperienced participants may hold a more fantastical view of relationships and therefore hypothetical infidelity would be significantly more detrimental to the relationship as indicated by the meta-analysis composed by Petersen & Hyde (2011). Furthermore, Apostolou et al. (2019) found that participants who were older, and therefore had more opportunities to experience infidelity, were more forgiving compared to the younger participants who did not have comparable experiences. The implication that more experience is correlated with more



forgiveness is relevant to our hypothesis. The number of romantic relationships in the current study ranged from 0 to 4, with only 1 participant reporting 5 or more (mean was 2.39 and median was 2.00). Furthermore, the frequencies among the number of relationships were as follows: 21% none, 36% only 1, 28% with 2, 11% with 3, and 2% with 4. The participants were all relatively inexperienced with romantic relationships. The quantity of romantic relationships question was not significantly correlated with any of the infidelity forgiveness categories.

### **Discussion**

Our current study was a replication and modification of Thompson et al. (2020). As done in the original, in this study we investigated the relationship between forgiveness of infidelity and Dweck's romantic mindsets, growth and destiny. More specifically, we used priming articles to enforce either the growth or destiny implicit beliefs. However, in this study we added three reflection questions with the intention of further encouraging the assigned implicit beliefs. After this process, we asked the participants questions from the Definitions of Infidelity questionnaire to assess how they reacted to different subtypes of infidelity (emotional/affectionate, sexual/explicit, online/technology, and solitary) and the Implicit Theories of Relationships Scale to assess if the priming worked. Using the data from these surveys we examined the accuracy of our hypotheses.

#### *Hypothesis 1*

Some findings of Thompson et al. (2020) were replicated by the current study. Men are more likely than women to forgive infidelity regardless of the subtype. In the current study, we suggest that the reason for this difference is that women attribute a greater risk to forgiving infidelity than men. As found by Root and Exline (2011), women view forgiveness as a process

that requires long-term emotional labor and dedication, whereas men view the act of forgiveness as a one-time decision. The researchers explained that therefore, when considering hypothetical forgiveness prompts, men are more likely to forgive. Women, unlike men, often consider all the work they must do to reach a point of pardon, and therefore give a stricter response to prompts (Root & Exline, 2011).

### *Hypothesis 2*

Our findings that physical infidelity is the least forgivable while solitary infidelity is the most forgivable replicates those of Thompson et al. (2020). These results go to show that behaviors that require a partner are more of a deal breaker to the relationship than behaviors that do not. Physical infidelity, unlike the other subtypes, comes with another risk on top of emotional distress from betrayal which is sexually transmitted diseases. Found by Conley et al. (2012), when partners physically cheated on their partner they did not focus on the principles of safe sex. More specifically, when cheating, only 48% of participants admitted to using a condom when engaging in vaginal sex and when engaging in anal sex only 32% of the participants used a condom. This extra level of risk may account for the higher level of caution.

### *Hypothesis 3*

We hypothesized that the participants, regardless of gender, would be primed by the manipulation. The articles and reflection questions did not appear to have an impact on the participants and their implicit theories. After looking at the data, there were several indicators that the participants may not have read the articles closely or paid attention to what the reflection questions were asking. When assessing the Destiny and Growth reflection questions there were some appropriate responses such as:

“My parents had a rocky relationship when they first got together. But through growth, they started communicating their feelings with one another and they are happier than ever.”

“My grandparents were destined to be together. They always know what the other person is thinking and are always functioning together in some capacity.”

However, many of the responses, for example “Future plans,” “Me and my girlfriend workout together. This is how we grow together.” and “I bought this girl a hoodie”, were all indicative of apathy or lack of understanding.

These responses from the reflection section were coded by the researchers. For clarification, researchers were presented with the responses in a randomized order and asked to rate them on a scale of 1 (destiny) to 5 (growth). The numerical value given by the researchers were then compared and the similarity between scores was consistent. With respect to the findings, when examining the overall consistency of coding between individual subjects, many subjects scored destiny and growth for different reflection questions. One trend was subjects scoring destiny in reflection questions 1 and 2 but reverting to growth in reflection question 3. Moreover, several participants used their answered reflection questions based on their own beliefs rather than using the article, as seen with the destiny reflection 1 example, “I don't think destiny plays a part, I think a relationship is what you make of it.” The participants did not adopt the primed mindset, and many reverted backs to their own beliefs by the time they reached reflection question 3. This regression to growth mindset was reflected in the data as well. Participants in both conditions revealed a lean towards the growth mindset in the ITRS questionnaire results.

The current study's findings differ from those of Thompson et al. (2020), in which their priming, while also not working on the women, did, however, work on the men. Despite adding more priming strategies, the current study had even less of an impact on inducing mindset on the participants. We determined that this could be a result of two aspects: the articles and the participant pool. The articles were limited in the ability to impress certain implicit beliefs on the participants. The articles were incredibly short and were not detailed, which may have contributed to the lower impact. However, the current study, while recognizing this limitation early on, had to stay as close as possible to original, Thompson et al. (2020). In future studies, it may be beneficial to expand on the readings given to participants.

Regarding the participant pool, as shown, the participants showed signs of apathy and they were also less experienced in the romantic domain. The participants were PSYC1000 students who picked research participation over an alternative assignment and therefore it is plausible that many were not fully committed and were instead there only for attendance. Unfortunately, this circumstance could have easily contributed to a high level of apathy. The PSYC1000 students are usually freshman and therefore young. The majority of the participants were 18 years old and consequentially they had less relationship experience. Among the participants, 21% had never been in a long-term romantic relationship before, 36% had only been in 1 long-term romantic relationship before, and 28% had been in 2 long-term romantic relationships before. It is possible that with less experience with relationships there is inherently less cynicism as well. The participants may have skewed more towards growth responses due to these more idealistic beliefs.

#### *Hypothesis 4*

In the current study, the priming of the implicit theories did not impact the participants as it did in Thompson et al. (2020). Therefore, we did not replicate their findings that participants primed with the growth mindset were more forgiving of emotional/affectionate infidelity and solitary infidelity than the destiny mindset.

#### *Hypothesis 5 and Hypothesis 6*

The hypotheses regarding religion and romantic/sexual experience were not supported. The level of religiosity indicated by the participant, whether strong or weak, did not have an impact on their perception of forgiveness. Furthermore, the amount of experience a participant had with romantic relationships and partners did not have an impact on their proclivity to forgive. We assume that the results showed no correlation for either of these findings due to the confusion or ambiguity shown in the responses. For clarification, there seemed to be varying interpretations of the questions. For example, regarding the question asking for the exact number of sexual partners there were non-numerical responses such as, “if you are talking about this year alone (janurary-august) i had 4” and “I've lost count.” It may have been more successful if the question had been given further parameters and more specific instruction. Furthermore, regarding the question of religion, two simple questions asking about one’s perceived level of religiosity and what their religion indicates about the forgivability of infidelity may not be enough. The context of spirituality is complex and to find significant data there may need to be a more thorough investigation.

#### *Conclusion*

The data collected in the study showed accuracy with H1 and H2, but not with H3, H4, H5, or H6. The current study replicated the findings of Thompson et al. (2020) that men are more forgiving of all infidelity subtypes compared to women (H1). Also, it replicated that sexual

infidelity is across gender the least forgivable and solitary infidelity is the most forgivable (H2). These findings remained the same in both studies.

Furthermore, in both studies the manipulation techniques failed to enforce a mindset, growth or destiny, on the participants. This failure ultimately impacted the accuracy of the H3 and H4 hypotheses. The articles were successful for the male participants in Thompson et al. (2020), however they failed to induce mindset for the female participants. To an even greater extreme, the articles, even with additional priming techniques, did not appear to induce mindset to the participants, male or female, in the current study. The implicit belief findings in both Thompson et al. (2020) and the current study, suggest that brief *Psychology Today* articles are not sufficient in persuading destiny or growth beliefs.

Future studies may benefit from using either a different form of priming or by enhancing the articles used. Moreover, using a more experienced and diverse population for the experiment may provide the environment for more conclusive data. Regarding the lack of findings for H5 and H6, the questions could benefit from editing in order to obtain more information from participants so that an accurate and precise response can be investigated.

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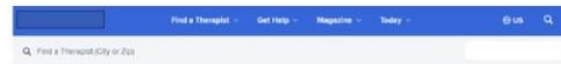
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## APPENDIX A

Participants will be randomly assigned to either a growth mindset condition (read growth article below) or a destiny mindset condition (read destiny mindset article below).

## Growth Article



## How to Have a Happy and Loving Relationship

The importance of growth in successful relationships

Posted May 17<sup>th</sup>, 2018



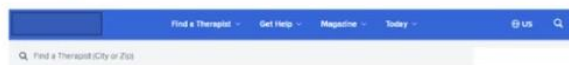
One of the most amazing experiences that human beings can share is a romantic relationship. We are social creatures after all. As such, being able to love and be loved are both necessary for a successful relationship.

However, what makes a healthy and loving relationship? Well, according to research, relationship success and longevity comes down to one primary factor: growth (Knoll, Carlson, & Eddy, 2017). In fact, in a national study conducted by Knoll and colleagues, couples indicating that they "worked to build their relationship" and that "maintenance and improvement" were



their primary goals reported greater relationship satisfaction and commitment than did couples who did not characterize their relationship in these ways. So, it seems that Taylor Olson said it best; "You come to love not by finding the perfect person, but by seeing an imperfect person perfectly."

## Destiny Article



## How to Have a Happy and Loving Relationship

The importance of destiny in successful relationships

Posted May 17<sup>th</sup>, 2018



One of the most amazing experiences that human beings can share is a romantic relationship. We are social creatures after all. As such, being able to love and be loved are both necessary for a successful relationship.

However, what makes a healthy and loving relationship? Well, according to research, relationship success and longevity comes down to one primary factor: destiny (Knoll, Carlson, & Eddy, 2017). In fact, in a national study conducted by Knoll and colleagues, couples indicating that their relationship



"was destined to work from the beginning" and that their relationship "was powerful enough to conquer all" reported greater relationship satisfaction and commitment than did couples who did not characterize their relationship in these ways. So, it seems that Taylor Olson said it best: "Sometimes you have to move on without certain people. If they're meant to be in your life, they'll catch up."

**APPENDIX B****Manipulation Check Question**

Which of the following was key to a successful romantic relationship?	<ul style="list-style-type: none"><li>a. Destiny, if it was meant to be, love can conquer all</li><li>b. Growth, love requires work and effort</li><li>c. I don't remember</li></ul>
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**APPENDIX C****Reflections for Enhancing Mindset Manipulation***Growth Mindset Questions*

**Based on the article you read, what is at least one reason why it is important to focus on growth in a romantic relationship?**

**In the space below, describe at least one time when you, or people you know, exhibited a focus on growth in their romantic relationship.**

**A friend of yours and their partner have been having a serious disagreement where they have reached a stalemate, or impasse. What relationship advice would you give your friend considering what you read in the article?**

*Destiny Mindset Questions*

**Based on the article you read, what is at least one reason why it is important to focus on destiny in a romantic relationship.**

**In the space below, describe at least one time when you, or people you know, exhibited a focus on destiny in their romantic relationship.**

**A friend of yours and their partner have been having a serious disagreement where they have reached a stalemate, or impasse. What relationship advice would you give your friend considering what you read in the article?**

**APPENDIX D****Definitions of Infidelity Scale-Revised (DIQ-R)**

Imagine that you are involved in a romantic relationship (at least 6 months long). For each of the hypothetical behaviors listed below, indicate the extent to which you would forgive your romantic partner if they engaged in that behavior. Rate these behaviors on a scale of 1 to 7, with 1 = not at all forgive and 7 = completely forgive.

1	Engaging in penile-vaginal intercourse with someone
2	Engaging in penile-anal intercourse with someone
3	Giving someone oral sex
4	Receiving oral sex from someone
5	Touching someone's genitals
6	Taking a shower with someone
7	Kissing someone intensely
8	Sending sexually explicit messages by text or e-mail to someone
9	Masturbating with someone over webcam
10	Receiving sexually explicit messages by text or e-mail from someone
11	Creating a profile on a dating website
12	Sending affectionate/flirtatious texts or e-mails to someone
13	Receiving affectionate/flirtatious texts or e-mails from someone
14	Browsing an online dating website alone
15	Receiving close emotional support from someone
16	Watching movies in a dark living room with someone
17	Being tagged in pictures with someone on a social networking site



18	Providing someone with close emotional support
19	Sharing secrets with someone
20	Dressing in a way to attract sexual attention
21	Accompanying someone to a formal event
22	Having a casual dinner with someone
23	Kissing someone on the cheek
24	“Checking out” (or admiring the look of) a waiter/ waitress
25	Viewing pornographic videos online alone
26	Giving someone a gift
27	Viewing pornographic magazines alone
28	Working/studying late with someone
29	Doing favors for someone
30	Liking/following someone on social media
31	Engaging in masturbation alone
32	Finding a celebrity attractive

**APPENDIX E****Implicit Theories of Relationships Scale (ITRS)**

Rate how strongly you agree or disagree with each of the statements below on a 7-point scale with 1= strongly agree and 7 = strongly disagree.

1	Potential relationship partners are either compatible or they are not.
2	A successful relationship is mostly a matter of finding a compatible partner right from the start.
3	Potential relationship partners are either destined to get along or they are not.
4	Relationships that do not start off well inevitably fail.
5	The ideal relationship develops gradually over time.
6	A successful relationship evolves through hard work and resolution of incompatibilities.
7	A successful relationship is mostly a matter of learning to resolve conflicts with a partner.
8	Challenges and obstacles in a relationship can make love even stronger.

**APPENDIX F****Demographic Questions**

1	What is your sex assigned at birth?	<ul style="list-style-type: none"> <li>a. Female</li> <li>b. Male</li> <li>c. Intersex</li> </ul>
2	What gender do you identify as?	<ul style="list-style-type: none"> <li>a. Female</li> <li>b. Male</li> <li>c. Non-binary</li> <li>d. Other (text box)</li> </ul>
3	What is your age?	[text box]
4	<p>Please specify your ethnicity.</p> <p>Choose all that apply.</p>	<ul style="list-style-type: none"> <li>a. White</li> <li>b. African American</li> <li>c. Latino or Hispanic</li> <li>d. Asian</li> <li>e. Native American</li> <li>f. Native Hawaiin or Pacific Islander</li> <li>g. Other (text box)</li> </ul>
5	On a scale from 1 to 10, how religious are you?	<p>10-point scale</p> <p>0 = not at all religious</p> <p>10 = extremely religious</p>
6	What does your religion indicate about the forgivability of	<ul style="list-style-type: none"> <li>a. Extremely forgivable</li> <li>b. Very forgivable</li> </ul>

	infidelity? If you are not religious, skip this question.	<ul style="list-style-type: none"> <li>c. Moderately forgivable</li> <li>d. Slightly forgivable</li> <li>e. Not at all forgivable</li> </ul>
7	What do your personal moral values indicate about the forgivability of infidelity?	<ul style="list-style-type: none"> <li>a. Extremely forgivable</li> <li>b. Very forgivable</li> <li>c. Moderately forgivable</li> <li>d. Slightly forgivable</li> <li>e. Not at all forgivable</li> </ul>
8	How do you sexually identify?	<ul style="list-style-type: none"> <li>a. Heterosexual</li> <li>b. Bisexual</li> <li>c. Pansexual</li> <li>d. Lesbian</li> <li>e. Gay</li> <li>f. Asexual</li> <li>g. Other (text box)</li> </ul>
9	How many romantic relationships (6 months or longer) have you been in?	<ul style="list-style-type: none"> <li>a. None</li> <li>b. 1</li> <li>c. 2</li> <li>d. 3</li> <li>e. 4</li> <li>f. 5 or more</li> </ul>
10	Are you currently in a romantic relationship?	<ul style="list-style-type: none"> <li>a. Yes</li> <li>b. No</li> </ul>

11	How many sexual partners have you had?	[text box]
12	Have you ever been in an open romantic relationship (consensual for all partners)?	<ul style="list-style-type: none"> <li>a. Yes</li> <li>b. No</li> </ul>
13	Have you ever had a romantic partner commit an act of infidelity?	<ul style="list-style-type: none"> <li>a. Yes</li> <li>b. No</li> </ul>
14	Have you ever committed an act of infidelity?	<ul style="list-style-type: none"> <li>a. Yes</li> <li>b. No</li> </ul>
15	Has anyone ever committed an act of infidelity against their partner with you?	<ul style="list-style-type: none"> <li>a. No</li> <li>b. Yes, with my knowledge</li> <li>c. Yes, without my knowledge</li> </ul>
16	When facing conflict in my romantic relationship, I am most likely to:	<ul style="list-style-type: none"> <li>a. Distance myself from my partner</li> <li>b. Engage with my partner</li> </ul>

