



Hindsight Bias in Judgements of Dating Couples

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Abstract

Hindsight bias, also known as the “I knew it all along” effect, exaggerates our ability to understand our initial perceptions and predictions after something has already occurred. Although hindsight bias is a universal cognitive phenomenon, there are cultural differences in how it is exhibited. Hindsight bias has been studied in various contexts, such as clinical diagnoses, rape, and eyewitness testimonies, but has yet to be assessed in a romantic context. When considering romantic situations, individual differences, such as gender and sex, can influence how the relationship is perceived. Considering these individual differences, hindsight bias in relationships should be assessed from an outside perspective to minimize the effect of potential distortions.

Introduction

Hindsight bias is a phenomenon that is often discussed in the field of psychology. Hindsight bias, also known as the “I knew it all along” effect, tends to exaggerate our ability to understand our initial perceptions and predictions after something has already occurred. This phenomenon occurs in our everyday lives in various contexts, ranging from clinical diagnoses to relationship dissolutions. For instance, upon dissolution of a romantic relationship, we are able to identify red flags and we then blame ourselves for not seeing these signs earlier because they seem so obvious now that the relationship is over. As obvious as these signs may seem after the relationship is over, in reality it is actually quite difficult for us to predict how the relationship will turn out. We encounter innumerable ambiguous signals as we move through our lives, but once something happens, we are able to sort out these signals and find ourselves believing that we knew it all along or that we saw it coming. This study will incorporate and build off of previously conducted research regarding hindsight bias and will further explain this phenomenon through an assessment of hindsight bias in the context of romantic relationships.

Literature Review

To understand hindsight bias, it is essential to discuss the difference between hindsight and foresight. The difference between the two is whether we have outcome knowledge. When reflecting on the past, hindsightful judges have outcome knowledge because the events have already occurred and they are aware of how a situation turned out (Fischhoff, 1975). When we are looking towards the future, being a foresightful judge, we do not have outcome knowledge.

Hindsight bias tends to be centered around the perceived predictability and inevitability of an event occurring. According to Roese and Vohs, hindsight bias is the belief that an event is more predictable after its outcome becomes known (2012). The phenomenon also involves the inability to recreate the feeling of uncertainty that came before receiving outcome knowledge. In other words, it is difficult to imagine foresightful perceptions once we are given outcome knowledge (Roese & Vohs, 2012).

Theories to Consider

Baruch Fischhoff describes the concept of creeping determinism, the hypothesized tendency to perceive reported outcomes as having been relatively inevitable (1975). Similarly, philosophical determinism is the conscious belief that the outcome, regardless of what it may be, has to happen. These two hypotheses highlight the aspect of perceived inevitability involved in hindsight bias.

Upon dissecting the phenomenon of hindsight bias, researchers have found that there are three different kinds of hindsight bias (Roese & Vohs, 2012). One kind of hindsight bias is having a faulty recollection of an earlier judgement, also known as memory distortion. Those practicing this kind of hindsight bias tend to say, "I said it would happen," after the event has already occurred. Another kind of hindsight bias is inevitability, which we have previously discussed. Inevitability is a combination of memory distortion and a belief in causal forces. It revolves around the belief that the state of events was predetermined, leading people to say things along the lines of, "it had to happen." Lastly, the third kind of hindsight bias is foreseeability, which is a combination of inevitability and an individual's own understanding of the world, which would sound like, "I knew it would happen" (Roese & Vohs, 2012).

Inputs that Influence Hindsight Bias

Roese and Vohs also detail the different mental inputs that can influence hindsight bias (2012). A cognitive input affects the operations of memory, which includes recollection, knowledge updating, and sensemaking. Recollection is how the memory is retrieved. In hindsight bias, we are practicing recollection by trying to estimate our initial predictions (Roese & Vohs, 2012). Knowledge updating is a process where new information is taken and integrated into existing memory. If the newfound knowledge pertains to the old information, then the past is better understood because of the new information. Sensemaking is when we develop causal explanations to form a sense of meaning,

which enhances perceived inevitability (Roese & Vohs, 2012). Sensemaking stems from our innate tendency to locate a cause and effect in any given situation. Situations that have causal explanations have a greater hindsight bias than situations that are more ambiguous. Therefore, when there is a surprising outcome, there is a heightened probability for a greater degree of hindsight bias when the outcome can be connected to coherent, clear, and plausible explanations (Roese & Vohs, 2012). Although it is reasonable for us to make these connections, our need for cause-and-effect leads us to develop hypothetical counterfactuals. Developing hypothetical counterfactuals means we develop the idea that the outcome could have occurred differently despite its reality (Roese & Olson, 1995). Counterfactuals typically involve an “if” (a personal action) and a “then” (a personal goal) to represent alternatives to the factual events (Roese et al., 2006). To put this in a relationship context, let’s say that Sofia and Daniel are in a long distance, romantic relationship. After six months of dating, we are told the two have broken up. Given this information, it would be natural to say that the distance apart caused the breakup, but this is not for certain. It would also be natural for Sofia and Daniel to develop hypothetical counterfactuals. If the two lived closer together, then would they have stayed together longer? On the other hand, if they did live closer together, then would they have broken up earlier since they got to see each other more often and became familiar with one another’s faults sooner? Despite these hypotheticals, it does not change the reality of the breakup. The hypothetical counterfactual is only a method to understand the cause behind it.

There is also a metacognitive input involved in hindsight bias. Metacognition is the ability to understand one’s own thoughts. A common metacognition in our everyday lives involves questioning ourselves and self-reflection (Roese & Vohs, 2012). Metacognitive inputs are subjective judgements, and they tend to have the greatest effect on the foreseeability aspect of hindsight bias, because it is also subjective. As stated previously, other studies support the idea that when people find a plausible, logical connection behind the reason for an outcome, they will show a greater sense of hindsight bias (Roese & Vohs, 2012). The sense of ease provided by satisfying our innate desire for causality/cause and effect leads to an idea of certainty. This certainty, in turn, enhances our idea that we knew all along that the outcome would occur. In the context of our hypothetical relationship, Sofia and Daniel, it would be easy to conclude that the reason behind the breakup was the distance, but in reality there are countless other factors that could have played a part in their dissolution.

Motivation is another factor in the development of hindsight bias. Like metacognitive inputs, motivation affects foreseeability as motives are centered around the wants and needs of the individual (Roese & Vohs, 2012). The motivational input is influenced by self-esteem, as people want to view themselves in a positive light. When trying to explain the past, people oftentimes take credit for success and blame others for their failure (Roese & Vohs, 2012). Motivational input also involves the need for closure. According to Roese and Vohs, people have a need to see the world as predictable because we feel

threatened by uncertainty. Those that have a greater need for control or closure often exhibit greater hindsight bias. The need for control and closure is one factor that can lead individuals to try and find patterns in randomness, painting a false sense of reality.

Hindsight Bias in Previous Contexts

The study of hindsight bias in previous contexts can contribute to and amplify the phenomenon. It has been studied and demonstrated in a variety of settings, including clinical diagnoses (Arkes, Wortmann, Saville, & Harkness, 1981), eyewitness testimonies (Neisser, 1981), rape (Carli, 1999; Janoff-Bulman, Timko, & Carli, 1985), employee evaluations (Mitchell & Kalb, 1981), and suicide (Goggin & Range, 1985).

Findings of various studies. Baruch Fischhoff was the first to document hindsight bias in 1975. Fischhoff's study was the foundation for future works on hindsight bias. This study found that receiving outcome knowledge significantly increased the perceived likelihood of the event occurring. In fact, it nearly doubled the perceived likelihood. Further, Fischhoff found that we are typically unable to reconstruct the perceptions we had before we received outcome knowledge. In other words, after an event occurs, it is difficult to reconstruct foresightful judgements. Although hindsight bias is a basic cognitive process, there is potential for individual differences to affect the magnitude of hindsight bias. Oftentimes in research, study samples do not include those outside of Westernized society. Therefore, it is necessary to examine the potential existence of cultural differences in hindsight bias.

Considering culture in hindsight bias. Researchers have previously assumed that hindsight bias is reflective of basic features of the human information-processing system, so it should have adaptively evolved to meet the needs of everyone. Therefore, hindsight bias should be the same in every culture (Pohl et al., 2002). When comparing East Asian cultures and Western cultures, those in East Asian cultures exhibited more hindsight bias while those in Western cultures were either more surprised by the unexpected outcome or showed no evidence of hindsight bias. By addressing cultural differences and how it may have an influence on the degree of hindsight bias, it enhances the credibility of the research findings. Given that cultural differences affect hindsight bias, it is arguable that there is also potential for gender differences to influence hindsight bias as well.

Hindsight Bias and Romantic Relationships

As most people will experience the dissolution of a romantic relationship, it is important for us to assess how hindsight bias may influence our experiences of romantic relationships and how we perceive the relationship after its dissolution because in the weeks following a breakup, people tend to report an increase in negative emotions and a decrease in life satisfaction (Rhoades, Dush, Atkins, Stanley, & Markman, 2011).

Relationship perceptions after the breakup. Although everyone has their own individual experiences during a breakup, there are significant findings that show similarities, by gender, on perceptions of relationships after they have ended. Contrary to popular belief, breakups seem to be more traumatic for men than for women (Hill et al., 1976). Men

report feeling more depressed, lonely, less happy, and less free. Men also find it harder to cope with no longer being loved and the relationship being over (Hill et al., 1976). It is arguable that because there are gender differences in the perception of relationship experiences, these differences could influence the magnitude of hindsight bias in a romantic relationship.

Assessing hindsight bias in the context of a romantic relationship. To date, there have been minimal studies on how hindsight bias influences perceptions of romantic relationships after dissolution. Previously conducted studies typically involve participants self-reporting their own relationship experiences, which leaves room for distortion. There are three reported influences that could affect the accuracy of reports of romantic partners (Halford et al., 2002). The first influence is the characteristics of the environment individuals are being asked in. For instance, individuals will talk about the relationship differently if their partner is present versus if they are alone with their friends. Another influence is individual biases when discussing specific events in the relationship. For instance, an egocentric bias could lead individuals to overreport their own positive behaviors and underreport their negative ones. Another way individual biases create distortion is that satisfied couples perceive their partner's behaviors more positively in comparison to those in distressing relationships (Halford et al., 2002). The third influence is having memory bias in the recall of relationship events. This means negative events are more salient for those that are not satisfied in relationships, thus making it easier to look at a relationship negatively (Halford et al., 2002).

Hindsight Bias in a Romantic Relationship from an Outside Perspective

Past studies have shown there is a lot of room for inaccuracy when self-reporting. There are gender differences in relationships as women and men have different reasonings behind wanting to end a relationship, as well as having different emotional reactions afterwards. Furthermore, when reporting their own relationships, there are multiple biases at play. Considering the distortions present when individuals discuss their own relationship experiences, it is essential to assess hindsight bias from a subjective, third-party perspective, which leads to my current study.

In this study, we tested the proposal that hindsight bias occurs in the context of romantic relationship judgements. We aimed to manipulate people's perceptions of a romantic couple, Sofia and Daniel, by providing different forms of outcome knowledge. The groups that were given outcome knowledge have the potential to be influenced by hindsight bias while the group not given any information operate as the control group and as a foresightful judge.

Methodology

Participants

College Sample For this study, we collected a college sample and a community sample. For the college sample, we used Qualtrics and University of Wisconsin-Eau Claire's SONA research participation system to distribute our survey to 262 University of Wisconsin-Eau Claire students, ranging in age from 18 to 27 ($M = 19.4$, $SD = 1.38$). Each participant was randomly assigned one of three outcome knowledges functioning as experimental groups.

Community Sample For the community sample, we utilized Amazon's Mechanical Turk to collect responses from 331 people across the United States, ranging from 24 to 76 ($M = 41.6$, $SD = 11.20$). Each participant was paid \$1.00 for their participation. Participants were randomly assigned one of three outcome knowledges functioning as experimental groups.

Demographics All participants reported their age, biological sex, race/ethnicity, sexual orientation, and current romantic involvement. For the community sample, participants were asked about their romantic history, specifically how many committed relationships they have been in and how many breakups they have experienced. We only asked the community sample these questions with the rationale that they have had more experience dating due to age.

Materials

Relationship Vignette All participants received a survey that introduced a romantic couple, Daniel and Sofia, and some background on their romantic relationship. A hypothetical vignette introduces the participants to the couple and goes on to describe the positives of their relationship and some issues they have as well (Appendix A). After reading this information, one group of participants are told that six months later the couple had broken up, which we will refer to as the "broken up group," and another group is told that the couple have gotten engaged, referred to as the "engaged group." A third group did not receive any outcome knowledge, operating as a control group because without outcome knowledge they do not have the ability to be influenced by hindsight bias. The sample size and distribution for each outcome knowledge group are provided in tables 1 and 2.

Relationship Judgements Participants then answered a series of questions to provide judgements about the quality of the couple's relationship and their perceptions of the couple's future. We asked participants to guess the status of Sofia and Daniel's relationship six months later, which we refer to as the six-month forecast. We also asked participants to rate how obvious it seemed for the couple to either break up or be engaged

six months later, which we termed as the “obviousness” of an outcome, on a seven-point scale (Surprising to Neither surprising nor obvious to Obvious).

Procedure

Researchers followed standard consent procedures. The study was distributed electronically using SONA, Qualtrics, and Amazon’s Mechanical Turk. Consent information was provided on the cover letter, noting that continuing onto the questionnaire would imply the students’ consent to participate. When all participants had finished, the participants were virtually debriefed, outlining the background behind the research, the 3 possible scenarios that participants could be assigned to, and our predictions.

Results and Discussion

Overall, we found that being given knowledge of a breakup influenced perceptions of a relationship’s trajectory. The college sample and the community sample had multiple differences in their responses to a six-month forecast. We also assessed the perceived obviousness of the two either breaking up or getting engaged as a way of estimating perceived inevitability. The college and community sample significantly differed on the perceived obviousness of breaking up and the perceived obviousness of the two getting engaged.

College Sample For the six-month forecast, participants were asked to state where they believed the couple would be in six months on a scale of “they will have broken up” to “they will have gotten engaged.” Within the college sample, we found that those who were told the couple had gotten engaged significantly differed from those who were told they had broken up, but not from those in the control group (Figure 1). For the obviousness of breaking up, we found that college students did not significantly differ, regardless of the outcome they were given (Figure 2). For the obviousness of the two getting engaged, we found that college students who were told they had gotten engaged rated it more obvious that the two would be engaged six months later in comparison to those who were told they broke up. However, there was not a significant difference between the control group and the other two outcomes (Figure 3).

Community Sample For the six-month forecast, each experimental group was significantly different from one another; those who were told the couple got engaged had forecasted engagement more than those who were not told anything and even more than those who were told Sofia and Daniel had broken up (Figure 1). For the obviousness of breaking up, the community sample was significantly different across the board (Figure 2). Specifically, those who were told they had broken up thought it was more obvious in comparison to the control and the engaged group. In this scenario, the control group and the engaged group significantly differed as those in the engaged group thought it was the least obvious for the two to break up. For the obviousness of the two getting engaged, there was a significant difference between each group, which highlights the effects of hindsight bias. The group that was told they were broken up found it more

surprising while those told they had gotten engaged found it more obvious (Figure 3).

Conclusion

In this study, we have found that in most cases, hindsight bias can have an effect on our perceptions of a romantic relationship. Our findings show that when predicting a couple's future, receiving outcome knowledge significantly impacts our perception of a couple's relationship trajectory. However, when examining different aspects of hindsight bias, we found an interesting trend between the college and community sample. For the college sample, although there was a significant difference found between the broken-up group and the engaged group, there oftentimes would not be a significant difference between the control group and the engaged group. On the other hand, there was a significant difference between each group for the community sample. Although we cannot say for certain, we speculate that this could be explained by the age of the participants as the community sample is much older and therefore we assume the community sample has more relationship experience to reference in comparison to the college sample, leading to significantly different responses.

Although my current study's findings have the potential to be rudimentary in assessing hindsight bias in the context of a romantic relationship, there are limitations that must be acknowledged. For instance, despite the fact that my study sample has participants across the United States, this is not representative as it does not fulfill a cultural lens. Further, my study does not account for individual differences but rather assesses hindsight bias in a broader context. Therefore, for future research, we encourage further exploration by incorporating a multicultural aspect beyond the United States. We also suggest assessing potential psychological consequences of hindsight bias in romantic relationships. Overall, this research shows that when a relationship ends, there is no way for us to predict if we really saw it coming. The data we collected suggests that the outcome of a relationship, specifically a relationship dissolution, may not be as obvious or as predictable as it seems. Our innate reaction, that we should have seen it coming, can be explained by the phenomenon of hindsight bias.

Table 1

Participants' Evaluations of Daniel and Sofia's Relationship as a Function of Outcome Knowledge Condition (College Student Sample)

	Broken Up M [95% CI]	Control M [95% CI]	Engaged M [95% CI]
Six-month forecast of their relationship status	4.79 [4.31, 5.27]a	5.96 [5.56, 6.36]b	6.19 [5.65, 6.73]b
Perceived obviousness of Sofia and Daniel breaking up in the future	4.52 [4.24, 4.80]a	4.23 [3.99, 4.47]a	4.37 [4.11, 4.63]a
Perceived obviousness of Sofia and Daniel getting engaged in the future	3.15 [2.89, 3.41]a	3.52 [3.26, 3.78]ab	3.87 [3.59, 4.15]b
Negative evaluation of the relationship ($\alpha=.77$)	3.81 [3.55, 4.07]a	3.33 [3.07, 3.59]b	3.24 [2.98, 3.50]b
Positive evaluation of the relationship ($\alpha=.72$)	3.87 [3.61, 4.13]a	4.50 [4.26, 4.74]b	4.63 [4.39, 4.87]b

Note. The six-month forecast was on an 11-point scale ranging from “they will have broken up” (scored as 1) to “they will have gotten engaged (scored as 11). All other items were rated on seven-point scales (surprising to obvious, strongly disagree to strongly agree). Broken-up (N=85), Control (N=91), Engaged (N=86).

Table 2

Participants' Evaluations of Daniel and Sofia's Relationship as a Function of Outcome Knowledge Condition (Community Sample)

	Broken Up M [95% CI]	Control M [95% CI]	Engaged M [95% CI]
Six-month forecast of their relationship status	4.21 [3.77, 4.65]a	6.29 [5.87, 6.71]b	7.17 [6.70, 7.64]c
Perceived obviousness of Sofia and Daniel breaking up in the future	5.10 [4.86, 5.34]a	4.45 [4.17, 4.73]b	3.93 [3.63, 4.23]c
Perceived obviousness of Sofia and Daniel getting engaged in the future	2.95 [2.68, 3.22]a	3.69 [3.41, 3.97]b	4.66 [4.40, 4.92]c
Negative evaluation of the relationship ($\alpha=.88$)	4.43 [4.17, 4.69]a	3.45 [3.15, 3.75]b	3.01 [2.73, 3.29]b
Positive evaluation of the relationship ($\alpha=.78$)	3.44 [3.22, 3.66]a	4.19 [3.92, 4.46]b	4.64 [4.37, 4.91]c

Note. The six-month forecast was on an 11-point scale ranging from “they will have broken up” (scored as 1) to “they will have gotten engaged (scored as 11). All other items were rated on seven-point scales (surprising to obvious, strongly disagree to strongly agree). Broken Up (N=111), Control (N=108-109), Engaged (N=112-113).

Figure 1 Six-month forecast as a function of outcome knowledge.

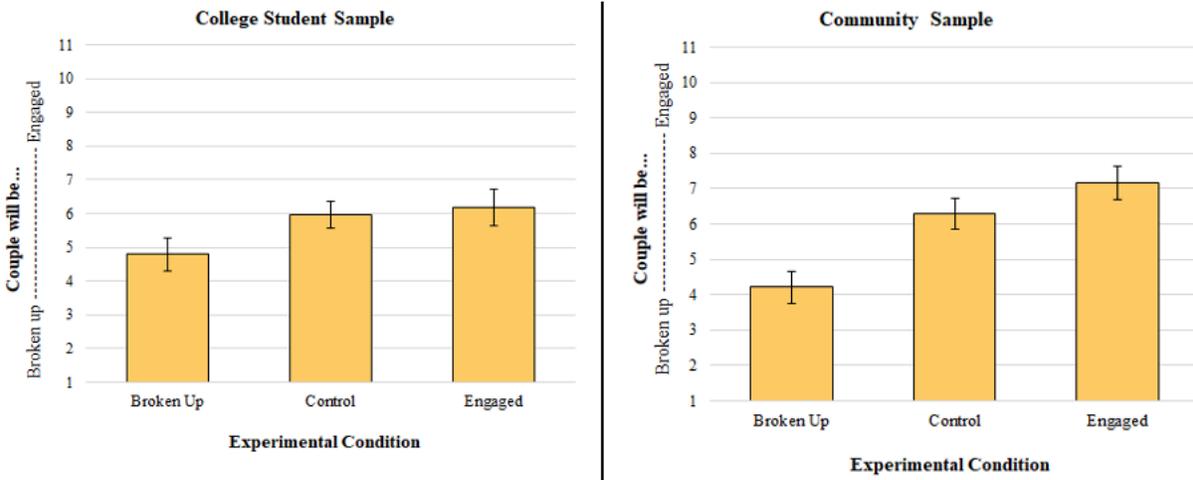


Figure 2 Perceived obviousness of breaking up as a function of outcome knowledge.

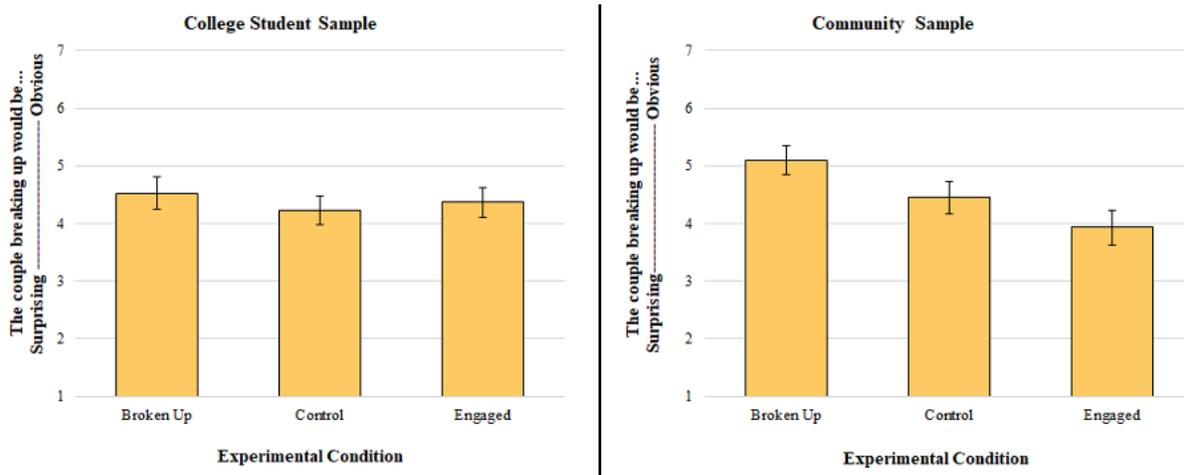
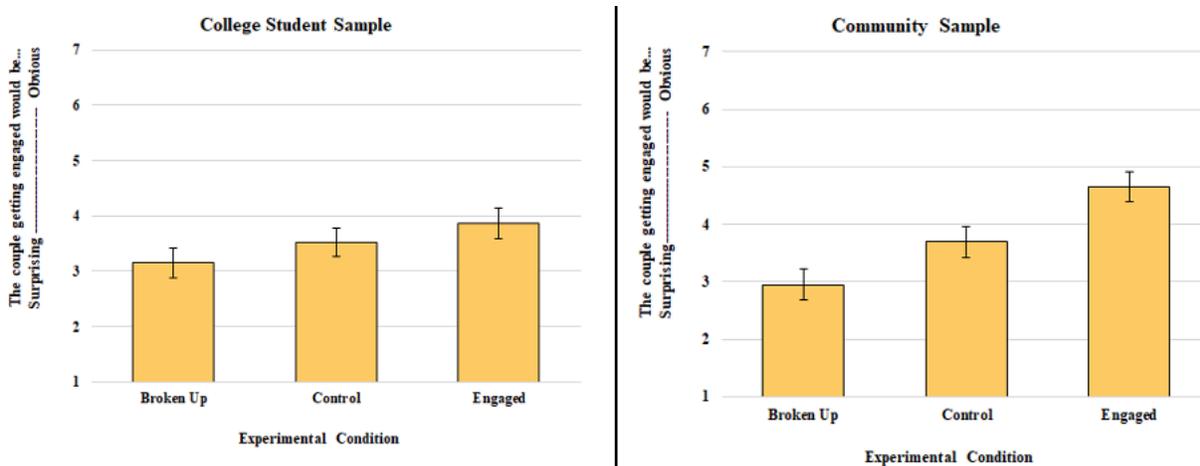


Figure 3 Perceived obviousness of getting engaged as a function of outcome knowledge.



Relationship Vignette

Each survey began with a description of Sofia and Daniel's relationship history. For this vignette, we listed the positives of their relationship and some potential downfalls. We randomly changed the order of the positives and negatives for counterbalancing purposes. The vignette is as follows:

Sofia and Daniel have just begun dating. It is their senior year of college and they hit it off after being introduced by a mutual friend at the homecoming football game. The couple has some potential issues. Sofia is very religious and spends a lot of time with her campus ministry while Daniel is a firm disbeliever. They are also pursuing opposite careers. She aims to work for a nonprofit and he is majoring in finance. Because of these differences, they tend to hang out with different crowds and don't share a lot of friends. In fact, their friends don't really support their relationship. They think the relationship is moving too fast and that Sofia and Daniel are too into each other to recognize that they are on different life paths. For all of these reasons, when certain topics come up there is some tension between Daniel and Sofia.

However, the couple also has a lot going for them. They always have something to talk about and can be open and honest with each other without feeling judged. Daniel says that he has never felt so comfortable with a romantic partner. Sofia, too, feels secure and safe around Daniel. She goes to all of his soccer games and he surprises her with flowers and candy. They have many of the same hobbies, like camping, kayaking, and listening to live music. For all of these reasons, Sofia and Daniel have grown close very quickly. They spend hours talking about their possible future together – where they'll get married, their favorite baby names, and where they want to live."

This is how the vignette was presented for the control group. For the two experimental groups, participants were informed about the status of the couple's relationship six months later. For the broken-up group, participants are informed that six months later, Sofia and Daniel have broken up. For the engaged group, participants are informed that six months later, Sofia and Daniel have gotten engaged.

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