

Memories and Prosocial Motivation
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Honors Thesis

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ABSTRACT

Prosocial behavior is a powerful force in this world, yet understanding what drives humans to be good is a complex topic. Self-perception theory explains how strengthening confidence and capability as a helper perpetuates prosocial behavior. Role placement, the assignment of social roles as a benefactor of helpful behavior or a beneficiary has been known to impact self-perception. But how does the amount of time from when one helped another affect one's self perception? This question has been neglected so far in the literature. Temporal distance represents the psychological separation in time between the current moment and past memories. The amount of temporal distance between memories impacts one's sense of self. Distant memories engage with an abstract sense of self, compared to recent memories that activate context-specific aspects. The general learning model asserts that prosocial media can influence an observer's behavior through vicarious activation. My study investigated intersections of role placement, temporal distance, and social media's influence by examining a volunteer who completed a 4000 km ride, the longest annual charity bike ride in the nation. They reflected on recent or distant memories in which they were the beneficiary or benefactor of helping behavior. In addition, they posted their responses on social media. Finally, 47 observers (M age = 19 , $SD=1.04$) rated their prosocial motivation after reading these posts. I hypothesized that when riders thought about themselves as benefactors rather than beneficiaries, especially in the distant versus near past, their sense of a moral self would be much higher and subsequently spill out via their language, resulting in greater prosocial motivation in observers. Contrary to my hypotheses, results revealed no significant effects of riders' role placement nor temporal distance on observers prosocial motivation. Theoretical and practical implications will be discussed.

Keywords: Prosocial Behavior, Temporal Distance, Role Placement, Social Media

Introduction

Prosocial behaviors are acts that enhance the welfare of others (Schwartz & Bilsky, 1990). They encapsulate a variety of helping behaviors including gift-giving, being a mentor, volunteering, and donating to charity. Aristotle (350 B.C./1985) was one of the first to suggest that prosocial behavior is the key to enhancing well-being. Research supports that prosocial behavior increases mental health while decreasing a sense of hopelessness (Schwartz et al., 2003). The current research focuses on the unclear realm of prosocial motivations and what ultimately drives people to prioritize the well-being of others. Self-perception can directly influence behavior in the moment. For example, being reminded of previous helpful behavior, stimulates maintenance of a specific moral image (Bem, 1972). According to the self-perception theory, people become aware of their attitudes by observing their own behavior (Bem, 1972). In addition, past memories can impact self-perception. Reflecting on distant, adolescent events allows people to engage with abstract, pure concepts of their childhood selves (Gino & Desai, 2012). On the other hand, reflecting on recent helpful experiences can lead people to believe that they have fulfilled their obligation and even have license to behave immorally (Tasimi & Young, 2016; Trope & Liberman, 2010). In the current modern age, social media is becoming more and more prevalent. However, there is more to be learned surrounding how social media can influence observers. Current literature has highlighted how there is a connection between the amount of helpful media consumed and consequential behavior (Prote et al., 2014). My study explores how people pursuing prosocial goals display their concrete and abstract memories on social media and subsequently experience self-perceptions processes that may potentially spill over and motivate observers on social media. In the following literature review, I will overview how self-perception, temporal distances and social media influence prosocial behavior.

Self-perception

Characterizations of self are a powerful predictor of behavior. Reflecting on giving or receiving help engages different aspects of the self (Grant and Dutton, 2012). Reflecting on receiving leads people to feel more grateful and can improve psychological well-being (Emmons & McCullough, 2003). Reciprocity is a prominent theory behind prosocial behavior as a consequence of giving. Reciprocity is the concept that once someone receives a gift they are more likely to reciprocate because they feel indebted to their benefactor (Gouldner, 1960). However, this aspect of human behavior is emotional, short-lived and confined to a situational context, often only impacting one person (Cialdini & Goldstein, 2004). The act of receiving is also known to reinforce feelings of embarrassment and incompetence (Fisher, Nadler, & Whitcher-Alagna, 1982). Moral licensing is the idea that once one has reinforced their good morals by remembering past actions, they give themselves license to behave immorally (Tasimi & Young, 2016; Conway & Peetz, 2012). When people are asked to reflect on concrete actions, they are more likely to activate their self-regulatory behaviors and give themselves license to behave immorally (Conway & Peetz, 2012; Mullen & Monin, 2016). Overall, receiving reinforces passive behavior, and diminishes motivation for helpful behavior (Fitzsimons & Finkel, 2011)

However, there is a growing body of evidence supporting the idea that reflecting upon giving to others can facilitate helping behaviors. Self-perception theory explains that when one observes their own behaviors, they reinforce their self-image (Bem, 1972). Thus, focusing on identifying as a benefactor reinforces self efficacy. Ideas of capability, confidence, and social worth are solidified when one reflects on previous helping behaviors (Grant & Gino, 2010).

Grant and Dutton (2012) tested whether reflecting on past memories of helping leads people to be more inclined to behave helpfully, when compared to reflecting upon receiving. They used a naturalistic field study to examine their hypothesis. They had university employed fundraisers, whose job consisted of trying to contact alumni in an effort to raise money, keep journals. Participants were prompted to reflect on memories of giving, receiving, or neither in the past while at work. Then, the fundraisers' amount of calls made were used as a measure of their prosocial dedication because they were paid hourly regardless of how many calls were made. They observed participants two weeks before manipulation, during the three days of experiment, and the following two weeks. The results revealed that reflecting upon previous prosocial behavior increased the amount of calls by 30%. In contrast, those who were tasked with reflecting on receiving didn't experience any change in the amount of calls made, demonstrating the power of emotional writing and how specific roles can impact one's behavior.

Temporal Distance

How one perceives time can influence their present and future. Construal-level theory (CLT) is the concept that temporally distant events are more generalized, abstract and reconstructed in the mind when compared to temporally proximate events (Trope & Liberman, 2010). By examining the language used on Twitter and in New York Times articles, Bhati Walasek (2016) determined that concrete words were more likely to describe the recent past rather than the distant past, supporting construal level theory.

CLT has been extrapolated even further and has been known to influence people's sense of self. (Kivetz & Tyler, 2007) demonstrated that perceiving distal times tends to drive engagement with core values and ideal senses of self. In contrast, thinking of proximal temporal

distances activates the pragmatic self. Correspondence bias is a consequence of CLT. This bias surrounds the idea that distant time perspectives shift attention to dispositional contingencies more salient to one's core values, and because people have a greater concrete perception of proximal time, they tend to engage with situational attributions. Kivetz and Tyler (2007) demonstrated this idea when they asked college students to choose between two different courses varying on temporal distance and value. Students were prone to choose a course that looked good on their resume when it would be taken in the near future. On the other hand, students were more likely to choose a course where they would be respected and valued if it were to be taken in the distant future. Thus, people rely on concrete context when thinking about the proximal temporal distances and they tend to rely on abstract, stable personality traits when perceiving the distant past.

Agerström & Björklund (2009) took this idea even further and tested the main effect of temporal distance on moral conception. They asked undergraduate students to reflect on hypothetical situations. For example, they asked how likely a participant was to help a friend move rather than spend the day relaxing in the good weather. Then, they varied if this scenario were to happen today or ten years from now. Results revealed people believe themselves to be more amoral, and selfish in the present than in the future. These conclusions support the concept that when engaging with distal conceptions of the future, people believe that they will develop into their ideal selves overtime and become a more caring and wise person.

Gino and Desai (2012) determined these ideas are salient when looking at the distant past as well. They established that there is a positive relationship between recall of morally pure childhood memories and current prosocial behavior. They proposed that because people think of children as innocent and as their childhood as a generally better time, activating this self-concept

will guide current behavior. Their experiments prompted participants to recall a positive childhood memory and write about it for ten minutes then they fill out likert scales measuring sense of moral purity, positive emotions, and positive effect. Then, participants were requested to help a researcher in a different lab with a new task. Participants' feelings of innocence and virtuousness were evoked. In addition those in the experimental conditions were more likely to help a novel researcher as opposed to the control group, who were prompted to reflect on a trip to the grocery store. Analyzing the memories that were recounted and the scale measures lead researchers to conclude that a sense of moral purity mediated prosocial behavior.

The Power of Media

Media is a powerful force in influencing behavior today. There is a neurological basis for these assumptions. In fact, magnetic brain imaging has shown identical mirroring between actors and observers (Gentile et al., 2009). Prot et al., 2014 used video games in order to further the idea of vicarious and observer consumption equality. They had participants learn how to play a video game while others were tasked with observing. They measured participants' mood, attitude, and joy. Results for both groups of participants were significantly similar, leading researchers to conclude that there is a relationship between how media is actively and vicariously perceived. In addition, prosocial media such as television and games have been shown to increase helpfulness in the short and long term (Gentile et al. 2009). These findings support the general learning model which emphasizes how people learn from their environment (Barlett & Anderson, 2013). Prote et, al. (2014) created an experiment to further the understanding of mediating factors on prosocial behavior and its longitudinal effects on prosocial behavior. They had participants from seven different countries fill out extensive questionnaires on their consumption of prosocial media such as movies, video games, and television shows. Within each

group, greater prosocial media consumption was associated with greater helpfulness, and these results were mediated by empathy. These findings reveal how prosocial media has a powerful and evident influence on not only observers emotion but also their behavior.

Conclusion

The literature and theories surrounding people's motivations for helping others are extensive. The current study focuses specifically on the interplay between self-perception, temporal distance, and social media as a mode of influence. Self-perception theory details how people develop their attitudes toward themselves by examining their behavior (Bem, 1972). Thus, thinking about oneself in different roles can alter one's sense of self. Temporal distance has been known to impact self-perception. However, it has not been examined in accordance with specific role assignments and prosocial motivation. On one hand, focusing on proximal distances engages the pragmatic self, which could potentially decrease prosocial behavior. On the other hand, engaging with distal memories allows individuals to focus on the "big picture" and prioritize their ideal selves (Kivetz and Tyler 2007). In the current study, a volunteer who embarked on a 4000 km participated. They were prompted with writing to reflect on either recent or distant past memories where they were the beneficiary or benefactor of helping behavior. In addition, because social media has become an increasingly prominent aspect of modern day life, their social media posts were rated on a prosocial motivation scale in order to gauge how prosocial models impact the general population.

Methods

Study Design Overview

The primary questions are as follows: Will observers be more motivated to behave prosocially upon viewing social media posts influenced by benefactor or beneficiary memories from the distant or recent past? A member of the Texas 4000 participated, which is a rigorous charity bike ride from Austin to Alaska to raise awareness, hope, and funds in the effort to fight cancer. The primary independent variables were four writing prompt conditions that cued participants to reflect on either a memory of giving or receiving from the distant or recent past. The participant received all four writing prompts in a random order, across the span of about 10 days. Then, they completed a social media post inspired by the given prompt in which they shared their thoughts, feelings and memories with their followers. The primary dependent variable was the impact of the social media posts on promoting prosocial behavior, measured through scores on the prosocial intentions scale made by raters.

Participants

A member of the Texas 4000 participated. Members must go through an intense application process and commit to a minimum of a year and a half of on-boarding educational and physical training. This study recruited riders from the 2023 summer ride to participate through email. The participant was a former female student at the University of Texas who was 22 years old. They received all four writing prompt conditions in a random order and \$50 as a reward. Henceforth the initial participant will be referred to as the “rider” henceforth. The second group of participants served as “raters” and will be referred to as such from now on. Raters consisted of students taking an Introductory Psychology course in the fall. These participants were undergraduates at the University of Texas at Austin between the ages of 18-22 years old.

They were recruited online and incentivized with class credit for participating. A power analysis has been conducted with an effect size of $d=.54$, (adapted from Grant and Dutton (2012)) and a 80% statistical power assumption. Thus, with one rider generating stimuli, our participant pool consisted of 47 undergraduate psychology student participants, $N= 12$ men and $N=34$ females.

Materials and Measures

Demographics

A demographics questionnaire used to collect gender, race, ethnicity, origin, working status and age of all participants.

Writing Prompts

Four writing prompts devised for each of the four conditions. These conditions varied in temporal distance and role. They included Benefactor, Distant; Beneficiary, Recent; Beneficiary, Distant; Beneficiary, Recent (see Appendix A). Four posts per rider downloaded and compiled for the raters to analyze. All identifying information was removed from the posts including names and locations mentioned.

Prosocial Intentions Scale (Baumsteiger & Siegel, 2019)

Raters assessed their prosocial motivation using Baumsteiger and Siegel's (2019) 5-item scale. This scale asks participants to assess a series of behaviors such as "Help a stranger find a lost pet" and indicate how likely they are to engage in each on a scale between 1 (definitely would not do this) to 5 (definitely would do this). This item has established consistency ($n = 247$, 147; $\alpha = .81, .83$), and validity with past prosocial behavior ($r = .51, .43$) (see Appendix B).

Procedure

There has been a two stage consent process conducted. Initially, the rider gave their consent to be prompted and to have researchers assess their social media posts. Next, after the

experiment had been conducted, the rider gave their consent to have their social media posts assessed by undergraduate students for a motivational study.

Following each writing prompt, the rider completed a social media post, inspired by the memory they reflected on. The final communication consisted of the experimental survey, which included the final writing prompt as well as a second qualtrics survey to complete. The second qualtrics survey included the second consent form which asked participants permission to have undergraduate students view and assess their social media. In addition, the second survey asked demographic questions for further research.

Participants were committed for a minimum of ten days. Once they received each survey, participants were asked to complete it immediately. After two days of finishing each survey, they were sent their next writing prompt. Once they have completed all surveys, each participant's four posts were compiled. Undergraduate raters were recruited in the fall. They assessed all four of the rider's posts according to the prosocial intentions scale.

Statistical Analysis

The primary analysis used a 2x2 repeated-measures ANOVA varying the time, and type of memory recalled as the independent variables and the average summary score of prosocial motivation created by the raters as the dependent variable. Secondary analysis involved implementing the additional data gathered such as demographics questions and questions regarding participants' perception of the experiment. A 2x2 stratified ANOVA was conducted to break down the two main independent variables by groups in order to explore the effects within different levels.

Results

Comparison Between Role and Temporal Distance

The initial research question surrounded if observers are more motivated to behave prosocially upon viewing social media posts influenced by benefactor or beneficiary memories from the distant or recent past? A two way within subject Analysis of Variance (ANOVA) statistical analysis revealed how there is not a statistically significant main effect of Role $F(1, 46)=.038$, $p=.845$, $\eta^2= 4.7 \times 10^{-4}$. In addition, there was not indication of a significant main effect of Temporal distance The results indicated no significant main effect for temporal distance, $F(1, 46)=.352$, $p=.556$, $\eta^2=.002$. Finally, there was no significant interaction between role and temporal distance $F(1, 46) = 2.551$, $p = .117$). This implies there is no significant effect of role on temporal distance that differs significantly from their individual impacts. Scores for all stimuli were consistently high and there was high internal consistency within our scale ($\alpha \geq 0.9$). (see Figure C1). Exposure to stimulus motivated by memories within recent temporal distances, yielded slightly higher prosocial intentions scores for Benefactory roles ($M=4.032$, $SD=.901$) and beneficiary roles ($M=4.011$, $SD=1.009$) as opposed to Distant memories combined with Benefactory role ($M=3.995$, $SD=.803$) and beneficiary roles ($M=3.984$, $SD=.918$)

Gender

Females had greater prosocial intention scores when exposed to all four conditions, as opposed to males (see Figure). There was no significant interaction between role, temporal distance, and gender (the full thing $P=.049$). However, Men ($M= 3.53$, $SD= .84$) constantly produced lower prosocial intentions scores, compared to women ($M=4.166$ $SD= .88$) when exposed to all stimuli.

Perception of Stimulus

Exploratory analysis was undergone in order to assess various demographic variables on prosocial intention scores. Based on average scores, people tend to be more prosocially motivated on average when they perceive the posts as being generated by a single person ($M=3.8$ $SD=1.13$), as opposed to multiple people ($M=4.1$ $SD=.8$).

Discussion

Overall, this study provides greater insight into the areas of memory and helpful behavior in regards to social media. Although we found no significant interaction between role and temporal distance, averages shed light on ideas surrounding memories and behavior. In addition, This study extends this idea to social media's impact on behavior.

Literature on how gender impacts prosocial behavior reveals that both genders engage in helpful behavior at similar rates (Eagly, A. H, 2009). However, men tend to value acts of valor and shows of strength. Thus, the fact that women were more prosocially motivated by stories of community helpfulness is insightful in regards to the impact of the overall behavior and the specific memory being recalled. However, a limitation to the current study is the number of male and female participants. Future researchers should strive to pursue a representative sample.

Research on Self-perception solidified that reflecting on benefactor or beneficiary behaviors can impact one's preceding actions (Fitzsimons & Finkle, 2011). It may be possible that these concepts are impacting the rider's future behavior, but are to not be prominent enough for observers to register through social media. In addition, inconsistencies in Construal Level Theory (CLT) can be explained by the possibility of lack of salience and relatability with observed social media posts. CLT relies on personal ideations of one's self in the distant future or the distant past (Gino & Desai, 2012). A more evident difference in CLT would be to use a larger range of temporal distances to engage with more abstract memories. Reflecting on distant events can lead someone to engage with a more pure, ideal version of themselves, promoting helpful behavior (Gino & Desai, 2012). Our study utilized distance and recent memories that were while the Texas 4000 was happening. Thus, in the future, researchers could examine larger distances as well as a larger spread of distances in order to find a more prominent relationship. There is a

connection between the amount of helpful media consumed and helpful behavior (Prote et, al., 2014). Going forward, participants could be exposed to even more stimuli.

For logistical reasons, we had participants identify themselves at the beginning of the survey. This is a drawback because participants could have felt a need to present as socially desirable because they are not anonymous.

In the future, researchers should strive to have a more representative sample of stimulus. During our study, only one rider participated in generating stimulus. Due to riders personal preferences, there was only one rider who was willing to engage with the study for the entire data collection period and post on social media for the study. On one hand, having participants create stimuli that were authentically posted on social media is a strength of the study because it allows the results to be more applicable to real work situations. However, although the posts were actually posted to the participants' audience on their own social media, they were presented in an artificial way. To protect privacy, a template was used to present the social media posts to the raters. In order to be more authentic, a real world application of the methods would be beneficial. In addition, examining an even larger temporal distance gap, as well as expanding the role types is an advisable direction. Strengths of this research include the dual participant pools and within subject nature which allows the opportunity to widen the applicability of the conclusion. By having every participant exposed to every condition, the results are more salient because within subject designs increase the power of results, and reduce errors as well as the variance for individual differences among participants. Concrete prosocial intentions scale is another strength. Utilizing a tested and accurate psychological scale increases the studies credibility.

This study provides valuable insight into the intricate relationship between memories, role placement and the influence of social media. While the absence of a significant interaction

between role and temporal distance is noteworthy, the observed average scores reveal a need for further research on memories and behavior. The findings extend to the modern realm of social media, offering insights into gender differences in social media's ability to motivate. This study helps to lay the foundation for future investigations into how prosocial motivation is dictated by the interplay between memory, behavior, and social media.

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Appendix A

Writing Prompts

We often receive from other people. We receive when others help, contribute, donate, assist, volunteer, express compassion, or provide support to us—any act of offering their time, knowledge, skills, money, connections, or other resources to benefit us. Thinking all the way back to the beginning of the summer, around the time the Texas 4000 ride started, please write about a distant memory in which you received from another person. What did you receive, and how did you benefit?

Figure A1. adapted from Grant and Dutton (2012). The underlined words were altered for each condition. 1) Recent temporal distance (at the end of the ride) reflecting on helping others. 2) Recent temporal distance reflecting on receiving help from others. 3) Distant memory (beginning of the ride) reflecting on helping others. 4) Distant memory reflecting on receiving help from others.

Appendix B

Prosocial Intentions Scale

Prosocial Behavioral Intentions Scale

Instructions: Imagine that you encounter the following opportunities to help others. Please indicate how willing you would be to perform each behavior from 1 (Definitely would not do this) to 7 (Definitely would do this). If you are more likely to complete one task (e.g., help a stranger find a key) than another (e.g., help a stranger find a missing pet), please respond to the task that you would be more likely to perform.*

1. Comfort someone I know after they experience a hardship
2. Help a stranger find something they lost, like their key or a pet
3. Help care for a sick friend or relative
4. Assist a stranger with a small task (e.g., help carry groceries, watch their things while they use the restroom)

Figure B1. Adapted from Baumsteiger et.,al (2018). The mean scores for all items averaged and combined for a single score.

Appendix C

Table 1
Descriptive Statistics for Prosocial Intention Scores

Role	Temporal Distance	<i>M</i>	SD
Benefactor	Distant	3.995	.803
	Recent	4.032	.903
Beneficiary	Distant	3.984	.918
	Recent	4.011	1.099

Note. $N=47$

Interaction Between Temporal Distance and Role

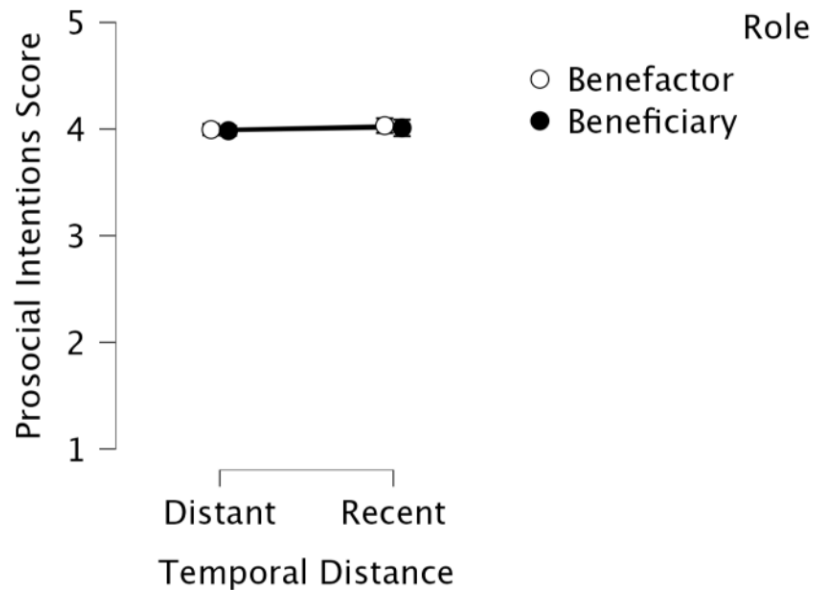


Figure C1. Figure based on the Prosocial Intentions Scale (Baumsteiger et.,al 2018) and expected results using the program JASP. There was no significant interaction ($p=.913$) found between temporal distance and prosocial intention score for those who reflected on benefactor memories and beneficiary memories.

Interaction Between Temporal Distance and Role Stratified by Gender

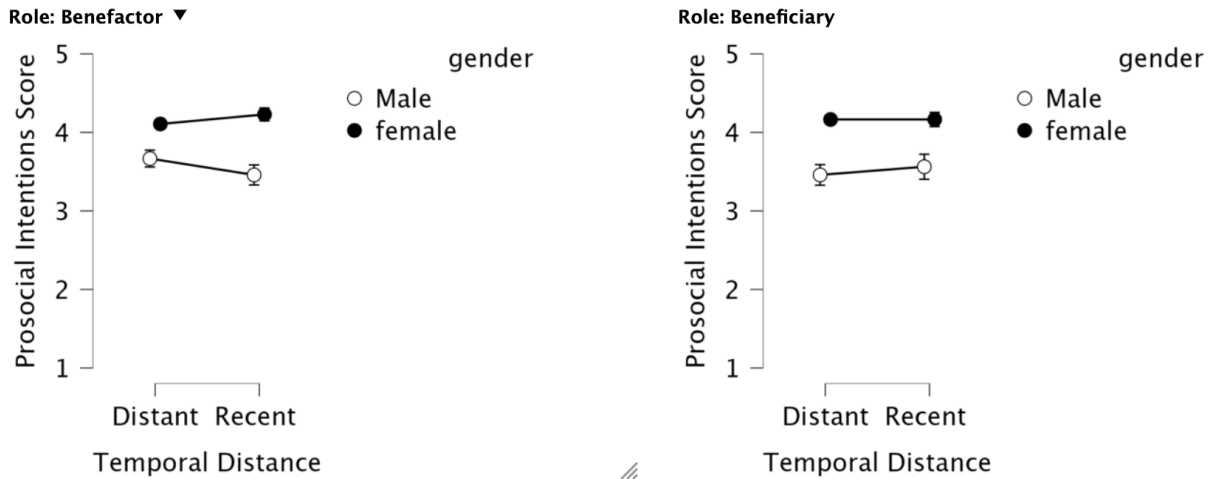


Figure C2. Figure based on the Prosocial Intentions Scale (Baumsteiger et.,al 2018) and expected results using the program JASP. Visualization exploratory analysis between different demographic factors. There was no significant results found when scores were distinguished by gender (p=.022)

Interaction Between Temporal Distance and Role Stratified by Perception

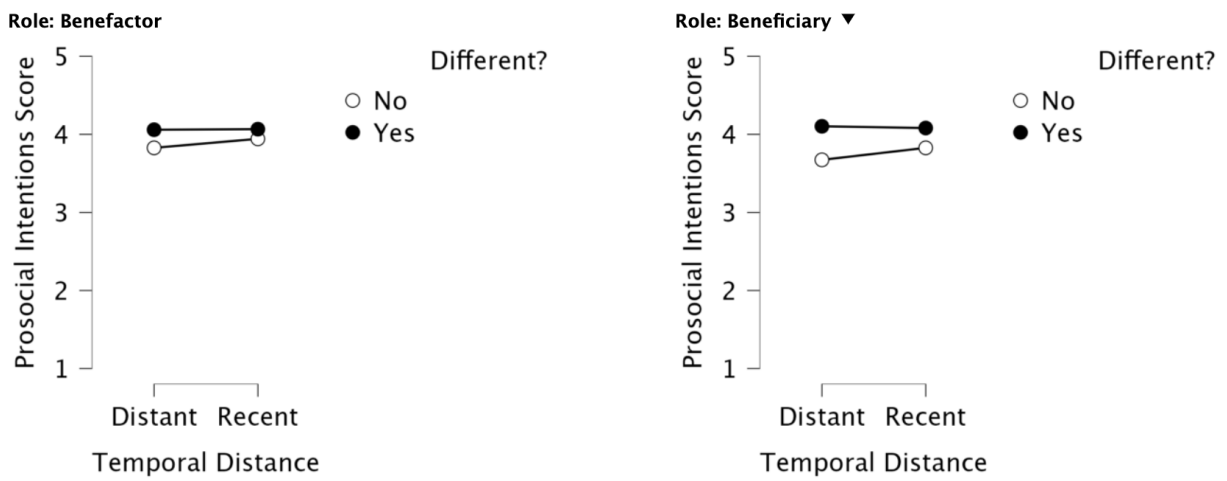


Figure C3. Figure based on the Prosocial Intentions Scale (Baumsteiger et.,al 2018) Although no significant difference was observed ($p=.148$) , visual inspection reveals how there are apparent perceptual differences, when data is broken down by Role Placement and Temporal Distance.

Note. In this figure, “Difference?” indicates the question of if the rater believes they have viewed social media posts created by one person.