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Romantic Nostalgia: Examining the Motivational and Relational Outcomes

Margaret Kneuer

ROMANTIC NOSTALGIA: EXAMINING THE MOTIVATIONAL AND RELATIONAL
OUTCOMES

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of
Philosophy in Psychology at Virginia Commonwealth University.

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Abstract

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By Margaret A. Kneuer, M.S.

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Psychology at Virginia Commonwealth University.

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Major Director: Dr. Jeffrey Green, Professor, Department of Psychology

Romantic nostalgia, or the sentimental longing and wistful affection towards a romantic partner

(Evans et al., in press), is a type of nostalgia pertaining to relationships that has not been

addressed widely in the current literature. The goal of this research is to investigate whether

romantic nostalgia buffers against conflict and promotes motivational benefits to the relationship.

I extend the work on the restorative nature of nostalgia to close relationships and explore

cognitive, motivational, and behavioral relationship maintenance strategies. Study 1 sampled

university students currently in romantic relationships to examine the association between

romantic nostalgia proneness and compassionate goals. Romantic nostalgia proneness was

significantly correlated and predicted compassionate goals, moderated by avoidant attachment,

and mediated by relationship functions. In Study 2, I experimentally manipulated both conflict

and romantic nostalgia to examine whether there was an interaction effect on compassionate

goals. Both manipulations were successful; however, there was no support for main or

interaction effects between romantic nostalgia and conflict on compassionate goals. In Study 3, I

induced conflict for all participants first, followed by the same romantic nostalgia manipulation

from Study 2, and assessed mediating and downstream relationship maintenance effects (support

giving, derogation of alternatives, sacrifice). There were no significant group differences on any variables of interest, except for the derogation of alternatives: nostalgic individuals devalued attractive alternative partners following a conflict, relative to non-nostalgic individuals. Overall, the three studies offered insight into the effect of romantic nostalgia on relationship maintenance strategies, with relevant applications for relationship science.

Keywords: Romantic nostalgia, compassionate goals, relationship threat, derogation of alternatives, attachment

Romantic nostalgia: Examining the motivational and relational outcomes

"Without past memories acting as guidepost, humankind's dynamics diminish to the entropy of commission and reaction. The desire to achieve lastingness would be frivolous without appreciation of our joint history…Absent historical awareness, there would be no evolving community consciousness and there would be no social engine capable of generating any communities' battery of self-determinacy." (Oldster, 2016, pp. 455-456)

Motivation to enhance or maintain relationships drives human behavior, in which we can set and attain specific goals. Emotions, particularly emotions evoked by shared memories, can be motivating. Individual differences (e.g., personality traits, emotions, attachment dimensions) and dyadic processes (e.g., perceived and actual support, conflict) predict psychological well-being and perceived quality of intimate relationships, such as intimacy, commitment, love, and relationship satisfaction (Turliuc et al., 2021). Positive social interactions can be not only advantageous for satisfying social and psychological needs in the moment but may offer unique benefits when they are reflected on later. In cases where social interactions are not readily available, these nostalgic reflections may be a promising replacement. I suggest that reminiscing on past social experiences with close relationships, particularly romantic partners, will fulfill basic needs for human functioning that can motivate people to enhance relationship goals. Further, I argue that the restorative component of romantic nostalgia in a relationship conflict context will have valuable implications for relational and motivational outcomes.

There are adaptive outcomes to experiencing personal nostalgia. Past research on nostalgia has revealed social and existential benefits of personally experiencing nostalgia. Advancing recent nostalgia theory, I hypothesize that the restorative nature of *romantic nostalgia* will extend to relationship conflict contexts, and subsequently buffer against the adverse effects of relationship threat. I justify the uniqueness of romantic nostalgia to other variations of nostalgia with support from various relationship theories. I designed a three-study package to

assess whether romantic nostalgia elicits more meaning, esteem, and continuity in their relationship (relationship functions), and in turn, greater pursuit of relationship goals, and subsequent downstream relationship strategies. I will build and extend these theories by first providing correlational support, followed by experimental work to determine the effects and consider important mediators and moderators. In doing so, I aim to capture the potential evidence to support and extend both emotion and relationship theories.

Definition and Sociality of Nostalgia

The meaning of nostalgia in its literal form is derived from the Greek words, *nostos* and *algos*, defined as the "suffering caused by the yearning to return to one's place of origin" (Wildschut et al., 2006, p. 975). Conceptual definitions of nostalgia moved to distinguish this negative connotation from that of homesickness. Whereas *homesickness* is defined as longing to return home after a period of absence, *nostalgia* is defined as a "sentimental longing or wistful affection for the past" (The New Oxford Dictionary of English, 1998 p. 1266). Nostalgia is characterized as a self-conscious and social emotion (Sedikides et al., 2015). There is cross-cultural agreement on the conceptualization as a universal emotional experience (Hepper et al., 2014). Nostalgia is considered a frequently experienced emotion: people reported feeling nostalgic at least once a week, if not more often (Wildschut et al., 2006).

There are some conceptual distinctions to be made between various self-relevant past-oriented phenomena. *Rumination* refers to the thoughts and behaviors that capture attention of a negative mood state (Rusting & Nolen-Hoeksema, 1998). *Counterfactual thinking* is defined as the mental representation of past alternatives, such as imagination for how events could have had a different outcome (Roese, 1997). Counterfactual thinking is often evoked from self-relevant negative events, which is paired with wishful thinking and regret (Epstude & Roese, 2008).

Therefore, there may be some indirect overlap between counterfactual thinking and nostalgia. Nostalgia, rumination, and counterfactual thinking are similar in terms of their shared positive associations with past-oriented cognitions; however, they differ significantly in terms of their associations with autobiographical memory functions (Cheung, Wildschut, & Sedikides, 2018). For example, nostalgia has a strong positive association with *intimacy maintenance*, which obtains symbolic proximity to close others when their physical presence is not available (Webster, 1997). Therefore, nostalgia is characterized as having more positive effects, relative to rumination and counterfactual thinking.

There are many benefits to nostalgia proneness (trait) and induced nostalgia (state). When people write about a nostalgic event (Wildschut et al., 2006) or smell nostalgic scents (Reid et al., 2015), they experienced greater feelings of *social connectedness*, which is operationally defined as feeling love, protected, connected to others, trusting, socially supported, empathetic, or experiencing attachment security (Sedikides et al., 2015). There is rich empirical support for nostalgia increasing self-esteem, meaning in life, and self-continuity (see Sedikides et al., 2015 for review). In the context of motivational benefits, feeling nostalgic increased inspiration, which fueled goal pursuit (Stephan et al., 2015). Their full model evidenced that people who felt more nostalgic experienced greater social connectedness, which increased their self-esteem, subsequently elevating their feelings of inspiration, and, in turn, strengthening pursuit of their important goals. Their six-study design, implementing both correlational and experimental designs, and varying the methods used to evoke nostalgia, successfully linked nostalgia to greater pursuit of important goals. They clarified the mechanisms through which nostalgia fueled social goal pursuit, through psychological, social, and motivational routes. When people reflect on a nostalgic event, their relationship goals are activated, and they experience stronger

intentionality and felt efficacy to connect with close friends (Abeyta, Routledge, & Juhl, 2015).

Thus, the social motivational function of nostalgia increases social goal pursuit. Goal pursuit in

relationships is a key element of my studies and has not yet been studied.

There has been some work examining the extent to which nostalgic recollections are a

primarily positive versus primarily negative emotion. The element of bittersweetness stems from

the mixed affective features, which combine both positive and negative affect, though nostalgia

is regarded as a predominately positive emotion (Sedikides et al., 2015). Nostalgia evokes many

positive outcomes: greater meaning in life (Cheung et al., 2013), approach motivation (Stephan

et al., 2014), optimism (Routledge et al., 2011), positive affect (Wildschut et al., 2006), and

prosocial behavior (i.e., helping behaviors, charity donations; Green et al., 2021; Zhou et al.,

2012). Even though there is strong empirical evidence to support the benefits, nostalgia is still

considered to be a *mostly* positive emotion (Sedikides et al., 2015). Therefore, it is important to

take into consideration where nostalgia may not elicit the most positive effects for everyone.

Two points of critique regarding the net positivity of nostalgia revolve around

methodological choices or individual differences (e.g., attachment). Recent investigation using a

daily diary method assessed daily instances of nostalgia, compared to writing prompts instructing

participants to depict their *most* nostalgic experience, yielded differences in positive outcomes

(i.e., well-being). People who currently experienced feelings of nostalgia in their daily lives felt

greater negative affect (Newman et al., 2020); further, they found that people felt more nostalgic

when negative social events occurred, compared to positive events. Whereas Newman and

colleagues (2020) suggested that these daily states of nostalgia were more negative than positive

using non-experimental methods, I argue that this is aligned with the reparative function of

nostalgia. Congruently, people who currently experienced nostalgia in their daily lives were

more likely to feel inspired (Newman et al., 2020). Arguably, various and new manipulations of

nostalgia (e.g., re-reading favorite books, Kneuer et al., 2022; viewing old Facebook posts,

Behler et al., 2022) may help determine who benefits the most from nostalgic experiences.

       In addition to methodological considerations, there has been work examining attachment-

related avoidance as an important moderator, indicating that nostalgia increased social

connectedness for those with lower avoidant attachment (Wildschut et al., 2010). Put another

way, those high in attachment avoidance appear to reap fewer benefits of nostalgic reverie for

some outcomes. Taking attachment into account, researchers can better understand the extent to

which people may rely on social bonds to navigate negative experiences.

       The social description of nostalgia adopts the appraisal theory of emotion (Smith &

Ellsworth, 1985) as a foundation. The social nature of nostalgia can be seen in the content of

nostalgic memories. Taking a prototype theoretical approach (Rosch, 1978) researchers can

better understand the sociality of nostalgia by examining the content of the memory itself. For

example, people describe themselves as the protagonist of a nostalgic memory regarding a social

interaction with close others (e.g., family members, friends, romantic partners, co-workers) or

pivotal events, such as weddings, graduations, birthdays, or reunions (Wildschut et al., 2006;

Sedikides et al., 2015). People who write about a nostalgia experience, compared to an ordinary

experience, tend to use more first-person plural pronouns, suggesting the sociality of nostalgic

content is less self-focused and emphasized interactions with close others (Abeyta et al., 2015).

Feeling nostalgic increased intentions to pursue goals to connect with friends (Abeyta et al.,

2015; Study 2).

Belongingness

Baumeister and Leary (1995) elaborated on a hypothesis for understanding a fundamental interpersonal motive: belongingness. They posited that people have a fundamental *need to belong*, in which people are motivated to experience frequent positive interactions with supportive others. Baumeister and Leary (1995) suggested the need to belong is a fundamental human motivation because the need to belong motivates people to pursue social interactions intended to satisfy the belongingness need (i.e., cultivating and maintaining potential relationships). It is important to further distinguish between categories of interaction partners. There are different considerations that vary across relational and group levels to determine the degree to which people want to be accepted by various people. According to Leary (2021), close others (i.e., family members, friends, romantic partners) would be categorized as *personally-supportive* individuals (those who personally care about your well-being), yet group members (i.e., police officers, teachers, coaches) would be categorized as *role-supportive* individuals (those who are expected to help in times of need, but do not personally care about your well-being). These categories may help differentiate between relationships and group memberships influencing feelings of acceptance and belonging.

Positive affect, such as joy and satisfaction, typically acts as an indicator of goal attainment, according to Baumeister and Leary (1995); though they specify that this is not always the case, as in the example of romantic relationship dissolution. *Satiation* occurs when belongingness needs are satisfied, resulting in reduced motivation and interest to seek out additional relationships (Baumeister & Leary, 1995). An example in the context of intimate relationships can been seen in the reduced amount of time people spend interacting with other people (i.e., old friends) when a new romantic relationship begins (Milardo, Johnson & Huston, 1983). On the other hand, *substitution*, or replacing one social bond with another social bond, is

limited to which relationships can be substituted (Baumeister & Leary, 1995). They indicated

that social interactions with long-term close relationships may provide a sense of belongingness

that would not be available in new interactions with acquaintances. The degree of desire for

belongingness and acceptance may fluctuate in various settings. For example, there are various

situations, including threats, that may evoke a greater desire for belonging or acceptance (Leary,

2021). I plan to extend this situational threat to relational threat contexts, such as with

relationship conflict.

When interactions with other people are not available, individuals may turn to mental

representations of social bonds to utilize as a source of social connectedness (Gardner, Pickett, &

Knowles, 2005) and may use nostalgia as a restorative strategy to do so (Wildschut et al., 2010).

When participants wrote about a nostalgic event in their lives, compared to an ordinary event,

they experienced an increase in positive affect, self-esteem, and social connectedness (Wildschut

et al., 2006). Further, Zhou and colleagues (2008) demonstrated the pattern of nostalgia

regulating loneliness. When people experienced feelings of loneliness, those feelings triggered

nostalgia, which subsequently increased social support perceptions (Zhou et al., 2008). Although

loneliness evoked nostalgic feelings, nostalgia alleviated loneliness by increasing felt social

connectedness. These studies demonstrated how nostalgia serves relational functions (Sedikides

et al., 2008): social connectedness and perceived social support. It may be particularly valuable

to use romantic nostalgia in situations where social interactions may not be available, or in times

of conflict with a romantic partner, to increase a sense of belongingness, or restore relational

connectedness within the context of a relationship.

Lack of felt connectedness is considered one facet of loneliness. Hawkley and colleagues

(2005) proposed three dimensions of the loneliness-connectedness continuum: isolation,

relational connectedness, and collective connectedness. At the individual level, *isolation* is

characterized as feelings of aloneness, anonymity, and withdrawal. At the relational level,

relational connectedness refers to feelings (or their lack) of familiarity, intimacy, and support; at

the group level, *collective connectedness* depicts feelings of group cohesion and similarity. One

example of relational connectedness in the context of close relationships is *romantic*

connectedness, in which a person feels close and connected with their romantic partner (Evans et

al., in press); researchers inferred stronger relational benefits, evoked from romantic nostalgia

experiences, from elevated feelings of romantic connectedness. I aim to support this preliminary

work and suggest that romantic nostalgia may supplement social interactions; however, I plan to

extend it further by incorporating a relationship threat condition (i.e., conflict) in my

experimental design for Study 2. This draws upon the restorative characteristic of nostalgia as it

is a social emotion (Sedikides et al., 2015).

Collective Emotions and Nostalgia

Smith and colleagues (2007) explained that we traditionally regarded emotions as

individual phenomena, relating to personal goals and desires; however, they argued that

collective or group-level emotions can be experienced when a person identifies with an ingroup.

Group-based emotions are defined as experiencing an emotion on behalf of a group a person

identifies with; thus, individuals can experience group-based emotions even if they are not

interacting with their group (Niedenthal & Brauer, 2012). This suggests the importance of

ingroup identity activation. Intergroup emotions theory (Mackie, Devos, & Smith, 1998) posited

that the activation of a social identity alters how people interpret consequences of events for their

ingroup; therefore, individuals appraise group-relevant events more intensely the more they

identify with their ingroup identity. Thus, as intergroup relations change, people reappraise, and

their emotions vis a vis the ingroup vary (Maitner, Smith, & Mackie, 2016). Wildschut and colleagues (2014) empirically established support for considering collective nostalgia as an intergroup emotion.

In the context of collective emotions, such as collective nostalgia (Wildschut et al., 2014), researchers assume that emotions regulate human functioning, and in turn, cultivate goal attainment (Frijda, 1986). There are various types of collective nostalgia, including *national nostalgia* (Behler et al., 2021; Smeekes, 2015) and *university nostalgia* (Green et al., 2021; Wildschut et al., 2014). Green and colleagues (2021) investigated how university nostalgia (wistful longing for their formative university years) predicted university engagement outcomes at both the relational (socializing with fellow alumni and future reunion interest) and collective (volunteering and donations) levels. *University belongingness* was conceptualized as connectedness and identification to the community (their university belongingness measure was a composite score of the social connectedness and group identification items, as they were highly correlated with each other). In their two studies, people with greater university nostalgia experienced greater subjective well-being indirectly, through heightened university belongingness. In addition, university belongingness mediated the relation between university nostalgia and both relational outcomes (socializing with fellow alumni and future reunion interest). This research provided empirical support for group-based emotions on not only collective outcomes (i.e., greater engagement with the university), but also relational outcomes (i.e., greater engagement with fellow alumni). The linkage between university nostalgia on relational outcomes can be explained by heightened feelings of social connectedness. Thus, when people feel nostalgic towards their alma mater, they experience greater interest in socializing with fellow alumni via increased feelings of belongingness.

Drawn from intergroup emotions theory, a perspective of how group-level emotions are experienced as a function of being a part of a group (Mackie, Devos, & Smith, 1998), researchers suggested that nostalgia can be experienced not only at the individual level, but also at the collective level. Wildschut and colleagues (2014) operationalized *collective nostalgia* as nostalgia for shared ingroup events. Collective nostalgia does not have to be personally experienced past events as the collective memories could be shared with ingroup members (Martinovic et al., 2017). Thus, people may not have experienced the past event personally for them to feel nostalgic. Self-categorization and integration of a particular social group into the self distinguishes group-level emotions from individual-level emotions (Seger et al., 2009). Nostalgia at the collective level is empirically supported by research on *university nostalgia* (Green et al., 2021; Wildschut et al., 2014) and *national nostalgia* (Behler et al., 2021; Smeekes, 2015). Therefore, nostalgia can be experienced at various levels, when considering group identification.

Collective nostalgia evokes psychological benefits, somewhat similar to personal nostalgia. People who experienced collective nostalgia increased their collective self-esteem (Wildschut et al., 2014; Dimitriadou et al., 2019). Supplemental and related work revealed that people with collective self-esteem were more likely to experience greater commitment and loyalty (Ellemers et al., 1999; Sedikides et al., 2008). These outcomes are specifically group-based benefits, though it has important implications for specific (dyadic) relationships.

Restorative Nature of Nostalgia

Nostalgia offers reparative benefits to buffer against or alleviate various types of adverse experiences. Nostalgia can be used as a coping resource for threats (Sedikides & Wildschut, 2020). When a person experiences an existential threat (e.g., meaningless; Sedikides &

Wildschut, 2018), a social threat (e.g., loneliness; Zhou et al., 2008), a well-being threat (e.g.,

boredom; Van Tilburg et al., 2013), or a self-threat (e.g., self-discontinuity; Sedikides et al.,

2008), nostalgia is triggered, and alleviates the negative feelings. For example, in the context of

well-being threats, boredom can indicate a loss of meaning and lack of adequate engagement

(Van Tilburg & Igou, 2012). Researchers manipulated boredom using various tasks (i.e., copying

references or line tracing) and assessed current feelings of nostalgia, followed by a desire to

pursue something meaningful. Bored people experienced more nostalgia through heightened

desire to search for meaning in life (Van Tilburg et al., 2012). After a boredom induction, people

were asked to write about a nostalgic memory and assessed whether they felt a presence of

meaning in their life; when people experienced boredom, writing about a nostalgic reflection re-

established meaning in their life (Van Tilburg, 2013). I am particularly interested in whether this

cyclical restoration can be applied to *relationship* threats, such as conflict with one's romantic

partner.

There has been initial work to support the reparative relational benefits of romantic

nostalgia after a conflict induction. People writing about a romantic nostalgic experience after a

conflict induction reported a greater willingness to accommodate with their partner (Evans,

2019). Further work induced conflict prior to a romantic nostalgia writing task as well but

explore other relationship outcomes. Specifically, people who felt more romantic nostalgia after

a conflict induction reported greater commitment to their partner (Swets et al., 2021). Shared

nostalgic discussion within romantic dyads restored conflict by fueling more positive perceptions

of partner behavior, including perceptions of politeness and considerate of feelings during the

conflict (Hepper et al., 2016). Most of the restorative nostalgia investigation manipulated or

induced the threat first. For the preliminary work for relationship threat in the context of

romantic nostalgia (Evans, 2019; Swets et al., 2021), conflict was induced *first* with a brief

measure before the romantic nostalgia manipulation; conversely, Hepper and colleagues (2016)

included a conflict discussion *after* a shared nostalgic discussion because they were investigating

whether dyadic nostalgia altered actual conflict discussion and resolution behaviors. I am

interested in the potential buffering effect of romantic nostalgia, so I plan to manipulate conflict

prior to the romantic nostalgia manipulation to better capture the reparative potential.

Romantic Nostalgia

As a social emotion, nostalgia typically is beneficial for interpersonal relationships. There

is very little published work on romantic nostalgia. There are related romantic nostalgia terms

that some researchers have used separately or interchangeably. I aim to clarify this area by

including the various terminology and defining terms consistent with the other researchers. I

begin discussing the *relational nostalgia* construct (also referred to as *dyadic nostalgia* when

specifically examined at the dyadic level), which is a broad term. Relational nostalgia

encompasses various types of relationships, including close friends, romantic partners, and

family members. I argue that *relationship-centered nostalgia, relationship nostalgia,* and

romantic nostalgia fall under this umbrella term. Conceptually, these terms are nearly identical

in their definitions. However, they all take on slight variations to their operational definitions.

Romantic nostalgia is defined as nostalgia specific to one's romantic partner or

relationship (Evans et al., in press; Evans, 2019). In his initial investigation, Evans (2019)

focused on understanding relationship-specific benefits of romantic nostalgia, arguing that it is a

maintenance and reparative means for romantic relationships. Evans (2019) adapted the

Southampton Nostalgia Scale to measure trait romantic nostalgia (Study 1) and adapted the

Event Reflection Task (Study 2) following a relationship conflict writing task to induce

relationship conflict in all participants first; trait romantic nostalgia was associated with closeness, commitment, and relationship satisfaction, and state romantic nostalgia increased willingness to accommodate. Further, Evans and colleagues (in press) conducted a series of four studies to examine romantic nostalgia's relational benefits of closeness, satisfaction, and commitment. In their correlational Study 1, they established initial support for romantic nostalgia positively associated with relational benefits (closeness, satisfaction, and commitment), even when controlling for relationship length. Next, they manipulated romantic nostalgia experimentally, using an adapted Event Reflection Task (Study 2) or listening to a song (Study 3). Participants in the romantic nostalgia writing condition experienced greater satisfaction and commitment, but only marginally more closeness, compared to the control group. Study 3 also revealed romantic nostalgia via music increased romantic connectedness, closeness, relationship optimism, satisfaction, and love (but only marginally more commitment). They constructed a 14-day diary study to understand romantic nostalgia in daily life in university students (Study 4). Daily romantic nostalgia uniquely predicted greater daily romantic connectedness and daily relationship optimism, as well as lowered daily desire to leave their relationship.

Swets et al. (2021) examined *relationship-centered nostalgia* at the correlational level (Study 1), using the Relationship Nostalgia Inventory (Mallory et al., 2018) and at the experimental level (Studies 2 and 3), adapting the Event Reflection Task (Sedikides et al., 2015) to write about a nostalgic event shared with the romantic partner. Swets et al. (2021) instructed participants to first complete a relationship conflict measure before the nostalgic writing task, compared to a positive event and an ordinary event; when people experienced heightened conflict, greater relationship-centered nostalgia increased committed to their romantic partners. They found partial support for relationship nostalgia as a maintenance tool (oneness, but not

positive illusions or accommodation). Conflict and maintenance (i.e., feelings of oneness with partner) were mediated by reduced commitment, and relationship-centered nostalgia moderated this relation.

They continued their work exploring sharing *relationship-based nostalgic memories* in romantic couples to determine the effects on relationship well-being (assessed with interpersonal competence: emotional support and disclosure). Dyads were randomly assigned to one of three conditions, in which one partner was asked to write about (a) a shared nostalgic memory, (b) a personal nostalgic memory, or (c) an ordinary event, while the other partner read that written narrative. Reading a partner's shared nostalgic memory narrative increased feelings of state nostalgia more than the other two conditions (Yraguen, Venus, Swets, & Cox, 2021). In addition, these readers experienced greater interpersonal competence via greater state nostalgia, relative to the other conditions. This supports the perspective of vicarious emotions in dyads. Niedenthal and Brauer (2012) specified that vicarious emotions in dyads occur either when one member observes another person experiencing a specific emotion or observing the other member in a situation that would evoke a specific emotion.

Reminiscing about romantic relationship experiences, or *relationship nostalgia*, was related to relationship satisfaction and affect (Mallory et al., 2018). For Study 1, they used an adapted trait-level Batcho Nostalgia Inventory (Batcho, 1995) relationship nostalgia measure, and assessed affect via a pre-post method. They found that people with greater relationship nostalgia were more likely to experience more relationship satisfaction. Also, people who experienced greater relationship nostalgia reported less positive and negative affect. There was a small effect for positive affect and a negligible effect for negative affect in Study 1; the researchers argued that this overall shift moved people towards a more homeostatic emotional

state in the present moment. It is important to note that the researchers conceptualized

relationship satisfaction as an increased sense of emotional bonding in couples, specifically to

aid in therapy practices; however, this was not directly measured in their studies.

   Relational nostalgia is nostalgia at the dyadic level or nostalgia within specific

relationships, which is also referred to as *dyadic nostalgia* (Hepper et al., 2012b; Hepper et al.,

2016). Hepper et al. (2012b) examined the effect of dyadic nostalgic interactions on individual

and *relational functions* (i.e., esteem, continuity, meaning). In their experiment, dyads (close

friends, romantic partners, family members) discussed either a shared nostalgic event or a shared

ordinary event for ten minutes. Nostalgic dyads exhibited greater positivity and emotional

intimacy, relative to the control group (Hepper et al., 2012b); specifically, conversing about a

shared nostalgic experience increased quality of the relationship (positivity, intimacy, support,

and disclosure). Dyads in the nostalgia condition reported feeling greater esteem, meaning, and

continuity to their relationship following discussions (Hepper et al., 2012b); this endorses the

theoretical functions of nostalgia (esteem, meaning, continuity) extending to their relationships.

   Hepper and colleagues (2016) continued the relational nostalgia work, focusing on

attachment, to understand perceived conflict buffering effects and relationship quality. They

established a foundational link in an individual survey (Study 1) in which trait nostalgia

proneness alleviated the negative association between attachment anxiety and perceived

relationship quality (satisfaction, commitment, intimacy, and trust; Fletcher et al., 2000). They

found similar results at the dyadic level, measuring dyadic nostalgia proneness by adapting

Southampton Nostalgia Scale among friends and romantic partners (Study 2). They conducted an

experiment (Study 3) with romantic couples, in which they induced relational nostalgia with a

five-minute shared nostalgic memory (vs. shared ordinary memory) discussion. Next, the dyads

had an 8-minute conversation about an unresolved relationship disagreement to evoke conflict and completed measures on conflict behavior, attachment, and perceived relationship quality (satisfaction, commitment, intimacy, and trust). Relational nostalgia was a buffer to relationship perceptions, including buffering negative conflict and maintaining relationship quality, for anxiously attached individuals, but not avoidantly attached individuals.

These connections may play a role in how people may be motivated differently to their shared experiences in the present moment, but these positive interactions become shared relationship memories over time. Nostalgic memories typically involve close relationships (Hepper et al., 2012b). Layous and colleagues (2021) theorized how nostalgia would increase well-being long-term based on three important functions: social connectedness, self-continuity, and meaning in life. In their 6-week longitudinal study, participants were instructed weekly to practice nostalgic reflection, relative to control reflection. They linked this nostalgic reflection to well-being, specifically through three key nostalgia functions of social connectedness, self-continuity, and meaning in life. It is important to note for their intervention that nostalgia positively related to greater well-being were temporary (lasting 3 weeks before returning to baseline), although this was not the case when taking trait nostalgia proneness into account. Highly nostalgic individuals, relative to those low in nostalgia proneness, experienced longer-lasting benefits of the nostalgia intervention, including greater positive affect and lower negative affect for those in the nostalgic writing condition compared to those in the control writing condition (Layous et al., 2021). This alludes to the restorative nature of nostalgia (Wildschut et al., 2006). Taking this approach, Study 2 addressed this specifically to determine if the restorative effects of romantic nostalgia would be advantageous when a person is feeling conflict in their romantic relationship.

Compassionate Goals

People may deliberately or actively strive to maintain relationships with others based on various motivations. Relationship continuity is evident when feelings of affection and love are retained over time, as well as the sense of couplehood (Riley, 2018). In addition, meaning or purpose also influences relationship outcomes. Specifically, when people felt a greater sense of meaning, they experienced enhanced relationship quality and motivation to maintain their relationship (Hadden & Knee, 2018). In a recent meta-analysis, the link between self-esteem and social relationships was examined. People can promote positive relationship outcomes, such as increased social support by cultivating greater esteem or positive regard (Harris & Orth, 2019). Taken together, it is worth noting the relational benefits of continuity, meaning, and esteem within relationships. My aim is to provide more empirical support to examine the associations between these relationship functions on pro-relationship outcomes, specifically compassionate goals, in romantic partners.

There are two broad classes of goals: extrinsic goals and intrinsic goals (Kasser & Ryan, 1996). Extrinsic goals predominately focus on acquiring external approval and rewards (i.e., money, fame, image), whereas intrinsic goals focus on relatedness, helpfulness, health, and growth. To better understand relationship development, Crocker and Canevello (2008) proposed an interpersonal model, linking the motivational approaches of the fundamental need to belong (Baumeister & Leary, 1995) and self-determination theory (Deci & Ryan, 2000). They investigated whether interpersonal goals predicted social support and trust over time for college roommates. They distinguished between two types of interpersonal goals: *compassionate goals*, or goals to support partner, and *self-image goals*, or goals to create desired self-images (Crocker & Canevello, 2008). Compassionate goals focus on the well-being of other people, in which the

intentions are to support others, and do not prioritize obtaining or gaining benefits for the self (Crocker & Canevello, 2008). Opposingly, self-image goals focus on the construction, maintenance, and defense of self-images, and prioritize obtaining and gaining benefits for the self (Crocker & Canevello, 2008). The self-image goals relate to the desire for acknowledgement of self-presentations, in which people can achieve interpersonal benefits, such as obtaining friends, a new job, or recognition (Schlenker, 2003). People who hold compassionate goals are more motivated to improve the well-being of others (Lee et al., 2020), thus indicate a prosocial intention to help others. This prosocial motivation is especially valuable in the context of romantic relationships.

Relationship goals may vary at the state level but can be measured at the trait level. Relationship goals emphasize the intention of the behavior rather than the outcome of the behavior (Knee et al., 2013). Compassionate goals are associated with greater feelings of closeness, social support, and trust, whereas self-image goals are associated with greater conflict and loneliness (Crocker & Canevello, 2008). Compassionate goals contain a desire to genuinely support close others (Crocker, 2011) whereas self-image goals are derived from a desire for competency or to present oneself as a good and competent individual (Canevello & Crocker, 2010).

Maintaining Relationships

People typically enact relationship maintenance strategies to sustain their relationships. There is a vast literature on relationship maintenance strategies, but three strategies I aimed to explore in detail span across motivational, behavioral, and cognitive dimensions. I considered the cognitive strategy of derogation of attractive alternatives, the motivational strategy of support giving, and the behavioral strategy of willingness to sacrifice.

Derogation of Attractive Alternatives

Derogation of tempting alternatives is a strong cognitive tool for gauging relationship maintenance. When a person in a healthy relationship (i.e., high in commitment) notices an attractive individual in their daily life, they typically will assess them as less desirable, a process known as *derogation of attractive alternatives*. In other words, people in relationships will often minimize the attractiveness of others to avoid the temptation that may stray, signaling efforts for maintaining and enhancing their current one. When people devalue attractive alternatives, they maintain relationship esteem (Miller & Maner, 2010).

Promoting relationship growth directs people to pursue their relationship goals (Rodrigues et al., 2017). Researchers conducted an experiment on heterosexual individuals to test the initial attraction to an attractive target when they are motivated to maintain their relationship goals. Participants were asked to write about their aspirations, hopes, and goals, compared to a control, followed by an attractiveness rating task on an attractive target. When participants who were highly committed to their relationship wrote about their aspirations, compared to their obligations, the initial attraction rating of tempting targets was lower (Rodrigues et al., 2017). These results revealed that relationship goal setting contains downstream effects on pro-relationship behaviors, prompting the derogation of an attractive target.

Support Giving

Providing support to fulfill people's needs, or *support giving*, is a valuable prosocial behavior that helps others, particularly because social support is one of the most important predictors of well-being (Cohen & Wills, 1985). People who set compassionate goals to support their partner may exhibit a willingness or desire to provide emotional help, act as a source of

comfort, or be considerate for their partner's feelings (Crocker & Canevello, 2008). In the

context of romantic relationships, when people give support to their partners with altruistic

intentions, both members of the dyad will benefit from compassionate goals and support giving

behaviors. For example, recipients of compassionate behaviors perceive their partner's behavior

as more supportive (Crocker & Canevello, 2008). Compassionate goal setting is positively

associated with support giving behaviors (Canevello & Crocker, 2020). Further, compassionate

goals accounted for 7% of the unique variance in support giving, over and above prosocial

orientations, such as empathic concern (Canevello & Crocker, 2020; Study 2). Those who

perceive their partner as unsupportive to their needs experience negative consequences to their

relationship (Lee et al., 2020). Thus, the motivation to support (compassionate goals) followed

by the behavior to support (support giving) benefits both members of the dyad and facilitates

relationship maintenance.

Willingness to Sacrifice

Willingness to sacrifice is considered a strong behavioral maintenance tool in the

relationship literature (Kelley & Thibaut, 1978), one that sends an important signal to the partner

regarding their commitment (Van Lange, Drigotas, Rusbult, Arriaga, Witcher, & Cox, 1997).

Partners will make personal sacrifices, defined as acting against their own preferences, for the

sake of their partner's well-being or the relationship well-being. In other words, *willingness to*

sacrifice has been defined by interdependence theory researchers as a person overriding their

own immediate self-interest to prioritize the well-being of their partner or relationship.

According to Van Lange and colleagues (1997), sacrifice behaviors boost the well-being of a

partner or relationship, or positive relationship goals. This process also has been termed

transformation of motivation, in which individuals abandon their own immediate self-interests to

act in concordance with their partner's interests (Kelley & Thibaut, 1978). Therefore, sacrifice

behaviors reveal a person's desire to maintain their long-term relationship goals because they are

taking a long-term orientation regarding the relationship.

Attachment Theory and Nostalgia

Attachment-related avoidance is the extent to which people avoid close relationships for

their psychological comfort (Bowlby, 1969). Thus, avoidantly attached individuals typically

distance themselves from experiencing interpersonal closeness. Conversely, people with

a*ttachment-related anxiety*, or the degree to which people fear abandonment, are motivated to

cling to or overly depend on others (Mikulincer & Shaver, 2019). In times of stress, people with

insecure attachment are motivated to relieve stress via different behavioral tendencies.

Specifically, anxiously attached individuals exhibit proximity-seeking behaviors to obtain greater

reassurance that their partner will not abandon them, whereas avoidantly-attached individuals

exhibit withdrawal behaviors (Mikulincer & Shaver, 2007). Thus, attachment seems to influence

various reactions in relationships. In the context of relationships, there seem to be differences in

benefiting from a romantic partner's supportive behavior based on attachment. Researchers have

argued that insecure attachment (avoidance or anxiety) disrupts the development of compassion

towards others, as well as oneself; specifically, the concern for abandonment engulfs people with

high attachment anxiety, whereas distrust of others afflicts people with high avoidant attachment

(Shaver et al., 2017).

Attachment as in individual difference is one main consideration to determine if personal

nostalgia oriented people either towards or away from close relationships. There are some

considerations in relationship-specific contexts that were highlighted in recent nostalgia research.

For people who are low in attachment avoidance (willing and able to become close to other

people), greater nostalgic feelings increased social connectedness and interpersonal confidence

(Wildschut et al., 2010). They conducted a series of studies examining personal nostalgia, at the

individual level, as a source of social connectedness and attachment-related differences. In Study

2, they found differences among the three facets of loneliness-connectedness (isolation,

relational connectedness, collective connectedness) as a predictor of nostalgia for low-avoidance

individuals. Then they manipulated relational connectedness, using the Twenge et al. (2001)

closeness induction. This manipulation consisted of "future alone" and "future belonging"

conditions. Participants read a fake personality profile of themselves, in which it reported they

would either end up with no lasting relationships (relational connectedness deficiency) or they

would end up with rewarding relationships (relational connectedness). They found deficiencies

in relational connectedness increased feelings of nostalgia for low-avoidance people (Study 3).

This indicated support for nostalgia as a resource for social connectivity. Lastly, they

manipulated nostalgia (Study 5) and found that nostalgia uniquely increased perceptions of

interpersonal competence (competence to provide emotional support for others; Buhrmester et

al., 1998), in the low-avoidance group. This seems to take on a self-determined approach; more

specifically, it provides empirical evidence for the notion that when people feel competent in

interpersonal situations, they achieve greater success in not only forming, but also maintaining,

social relationships (Buhrmester et al., 1998). Therefore, nostalgia can enable relationship

strivings by increasing social connectedness.

Juhl, Sand, and Routledge (2012) took this further by examining the effect in the context

of romantic relationships. They investigated how the interaction between general nostalgia and

(low) avoidant attachment increased relationship satisfaction. When people currently in romantic

relationships wrote about a personally nostalgic memory, compared to a control, those who had

low avoidant attachment were more likely to have greater relationship satisfaction (Juhl et al.,

2012). There has been recent work to identify moderators of nostalgia as it relates to social

exclusion. Researchers conducted an experiment on Greek undergraduate students in which they

were instructed to either imagine social exclusion based on their nationality or imagine an

ordinary occasion related to their nationality, such as selecting their 'nationality' on an

application form (Abakoumkin, Wildschut, Sedikides, & Bakarou, 2017). They found that people

who had low avoidant attachment utilized nostalgia after social exclusion, compared to those

with high avoidant attachment. The results suggest how attachment, particularly avoidance, plays

a role in determining whether people will use nostalgia as a coping resource to restore social

dissatisfaction or distressing social experiences.

The attachment-avoidance individual difference is not only an identified consideration for

relational or social outcomes in nostalgia research, such as connectedness, but also has

implications for motivational outcomes as well. They designed their work to explore the

moderating effect of attachment-related avoidance on the relation between nostalgia and goal

pursuit, focusing their approach on fulfilling belongingness needs (Abeyta et al., 2019). Across

two studies, low avoidantly-attached people experienced a boost in approach-oriented social

intentions from nostalgic reflection, but not high avoidantly-attached people (Abeyta et al.,

2019). Further, they found people with highly avoidant attachment lowered their social goal

pursuit (decreased intentions to connect with other people). Therefore, Abeyta and colleagues

(2019) articulated that nostalgia evoked greater relationship goal pursuits only for people with

low avoidant attachment, as nostalgia may drive people with high avoidant attachment away

from social goals. I plan to extend this work to intimate relationship contexts to clarify how

nostalgia may evoke positive relational and motivational benefits and consider the individual

differences of attachment.

Considerations for Self-Esteem in Nostalgia Literature

Dyadic nostalgia interactions increased relationship functions (meaning, continuity,

esteem) via greater feelings of emotional intimacy (Hepper et al., 2012); further, discussing a

nostalgic event with a romantic partner boosted perceived worth, continuity, and meaning of the

relationship. There is empirical support for the notion that nostalgia increases self-esteem (see

Wildschut et al., 2006). For example, people reported greater self-esteem after listening to a

nostalgic song, relative to a control song (Cheung et al., 2013, Study 3). Similarly, people who

smelled nostalgic scents felt elevated self-esteem (Reid et al., 2014). When people feel nostalgic,

they experience greater self-expansion, curiosity, and oriented towards novel experiences

through greater self-esteem (Baldwin & Landau, 2014), as well as optimism (Cheng et al., 2013,

Study 4). This effect of nostalgia on self-esteem is nurtured by increased social connectedness;

specifically, when people experience nostalgia, they feel socially connected to others, which in

turn raises self-esteem (Wildschut et al., 2015). Regarding the self-positivity benefits, people

with both low and high avoidant attachment have an equal likelihood of elevating their self-

esteem (Wildschut et al., 2010, Study 4). Insecurely attached individuals and individuals with

low self-esteem experience similar outcomes in their relationships, such as concerns about

rejection and negative evaluations of the relationship (Campbell, Simpson, Boldry, & Kashy,

2005; Peach & MacDonald, 2004), but more information about the behavioral consequences for

people with low self-esteem is needed, particularly with the buffering role of nostalgia. Low self-

esteem individuals typically do not use their romantic partners as a source of self-esteem

(Murray et al., 1998), but I argue that an adaptive solution may be to turn to romantic nostalgia

to evoke self-esteem because nostalgia orients people towards the self and boost social

connection, in turn increasing self-esteem and optimism (Cheung et al., 2016). As people with

low self-esteem strive to increase their levels of worth or regard, nostalgia may be an untapped

tool to use because it could assist with increasing optimism that their relationship will last.

Similar to personal nostalgia, romantic nostalgia appears to most benefit people with low

avoidant attachment; however, it would be important to explore whether romantic nostalgia

could benefit people with low self-esteem under relationship threat conditions. People with low

self-esteem typically do not trust signals of acceptance from their partner and are more inclined

to generalize signals of rejections (Murray et al., 2006). Also, as a strategy to avoid getting hurt

by rejection, people with low self-esteem typically minimize the meaning of positive interactions

or events in their relationships (Marigold, 2007). Low self-esteem individuals are strongly

motivated to avoid negative threats to their relationship, so they tend to create distance from their

romantic partners to preemptively avoid rejection (Murray et al., 2006). They report greater felt

insecurity about their relationship (Murray et al., 1998) and they do not tend to believe they

possess many positive characteristics, nor do they believe that others view positive

characteristics in them (Marigold, 2007). Past work constructed a cognitive reframing technique

to help generalize partner affirmations while avoiding the negative self-evaluation concerns for

people with low self-esteem.

Plan for 3-Study Dissertation

Across the three studies, my research intended to investigate the reparative effects of

romantic nostalgia. The goal of Study 1 was to establish an association between romantic

nostalgia and compassionate goals. In Study 2, I manipulated relationship threat (i.e., conflict) to

determine any discrepancies in the pattern of music-evoked romantic nostalgia predicting

compassionate goals. For Study 3, I explored the mediating and subsequent effects of romantic nostalgia on compassionate goals within a heightened conflict situation. Specifically, I investigated the potential buffering role of romantic nostalgia against conflict on motivational, cognitive, and behavioral relationship maintenance outcomes. I considered individual differences that potentially influenced the associations or predicted effects of romantic nostalgia on compassionate goals. Based on theoretical considerations (e.g., Shaver et al., 2017), Studies 1 and 2 accounted for attachment avoidance in both correlational and experimental designs. In an exploratory manner, Studies 2 and 3 sought to extend the assessment of individual differences to include self-esteem as there is limited research evaluating the role of self-esteem on romantic nostalgia. Overall, the purpose of the studies was to investigate the potential restorative role of romantic nostalgia on compassionate goals in close relationships.

Study 1

Study 1 was a correlational design to examine whether romantic nostalgia proneness was positively associated with relational connectedness, relationship functions (esteem, meaning, continuity), and relationship goals.

Hypotheses

H1: Romantic nostalgia proneness will be positively related to relational connectedness, relationship functions (esteem, meaning, continuity), and relationship goals. Specifically, romantic nostalgia proneness will be positively associated with enhanced compassionate goals.

H2: Romantic nostalgia proneness will be a positive predictor of relationship goals, and attachment will moderate the effect.

H3: Relational functions (esteem, meaning, continuity) will mediate the association between romantic nostalgia proneness and compassionate goals.

Participants

I recruited 210 undergraduate students from the university participant pool who were currently in an exclusive romantic relationship for at least 6 months. Of the 210 participants, 16 failed at least 3 of the 4 attention checks included, so they were excluded from analyses. There were 9 participants who indicated they were either not in an exclusive relationship or currently in a platonic friendship and an additional 14 participants who indicated their relationship was less than 6 months long, so they were also excluded from analyses. The final sample was 171 participants. Participants ranged in age from 18 to 33 ($M = 19.70$, $SD = 2.22$) and were predominately women (76.0%), men (21.1%), non-binary (2.9%). They were predominately White (46.8%), Black or African American (15.2%), South Asian (11.1%), more than one race (11.1%), other or unknown (7.6%), East Asian (6.4%), Native Hawaiian/Pacific Islander (0.6%), and American Indian/Alaska Native (0.6%), with 1 participant choosing to not respond. The sample identified predominately as straight/heterosexual (73.7%), bisexual/pansexual/fluid (19.9%), lesbian (2.3%), other (1.2%), asexual/aromantic (0.6%), gay (0.6%), and queer (0.6%), with 2 participants preferring not to answer. The length of the romantic relationship ranged from 6 to 98 months, with an average of 20.95 months ($SD = 18.14$) and most of the participants were not married previously (98.8%) or had any children (97.1%). Participants were compensated with course credit upon completion of the study.

Measures and Procedures

The online study was administered using a Qualtrics survey. Consenting participants completed the online questionnaire, consisting of items measuring romantic nostalgia, relational connectedness, relationship functions, compassionate goals, and attachment trait scales, as well

as relationship and demographic information. They were instructed to complete the study alone, in one single session, and select a time that was convenient to their schedule.

I used an adapted Southampton Nostalgia Scale (see Evans, 2019; α = .89) to assess *romantic nostalgia proneness* (*romantic nostalgia*) across 7 items on a 7-point Likert scale (1 = *not at all/very rarely* to 7 = *very much/very frequently*). Next, I used 5 items from the UCLA 20-item loneliness scale (Russell, 1996) to assess the facet of *relational connectedness* (Hawkley, Browne, & Cacioppo, 2005; see Wildschut et al. 2010; α = .77) along a 4-point Likert scale (1 = *never* to 4 = *often*). I added the same 12 items as Hepper et al. (2012a) to measure the three *relationship functions*: relationship esteem, relationship meaning, and relationship continuity (α = .96) with the stem "Thinking about my romantic partner…" in a 6-point Likert scale (1 = *strongly disagree* to 6 = *strongly agree*). I added two scales to assess *relationship goals*, specifically compassionate goals: the Compassionate and Self-Image Goals Scale – adapted (Crocker, Canvello, & Lewis, 2017; α = .85 and α = .87, respectively) using a 5-point Likert scale (1 = *not at all* to 5 = *extremely*). For participants' *attachment*, I used the Experiences in Close Relationship – Short Form (Fraley, Waller, & Brennan, 2000) to measure avoidant (α = .78) and anxious attachment (α = .70) in a 7-point Likert scale (1 = *strongly disagree* to 7 = *strongly agree*). Participants completed relevant relationship information (i.e., length) and demographic information (i.e., age, gender, race, sexual orientation), then thanked concluding the study.

Results

Data were cleaned prior to conducting the analyses. Several of the variables contained one outlier and were winsorized accordingly. The three relationship function measures violated the multicollinearity assumption ($r > .70$), so they were merged into one measure (*relationship*

function) for analyses Tabachnick & Fidell, 2007). I ran a correlational matrix to assess the bivariate correlations among the trait measures. Next, I ran a moderation analysis to determine the relation between romantic nostalgia proneness predicting compassionate goals moderated by attachment. I conducted a serial mediational analysis to determine whether relational connectedness and relationship functions might mediate the association between romantic nostalgia proneness and compassionate goals.

I conducted one-way between subjects ANOVAs to examine potential differences in romantic nostalgia proneness across several demographic characteristics. There were no significant differences in romantic nostalgia proneness across racial groups, $F(7, 162) = 1.06$, $p = .394$, gender identity, $F(2, 168) = .55$, $p = .579$, or sexual orientation, $F(7, 163) = .46$, $p = .863$. Next, I conducted a simple regression and age was not a significant predictor of romantic nostalgia proneness, $R^2 = .00$, $F(1, 169) = .21$, $p = .646$.

H1: Romantic nostalgia proneness will be positively related to relational connectedness, relationship functions (esteem, meaning, continuity), and relationship goals.

I conducted a Pearson correlation to test the association between romantic nostalgia, relationship functions, relational connectedness, and relationship goals. Romantic nostalgia was significantly correlated with relationship functions, $r(170) = .18$, $p = .017$, and with compassionate goals, $r(170) = .22$, $p = .004$, but was not significantly associated with relational connectedness, $r(170) = -.08$, $p = .290$. People with greater romantic nostalgia proneness also tended to have greater adaptive relationship functions (esteem, meaning, continuity) and have more compassionate goals in their relationship.

H2: Romantic nostalgia proneness will be a positive predictor of relationship goals, and attachment will moderate the effect.

I conducted simple regression analysis to determine whether romantic nostalgia proneness was significantly associated with greater relationship goals. Romantic nostalgia was significantly associated with compassionate goals, $R^2 = .05$, $F(1, 169) = 8.74$, $p = .004$. Therefore, people who had more compassionate intentions for their romantic relationship also tended to have greater romantic nostalgia proneness.

Analyses evaluated the hypothesized influence of attachment on the relation between romantic nostalgia and compassionate goals. Hayes (2018) PROCESS macro (Model 1) was used to generate 5,000 bootstrapped confidence intervals of the conditional effect for both moderations: avoidant and anxious. For all participants, romantic nostalgia positively predicted compassionate goals, ($\beta = .13$, $p = .004$), whereas attachment negatively predicted compassionate goals ($\beta = -.14$, $p = .003$). Further, the relation between romantic nostalgia and compassionate goals was significantly moderated by attachment ($\beta = .08$, $\Delta R^2 = .02$, $F(1, 167) = 4.33$, $p = .039$). The relation between romantic nostalgia on compassionate goals was significant at high ($\beta = .21$, $p = .001$) and average avoidant attachment ($\beta = .13$, $p = .004$), but was non-significant at low avoidant attachment ($\beta = .05$, $p = .401$).
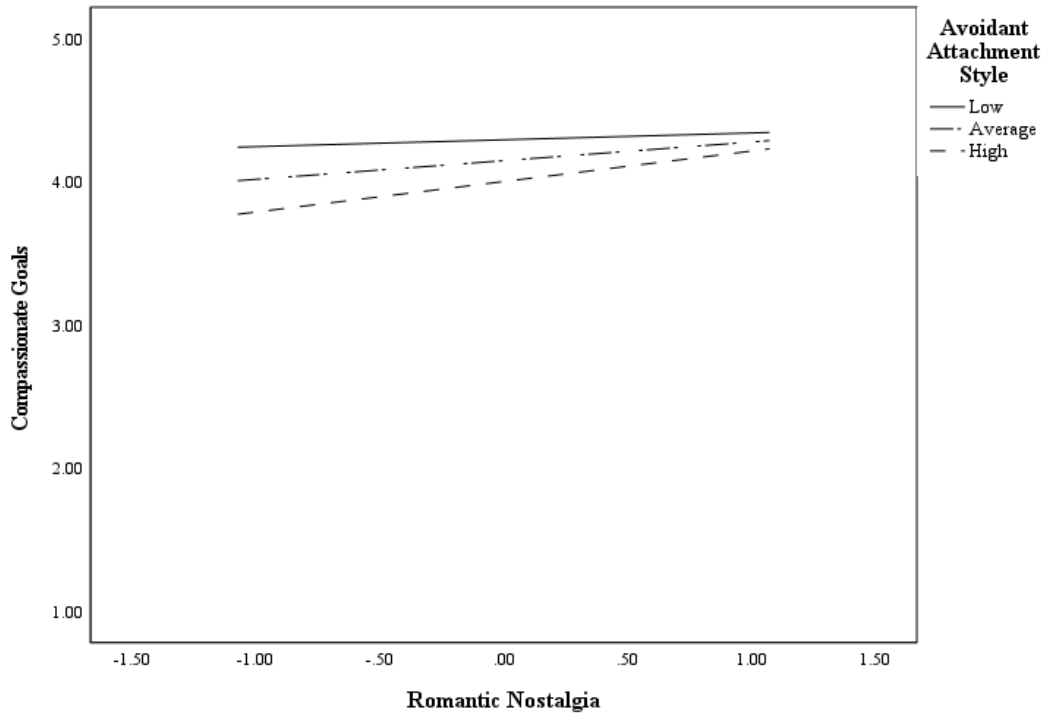
Figure 1. Avoidant attachment moderating the relation between romantic nostalgia and compassionate goals.

In addition, for all participants, romantic nostalgia positively predicted compassionate goals, (β =.14, p = .003), whereas attachment did not significantly predict compassionate goals (β = -.06, p =.170). Further, the relationship between romantic nostalgia and compassionate goals was not significantly moderated by attachment (β = .03, ΔR^2 = .00, $F(1, 167)$ = .65, p = .423). The relation between romantic nostalgia on compassionate goals was similar across low, average, and high levels of anxious attachment.
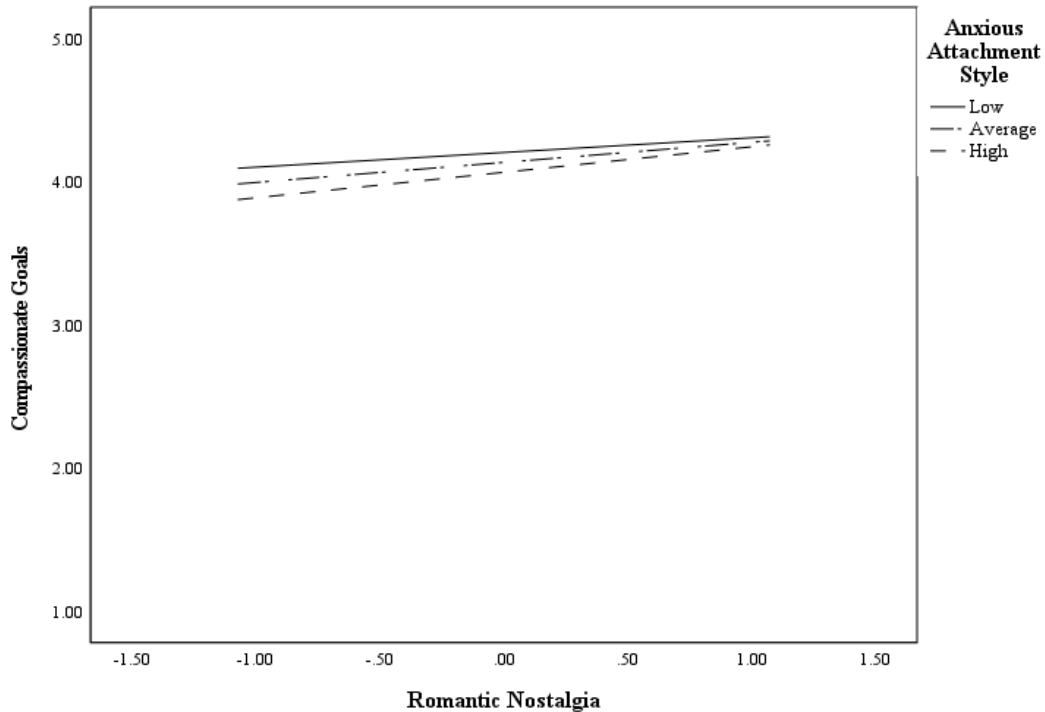
Figure 2. Similar associations of romantic nostalgia and compassionate goals across low, average, and high anxious attachment.

H3: Relational functions (esteem, meaning, continuity) will mediate the association between romantic nostalgia proneness and compassionate goals.

I used Hayes (2018) PROCESS macro (Model 4) to conduct bootstrapping analysis to examine the indirect effect of romantic nostalgia proneness on compassionate goals via relationship functions. I used a mediation model; whereby romantic nostalgia was modeled to be associated with greater compassionate goals through relationship functions. This model, conducted with 5,000 bootstraps, yielded a mean bootstrap estimate of the indirect effect of .03. Because the 95% confidence interval did not include 0 [.01, .07], I can conclude that relationship functions mediated the relation between romantic nostalgia and compassionate goals. That is, romantic nostalgia predicted greater relationship functions, which in turn led to enhanced compassionate goals.

Relationship Functions

.18*   .30**

Romantic Nostalgia   .17*   Compassionate Goals
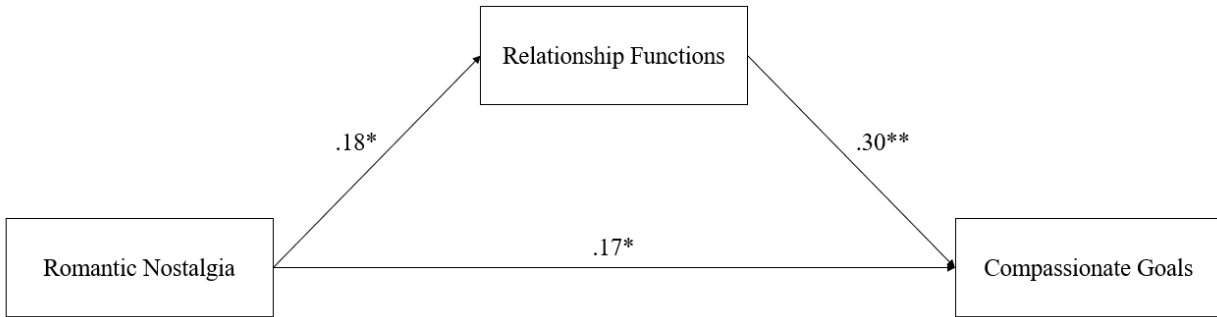
Figure 3. Beta coefficients for relationship functions (esteem, connectedness, and meaning) mediate the relation between romantic nostalgia proneness and compassionate goals.

Post Hoc Analysis

I conducted a Pearson correlation to determine whether relationship length was associated with any of the variables of interest. Relationship length was not significantly associated with romantic nostalgia, $r(170) = -.05$, $p = .562$, relationship functions, $r(170) = .04$, $p = .989$ or compassionate goals, $r(170) = -.06$, $p = .420$

Discussion

Study 1 examined trait levels associations of romantic nostalgia on relational and motivational outcomes. The correlational design was intended to establish preliminary support for experimental Study 2. The purpose of Study 1 was to link romantic nostalgia proneness to motivational outcomes: enhanced relationship goals (compassionate goals). In addition, I also investigated the link between romantic nostalgia proneness and relational outcomes, specifically relationship esteem, meaning, and continuity. I found empirical support for all hypotheses in Study 1. I hypothesized that romantic nostalgia would be associated with (H1) and predicted (H2) compassionate goals, moderated by attachment (H2) and mediated by relationship functions (H3). People with greater romantic nostalgia proneness tended to have more compassionate intentions via increased relationship esteem, meaning, and continuity; however, this was a correlational design, so the paths are not causal. Study 1 was intended to provide preliminary

support for the associations between the variables of interest, to initially establish correlational links.

Highly romantic nostalgizers tended to exhibit more compassionate intentions to support their romantic partner. However—and somewhat inconsistent with some past nostalgia and attachment work—this relation was stronger for those with high avoidant attachment. Past nostalgia research often finds nostalgic benefits for people low in attachment avoidance (Wildschut et al., 2010); Past attachment researchers argued that insecure attachment interferes with compassionate intentions and development because avoidantly attached people are often distrustful towards others in times of need (Shaver et al., 2017). It may be the case that in times other than stress or need, romantic nostalgia may relate to positive relational benefits, such as compassionate goals, for people with high avoidant attachment. It is valuable, then, to assess attachment within a more stressful context, such as relationship conflict, for Study 2 to parse out the associations further.

Nostalgia often acts as a coping resource for adverse experiences (Sedikides & Wildschut, 2020), including existential threats (e.g., meaningless; Sedikides & Wildschut, 2018), social threats (e.g., loneliness; Zhou et al., 2008), well-being threats (e.g., boredom; Van Tilburg et al., 2013), and self-threats (e.g., self-discontinuity; Sedikides et al., 2008). I was interested in whether this framework can be applied to relationship threats, such as conflict. In Study 1, I found initial support linking romantic nostalgia to pro-relationship outcomes, specifically compassionate goal setting (intentions to offer support for their romantic partner). Highly romantic nostalgizers tend to exhibit more compassionate goals through increased relationship esteem, meaning, and continuity. For Study 2, I predicted that listening to a romantically nostalgic song would buffer against the negative effects of conflict by increasing pro-relationship

outcomes (e.g., compassionate goals) through elevated esteem, meaning, and continuity, compared to a control. In addition, I assessed whether attachment moderates the effect of romantic nostalgia on pro-relationship outcomes.

Study 2

The goal of Study 2 is to examine assess various relationship outcomes (compassionate goals and commitment), specifically whether romantic nostalgia and conflict interact when experimentally manipulated, as well as considering theoretically relevant individual differences including attachment and self-esteem. Empirical support has established *music* as a potent trigger of nostalgia (e.g., Cheung et al., 2013; Stephan et al., 2015) and recently music has been used as an effective technique to induce romantic nostalgia through selecting songs that hold nostalgic significance for individuals' romantic relationships (Evans et al., in press). This idiographic approach has in one instance (Evans et al., in press) yielded a stronger effect size than the modified Event Reflection Task (recall) technique, so I chose it for Study 2.

Design

I employed a 2 (romantic nostalgia: nostalgic song vs. control song) x 2 (relationship conflict: conflict writing task vs. control writing task) between-subjects factorial design. When a person recalls a conflict situation (*relationship threat*), relative to an ordinary situation, feeling nostalgic towards a romantic partner (*romantic nostalgia*) increases their intention to support their partner (*compassionate goals*) in their relationship through heightened esteem, meaning, and continuity (*relationship functions*). Specifically, a person who has low avoidant attachment will show greater intention to support their partner under relationship threat from experiencing nostalgic songs; people with high avoidant attachment will show little difference compassionate goals when listening to nostalgic vs. ordinary songs under relationship threat.

Hypotheses

Main Effects

H1: Listening to a romantic nostalgic song will increase compassionate goals, compared to listening to a control song (H1a) and writing about a high conflict experience will decrease compassionate goals (H1b). That is, I predict a main effect for nostalgia (nostalgic vs. control song) on compassionate goals as well as a main effect for recalling a conflict experience (vs. ordinary experience) on compassionate goals.

Interaction

H2: State romantic nostalgia will buffer the effect of conflict on compassionate goals. The effect of conflict on compassionate goals will depend on romantic nostalgia felt in the present moment. Those in the romantic nostalgia condition will experience enhanced compassionate goals, at low conflict and high conflict; however, a different pattern will occur for those in the control condition, such that high conflict will reduce compassionate goal setting (see Table 1 for hypothesized means).

Table 1. Hypothesized mean scores of compassionate goals for each condition.

Compassionate Goals		Group	
		Romantic Nostalgia	Control
Relationship Conflict	High	5	1
	Low	5	3

Controlling Variable

H3: Listening to a romantic nostalgic song will increase compassionate goals after high conflict when controlling for avoidant attachment.

Exploratory

RQ1: Will listening to a romantic nostalgic song buffer the effect of conflict on compassionate goals when controlling for self-esteem?

RQ2: Will listening to a romantic nostalgic song buffer the effect of conflict on commitment?

Participants

An a priori power analysis using G*Power (Faul, Erdfelder, Buchner, & Lang, 2009) indicated a minimum of 128 participants would be required to adequately detect a medium effect size of .25 with 80% power for an Analysis of Covariance with one covariate and four total groups ($\alpha = .05$) based on previous work (Evans et al., 2021). I recruited 232 participants at least 18 years old and currently in an exclusive romantic relationship for at least 6 months. Participants were not asked to participate if they considered their relationships to be abusive (i.e., physically or emotionally) in any capacity (consistent with the recruitment requirements in Evans, 2019); there were 25 participants excluded for not meeting the screening questions. Of the remaining 207 participants, 31 did not report a relationship length within the scope of the study and one participant reported a relationship length older than their reported age. All participants passed the attention checks, leaving a final sample of 185 participants. Student participants were compensated with partial course credit upon completion.

Participants ranged in age from 18 to 34 years old ($M = 19.09$, $SD = 2.05$). The sample was predominantly women (72.4%), followed by men (20.5%), non-binary (5.4%), with 1.6% of participants preferring not to indicate their gender identity. The sample was made up of White (38.4%), Black or African American (18.4%), biracial or multiracial (15.7%), South Asian (8.1%), East Asian (7.6%), other or unknown (9.2%), Native Hawaiian or Pacific Islander (1.6%), and American Indian/Alaska Native (1.1%) participants. Most participants were not

Hispanic or Latino (74.1%), with 21.1% of participants identifying as Hispanic or Latino and 4.9% of participants reporting a preference not to answer. For sexual orientation, the sample identified as predominately straight (65.4%), followed by bisexual or pansexual (25.9%), gay or lesbian (4.8%), asexual or aromantic (1.1%), and queer (0.5%), with 2.1% of participants choosing not to answer. Lastly, most participants indicated that English was their first language (82.2%).

Within the sample, participants reported a range in current relationship length, from 6 to 163 months ($M = 19.56$, $SD = 19.03$), with participants predominately rating the status of their relationships as dating seriously (82.7%), not having children (98.9%), nor previously married (98.9%), and in an exclusive relationship (96.8%).

Measures and Procedures

Consenting participants were invited into the laboratory to complete the study on the provided lab computers. Trained experimenters welcomed the participants at the start of the session using a standardized script to explain the instructions of the study. Participants completed the entire study using a Qualtrics survey in one single session, one at a time. Using the Qualtrics randomizer feature in the survey flow settings, participants were randomly assigned to the conflict ($n = 89$) or control ($n = 96$) writing condition, followed immediately by a manipulation check. Next, they were randomly assigned (orthogonally to the conflict manipulation, using the Qualtrics randomizer feature) to the romantic nostalgia ($n = 90$) or control ($n = 95$) music condition, followed by manipulation check items. Participants completed state measures of relationship functions and compassionate goals, as well as trait measures of attachment and self-esteem. Lastly, they were asked to provide relationship and demographic information before they were debriefed by the experimenter and granted partial course credit.

Conflict Writing Manipulation. I randomly assigned participants to write either about a recent relationship conflict experience (a recent memorable disagreement in which their romantic partners caused them to feel bad) or a control writing task (write about their commute to school) for 3 minutes (Evans, 2019; Murray et al., 2008). Participants in the relationship conflict condition were instructed to write about a non-traumatic experience. Specifically, the instructions were: "*We want you to think of a relatively recent instance during your romantic relationship in which your romantic partner did something that you did not like, annoyed you, or made you experience negative emotions. This can be anything from (but not limited to) a disagreement or argument you two had, to a behavior that annoyed you or made you angry. Please think about this particular event and immerse yourself in it. Please spend a couple of minutes thinking about the event and how it makes you feel. Using the space provided below, for the next few minutes, we would like you to write about the negative experience. Immerse yourself in this experience. Describe the experience and how it makes you feel.*" Instructions for the control condition were: "*We want you to describe your commute to school. Please describe your commute in detail. Please think about this particular event and immerse yourself in it. Please spend a couple of minutes thinking about the event and how it makes you feel. Using the space provided for the next few minutes, we would like you to write about your commute to school. Immerse yourself in this experience. Describe the experience and how it makes you feel.*" Following the relationship conflict manipulation, negative subscale of the Positive and Negative Affect Schedule (Watson & Tellegen, 1988) was used as a manipulation check.

Romantic Nostalgia Music Manipulation. Next, I manipulated relationship nostalgia using a romantic nostalgia music induction (Evans et al., in press). Participants in the romantic nostalgia music condition listened to a song that reminded them of their romantic partner or

romantic relationship that made them feel nostalgic. Instructions for the romantic nostalgia music condition were: "*According to the Oxford Dictionary, 'nostalgia' is defined as a 'sentimental longing for the past. Please think of a nostalgic event regarding your relationship with your romantic partner. Now, specifically, try to think of a song that reminds you of your romantic partner or romantic relationship that makes you feel the most nostalgic. Once you have thought of the nostalgic song involving your romantic partner or romantic relationship and how it makes you feel, then let the experimenter know what it is by writing it down on the paper provided. When you have written the song you have selected, please let the experimenter know. Once you let the experimenter know which song you have selected, we would like you to listen to this nostalgic song about your romantic partner or romantic relationship. Immerse yourself into this nostalgic song.*" Those in the control music condition listened to a song that was not related to their romantic partner or relationship, but that the participant enjoyed listening to. Specifically, the instructions for the control condition were: "*Please think of a current song NOT related to your romantic partner or relationship that you enjoy listening to. Once you have thought of the current song NOT involving your romantic partner or romantic relationship, then let the experimenter know what it is by writing it down on the paper provided. When you have written the song you have selected, please let the experimenter know. Once you let the experimenter know which song you have selected, we would like you to listen to this current song NOT about your romantic partner or romantic relationship. Immerse yourself into this current song.*" Three adapted nostalgia manipulation check items (Wildschut et al., 2006; α = .96) were used to specifically focus on current nostalgic feelings towards their romantic partner or relationship (e.g., "*The following statements refer to how you feel right now about your romantic partner or*

romantic relationship. Please indicate your agreement or disagreement by selecting the box for each statement, according to the following scale: right now, I am having nostalgic feelings").

Measures. The same items assessing relationship functions (meaning, continuity, esteem) from Study 1 were assessed, adjusted to state language (e.g., "right now, thinking about my romantic partner makes me feel loved"). I included an 8-item measure to assess *compassionate goals*: Compassionate and Self-Image Goals Scale – adapted (Crocker, Canvello, & Lewis, 2017; $\alpha = .82$) adjusted for state language (e.g., "right now, in my romantic relationship, I want to be supportive of my partner"). I used the 12-item Experiences in Close Relationship – Short Form (Fraley, Waller, & Brennan, 2000) to measure avoidant ($\alpha = .72$) and anxious ($\alpha = .74$) *attachment* with the corresponding subscales; participant attachment was included as the potential covariate. A sample item for anxious attachment was "I need a lot of reassurance that I am loved by my partner" and a sample item for avoidant attachment was "I try to avoid getting too close to my partner." For the exploratory analysis, I included the 10-item Rosenberg Self-Esteem Scale (Rosenberg, 1965) to measure trait self-esteem, or global self-worth ($\alpha = .88$).

Results

The data were cleaned prior to analyses. Specifically, I conducted a series of assumption checks for normality of the data prior to analyses. None of the measures exceeded the 2.0 cutoff for skewness or kurtosis (George & Mallery, 2010), except for age as anticipated with our sample of undergraduate students. I converted all the variables to their standardized values to assess univariate outliers; several of the measures (i.e., conflict manipulation check items, negative affect, relationship functions, avoidant attachment, commitment) contained between 1 and 3 outliers that exceeded the ± 3.29 *z*-score cutoff, so they were winsorized accordingly.

I embedded manipulation checks to assess the writing and music tasks. The conflict writing task participants (M = 17.56, SD = 6.26) differed significantly from the control writing task participants (M = 15.85, SD = 5.78) on negative affect, $t(183)$ = 1.94, p = .027, d = .29, a small effect. Thus, participants writing about a recent conflict reported heightened negative affect (e.g., distress, upset, ashamed, irritable) compared to those who wrote about their commute to school. For completeness, I also ran an independent samples t-test to determine if the writing groups differed on positive affect, and the two conditions did not differ significantly, $t(183)$ = -.41, p = .340. In addition, participants listening to a romantically nostalgic song (M = 5.23, SD = 1.06) reported more romantic nostalgia compared to participants listening to a control song (M = 4.10, SD = 1.28), $t(182)$ = 6.03, p < .001, d = .89, a large effect. When participants were instructed to listen to a song that reminds them of their partner, compared to a song they simply enjoy listening to, they experienced greater romantic nostalgia in the present moment. Therefore, there is preliminary support that the two manipulations were successful at evoking conflict and romantic nostalgia compared to their control groups, respectively.

I conducted one-way between subjects ANOVAs to determine whether there were demographic differences on romantic nostalgia. There were no significant differences in romantic nostalgia across racial groups, $F(7, 176)$ = 1.02, p = .419, gender identity, $F(4, 179)$ = .18, p = . 951, or sexual orientation, $F(7, 176)$ = 1.05, p = .396. Next, I conducted a simple regression and age was not a significant predictor of romantic nostalgia, R^2 = .00, $F(1, 182)$ = .33, p = .565.

Main Effects

H1: Listening to a romantic nostalgic song will increase compassionate goals, compared to listening to a control song (H1a) and writing about a high conflict experience will decrease compassionate goals (H1b).

A two-way between subjects ANOVA was conducted to determine the effect of writing condition and music condition on compassionate goals. Participants were randomly assigned to one of two writing groups (conflict, control) and to one of two music groups (romantic nostalgia, control). The main effect of writing group on compassionate goals was not significant, $F(1, 181) = .52$, $p = .472$, partial $\eta^2 = .00$. Participants in the conflict writing condition ($M = 4.51$, $SD = .45$) reported similar levels of setting more compassionate goals towards their partner as the participants in the control writing condition ($M = 4.57$, $SD = .43$). In addition, the main effect of music group on compassionate goals was not significant, $F(1, 181) = 1.17$, $p = .280$, partial $\eta^2 = .01$. Participants in the romantic nostalgia music condition ($M = 4.58$, $SD = .42$) and participants in the control music condition ($M = 4.50$, $SD = .47$) both revealed similar levels of intentions to pursue more compassionate goals.

Interaction

H2: State romantic nostalgia will buffer the effect of conflict on compassionate goals.

The interaction between writing condition and music condition on compassionate goals was not significant, $F(1, 181) = .11$, $p = .747$, partial $\eta^2 = .00$. This indicates that the writing groups were affected similarly by music groups. Specifically, compassionate goals were similar for those in the romantic nostalgia condition ($M = 4.57$, $SD = .46$) and control condition ($M = 4.47$, $SD = .48$) after writing about a recent conflict situation in their relationship; compassionate goals were also similar in the romantic nostalgia condition ($M = 4.59$, $SD = .40$) and control condition ($M = 4.54$, $SD = .47$) after writing about a control event.
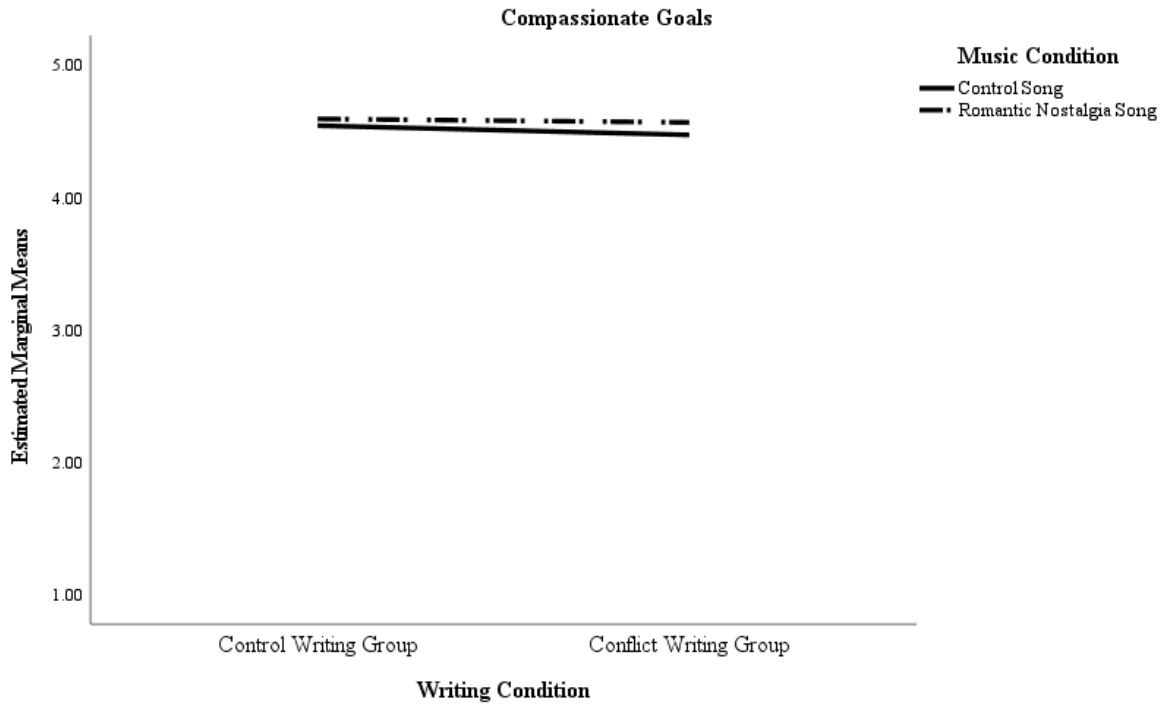
Figure 4. Non-significant interaction between romantic nostalgia and conflict on compassionate goals.

Controlling Variable

H3: Listening to a romantic nostalgic song will increase compassionate goals after high conflict when controlling for avoidant attachment.

To investigate how well conflict and romantic nostalgia predict compassionate goals when controlling for avoidant attachment, I conducted a hierarchical linear regression. When avoidant attachment was entered, it predicted compassionate goals, $F(1, 183) = 22.62$, $p < .001$, $R^2 = .11$. This initial model shows that 11% of the variance in compassionate goals was predicted by the participant's attachment. When conflict and romantic nostalgia were added to the model, they did not significantly improve the prediction, $\Delta R^2 = .00$, $\Delta F(2, 181) = .46$, $p = .633$. All variables together significantly predicted compassionate goals, $F(3, 181) = 7.80$, $p < .001$, $R^2 = .11$. Avoidant attachment was a significant predictor in the model ($\beta = -.32$, $p < .001$), whereas

conflict (β = -.04, p = .544) and romantic nostalgia (β = .05, p = .525) were not significant

predictors of compassionate goals.

Exploratory

RQ1: Will listening to a romantic nostalgic song increase compassionate goals after high

conflict when controlling for self-esteem?

  A hierarchical linear regression model regressed self-esteem on compassionate goals in

the first block, followed by conflict and romantic nostalgia in the second block. When self-

esteem was entered, the first model was not significant, $F(1, 181) = .15$, $p = . 698$, $R^2 = .00$.

When conflict and romantic nostalgia were added, the second model was also not significant,

$\Delta R^2 = .01$, $\Delta F(2, 179) = 1.16$, $p = .316$. Together, the variables did not significantly predict

compassionate goals, $F(3, 179) = .82$, $p = .483$, $R^2 = .01$.

RQ2: Will state romantic nostalgia buffer the effect of conflict on commitment?

  A two-way between subjects ANOVA was conducted to determine the effect of writing

condition and music condition on commitment. Participants were randomly assigned to one of

two writing groups (conflict, control) and one of two music groups (romantic nostalgia, control).

The main effect of writing group on commitment was not significant, $F(1, 181) = .03$, $p = .872$,

partial $\eta^2 = .00$. The main effect of music group on commitment was not significant, $F(1, 181) =$

1.72, $p = .192$, partial $\eta^2 = .01$. The interaction between writing condition and music condition on

commitment was not significant, $F(1, 181) = 1.52$, $p = .220$, partial $\eta^2 = .01$. This indicates that

the writing groups were affected similarly by music group. Specifically, commitment was similar

for those in the romantic nostalgia condition ($M = 8.10$, $SD = 1.02$) and control condition ($M =$

7.64, $SD = 1.38$) after writing about relationship conflict; commitment was also similar in the

romantic nostalgia condition (*M* = 7.90, *SD* = 1.24) and control condition (*M* = 7.88, *SD* = 1.09)

after writing about a control event.
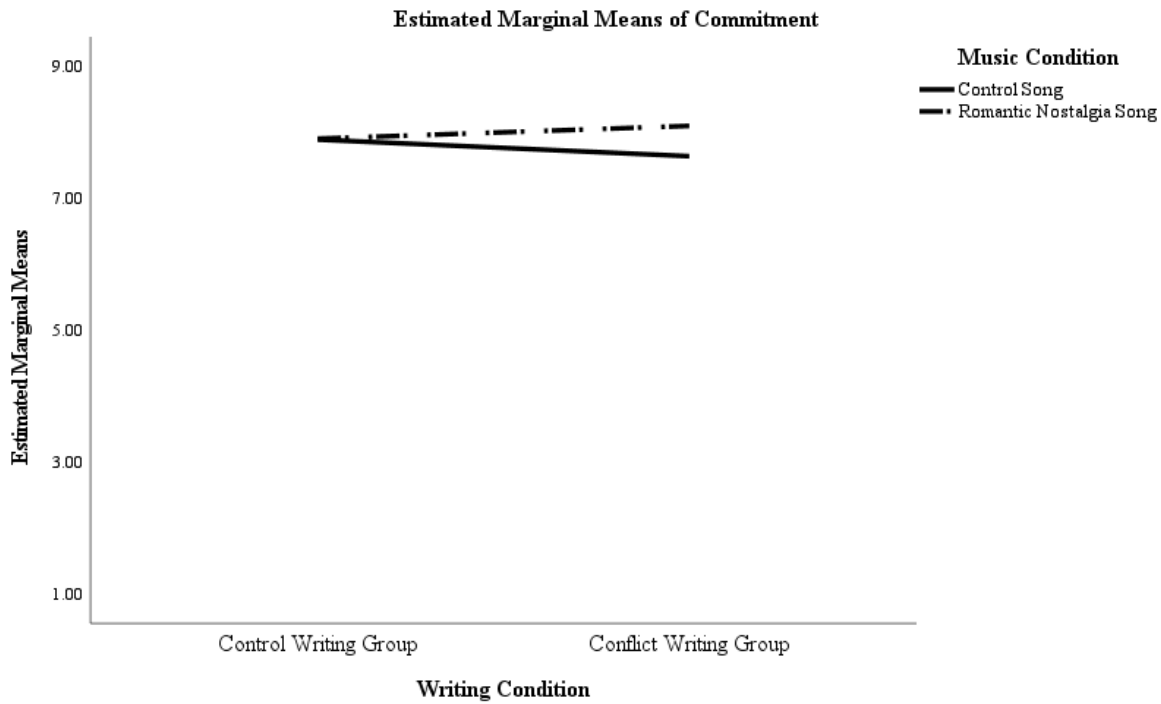
Figure 5. Non-significant interaction between romantic nostalgia and conflict on commitment.

Post Hoc Analysis

I conducted a simple regression analysis to determine whether relationship length was

significantly related to compassionate goals. Relationship length did not significantly predict

compassionate goals, R^2 = .01, $F(1, 184)$ = .94, *p* = .333. Next, I conducted a Pearson correlation

to examine whether affect and relationship length were significantly associated. Both negative

affect (*r* = -.08, *p* = .264) and positive affect (*r* = -.11, *p* = .150) were not significantly correlated

with relationship length. Thus, longer relationship length was not associated with lower negative

affect.

Discussion

I utilized an experimental design to investigate the effects of conflict and romantic nostalgia on compassionate goals. The purpose of Study 2 was to experimentally examine the potential buffering role of romantic nostalgia. Both manipulation checks were statistically significant: the writing task was successful in manipulating conflict and the music task successfully manipulated romantic nostalgia. However, the effect size for the conflict manipulation was rather small. The romantic nostalgia music manipulation yielded comparable effects as in previous work (Evans et al., in press). Overall, Study 2 added support for replication of music-evoked romantic nostalgia in effectively manipulating romantic nostalgia in the present moment.

My first hypothesis (referring to the two potential main effects) was not supported; writing about a recent conflict in their relationship did not reduce compassionate goal setting towards their partner, relative to writing about commuting to school. Similarly, listening to a romantically nostalgic song did not enhance compassionate goals, relative to listening to an enjoyable song. The second hypothesis regarding an interaction between conflict and romantic nostalgia also was not supported: people experienced similar patterns of the effect on compassionate goals across the four conditions. Lastly, my third primary hypothesis was not supported: listening to a romantically nostalgic song (compared to a control) and writing about a recent conflict (compared to a control) did not significantly predict compassionate goals while controlling for attachment avoidance. It is noteworthy that attachment avoidance was a significant predictor of compassionate goals. Based on past work (e.g., Hepper et al., 2016), attachment was expected to influence the effectiveness of romantic nostalgia, though it seemed to consume a significant amount of the variance in compassionate goals.

The exploratory research questions yielded some insight into the relation between the

main variables of interest and self-esteem and commitment. The first research question was not

supported; self-esteem was not a significant predictor for compassionate goals. People with low

self-esteem may be more focused on seeking opportunities to boost their self-esteem or avoid

context situations in which their self-esteem could be damaged, rather than focused on setting

compassionate goals for their partner (Crocker & Wolfe, 2001). Though personal nostalgia offers

a solution to promote self-esteem through greater social connectedness (Wildschut et al., 2006),

and I predicted romantic nostalgia may provide consistent benefits, perhaps there are other

considerations within the context of a romantic relationship, particularly in times of conflict, that

should be accounted for in future research. It may be the conflict itself that threatens the self and

relationship of a person with low self-esteem, so perhaps future research could direct low self-

esteem individuals to strategies to better resolve conflict first. The second research question was

not supported: commitment was not influenced by the conflict writing or the romantic nostalgia

manipulations, either separately or jointly. Previous work (Swets, Cox, & Ekas, 2021) with

different methodology found support for romantic nostalgia increasing commitment in conflict

situations; however, additional research using the music manipulation found a small effect ($\eta^2 = $

.01) for romantic nostalgia on commitment (Evans, 2019, Study 3), so more research is needed to

examine this further. It is important to note a limitation that some of the hypotheses did not have

the most empirical support as the romantic nostalgia literature is still emerging. Overall, Study 2

offers greater insight into the theoretical considerations used for the downstream variables in

Study 3.

It is important to note that the conflict writing task evoked greater negative affect than the

control writing task, but the two groups did not differ on positive affect. This may be the result of

the mixed affective states evoked from the writing groups. My intention for Study 2 was to establish a baseline with a control group, in which I selected a relationship turmoil prompt and a control (commuting) prompt. The conflict manipulation was statistically significant; however, the effect was weaker than anticipated. It may be the case that reflecting on commuting may not have been a neutral comparison relative to the relationship turmoil prompt because of a mixed affective experience of commuting itself. Therefore, I planned to only induce conflict with the writing task (removing the control group), to create a heightened relationship conflict context for all participants for Study 3. This way, I can examine the downstream effects of romantic nostalgia on pro-relationship behaviors.

In addition to the weaker conflict manipulation yielding a smaller effect than anticipated, one explanation for the lack of significant differences in compassionate goals among the four groups may be the result of the sample itself. The student participant criteria for the psychology pool restricted them to exclusive committed relationships for at least 6 months. The young adults sampled may be especially motivated to set relationship goals with their partner, such as a desire to support their partners or make a positive difference in their partner's life. Therefore, it may be beneficial to consider a different population of interest to see if the conflict induction would be stronger in a different sample other than college students. In addition, the student population are typically younger in age, so their relationships are shorter in length on average than the general population. The relationship length of the students sampled in Study 2 had a median value of 12 months, ranging from 6 to 163 months. Longer relationships may provide more opportunities to experience romantic nostalgia, given the duration of time shared together. Extending into a broader age range for Study 3 could allow for a greater total number of shared memories or events with their partner, in which they could pull from more romantic nostalgic experiences.

My plan for Study 3 was to extend the work in Study 2 within a heightened relationship conflict context and include downstream pro-relationship behaviors, such as sacrificing for their romantic partner, derogating attractive alternatives, and giving more support to their partner. I planned to use a more nationally representative U.S. sample by utilizing an online platform for Study 3. Given the timing for data collection, and first obtaining committee approval, Studies 2 and 3 were partly conducted concurrently; while the risks for detecting smaller effects was considered, the theoretical framework for the three-study package offered a stronger foundation to pursue the research questions.

Study 3

I designed an experiment in which I randomly assigned participants to one of two music conditions (romantic nostalgia vs. control) following a relationship threat induction. My goal was to replicate and extend the effect of romantic nostalgia on compassionate goals from Study 2. I added three additional outcomes for Study 3: subsequently support giving (offering support to partner), sacrifice, and derogation of alternatives. In addition, I examined two potential mediators, relationship functions (meaning, continuity, esteem) and compassionate goals, building upon Study 2 models. I predicted that in conflict (*relationship threat*), listening to a romantically nostalgic song (*romantic nostalgia*) increased their intention to support their partner (*compassionate goal*) through heightened esteem, meaning, and continuity (*relationship functions*); subsequently, these individuals offer more support to their partner (*support giving*), rate attractive alternative partners lower (*derogate attractive alternatives*), and view more unpleasant images (*sacrifice*) relative to those listening to a control song.

Hypotheses

H1: State romantic nostalgia will increase compassionate goals, via increased relationship functions (esteem, meaning, and continuity), in a heightened relationship conflict context.

H2: The change in compassionate goals articulated in H1 will, in turn, influence pro-relationship behaviors of sacrifice, derogation of alternatives, and support giving. Romantic nostalgia will increase relationship functions (meaning, continuity, esteem), which in turn will elevate compassionate goals, and subsequently support giving (H2a), derogation of alternatives (H2b), and sacrifice (H2c) in a heightened relationship conflict context.
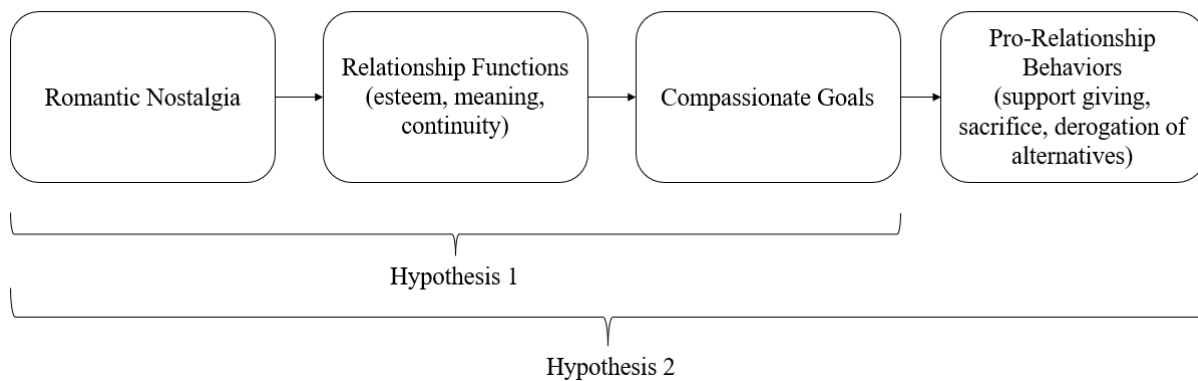
Figure 6. Hypothesized model for H1 and H2 examining the effect of romantic nostalgia on pro-relationship behaviors via relationship functions and compassionate goals.

Exploratory

I included two exploratory research questions for Study 3. These research questions were posed before data collection commenced.

RQ1: Will romantic nostalgia increase relationship functions (esteem, meaning, continuity) via social connectedness? There is extensive past work modeling how nostalgia evokes greater social connectedness, which in turn increases self-esteem (Cheung et al., 2013), meaning (Routledge et al., 2011), and self-continuity (Sedikides et al., 2016); my goal was to determine whether this modeling occurs within the context of relationship conflict for romantic partners.

RQ2: Will romantic nostalgia reduce the impact of relationship threat for people with low self-esteem on compassionate goals? The effect of romantic nostalgia on compassionate goals will be moderated by self-esteem. Following the romantic nostalgia task, will not be significant discrepancies between people with low, average, and high self-esteem on compassionate goals, compared to the control condition.

Table 2. Hypothesized mean scores of compassionate goals for each condition.

Compassionate Goals		Group	
		Romantic Nostalgia	Control
	High	5	5
Self-Esteem	Average	5	3
	Low	5	1

Participants

A priori power analyses using InteractionPoweR (Finsaas & Baranger, n.d.) and Monte Carlo Power Analysis for Indirect Effects (Schoemann, Boulton, & Short, 2017) were conducted using pilot data and empirically derived estimates (Lovakov & Agadullina, 2021; Schoemann, Boulton, & Short, 2017) to determine that 380 participants are needed to reach 80% power for the serial mediation model with a 95% confidence interval and 1000 replications.

Data collection occurred in batches ranging from 50-250 participants on Amazon Mechanical Turk[1]. Upon the conclusion of each batch collection, the data were scanned for attentiveness and any participants failing to follow instructions or meet attention check requirements were rejected. I screened over 1,000 participants to remove bots and inattentive responses. Overall, the 11 batches collected 1808 participants; the approval rate was about 26%,

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[1] The Worker Requirements were originally set to 90% HIT approval rate, 100 HITs approved, and restricted to the United States; however, halfway through data collection the settings were changed to 95% HIT approval rate, 5,000 HITs approved, and restricted to the United States to increase data quality (Amazon Mechanical Turk, 2013).

leaving 470 good-quality participants remaining who passed attention checks. All participants

had the right to withdraw their data at the conclusion of the study (some opted for this option),

leaving the remaining 400 participants. Consistent with Study 2, participants were not asked to

participate if they considered their relationships to be abusive (i.e., physically, emotionally) in

any capacity (consistent with the recruitment requirements in Evans, 2019). Of the 400 good-

quality participants, 15 did not report a relationship length within the scope of the study (at least

6 months). One participant failed to pass at least 2 of the attention checks, leaving a final sample

of 384 participants. Amazon Mechanical Turk participants were monetarily compensated ($0.50)

upon completion of the study.

Participants ranged in age from 20 to 79 years old ($M = 42.46$, $SD = 12.96$). The

participants indicated their gender identity as women (51.8%), men (47.4%), non-binary (0.5%),

and genderqueer (0.5%). The sample was predominately White (80.7%), followed by Black or

African American (8.1%), East Asian (4.4%), South Asian (2.1%), biracial or multiracial (1.6%),

American Indian/Alaska Native (1.6%), Native Hawaiian or Pacific Islander (1.3%), and other

racial identity or unknown (0.3%). Most participants were not Hispanic or Latino (87.2%): 9.4%

of participants identified as Hispanic or Latino and 3.4% of participants reporting a preference

not to answer. Regarding sexual orientation, the sample identified as predominately straight

(78.6%), followed by bisexual or pansexual (14.1%), asexual or aromantic (4.4%), and gay or

lesbian (2.3%), and demisexual (0.5%). Lastly, most participants indicated that English was their

first language (97.9%).

Participants reported a large range of current relationship length, from 6 to 680 months

($M = 112.83$, $SD = 135.02$), with participants predominately rating the status of their

relationships as married (59.6%), followed by dating seriously (31.8%), engaged (5.5%), dating

casually (1.8%), and other (1.3%). Most reported having children (59.6%), not being previously

married (70.1%), and in an exclusive relationship (89.6%).

Measures and Procedure

I administered the online study using a Qualtrics survey. Consenting participants

completed the online questionnaire, consisting of a conflict writing prompt, a romantic nostalgia

manipulation, state and trait measures, as well as relationship and demographic information.

They were instructed to complete the study alone, in one single session, and select a time that

was convenient to their schedule. First, all participants completed a relationship threat induction.

Then participants were randomly assigned to one of two music conditions for the romantic

nostalgia manipulation, which was identical to the Study 2 manipulation. Participants completed

measures of relationship functions and compassionate goals. They were instructed to complete

the images sacrifice task, imaging themselves in a scenario with their partner to view and rate

batches of either pleasant or unpleasant images (where their partner would have to view and rate

the images they did not choose to rate). The participants completed a brief scale assessing

willingness to give support to their partner. Next, participants completed a devaluation of

attractive alternatives task. Lastly, the participants provided their relationship and demographic

information and were compensated in Amazon Mechanical Turk within 3 days of completion.

Conflict Writing Induction. Participants were asked to write about a recent relationship

conflict experience (a recent memorable disagreement in which their romantic partners caused

them to feel bad) for 3 minutes (Evans, 2019; Murray et al., 2008). Participants were instructed

to write about a non-traumatic experience. Specifically, the instructions were the same as the

conflict prompt used in Study 2.

Romantic Nostalgia Music Manipulation. Next, the same music manipulation and check items from Study 2 were used, in which participants in the romantic nostalgia condition listened to a romantically nostalgic song ($n = 183$) and participants in the control condition listened to a song that is not related to their romantic partner/relationship but one that they simply enjoy ($n = 201$).

Relationship Functions. The same items assessing relationship functions (meaning, continuity, esteem) from Study 2 were assessed, adjusted to state language.

Compassionate Goals. They completed the same measure of compassionate goals using the Compassionate and Self-Image Goals Scale - adapted (Crocker, Canevello, & Lewis, 2017) adjusted for state language as in Study 2.

Sacrifice for partner via viewing aversive images. I used an adaptive version of the aversive images sacrifice task used in Waves 11 and 12 of previous research conducted by Green and colleagues (2009) to assess an individual's willingness to sacrifice for their partner when their partner is not present. The instructions for the imagined sacrifice task were: "*We are interested in people's responses to positive and negative stimuli. Imagine that you would rate how pleasant 100 images are and that your partner would rate 100 images. Of the 200 total images, half of them are quite pleasant (examples: puppies, babies, nature scenes), but half are quite unpleasant (examples: bloodied individuals, dead animals). Imagine that you have been assigned the role of choosing, so you get to choose how many pleasant images and how many unpleasant images you rate. You would get to choose which 100 images you rate in 5 groups of 20; each of the five groups will be all pleasant or all unpleasant photos. Imagine that your partner would rate the images that you do not rate. For example, if choose to rate 20 pleasant images, your partner would have to rate 20 unpleasant images; if you choose to rate 20*

unpleasant images, your partner would have to rate 20 pleasant images." I recruited 20

participants for pilot testing. People indicated similar imagined ratings for their willingness to

view unpleasant images (M = 4.05, SD = 1.67), to what they believed their partner would be

willing to rate (M = 4.39, SD = 1.54), $t(36)$ = -.65, p = .521. People were willing to rate 60

unpleasant images, leaving 40 unpleasant images to be viewed by their partner in the

hypothetical scenario. Also, people believed that their partners were willing to rate 60 unpleasant

images if given the same task.

  Support Giving. Support giving was assessed using a modified version of the

Multidimensional Survey of Perceived Social Support (Zimet et al., 1988), which is consistent

with recent work (Canevello & Crocker, 2020). The 10-items reflected support that participants

give to their romantic partners in a self-reported Likert scale (1 = *strongly disagree*, 5 = *strongly

agree*), with sample items: "I am willing to help my partner make decisions" and "I provide

emotional help and support to my partner."

  Devaluation of attractive alternatives. Consistent with past work (Birnbaum et al.,

2019), derogation of attractive alternative partners was assessed using an adapted version of the

Ritter, Karremans, and van Schie (2010) procedure; participants were asked to rate 8 attractive

pictures of people (4 males, 4 females). The participants were asked to rate the extent to which

they find them romantically attractive. If the images were not relevant to the perceiver as a

potential target of attraction, there was an option to select 'not applicable' in the scales.

Specifically, the instructions were: "*You will be asked to view 8 images of people. Please rate the

extent to which you find them romantically attractive or not, in other words – the extent to which

you indicate a potential romantic attraction to them. If the image is not relevant to whom you

find romantically attractive, you may select 'not applicable' in the scales provided.*" The ratings

indicated the value of attractive potential partners, with lower ratings reflecting a greater

derogation of alternatives. The pictures were first pilot tested ($N = 74$) to evaluate the perceived

physical attractiveness from a list of 40 pictures (20 males, 20 females) generated from an AI

software (OpenAI). Of the 20 male images, pilot participants rated four images greater than or

equal to the midpoint (2.50). Of the 20 female images, 10 were rated greater than or equal to the

midpoint for attractiveness; for control purposes, the four images of the 10 female images were

then matched along demographics (i.e., race) with the four images of the males selected.

Results

The data were cleaned prior to analysis. Specifically, I conducted a series of assumption

checks for normality of the data prior to analyses. None of the measures exceeded the 2.0 cutoff

for skewness or kurtosis (Tabachnick & Fidell, 2007). I converted all the variables to their

standardized values to assess univariate outliers; Negative affect and Relationship Esteem both

contained 4 outliers, Relationship Connectedness and Relationship Continuity both contained 6

outliers, Relationship Meaning contained 5 outliers, and Compassionate Goals and Support

Giving both contained 2 outliers that exceeded the ±3.29 z-score cutoff, so they were winsorized

accordingly (Tukey, 1961).

After the conflict induction, the negative affect subscale total score ranged from 10 to 46

($M = 17.60$, $SD = 8.16$). In addition, I included manipulation checks to assess the group

differences for the music task. Participants who listened to a romantically nostalgic song ($M =$

4.57, $SD = 1.33$) reported feeling more romantic nostalgia relative to participants who listened to

a control song ($M = 4.17$, $SD = 1.47$), $t(382) = 2.75$, $p = .003$. Consistent with Study 2,

participants who listened to a song that reminded them of their partner, compared to a song they

simply enjoyed, experienced greater romantic nostalgia.

I conducted one-way between subjects ANOVAs to determine whether there were demographic differences on romantic nostalgia. There were no significant differences in romantic nostalgia across racial groups, $F(7, 376) = .29$, $p = .958$ or gender identity, $F(3, 380) = 2019$, $p = .089$. For this sample, I first dummy coded the sexual orientation variable (1 = straight/heterosexual; 0 = LGB+) and conducted an independent samples t-test. There were no significant differences between the groups on romantic nostalgia, $t(382) = -.26$, $p = .397$. Next, I conducted a simple regression and age was not a significant predictor of romantic nostalgia, $R^2 = .00$, $F(1, 382) = .08$, $p = .773$.

Table 3. Mean scores among the music conditions on the variables of interest.

Variable	Nostalgia	Control	t	p
	M(SD)	M(SD)		
Relationship Functions	5.06 (.92)	4.99 (.92)	.66	.256
Compassionate Goals	4.13 (.86)	4.11 (.81)	.25	.402
Support Giving	4.56 (.53)	4.55 (5.3)	.04	.486
Potential Partner Ratings	2.92 (1.08)	3.15 (1.10)	-2.07*	.020
Willingness to Sacrifice	3.58 (1.72)	3.59 (1.57)	-.05	.481

H1: State romantic nostalgia will increase compassionate goals, via increased relationship functions (esteem, meaning, and continuity), in a heightened relationship conflict context.

A mediational model was conducted to examine whether the effect of romantic nostalgia (vs. control) on compassionate goals was mediated by relationship functions using bootstrapping analysis with PROCESS model 4 (Hayes, 2012). First, I dummy coded the music conditions (1 = romantic nostalgia; 0 = control). The mediation model, conducted with 5,000 bootstraps, yielded a mean bootstrap estimate of the indirect effect of .03; the 95% confidence interval did include 0 [-.07, .14]. Therefore, I cannot conclude that relationship functions (esteem, meaning, continuity) mediated the effect of romantic nostalgia on compassionate goals. Nostalgia did not significantly

increase esteem, meaning, and continuity ($\beta = .07$, $p = .513$), and did not increase compassionate

goals ($\beta = .02$, $p = .804$); combined, the relationship mechanisms of esteem, meaning, and

continuity were significantly associated with greater compassionate goals ($\beta = .61$, $p < .001$).
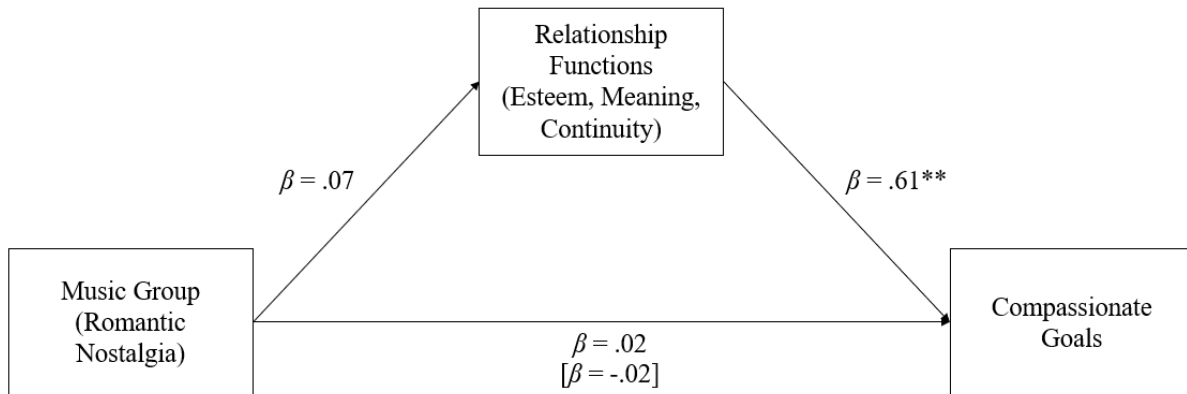

Figure 7. Beta coefficients for mediation analysis model the effect of romantic nostalgia on

compassionate goals via relationship functions.

H2: State romantic nostalgia will increase relationship functions (meaning, continuity,

esteem), which in turn will elevate compassionate goals, and subsequently support giving

(H2a), derogation of alternatives (H2b), and sacrifice (H2c) in a heightened relationship

conflict context.

Three separate serial mediation models were computed to test the downstream effect of

romantic nostalgia on relationship maintenance outcomes (support giving, sacrifice, derogation

of alternatives) via relationship functions (meaning, continuity, esteem) and compassionate

goals.

I conducted a serial mediation analysis using PROCESS model 6 (Hayes, 2012) to test

whether relationship functions and compassionate goals mediate the effect of romantic nostalgia

on support giving. This model, with 5,000 bootstraps, yielded a mean bootstrap estimate of the

indirect effect of .02; because the 95% confidence interval contained 0 [-.06, .09], I cannot

conclude that the three relationship functions and compassionate goals mediated the relation between romantic nostalgia on support giving.

Figure 8. Beta coefficients for mediation analysis model the effect of romantic nostalgia on support giving via relationship functions and compassionate goals.

Next, I computed the same serial mediation model, replacing the outcome variable with a measure of attractive images ratings, to assess the derogation of attractive alternatives. This model, conducted with 5,000 bootstraps, yielded a mean bootstrap estimate of the indirect effect of .01 and the 95% confidence interval included 0 [-.04, .06]; therefore, I cannot conclude that the relationship functions and compassionate goals mediated the relation between romantic nostalgia and the derogation of attractive alternative partners. However, there was a significant direct effect of romantic nostalgia on derogation of alternatives; music-evoked romantic nostalgia predicted greater devaluation of attractive partner ratings ($\beta = -.23$, $p = .039$), relative to the control group.

Figure 9. Beta coefficients for mediation analysis model the effect of romantic nostalgia on derogation of alternatives via relationship functions and compassionate goals.

Similar to the previous models, I conducted a third serial mediation analysis, using 5,000 bootstraps with model 6 of PROCESS macro (Hayes, 2012) to test whether the effect of romantic nostalgia on willingness to sacrifice was mediated by relationship functions and compassionate goals. The model yielded a mean bootstrap estimate of the indirect effect of .01. I cannot conclude that the relationship functions and compassionate goals mediated the relation between romantic nostalgia and willingness sacrifice, as the 95% confidence interval included 0 [-.08, .10].
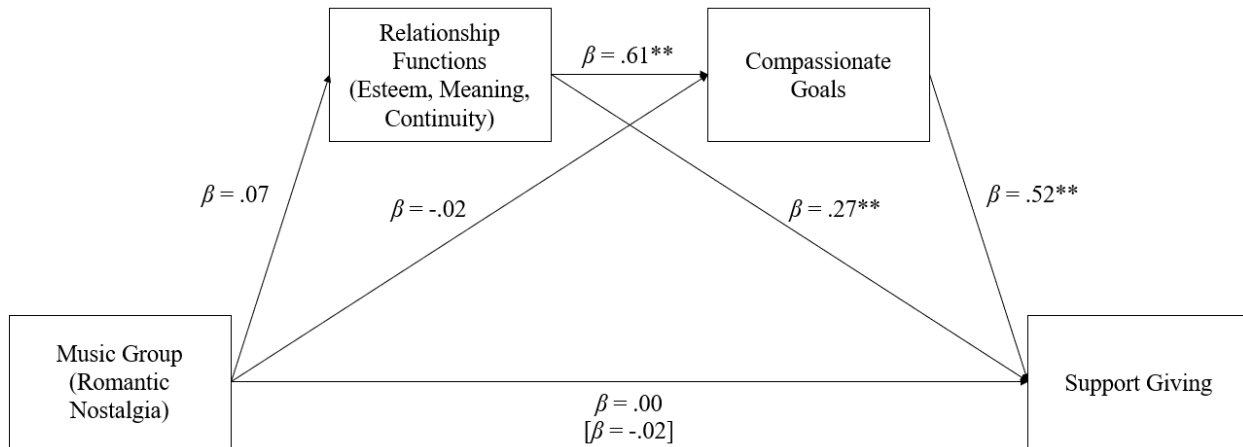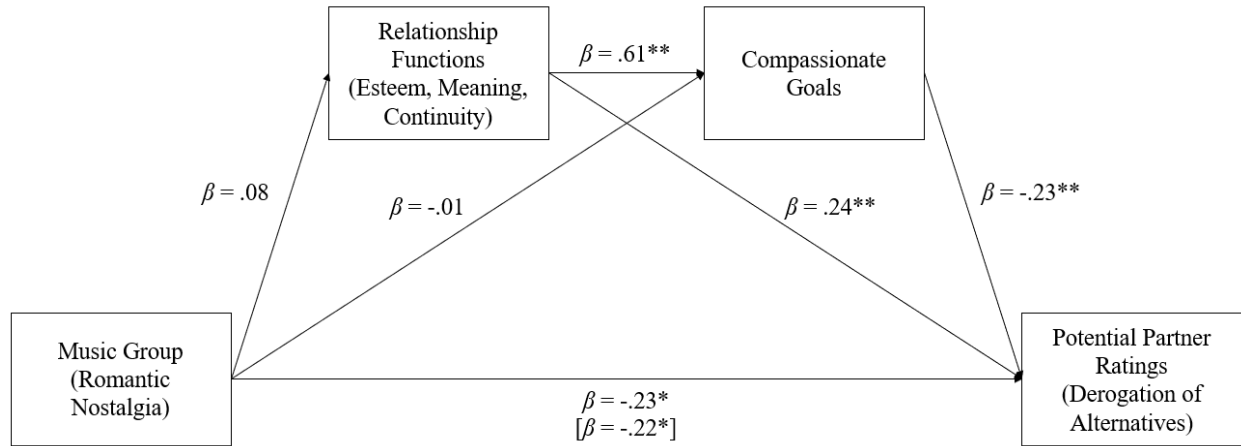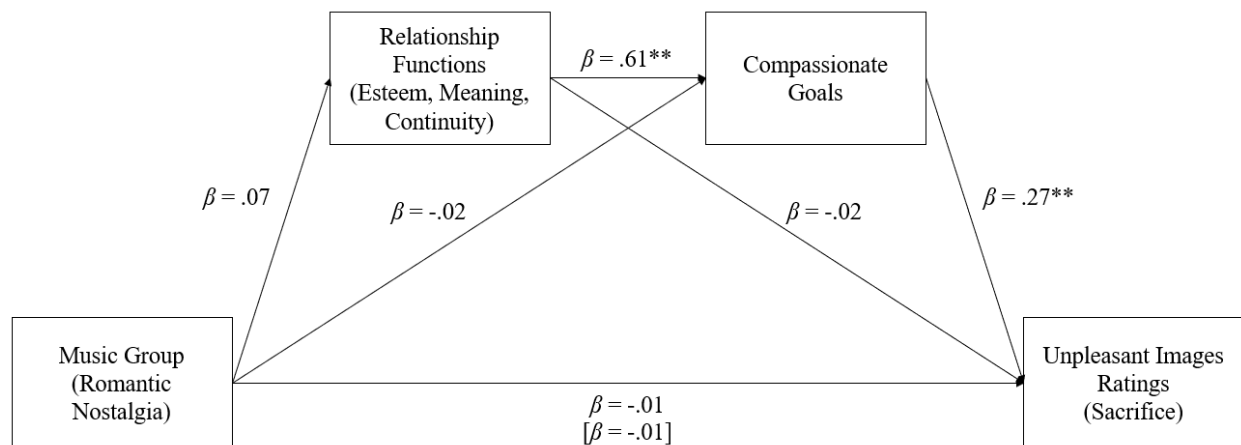
Figure 10. Beta coefficients for mediation analysis model the effect of romantic nostalgia on

sacrifice via relationship functions and compassionate goals.

RQ1: Will romantic nostalgia increase relationships functions via social connectedness?

In a somewhat more exploratory lens, I conducted a mediational model to examine

whether the effect of romantic nostalgia (vs. control) on relationship functions is mediated by

social connectedness in a relationship using bootstrapping analysis with PROCESS model 4

(Hayes, 2012). This model, conducted with 5,000 bootstraps, yielded a mean bootstrap estimate

of the indirect effect of .11; however, I cannot conclude that social connectedness mediated the

effect of romantic nostalgia on the relationship functions because the 95% confidence interval

contained 0 [-.06, .27].
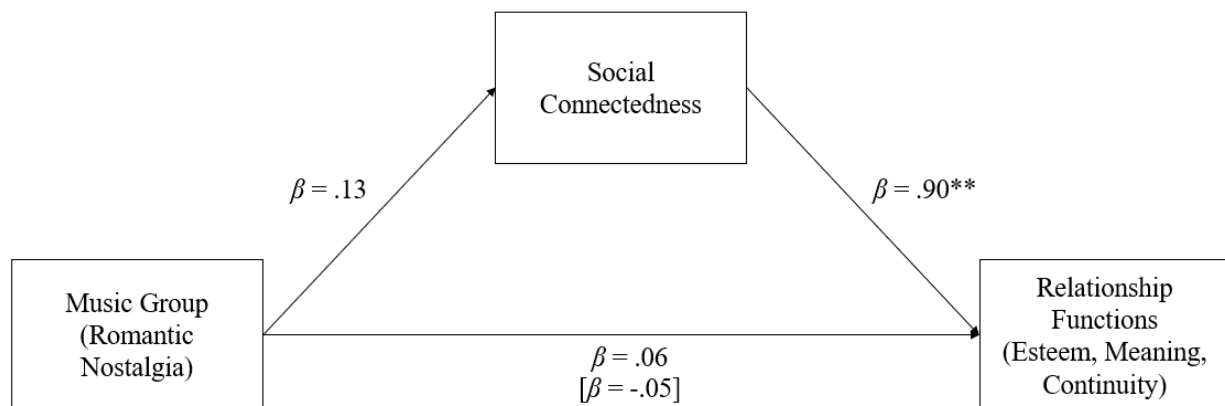
Figure 11. Beta coefficients for mediation analysis model the effect of romantic nostalgia on

relationship functions via social connectedness.

RQ2: Will romantic nostalgia reduce the impact of relationship threat for people with low

self-esteem on compassionate goals?

Analyses evaluated the hypothesized influence of self-esteem on the relation between

romantic nostalgia and compassionate goals. Using PROCESS macro (Hayes, 2012; model 1), I

conducted a moderation analysis, generating 5,000 bootstrapped confidence intervals of the

conditional effect. For all participants, romantic nostalgia did not significantly predict

compassionate goals (β = .02, p = .795) while self-esteem significantly predicted compassionate

goals (β = -.49, p < .001). Furthermore, the relationship between romantic nostalgia and

compassionate goals was not significantly moderated by self-esteem (β = -.03, ΔR^2 = .00, F(1,

380) = .05, p = .824). The effect of romantic nostalgia on compassionate goals was similar at

low, average, and high levels of self-esteem.
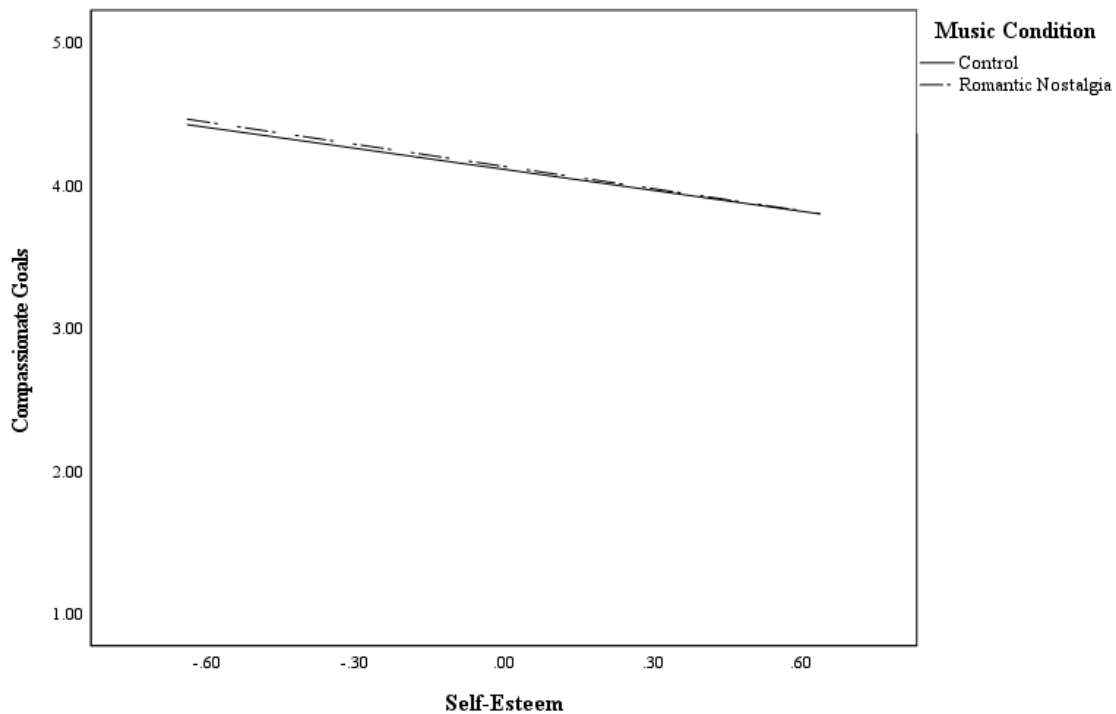
Figure 12. Non-significant interaction between romantic nostalgia and self-esteem on

compassionate goals.

Post Hoc Analysis

Relationship length was positively associated with compassionate goals, R^2 = .02, F(1,

382) = 7.90, p = .005 and support giving, R^2 = .03, F(1, 382) = 11.93, p < .001. Relationship

length did not significantly predict sacrifice, R^2 = .01, F(1, 382) = 3.49, p = .062. Next, I

conducted a hierarchical linear regression to evaluate whether romantic nostalgia (vs. control)

significantly predicted derogation of alternatives when controlling for relationship length. When

relationship length was first entered into the model, it negatively predicted derogation of

alternatives, $R^2 = .04$, $F(1, 377) = 14.48$, $p < .001$; however, when romantic nostalgia (vs.

control) was added, it significantly improved the model, $\Delta R^2 = .01$, $\Delta F(1, 376) = 4.39$, $p = .037$.

Next, I conducted a Pearson correlation to examine whether affect and relationship length are

significantly associated (Table 4). Negative affect is negatively correlated with relationship

length, $r(380) = -.19$, $p < .001$. Thus, longer relationship length was associated with lower

negative affect after conflict.

Table 4. Associations between affect and relationship length in correlational matrix table.

Variable	1	2	3
1. Positive Affect	-		
2. Negative Affect	-.07	-	
3. Relationship Length	-.09	-.19**	-

Lastly, I conducted a simple regression analysis to determine whether romantic nostalgia

proneness was associated with compassionate goals. Trait romantic nostalgia positively predicted

compassionate goals, $F(1, 382) = 36.20$, $p < .001$. Therefore, romantic nostalgia proneness was

positively associated with more compassionate goal setting.

Discussion

The purpose of Study 3 was to experimentally manipulate romantic nostalgia to evaluate

the effect on relationship goals and downstream behaviors in a heightened conflict context. My

goal was to replicate and expand on the findings from Study 2. First, I evoked conflict for all

participants using the same writing induction as Study 2, without the control group. Consistent

with Study 2, the music task following the conflict induction was successful in manipulating

romantic nostalgia, offering greater support and replication for previous work (Evans et al., in

press). Participants listening to a song they identified as a reminder of their partner experienced

more romantic nostalgia than those who listened to a song that they simply enjoyed but was not linked to their relationship.

There were no significant group differences on any of the variables of interest, except for the derogation of attractive alternatives. This may be the result of the heightened relationship threat, as all participants were exposed to a conflict task at the beginning of the study. Participants who listened to a romantically nostalgic song, compared to a control song, reported feeling less attraction to potential alternative partners. This finding offers preliminary support for how nostalgia influences relationship maintenance behaviors in conflict situations. This suggests how people detract from potential partners, viewing attractive people as less attractive, to sustain and protect their partnerships. In conflict, people may be still feeling residual effects of the threats toward their relationship, so listening to romantically nostalgic or a control song yields similar reparative outcomes for the willingness to support (motivational) or sacrifice (behavioral) for their current partner. Future research could examine other cognitive strategies that partners use to maintain relationships, such as cognitive interdependence (i.e., plural pronoun usage; Agnew et al., 1998), positive illusions, or perceived superiority. There may be stronger implications to evoke romantic nostalgia for people in conflict to derogate against attractive alternative partners (cognitive).

Contrary to my predictions, I did not find indirect effects for any of my hypotheses in Study 3; however, I did find support for the direct effect of romantic nostalgia on derogation of alternatives. For Hypothesis 1, romantic nostalgia (vs. control) did not increase compassionate goals, nor did relationship functions (esteem, meaning, continuity) mediate the relation. In an exploratory effort, I evaluated a potential mechanism, social connectedness, to determine if there was a suppressor variable, though the mediation for my exploratory research question (RQ1) was

not significant either. This finding contrasts with the existing literature (Cheung et al., 2013; Routledge et al., 2011; Sedikides et al., 2016) modeling the social, existential, and self-oriented functions of nostalgia. It is important to know much of the existing literature focused on personal nostalgia, and my goal was to examine whether romantic nostalgia operated similarly, particularly during heightened state of relationship threat. I examined the further pro-relationship behaviors in Hypothesis 2; I did not find support for romantic nostalgia increasing support giving (H2a), derogation of alternatives (H2b), or willingness to sacrifice (H2c), as there was not a significant indirect effect via relationship functions or compassionate goals. After listening to either a romantic nostalgia or control song, participants seem to be similarly willing to give support to or sacrifice for their partners following a conflict. Lastly, I explored individual differences, specifically examining self-esteem, to determine if there were any moderating effects. However, my exploratory research question (RQ2) was not supported: self-esteem did not moderate the relation between romantic nostalgia and compassionate goals.

Overall, I found mostly null effects for my full mediation models in Study 3. These findings may be the result of the methodology selected. I used the same conflict writing prompt in Study 3 from Study 2. As I removed the control condition, I cannot directly assess the effect size in Study 3; however, in Study 2, the effect size was rather weak for the conflict manipulation. I selected the same relationship turmoil induction from previous romantic nostalgia work (Evans, 2019), and used a separate control condition that has also been used in previous interpersonal relationships work (Murray et al., 2008). The conflict induction was as potent or negative as anticipated; the mean score for negative affect was slightly below the midpoint of the scale range. Therefore, it may be advantageous to examine conflict more broadly. One idea for future directions may be to sample highly distressed couples, or those with

high conflict in their relationship, rather than using an experimental design for inducing conflict,

to examine a broader range of conflict and test the possibility that nostalgia may be more

pertinent at higher conflict levels. Conversely, the effect size for romantic nostalgia was stronger,

and offered support for varying techniques to evoke romantic nostalgia in the literature (Evans et

al., 2021).

General Discussion

I designed one correlational study and two experiments to investigate the effects of

romantic nostalgia, specifically the pro-relationship outcomes in conflict situations. Previous

work developed a preliminary theoretical framework, focusing on emotions theories and

relationship maintenance mechanisms, and my investigation yielded insightful avenues for future

work. In Study 1, I used a correlational design to examine the relation between romantic

nostalgia and the three relationship functions (esteem, meaning, continuity) as well as

compassionate goals. High romantic nostalgizers tended to have greater esteem, meaning, and

continuity in their relationships, as well as set more compassionate goals. Across the three

studies, I explored the theoretically relevant individual differences of attachment avoidance and

self-esteem (e.g., Campbell, Simpson, Boldry, & Kashy, 2005; Wildschut et al., 2010). For Study

2, I experimentally manipulated both conflict and romantic nostalgia, using writing and music

tasks, respectively, to investigate the motivational outcomes (compassionate goals). Study 3

expanded on Study 2 by assessing further downstream consequences of relationship maintenance

that has not been explored in the context of romantic nostalgia. Specifically, I focused on the

motivational, cognitive, and behavioral maintenance outcomes of support giving, derogation of

alternatives, and sacrifice to understand how romantic nostalgia influences various pro-

relationship dimensions within conflict contexts. High romantic nostalgizers tended to set more

compassionate goals in their relationships (Study 1). Music-evoked romantic nostalgia did not

significantly increase compassionate goals (Studies 2 and 3) relative to a control song, nor did it

enhance willingness to sacrifice and support their partner (Study 3). However, in a conflict

setting in Study 3, listening to a romantically nostalgic song lowered the perceived attractiveness

of potential partners relative to listening to a control song (derogation of alternatives).

Limitations and Future Directions

The findings of the studies were largely null, evident particularly with the null indirect

effects in the full models. I rooted much of my theoretical framework in nostalgia literature, but

romantic nostalgia specifically falls within the context of intimate relationships. Therefore, I

considered relationship factors that may play a role in the longevity of relationships, such as

individual differences (e.g., attachment). It would be beneficial to examine other relationship

dynamics not assessed in the current investigation, or use different approaches, such as dyadic

studies, to better measure and understand the influences of romantic nostalgia on relationship

maintenance outcomes. The methodology selected may have also influenced the null effects.

Specifically, the conflict manipulation in Study 2, though statistically significant, was not as

potent as desired. I merged a relationship turmoil writing induction task and a control writing

task into the design for Study 2 with the intention to provide a baseline with a control group that

was not included in previous romantic nostalgia research design (e.g., Evans, 2019; Swets et al.,

2021). However, the conflict writing prompt and the control (commuting) writing prompt did not

demonstrate significant differences on the variables of interest. Participants in the control group

detailed their commute to school, but perhaps this task may evoke some mixed affect, such as

irritation with traffic. In addition, the *fading affect bias*, or the tendency for autobiographical

events associated with negative affect fade quicker over time relative to positive affect

(Skowronski et al., 2013), may help explain why positivity is more likely to be recalled relative to negativity. The fading affect bias may relate to affective valence of recalling conflict experiences in their relationships, as negative memories fade faster over time. The instructions of the conflict task did specify participants recall a *recent* conflict; however, a more restrictive timeframe may be needed (e.g., within the last week). Future research may opt for a third condition or induce conflict in a different technique. One example could be having the romantic dyad discuss a recent conflict together.

The present investigation replicated and expanded upon recent work addressing the theoretical questions of what types of nostalgia influence pro-relationship behaviors. Across the three studies, I found evidence to suggest that romantic nostalgia, at the trait level or evoked through song, has advantageous benefits for relationship maintenance, specifically cognitive effects (e.g., derogation of alternatives). Future research may help to bridge the unidentified moderators and mediators to determine why romantic nostalgia devalues attractive alternative partners. There is little preliminary work, mostly unpublished, exploring the relational effects of romantic nostalgia proneness. Future work should also control for potential moderators, including avoidant attachment, in dyadic level of analysis. In addition, consideration for other dyads (i.e., friends, roommates, relatives, co-workers) to broaden the scope of relational nostalgia would be beneficial for future directions. I excluded the other types of dyads to be as specific as possible and remove any potential confounds of investigating different types of relationships. However, relationship length was an important predictor of many variables of interest for Study 3, including compassionate goals and support giving. Further, in the nostalgia literature, age has been positively related to well-being for highly nostalgic older adults (Hepper et al., 2020), suggesting that nostalgia buffers perceived limitations of time across the adult

lifespan. Therefore, future work should control for relationship length. Alternatively, one avenue

for future directions could be to evaluate romantic nostalgia in the context of younger adult

relationships relative to older adult relationships. Nostalgia is most prevalent among younger

adults, or those below 30 years old, and older adults, or those above 75 years old (Hepper et al.,

2018), and researchers suggested that the peaks in nostalgia across the lifespan may be from

major life transitions, such as leaving home or retirement (Wildschut et al., 2018). Relationships

in these age categories (younger vs. older adulthood) may evolve or change over time, and it

would be valuable to investigate the content and functions of romantic nostalgia at different life

stages or relationship transitions to determine whether romantic nostalgia may be an adaptive

relationship maintenance tool.

There may be elements of the music instructions used in Studies 2 and 3, that could have

influenced the results of the studies. The control condition used a broader instruction for

selecting an enjoyable song, whereas the romantic nostalgia condition used a specific instruction

of selecting a song that directly reminded them of their romantic partner or relationship. One

alternative explanation for the lack of significant differences in compassionate goals could be

that the participants in the control group selected a song that does not connect to their romantic

partner, but may connect to another close relationship (e.g., friend, roommate, or family

member). If those in the control music condition selected a song that reminds them of a friend,

for example, they may be benefitting from sharing positive social interactions of close others.

Therefore, future directions could induce romantic nostalgia with the relational nostalgia

induction (Hepper et al., 2012b; Hepper et al., 2016) to determine whether romantic nostalgia

increases compassionate goals at the dyadic level. For the manipulation, dyads in the relational

nostalgia condition would be asked to discuss a shared nostalgic event while those in the control

condition would be asked to discuss a shared ordinary event for 10 minutes. This could be

assessed by conducting a single-mediator model using the Actor-Partner Interdependence Model

(Kenny, Kashy, & Cook, 2006) to test for the potential actor and partner effects of relational

connectedness on compassionate goals.

A second avenue for future works draws upon collective nostalgia work. People may

experience nostalgia for other people's past experiences, which may extend to romantic partners.

Past research supported the claim that people can feel nostalgic for a past event they personally

have not experienced (Martinovic et al., 2017). These collective memories have been shared with

the ingroup members. Therefore, future work on romantic nostalgia could examine if this would

be the case at the dyadic level: would a person feel nostalgic for a memory from their partner's

past? It may be relationally beneficial for romantic partners to share past nostalgic memories;

recounting past events with romantic partners may facilitate greater emotional intimacy (Hepper

et al., 2012). Using the present work as a foundation, it would be an important distinction in

relational nostalgia compared to collective nostalgia to examine this further. There has been

preliminary work in this avenue by Yraguen and colleagues (2021) in which romantic partners

read a narrative of their partner's relationship memory. Reading their partner's narrative about

their shared memory evoked greater feelings of state nostalgia. However, these researchers did

not have participants read personally nostalgic memories. Overall, this future direction could be

beneficial to better understand relational nostalgia. Arriaga and colleagues (2018) suggested how

greater attachment security can be promoted by romantic relationships, through the dual-process

Attachment Security Enhancement Model (ASEM). Some people may experience chronic

relationship insecurity from experiencing relationships with unsatisfactory partners unable to

response to their needs (Mikulincer & Shaver, 2016). People with partners who are responsive to

their needs should experience increased attachment security (Murray et al., 2006). According to

ASEM, for avoidant attachment, *soft* strategies may alleviate the insecurities by acknowledging

the need for autonomy in a supportive relationship; for anxious attachment, *safe* strategies may

mitigate the insecurities by acknowledging the need for connection.

Conclusions

There are important applications to understanding nostalgia within the context of

romantic relationships, particularly in reminiscence-based interventions. For example, in

cognitive reminiscence therapy, guided recall and interpretation has been linked with adaptive

thinking within relationship contexts in young adults (Pilon, Hallford, Tyler, 2022). Nostalgia

can be utilized strategically to buffer maladaptive states, and research is now expanding the

investigation to the context of relationships, with a particular emphasis on conflict mitigation.

While the present investigation yielded largely null indirect effects, more research is needed to

uncover the relationship maintenance mechanisms of romantic nostalgia. Across these three

studies, I established further evidence for the reparative nature of romantic nostalgia on cognitive

relationship outcomes (i.e., devaluation of alternative) in the context of intimate relationships.

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Appendix

<u>Romantic Relationship-Specific Southampton Nostalgia Scale (see Evans, 2019):</u>

Instructions: This questionnaire is about nostalgia regarding your *current romantic partner and/or romantic relationship*. According to the Oxford Dictionary, "nostalgia" is defined as a "sentimental longing for the past."

1. How valuable is romantic nostalgia for you?
      1 Not at all 2 3 4 5 6 7 Very much

2. How important is it for you to bring to mind nostalgic experiences about your current romantic partner or relationship?
      1 Not at all 2 3 4 5 6 7 Very much

3. How significant is it for you to feel nostalgic about your romantic partner and/or romantic relationship?
      1 Not at all 2 3 4 5 6 7 Very much

4. How prone are you to feeling nostalgic about your romantic partner and/or romantic relationship?
      1 Not at all 2 3 4 5 6 7 Very much

5. How often do you experience nostalgia about your romantic partner and/or romantic relationship?
      1 Very rarely 2 3 4 5 6 7 Very frequently

6. Generally speaking, how often do you bring to mind nostalgic experiences about your romantic partner and/or romantic relationship?
      1 Very rarely 2 3 4 5 6 7 Very frequently

7. Specifically, how often do you bring to mind nostalgic experiences about your romantic partner and/or romantic relationship? *
      _____ At least once a day
      _____ Three to four times a week
      _____ Approximately twice a week
      _____ Approximately once a week
      _____ Once or twice a month
      _____ Once every couple of months
      _____ Once or twice a year

UCLA 20-item Loneliness Scale (Russell, 1996):

INSTRUCTIONS: Indicate how often each of the statements below is descriptive of you.

Statement	Never	Rarely	Sometimes	Often
1. How often do you feel that you are "in tune" with the people around you?	1	2	3	4
2. How often do you feel that you lack companionship?	1	2	3	4
3. How often do you feel that there is no one you can turn to?	1	2	3	4
4. How often do you feel alone?	1	2	3	4
5. How often do you feel part of a group of friends?	1	2	3	4
6. How often do you feel that you have a lot in common with the people around you?	1	2	3	4
7. How often do you feel that you are no longer close to anyone?	1	2	3	4
8. How often do you feel that your interests and ideas are not shared by those around you?	1	2	3	4
9. How often do you feel outgoing and friendly?	1	2	3	4
10. How often do you feel close to people?	1	2	3	4
11. How often do you feel left out?	1	2	3	4
12. How often do you feel that your relationships with others are not meaningful?	1	2	3	4
13. How often do you feel that no one really knows you well?	1	2	3	4
14. How often do you feel isolated from others?	1	2	3	4
15. How often do you fee1 you can find companionship when you want it?	1	2	3	4
16. How often do you feel that there are people who really understand you?	1	2	3	4
17. How often do you feel shy?	1	2	3	4
18. How often do you feel that people are around you but not with you?	1	2	3	4
19. How often do you feel that there are people you can talk to?	1	2	3	4
20. How often do you feel that there are people you can turn to?	1	2	3	4

Hepper et al. (2012a) Relationship Functions (Esteem, Connectedness, Meaning):

Instructions: Respond to each of the items below the extent to which the items pertain or not to your current romantic relationship.

"Thinking about my romantic partner…"

1. Makes me value my relationship more
2. Makes me feel like my relationship has many positive qualities
3. Makes me feel good about my relationship
4. Makes me like my relationship better

5. Makes me feel loved
6. Makes me feel connected to my romantic partner
7. Makes me feel protected
8. Makes me feel I can trust others

9. Makes me feel that life is worth living
10. Makes me feel life is meaningful
11. Makes me feel life has a purpose
12. Makes me feel there is a greater purpose to life

Compassionate and Self-Image Goals Scale – Adapted Version (Crocker, Canvello, & Lewis, 2017):

Instructions: Please indicate the degree to which you agree with the following statements regarding your current relationship based on the statement below. (1 = not at all, 5 = extremely)

"Over the past 2 weeks, in my romantic relationship, I wanted/tried to…"

Compassionate Goals
1. Be supportive of my partner.
2. Have compassion for my partner's mistakes and weaknesses.
3. Be constructive in my comments to my partner.
4. Avoid being selfish or self-centered.
5. Avoid neglecting my relationship with my partner.
6. Avoid doing anything that would be harmful to my partner.
7. Be aware of the impact my behavior might have on my partner's feelings.
8. Make a positive difference in my partner's life.

Self-Image Goals
1. Avoid showing my weaknesses.
2. Get my partner to acknowledge my positive qualities.
3. Avoid being blamed or criticized.
4. Avoid revealing my shortcomings or vulnerabilities.
5. Get my partner to respect or admire me.
6. Demonstrate my intelligence.
7. Demonstrate my positive qualities.
8. Avoid coming across as unintelligent or incompetent.
9. Avoid appearing unattractive, unlovable, or undesirable.

Experiences in Close Relationship – Short Form (Fraley, Waller, & Brennan, 2000):

Please respond to the following using the following anchors: (1 = strongly disagree, 2 = disagree, 3 = slightly disagree, 4 = neutral, 5 = slightly agree, 6 = agree, 7 = strongly agree)

1.   It helps to turn to my romantic partner in times of need. *
2.   I need a lot of reassurance that I am loved by my partner.
3.   I want to get close to my partner, but I keep pulling back.
4.   I find that my partner(s) don't want to get as close as I would like.
5.   I turn to my partner for many things, including comfort and reassurance. *
6.   My desire to be very close sometimes scares people away.
7.   I try to avoid getting too close to my partner.
8.   I do not often worry about being abandoned. *
9.   I usually discuss my problems and concerns with my partner. *
10. I get frustrated if romantic partners are not available when I need them.
11. I am nervous when partners get too close to me.
12. I worry that romantic partners won't care about me as much as I care about them.

Relevant Relationship Information:

Status of your relationship with your partner
1. Friends
2. Dating casually
3. Dating seriously
4. Engaged
5. Married
6. Other (please specify: _____)

How exclusive is your relationship?
1. Neither I nor my partner dates others
2. My partner dates others but I do not
3. I date others but my partner does not
4. Both my partner and I date others

How long (in months) have you been with your current romantic partner?

Were either of your married previously?

Do you or your partner have any children?

Demographic Information:

What is your gender?
1. Man
2. Woman
3. Non-binary
4. I identify my gender as: _____

What is your sexual orientation?
1. Asexual/Aromantic
2. Bisexual/Pansexual/Fluid
3. Gay
4. Lesbian
5. Queer
6. Straight (Heterosexual)
7. I identify my sexual orientation as: _____

What is your age (in years)? _____

What race do you identify as?
1. American Indian/Alaska Native
2. East Asian
3. South Asian
4. Native Hawaiian/Pacific Islander
5. Black or African American
6. White
7. More than one race
8. Other or unknown

What is your ethnicity?
1. Hispanic or Latino(a)
2. Not Hispanic or Latino(a)
3. Unknown

Is English your native language? (Yes/No)

<u>Full conflict instructions – adapted (Evans, 2019; Murray et al., 2008):</u>

We want you to think of a relatively recent disagreement during your romantic relationship in which your romantic partner did something that you did not like, annoyed you, or made you experience negative emotions. Please think of a negative event, and *not* a traumatic experience. This can be anything from (but not limited to) a disagreement or argument you two had, to a behavior that annoyed you or made you angry. Please think about this particular event, and immerse yourself in it. Please spend a couple of minutes thinking about the event and how it makes you feel.

Using the space provided below, for the next few minutes, we would like you to write about the negative experience. Immerse yourself into this experience. Describe the experience and how it makes you feel.

<u>Conflict control instructions (Murray et al., 2008):</u>

We want you to think about your commute to school. Please describe your commute in detail. Please think about this particular event, and immerse yourself in it. Please spend a couple of minutes thinking about the event and how it makes you feel.

Using the space provided below, for the next few minutes, we would like you to write about your commute to school. Immerse yourself into this experience. Describe the experience and how it makes you feel.

Positive and Negative Affect Schedule (Watson, Clark, & Tellegen, 1988):

Instructions: This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space provided. Indicate what extent you feel this way right now, that is, at the present moment. Use the following scale to record your answers.

1. Interested
2. Distressed
3. Excited
4. Upset
5. Strong
6. Guilty
7. Scared
8. Hostile
9. Enthusiastic
10. Proud
11. Irritable
12. Alert
13. Ashamed
14. Inspired
15. Nervous
16. Determined
17. Attentive
18. Jittery
19. Active
20. Afraid

Conflict manipulation check items:

Four selected items from the Relationship Conflict Scale (Gordon & Chen, 2016) will be

adapted with state language to assess current feelings of conflict:

1. "Right now, I feel like all my partner and I do is fight"

2. "Currently, there is a lot of conflict in my relationship"

3. "Right now, I am irritated by my partner"

4. "In this present moment, my partner and I are in agreement on major issues*"

Three items will measure the extent to which participants currently feel on a 7-point Likert

scale (see Reyes, 2012)

1. "Unaccepted"

2. "Rejected"

3. "Negative"

Romantic Nostalgia Condition Instructions (Evans et al., in press):

According to the Oxford Dictionary, 'nostalgia' is defined as a 'sentimental longing for the past. Please think of a nostalgic event regarding your relationship with your romantic partner. Now, specifically, try to think of a song that reminds you of your romantic partner or romantic relationship that makes you feel the most nostalgic. Once you have thought of the nostalgic song involving your romantic partner or romantic relationship and how it makes you feel, then let the experimenter know what it is by writing it down on the paper provided. When you have written the song you have selected, please let the experimenter know.

Once you let the experimenter know which song you have selected, we would like you to listen to this nostalgic song about your romantic partner or romantic relationship. Immerse yourself into this nostalgic song.

Romantic Nostalgia Control Condition (Evans et al., in press):
Please think of a current song NOT related to your romantic partner or relationship that you enjoy listening to. Once you have thought of the current song NOT involving your romantic partner or romantic relationship, then let the experimenter know what it is by writing it down on the paper provided. When you have written the song you have selected, please let the experimenter know.

Once you let the experimenter know which song you have selected, we would like you to listen to this current song NOT about your romantic partner or romantic relationship. Immerse yourself into this current song.

Romantic Nostalgia Manipulation Check – adapted (Wildschut et al., 2006):

The following statements refer to how you feel <u>right now</u>. Please indicate your agreement or disagreement by placing a number in the blank space preceding each statement. The number should be anywhere from 1 to 6, according to the following scale.

1	2	3	4	5	6
Strongly disagree	Moderately disagree	Slightly disagree	Slightly agree	Moderately agree	Strongly agree

___   Right now, I am feeling quite nostalgic towards my romantic partner.
___   Right now, I am having nostalgic feelings about my romantic relationship.
___   I feel nostalgic for my romantic partner at the moment.

Aversive Images Sacrifice Task:

We are interested in people's responses to positive and negative stimuli.

Imagine yourself in a psychology lab in front of a computer. You've come to the study with your partner. Now, imagine that you and your partner are asked to rate the extent to which images are pleasant or not. Of the 200 total images, half of them are quite pleasant (examples: puppies, babies, nature scenes), but half of them are quite unpleasant (examples: bloodied individuals, dead animals). You and your partner would each rate 100 images separately – in batches of 20 photos at a time. Each batch of 20 photos will contain either entirely pleasant or entirely unpleasant images.

Imagine that you have been assigned to the role of choosing, so you get to choose how many pleasant images and unpleasant images you rate. Keep in mind that your partner would have to rate the remaining images.

The choices are:
If you rate 0 unpleasant images (and 100 pleasant images), then your partner would have to rate 100 unpleasant images (and 0 pleasant images).
If you rate 20 unpleasant images (and 80 pleasant images), then your partner would have to rate 80 unpleasant images (and 20 pleasant images).
If you rate 40 unpleasant images (and 60 pleasant images), then your partner would have to rate 60 unpleasant images (and 40 pleasant images).
If you rate 60 unpleasant images (and 40 pleasant images), then your partner would have to rate 40 unpleasant images (and 60 pleasant images).
If you rate 80 unpleasant images (and 20 pleasant images), then your partner would have to rate 20 unpleasant images (and 80 pleasant images).
If you rate 100 unpleasant images (and 0 pleasant images), then your partner would have to rate 0 unpleasant images (and 100 pleasant images).

Derogation of Alternatives Image Rating Task:

You will be asked to view 8 images of people. Please rate the extent to which you find them romantically attractive or not, in other words – the extent to which you indicate a potential romantic attraction to them. If the image is not relevant to whom you find romantically attractive, you may select "not applicable" in the scales provided.

To what extent do you consider this person to be a potential romantic partner, irrespective of your current relationship status?

1 = extremely unlikely; 2 = somewhat unlikely; 3 = neither likely nor unlikely, 4 = somewhat likely; 5 = extremely likely; 6 = not applicable

Vita

Margaret Anne Kneuer was born on November 6, 1996, in Buffalo, New York, and is an American citizen. She graduated from Pittsford Mendon High School in 2014. She received her Bachelor of Arts in Psychology from Mercyhurst University in Erie, Pennsylvania in 2018. In May 2020, she earmed her Master of Science in Psychology from Virignia Commonwealth University.