

Mixed and Conflicted:

The Role of Ambivalence in Romantic Relationships in Light of Attractive Alternatives

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This paper has been accepted for publication at *Emotion* (September, 2021). This version has not been copy-edited and thus may differ from the final published version.

The published version is available through the publisher's website.

Zoppolat, G., Faure, R., Alonso-Ferres, M., & Righetti, F. (2022). Mixed and conflicted: The role of ambivalence in romantic relationships in light of attractive alternatives. *Emotion*. <https://doi.org/10.1037/emo0001055>

Abstract

People in romantic relationships tend to have positive feelings towards their partner and want their relationship to last. However, maintaining a romantic relationship over time is challenging, and people can often experience mixed and conflicting feelings (i.e. ambivalence) towards their significant other. While research has identified the serious consequences that ambivalence can have for personal and relational wellbeing, very little is known about the factors that can lead people to experience ambivalence in relationships. The present work examines how extra-dyadic desire (i.e. desire for someone other than the partner), a common difficulty people face in the context of monogamy, is a situation in which people feel more ambivalent towards their partner. In three studies ($N = 1178$) using experimental, daily diary, and longitudinal approaches, we find that feelings of desire for an attractive alternative increase ambivalence towards the current partner, above and beyond how much people actually value their partner, and that this has short and long-term negative consequences for personal and relational wellbeing. Furthermore, while most people could identify an attractive alternative in their life, *desire* for the alternative – rather than just their presence – seems to play a stronger role in increasing ambivalence. This work highlights the emotional processes through which attractive alternatives pose a threat to romantic relationships and the role that ambivalence plays in daily life and over time.

Keywords: attractive alternatives, ambivalence, close relationships, desire, repeated measure design

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In most contemporary societies around the world, romantic relationships are conceived as the union between two people (Watkins & Boon, 2015), with expectations for emotional and sexual fidelity, at least for the majority of couples (Conley et al., 2013). Therefore, for people in an exclusive romantic relationship, the presence of attractive others (i.e., other potential partners who capture either short-term or long-term interest) can be a serious threat to the stability of the relationship (e.g. Finkel et al., 2002). In fact, monogamy deviations are common and are often the impetus for relationship dissolution (Amato & Previti, 2003). Given the risk that alternatives pose, people engage in a wide array of relationship maintenance behaviors, both consciously and non-consciously, in order to protect their current relationship against the threat of attractive alternatives (e.g. devaluing the alternative, Lydon & Karremans, 2015). However, these strategies do not always work, and, at times, even the most committed individual can fall under the allure of an attractive other (Ritter et al., 2010). When this occurs, how do people feel when they experience extra-dyadic interest?

For those in generally satisfactory relationships, experiencing interest in an attractive other may be destabilizing. Because people tend to view their partner and their relationship in a positive light, even exaggerating their virtues and downplaying their faults (Barelds et al., 2011; Murray et al., 1996), finding someone else to be desirable may put that evaluation into question, and create inner conflict. While existing theoretical perspectives have highlighted the disruptive role that attractive alternatives can play in relationships (Rusbult et al., 1998), such as by threatening its longevity (e.g. Ritchie et al., 2020), surprisingly not much is known about the emotional experiences and evaluative processes that people face in these (common) situations. In these instances, people are caught between wanting to maintain their current

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relationship and experiencing a pull towards another person and, in the context of monogamy, they cannot pursue both without potential serious consequences for their personal and relational wellbeing (e.g. Emmers-Sommers et al., 2010). Therefore, the way that people experience this desire and evaluate their current relationship in the face of an attractive alternative will likely shape the future of their relationship, whatever that may be.

In the present work, we use experimental, daily diary, and longitudinal approaches to test how people evaluate their current romantic partner and relationship when experiencing desire for another person. We propose that when people experience interest in an attractive other, they experience greater ambivalence towards their current romantic partner (i.e. experience mixed and conflicted feelings; Fincham & Linfield, 1997), ultimately impacting their relational and personal well-being in the long-run. By testing this, we shed light on two frequent and often distressing experiences in romantic relationships: feelings of attraction towards an alternative and ambivalence towards the current romantic partner, thus extending the theoretical understanding of *how* alternatives pose a threat to relationships and highlighting the complex role that mixed and conflicting feelings can play in people's most intimate relationships.

The Threat of Attractive Alternatives

Generally, people have a great desire to maintain their current romantic relationship given the strong attachment that they form with their partner (e.g. Fraley et al., 2005) and the important psychological and physical benefits that close relationships confer (e.g. Holt-Lunstad et al., 2010). But maintaining this relationship over time can be difficult. One of the biggest challenges that monogamous couples face is the presence and allure of potential other relationship partners. Indeed, stemming from classic theories of interpersonal relationships, such as interdependence theory and the investment model of relationships (Rusbult, 1980; Thibaut & Kelley, 1959), numerous studies show that relationship longevity is greatly

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influenced by the quality of alternatives to the current relationship (e.g., Emmers-Sommers et al., 2010): the more the alternative is perceived as being able to provide better outcomes than the current relationship, the greater the likelihood that the person may leave (Le & Agnew, 2003).

Given the motivation and importance of maintaining relationships over time, deliberative and automatic strategies are often used to defend against the threat of attractive alternatives, downregulating their potential appeal (Lydon et al., 1999; Lydon & Karremans, 2015), and ultimately their threat. Early work in relationship science has argued for this devaluation effect (Johnson & Rusbult, 1989; Lydon et al., 1999), and a plethora of more recent empirical research has found that people do indeed defend their relationship from external threats by inoculating the threat at the start. For example, romantically involved individuals tend to quickly reveal their relationship status to an attractive other (Linardatos & Lydon, 2011), judge them as less attractive than single people do (Karremans et al., 2011), pay less deliberative and automatic attention to them (Linardatos & Lydon, 2011; Maner et al., 2009; McNulty et al., 2018), and remember more negative than positive attributes (Visserman & Karremans, 2014). Given that people's evaluation of their relationship is greatly influenced by the quality of their alternatives and the extent to which they perceive them to be more or less desirable than their current partner (Le & Agnew, 2003; Lydon et al., 1999; Rusbult, 1983), these processes that downgrade the appeal of alternatives are powerful relationship maintenance tools. Indeed, social comparison processes are activated when people are confronted with an attractive alternative to their current romantic partner, threatening their relationship satisfaction (Rusbult, 1983) and rendering other options potentially more appealing (MacDonald et al., 2021). To the extent that people continue to ignore alternatives or view them as less appealing, their current romantic partner will remain

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the better and more appealing option, supporting relationship longevity. However, despite these strategies, the eye and heart often still wander (Emmers-Sommers et al., 2010).

While relationship maintenance processes help protect the current relationship, safeguarding the benefits that the bond provides (e.g. Dush & Amato, 2005), people do not always downplay or ignore attractive others. Indeed, despite the strong monogamy norms in most contemporary societies (Conley et al., 2013), infidelity is common, with reports ranging from 20% to 60% for committed couples (e.g. Emmers-Sommers et al., 2010; Mark et al., 2011). As infidelity is a clear violation of the exclusivity expectation, it is one of the most distressing events for intimate relationships (Hall & Fincham 2009), and the most prevalent reason for marriage dissolution (Amato & Previti, 2003; Yuan & Weiser, 2019).

Given the significant consequences of straying from one's relationship partner, it is surprising that very little is known about how people feel when they do encounter feelings of attraction towards an alternative potential mate, and particularly how this plays out in daily life and overtime. Previous research has shown that the quality of attractive alternatives in one's life is negatively associated with commitment and satisfaction in the current relationship (Le & Agnew, 2003; Tran et al., 2019). Yet, given the scarcity of longitudinal evidence documenting actual changes over time, it remains unclear whether the desire for alternatives is a precursor or consequence of how people evaluate their partner and relationship. A notable exception comes from a study showing that having the automatic tendency to direct attention to general attractive others (as measured in a dot probe paradigm; Maner et al., 2007) is a predictor of later infidelity and break up (McNulty et al., 2018). Nevertheless, very little is known about the evaluative process that occurs when desire toward another person arises and how this desire in turn may alter the appraisal of the partner and relationship. Instead, prior research has primarily focused on the automatic relationship maintenance processes that suppress desire, leaving the questions of a) what happens when

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this desire is felt – both in the short and long term – and b) how this desire affects the individual's own well-being outside of the context of sexual infidelity (e.g. Hall & Fincham, 2009) greatly unexplored. This is a significant theoretical and practical gap considering the likely frequency at which interest in others is piqued and the consequences it may have for those who experience it. Thus, understanding people's experiences when encountering feelings of attraction towards an alternative is important both for understanding the ways in which alternatives pose a threat to relationships as well as to develop interventions to help people understand and cope with their extra-dyadic feelings, potentially preventing subsequent sexual infidelity.

Ambivalence and Attractive Alternatives

People in non-distressed relationships tend to hold their partner and relationship in high esteem (Barelds et al., 2011). These positive evaluations are valuable for relationship prosperity, as they help people feel good about their relationship and maintain their commitment over time (e.g. Murray et al., 1996). However, people are not always so secure in their evaluations, and most people experience some conflicting feelings – or ambivalence – towards their partner at some point (e.g. Birmingham et al., 2019; Uchino et al., 2013; Zayas & Shoda, 2015). These conflicting feelings can arise or be exacerbated by various diagnostic events or situations within the relationship (Joel et al., 2021). Although people are not always aware of their mixed feelings or experience them continuously, ambivalence is a common and normal part of relationships (e.g. Fincham & Linfield, 1977; Uchino et al., 2014; Zayas et al., 2017), given that the benefits and rewards associated with them, such as love and companionship, are also accompanied by inevitable costs and threats, such as disappointment and conflict (e.g. Gable et al., 2003). These mixed experiences give rise to conflicting feelings towards the partner (Zayas & Shoda, 2015), which can be troublesome, as they often occur when people are already invested in the relationship (Miller et al., 2006).

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While people may not necessarily be aware of these mixed evaluations (e.g. Zayas et al., 2017), ambivalence is particularly distressing when people do become consciously aware of it, that is when they experience *subjective ambivalence* (e.g. Priester & Petty, 1996; Van Harreveld et al., 2015). In particular, previous research has shown that ambivalence becomes more salient (and therefore people are more aware of it) when needing to make a personally relevant choice (e.g. Schneider & Schwarz, 2017). For example, in a study in which students wrote about a labor law that could affect their future employment, they experienced greater ambivalence when needing to choose whether they were in favor or against the new regulation, rather than when simply writing about it without having to take a position (Van Harreveld et al., 2009a). This is because, when making a decision, the individual must evaluate all the different options and doing so brings saliency to both the positive and negative aspects of each option (Reich & Wheeler, 2016).

While most of the research on the emergence of subjective ambivalence as a function of decision making has centered around more abstract attitude objects, such as in the example provided above, initial evidence suggests that a similar process occurs in close relationships. For example, in a study with people contemplating a break-up, people experienced a great deal of inner conflict when thinking about their choice, feeling strongly about both the reasons for staying and also the reasons for leaving the relationship (Joel et al., 2018). In a subsequent study, Joel and colleagues (2021) found that people who scored higher on a “stay/leave ambivalence” scale, that is people who were more torn on the decision of whether to remain in their relationship or not, experienced greater daily turmoil in their relationship evaluations. Thus, while people tend to generally have mixed feelings throughout their relationship (Zayas & Shoda, 2015), these mixed feelings may become particularly salient or become exacerbated when having to make a relationship-relevant decision.

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A particularly tricky situation in which people may consider this type of decision – and thus experience greater ambivalence – is in the context of extra-dyadic interest. As social exchange and interdependence theory suggest (Levinger, 1976; Rusbult, 1983), relational stability and satisfaction are greatly influenced by the subjective evaluation of one's own relationship 'rewards' and 'costs' compared to those that could be obtained through other possible relationships (e.g. Amato & Hohman-Marriot, 2007; Levinger, 1976). According to these perspectives, the positive and negative outcomes associated with the current relationship provide valuable information that motivates people to make an important relationship relevant choice, and having good alternatives is one of the strongest reasons to change the relationship one is currently in (e.g. transforming a monogamous relationship to a consensually non-monogamous one; MacDonald et al., 2021) or leave the relationship altogether (Machia & Ogolsky, 2020). Importantly, the evaluative process that people go through when making these relationship decisions and evaluating its costs and benefits is a turbulent one (Joel et al., 2021), as it likely brings saliency to the conflicting emotions present in the relationship, highlighting and exacerbating pre-existing feelings of ambivalence towards their current romantic partner. Thus, when an attractive alternative is present, people may experience two different forces, one that pulls them toward protecting their current relationships and one that pulls them toward increasing proximity with the appealing alternative. In this way, attractive alternatives likely represent a serious threat to the relationship regardless of whether sexual infidelity occurs, simply by requiring a critical evaluation of the current partnership compared to another and thus triggering or enhancing feelings of ambivalence towards the partner.

All of this is important because experiencing ambivalence towards a partner can have serious implications for relational and personal well-being. While mixed emotions, including ambivalence, are not always linked with poorer outcomes (Hershfield et al., 2013), and can

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even be adaptive in certain contexts (Berrios et al., 2018; Moss & Wilson, 2015), feeling ambivalence towards close others is generally a highly aversive experience (e.g. Hsieh & Hawkley, 2018). In line with the “ABC Model of Ambivalence” (van Harreveld et al., 2015), ambivalence has affective, behavioral, and cognitive consequences; when ambivalent, people experience greater negative affect and discomfort (particularly when confronted with a choice), tend to want to change their discomfort through behavior (such as changing aspects of the current situation), and engage in greater cognitive processing to try to make sense of their ambivalence (thus bringing saliency to the issue at hand). While ambivalence is unpleasant when felt towards a variety of attitude objects, from political topics to food (Nohlen et al., 2014; Schneider et al., 2015), it is especially disconcerting in the context of close relationships because it conflicts with the overly positive way people would prefer to see and feel about their partner (Miller et al., 2006; Murray, 1999).

Importantly, ambivalence is distinct from simply having negative affect, and previous research has found that those who experience evaluation conflict (i.e. ambivalence) experience worse relational as well as personal outcomes compared to those who have more stable evaluations (e.g. Whitton et al., 2014). When experiencing ambivalence, people are also more likely to experience poorer relationship satisfaction (Lavner et al., 2012) and, given its troublesome nature, be motivated to reduce their conflicting feelings (Van Harreveld et al., 2015). One way to reduce ambivalence is to change the situation – by altering it or exiting from it altogether. Thus, we suggest that when experiencing extra-dyadic interest, in addition to experiencing lower relationship satisfaction, people may come to desire to change their partner (perhaps in an attempt to change the value derived from their relationship compared to a potential alternative one) and come to think about leaving the relationship all together (Joel et al., 2018; Righetti et al., 2020). Furthermore, in addition to the implications that it has for relationships, ambivalence in close relationships is also linked with serious health

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outcomes, such as poorer cardiovascular and immune functioning, and greater stress and anxiety (Birmingham et al., 2015, 2019; Herr et al., 2019; Holt-Lunstad & Uchino, 2019; Hsieh & Hawkey, 2018; Uchino et al., 2013, 2014). Therefore, we argue that people who experience desire towards an attractive alternative feel more ambivalence towards their current romantic partner and experience poorer personal and relationship outcomes. By testing these hypotheses, we can begin to unravel the experiences that people encounter when feelings of desire towards an alternative occur and their consequences for their own personal and relational wellbeing.

Research Overview

Three studies ($N = 1178$) were conducted¹ to test the link between attraction to attractive alternatives and subjective ambivalence.² The first study was an online experiment in which we manipulated desire for an attractive alternative and assessed subjective ambivalence. This provided an initial test of our hypothesis and a stepping stone for the next two more ecologically valid studies. The second study was a 10-day daily diary with people in a romantic relationship. In this study, we expected greater interest for attractive alternatives to be linked with greater subjective ambivalence and that this, in turn, would be linked with poor relational (i.e., relationship satisfaction, desire to change the partner, and thoughts of breakup) and personal (i.e., life satisfaction and stress) outcomes on that same day. In this study we also tested the ways in which alternatives may pose a greater threat to

¹ Material for all studies can be found on the [Open Science Framework page](https://osf.io/er49g/?view_only=3a6ae7ef2ffc4bdfb7a20ed4219dc0d) for the project: https://osf.io/er49g/?view_only=3a6ae7ef2ffc4bdfb7a20ed4219dc0d.

² In all studies, we used subjective ambivalence rather than another common measure of ambivalence known as objective or potential ambivalence (i.e. experiencing both positive and negative emotions at the same time without necessarily being aware of these mixed feelings or experiencing them as conflicting; Priester & Petty, 1996). Objective ambivalence is measured by asking people to rate the extent to which they experience positive and negative feelings towards a target and using a formula to calculate an ambivalence score; subjective ambivalence is measured by asking people to directly rate the extent of their mixed and conflicting feelings towards a target. In our work we were primarily interested in the awareness of ambivalence (i.e. subjective ambivalence) because it is subjective ambivalence, and not objective, that is theorized to become more salient when there is a choice to be made and is also theorized to be particularly discomforting (e.g. van Harreveld et al., 2009) with possible detrimental consequences for personal and relational well-being.

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the relationship by assessing whether participants experienced greater ambivalence depending on the *presence*, the *number*, or the *desire* towards attractive alternatives in their life. Finally, the third study consisted of two parts: a 14-day daily diary and a longitudinal study with couples. We again tested whether interest for attractive alternatives was linked with greater ambivalence for the partner and whether this, in turn, was linked with poor relational (i.e., relationship satisfaction, desire to change the partner, and thoughts of breakup) and personal (i.e., life satisfaction, anxiety, depression, stress, and general physical health) outcomes on that same day as well as over time. To ensure that the effect of attraction to attractive alternatives was specific to subjective ambivalence (i.e., the awareness of having mixed feelings) rather than a general devaluation of their partner, we performed auxiliary analyses controlling for this variable in all studies. The experimental study provides initial evidence of the link between attractive alternatives and ambivalence and provides experimental control, the daily diary studies offer high ecological validity given that the relationship between attractive alternatives and ambivalence was measured by assessing people's everyday thoughts and feelings in their natural environment and close to their occurrence and, finally, the longitudinal part of the third study, conducted over the span of one year, offers a unique opportunity to test the long-term consequences of this phenomenon.

Study 1

Method

Participants

A total of 1021 individuals were recruited through the online platform Prolific and through the online platform for students at a Dutch university, with 993 meeting the specified requirement (i.e. be above 18 years old and in an exclusive romantic relationship of at least 4 months). Due to the nature of the manipulation, only those who indicated that they had an attractive alternative in their life (68.8%, "Many people in relationships find other people

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attractive besides their partner. Do you have a person in mind that you would like to date if you were not already in a relationship? Or can you identify a person that you find attractive besides your partner?" indicated as *yes* or *no*) and identified as heterosexual were included in this study (this was due to the nature of the study and manipulation as described below; to not exclude from possible compensation, participants who did not have an attractive alternative in their life and those who did not identify as heterosexual were routed to another unrelated study). Thus, the final sample size was of $N = 658$. The primary goal of the study was to test the effect of manipulated desire for an alternative on ambivalence, and target sample size was pre-determined accordingly through an a priori statistical power analysis using G*Power 3.1 (Faul et al., 2009). Assuming a small effect size of $d = 0.25$, and with $\alpha = .05$ and power = .80, the needed sample size was $N = 506$ for the between groups comparison (two-tail independent t -test).³ Participants' mean age was 31.9 ($SD = 10.6$; ranging from 18 years to 71 years), and were mostly women (60%). They reported being together with their partner for an average of 7.9 years ($SD = 8.5$), and 68% were in a cohabitating relationship.

Procedure

Participants (all of whom had indicated in the screening questionnaire that they had an attractive alternative in their life) were randomly assigned to one of two groups: the experimental group ($N = 332$) was instructed to think about the attractive alternative they had previously indicated and the control group ($N = 326$) was instructed to think about a same-sex friend⁴ (all participants had identified as heterosexual in the screening questionnaire). The experimental group was then asked to write about what they liked about this person, why they found them attractive, and to imagine and write what they would do on a hypothetical date together. This manipulation aimed at increasing the salience and desire for the attractive

³ A sensitivity power analysis further revealed that the study had 80% power to detect a small effect size of at least $d = 0.22$.

⁴ Participants were instructed to think of a same-sex friends in order to exclude (as much as possible) the possibility that they would experience desire towards them.

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alternative. The control group replied to the same questions regarding the same-sex friend (i.e., wrote about what they liked about their friend and what would they do on an outing together). Both groups then completed the same outcome measures. This study was approved by the Scientific and Ethical Review Board of the Vrije Universiteit Amsterdam, (#2020-005R1) and all participants provided consent before starting the experiment.

Measures

Participants indicated their *subjective ambivalence* toward their partner (3-items; “At this moment, to what extent do you have mixed feelings toward your current romantic partner?”, “At this moment, to what extent do you feel both positive and negative feelings towards your current romantic partner?”, “At this moment, to what extent do you feel conflicted emotions/thoughts towards your partner?”; $\alpha = .83$) (Priester & Petty, 1996) and their *desire for the attractive alternative* (3-items; “How much do you desire this person?”, “How attractive is this person?”, “To what extent do you think this person would be an appealing romantic partner?”; $\alpha = .69$), both measured on a 7-point scale from 1 (*Not at all*) to 7 (*Extremely*). Furthermore, participants reported their *partner evaluation* (5-items; e.g. “I like my partner very much”, “I feel a lot of positive affect towards my partner”, “I esteem my partner very much”, “I love my partner”, “My partner is a very valuable person”; $\alpha = .94$), both measured on a 7-point scale from 1 (*Not at all*) to 7 (*Completely*).

Results

Analytical Strategy

Generalized linear models were conducted to compare the experimental and control group on subjective ambivalence and desire for the alternative. Mediation analyses and the sequential mediation analysis were conducted through the SPSS plugin PROCESS (Hayes, 2017), which conducts significance tests of the parameter estimates of each mediation pathway and estimates indirect effects with 95% confidence intervals using a bootstrap

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method with 20,000 samples. This combination of the joint-significance test with the estimation of the magnitude and confidence intervals of the indirect effect is considered as the most sophisticated approach for tests of mediation because it reduces Type I errors and maximizes statistical power and precision (Taylor et al., 2008; Yzerbyt et al., 2018).

Findings

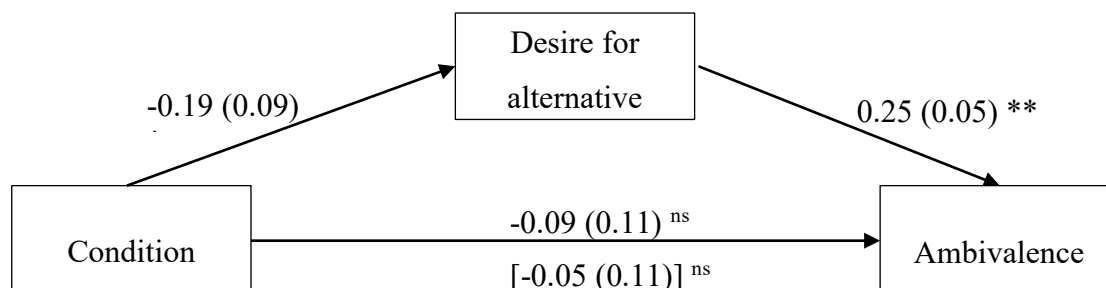
Contrary to expectation, no significant difference was found in ambivalence between the experimental and control group ($t(656) = -0.44$, 95% CI [-0.27, 0.17], $p = .659$, $d = 0.04$). However, as expected, the two groups significantly differed on desire for the alternative, with the experimental group experiencing greater desire ($M = 4.79$, $SD = 1.18$) than the control group ($M = 4.60$, $SD = 1.17$), $t(656) = 2.03$, 95% CI [0.01, 0.36], $p = .042$, $d = 0.16$. Results remained significant when controlling for partner evaluation ($t(652) = 2.35$, 95% CI [0.04, 0.39], $p = .019$, $d = 0.18$), with the experimental group still experiencing greater desire ($M = 4.81$, $SD = 0.06$) than the control group ($M = 4.59$, $SD = 0.06$).

To test whether our manipulation nevertheless affected ambivalence through desire, we regressed ambivalence on condition (experimental group = 1, control group = 2) and desire. Desire toward an attractive alternative was related to greater ambivalence ($b = 0.25$, $SE = 0.05$, 95% CI [0.15, 0.34], $p < .001$, $\eta_p^2 = 0.04$) and the indirect effect of desire was significant ($b = -0.05$, 95% CI [-0.09, -0.002]). Thus, the experimental manipulation affected ambivalence indirectly through desire. As compared to those in the control condition, people in the experimental condition felt more desire toward their alternative, which in turn led them to feel more ambivalence toward their partner. Results remained significant when controlling for partner evaluation, with a main effect of desire on ambivalence ($b = 0.13$, $SE = 0.04$, 95% CI [0.06, 0.21], $p = .001$, $\eta_p^2 = 0.02$) and a significant indirect effect ($b = -0.03$, 95% CI [-0.06, -0.003]). These results indicate that, as compared to the control condition, people in the

experimental condition experienced greater desire toward their alternative, which in turn was linked with greater ambivalence.⁵

Figure 1

Mediation model of Study 1



Note. The mediation model of condition (experimental versus control) on ambivalence through desire for the alternative, (indirect effect: $b = -0.05$, 95% CI [- 0.09, - 0.002]). All reported values are unstandardized estimates (b values), with their SE reported between parentheses. Within brackets in the total effect of condition on ambivalence. * $p < .05$, ** $p < .001$, $ns =$ non-significant

Discussion

Although our manipulation did not directly affect ambivalence, it was successful in affecting the desire participants felt toward an attractive alternative present in their life. Such desire, in turn, affected the participants' ambivalence toward their partner (also above and beyond their general partner evaluation). In other words, while all participants had indicated that they had an attractive alternative in their life, it was those who experienced greater desire towards the alternative that also experienced greater mixed feelings towards their current partner. Study 1 thus provided initial (experimental) evidence for the link between attractive alternatives and ambivalence. In Study 2, we sought to gain greater power and ecological validity to test these findings by using a daily diary methodology, assessing the role of

⁵ We also explored whether the effects were moderated by gender, and found evidence of a significant moderated mediation, such that desire was linked with greater ambivalence for men but not women. Given that this was an exploratory analysis and that the sample may have been underpowered to detect a small interaction effect ($p = .021$, $\eta_p^2 = .008$), we report these exploratory analyses in the Supplemental Material.

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alternatives in everyday life. Furthermore, in order to assess in what way and through which emotional processes alternatives pose a threat to the relationship and, based on and extending the findings from Study 1, whether it is indeed desire that drives the effects on ambivalence, we tested whether people who could identify the *presence of an alternative*, who felt greater *desire for the alternative*, and who had a higher *number of alternatives* also experience greater ambivalence towards their partner.

Study 2

Method

Participants

We gathered data from 174 young adults (mean age was 22.02, $SD = 3.01$, ranging from 18 to 33 years old) primarily living in the Netherlands. Two participants stated their data had been unreliable and were excluded from all analyses. Sample size was determined a priori on the basis of the current best practice guidelines in relationship science (Finkel et al., 2015), as well as financial and time constraints, and paired with a repeated measure design to maximize power. Participants were mostly women (75%), and 80% identified as heterosexual. Participants reported being together with their partner for an average of 2.4 years ($SD = 1.9$, ranging from 4 months to 13 years), with almost 40% reporting living together. Sample size is in line with standards for testing mediations using multilevel designs (Zhang et al., 2009). Participants were recruited through personal approach, social media, and various websites, and were required to be in an exclusive romantic relationship of at least 4 months.

Sensitivity power analyses were conducted following Lane and Hennes' (2018) approach for estimating power for multilevel models. Specifically, we ran simulations to estimate the smallest effect sizes that could be reliably detected with 80% power in a replication study with the same sample size and parameters as those in the present study. The

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results revealed that a replication study would provide 81% power to detect an unstandardized association of at least $b = .09$ ($SE = .03$) between daily interest for an attractive alternative and subjective ambivalence, and $b = .15$ ($SE = .05$) between daily flirting and ambivalence towards the partner. See Supplemental Material for details.

Procedure

Participants first completed an online intake survey in which they signed informed consent, responded to various baseline questionnaires,⁶ and were given specific instructions about the daily diary study, which commenced on the first Tuesday following their intake survey. Every evening, for 10 consecutive days, participants received an email at 8.00 p.m. with a link to complete the daily questionnaire, which was administered through Qualtrics. Participants were instructed to complete the survey alone, before midnight, and in a quiet environment, and were compensated either through academic credit or monetarily (up to €40 for completing the intake survey and at least 80% of the daily diaries). This study was approved by the Scientific and Ethical Review Board of the Vrije Universiteit Amsterdam (#2020-005R1) and all participants provided consent before starting the study.

Measures

Intake

During the intake sessions, participants indicated whether they could identify the *presence of an attractive alternative* in their life (1-item; “Many people in relationships find other people attractive besides their partner. Do you have a person in mind that you would like to date if you were not already in a relationship? Or can you identify a person that you find attractive besides your partner?”) measured dichotomously (*Yes/No*). Then they rated

⁶ This study was part of a larger study with people in a romantic relationship. Only variables relevant to the current investigation are reported here. Other variables, not theoretically associated with the present study, were not considered.

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their *desire for the alternative* (1 item; “How much do you desire this person?”).⁷ Finally, participants indicated how *many alternatives* they had, defined as the number of “people who you know and might be interested in dating and who might be interested in dating you” measured in 7 categorical ranges (0, 1, 2-3, 4-5, 6-10, 11-20, 21-50, 51 or more).

Diary

During the diary phase, participants reported each day on their *interest in an attractive alternative* (1-item; “Today, how often did you have thoughts of a (physically and emotionally) attractive other person?”) and their behavioral interest in alternatives (i.e. *flirting*, 1-item; “Today, I flirted with people I found attractive”), both measured on a 7-point scale from 1 (*Not at all*) to 7 (*Very often*). They also reported their *subjective ambivalence* towards their partner (3-items; e.g. “Today, to what extent did you have some mixed feelings towards your partner?”; $\alpha = .93$) measured on a 7-point scale from 1 (*Not at all*) to 7 (*Extremely*) (Priester & Petty, 1996). For relational outcomes, participants rated their *relationship satisfaction* (1-item; “I feel satisfied with my relationship with my partner”), measured on a 7-point scale from 1 (*Not at all*) to 7 (*Extremely satisfied*), *desire to change partner* (1-item; “I wanted my partner to change their behavior, preferences, or goals to resolve some problems in our relationship”), measured on a 7-point scale from 1 (*Not at all*) to 7 (*Very much*), and their *thoughts of breakup* (1-item; “I had thoughts about possibly breaking up in the future”) measured on a 7-point scale from 1 (*Not at all*) to 7 (*Many*). For personal well-being outcomes, participants reported their *life satisfaction* (1-item; “Today my life was close to my ideal”) and *stress* (1-item; “Today, I feel stressed”), both measured on a 7-point scale from 1 (*Not at all*) to 7 (*Extremely*). Finally, they also rated their daily *partner evaluation* (2-items; “Today, I feel positive feelings towards my partner” and “Today, I felt

⁷ *Desire for the alternative* at Intake was initially assessed through a 3-item measure as in Study 1. However, given its poor reliability score in this sample ($\alpha = .53$), we utilized the item with greater face value for the main analysis. To ensure that our results would not be influenced by this decision, we also ran the same analyses with the 3-item measure of *desire for alternative* at Intake, and found the same pattern of result as with the 1-item variable (see Footnote 8).

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negative feelings towards my partner,” reversed; $\alpha = .82$). See Table 1 for descriptive statistics.

Table 1

Means, standard deviations, and correlations among variables of interest in Study 2

Variables of interest	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1. Desire for alternatives	2.01	1.53	1							
2. Relational ambivalence	2.20	1.46	.37*	1						
3. Relationship satisfaction	5.77	1.28	-.26*	-.69*	1					
4. Desire for partner to change	2.47	1.71	.13*	.57*	-.51*	1				
5. Thoughts of breakup	1.71	1.30	.36*	.61*	-.59*	.34*	1			
6. Stress	3.63	1.77	.10*	.23*	-.22*	.21*	.19*	1		
7. Life satisfaction	3.90	1.60	-.11*	-.26*	.35*	-.20*	-.21*	-.46*	1	
8. Partner evaluation	5.79	1.17	-.24*	-.72*	.77*	-.60*	-.55*	-.25	.32*	1

Note. All variables were assessed on a scale of 1-7, except for relationship explicit partner evaluation. Correlations represent zero-order correlations across all measurement time points. * $p < .01$

Results

Analytical Strategy

Given the nested nature of the data (multiple measurements within participants), two-level multilevel analyses were performed (Bolger & Laurenceau, 2013), in which daily assessments (i.e. level 1) were nested within participants (i.e., level 2). Intercepts were treated as random and slopes as fixed effects. Given that at Intake we had level-2 predictors, we tested the between-person effects in models with level-1 outcomes (measured in the diary) regressed on level-2 predictors (measured at Intake). Continuous level-2 predictor variables were grand-mean centered. When considering the diary predictors, we used person-centering in order to disentangle the between- and within-person effects (Bolger & Laurenceau, 2013; Zhang et al., 2009). That is, all level-1 predictors were centered around the person mean to examine within-person variations across the 10 diary days (e.g., whether days for which individuals reported higher (or lower) desire toward attractive alternatives as compared to

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their own average across the 10-day period were associated with higher (or lower) ambivalence on that same day). In addition, we also included the actual person means (e.g., each individual's average level of desire for an attractive alternative across all diary days) for all our level-1 predictors in our models to examine and account for between-person variations in the diary (e.g., whether individuals who reported higher (or lower) desire toward attractive alternatives as compared to other participants on average across the 10-day period also reported higher (or lower) ambivalence on average during the diary). As an illustration, by including both person-centered scores and person mean scores, we are thus able to examine the association between one's desire toward attractive alternatives and ambivalence on a given day (i.e., within-person effect) above and beyond one's general desire tendencies across all days (i.e., between-person effect) (Zhang et al., 2009).

As in Study 1, all the mediations were tested by first conducting significance tests of the parameter estimates for each mediation pathway and then testing the indirect effects (Yzerbyt et al., 2018), which was tested using the Monte Carlo method for assessing mediation (MCMAM), a bootstrapping method which estimates indirect effects with 95% confidence intervals using unstandardized estimates through 20,000 simulations (Selig & Preacher, 2008). To ensure that effects of desire and ambivalence were not merely due to people's general evaluations of their partner, we also controlled for partner evaluation in all models (both person-centered scores and person mean scores). Although the total effects were not significant for all models, we proceeded to test the indirect effects because our hypotheses were theoretically driven and the significance of the total effects is not considered as a necessary condition to test mediation (Hayes, 2009; Shrout & Bolger, 2001).

Findings

Intake predictors. First, we regressed ambivalence during the 10-day diary on *presence of attractive alternative* at Intake (1 = yes, - 1 = no alternative; 75.3% of the sample

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indicated they had an alternative) and found a significant association between having an attractive alternative in one's life and ambivalence towards the partner ($b = 0.44$, $SE = 0.17$, 95% CI [0.10, 0.78], $p = .011$). However, this association became only marginally significant when controlling for partner evaluation during the diary ($b = 0.21$, $SE = 0.11$, 95% CI [-0.004, 0.41], $p = .054$). We then tested whether *desire toward the alternative* at Intake would be linked with greater *ambivalence* over the diary and found a significant association with ambivalence ($b = 0.24$, $SE = 0.06$, 95% CI [0.13, 0.35], $p < .001$). These association remained significant when controlling for partner evaluation ($b = 0.14$, $SE = 0.04$, 95% CI [0.07, 0.21], $p < .001$).⁸ Then, we tested whether the *number of alternatives* at Intake was associated with ambivalence during the diary (21.7% indicated they had 0 alternatives, 14.5% indicated 1, 44.5% indicated 2-3, 13.6% indicated 4-5, and 5.7% indicated 6 or more), but found no significant association ($b = 0.06$, $SE = 0.07$, 95% CI [-0.07, 0.18], $p = .398$).⁹

Diary predictors. We then conducted the analyses within the diary to test the within-person effects of daily interest of attractive alternatives. As expected, daily interest for an attractive alternative was associated with greater same-day subjective ambivalence ($b = 0.13$, $SE = 0.03$, 95% CI [0.08, 0.19], $p < .001$). This association remained significant when controlling for daily partner evaluation ($b = 0.12$, $SE = 0.02$, 95% CI [0.07, 0.16], $p < .001$). Next, to investigate whether daily ambivalence mediated the effect of desire for the alternative on relational and personal outcomes, we conducted a series of mediations. All results are displayed in Table 2. In separate models, mediation analyses revealed a significant main effect of daily ambivalence on relationship satisfaction, desire to change the partner,

⁸ The same pattern of results was found when using the full item measure of *desire toward the alternative* ($b = 0.35$, $SE = 0.09$, 95% CI [.18, .52], $p < .001$), also when controlling for partner evaluation ($b = 0.20$, $SE = 0.05$, 95% CI [.09, .31], $p < .001$).

⁹ The main purpose of the Intake measurements was to test their association with *ambivalence* over the course of the diary. While the primary mediation analyses were conducted with the daily diary measures, we also exploratorily conducted 2-1-1 mediation analyses with the Intake variables as predictors. The results parallel those of diary mediations, and have been reported in the Supplemental Material for transparency.

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thoughts of breakup, life satisfaction, and stress, controlling for daily desire for the alternative (all $ps < .001$). Second, in all models, the indirect effects did not contain zero, indicating that ambivalence was a significant (partial) mediator between desire for alternatives and all outcome variables. Importantly, as also seen in Table 2, main effects as well as indirect effects remained significant in each model when controlling for partner evaluation on that same day, except for life satisfaction, for which the main effect of ambivalence was not significant.¹⁰

Table 2

Results of the daily diary multilevel mediation analysis of desire for alternatives in Study 2

Predictor and effect	Main model				Model controlling for partner evaluation			
	<i>b</i>	<i>SE</i>	95% CI	<i>p</i>	<i>b</i>	<i>SE</i>	95% CI	<i>p</i>
Relational outcome: relationship satisfaction								
Subjective ambivalence	-0.53	0.02	[-0.57, -0.49]	<.001	-0.21	0.02	[-0.25, -0.16]	<.001
Attractive Alternatives								
Total effect	-0.03	0.03	[-0.08, 0.02]	.214	-0.02	0.02	[-0.05, 0.02]	.392
Direct effect	0.04	0.02	[-0.003, 0.08]	.071	0.01	0.02	[-0.03, 0.04]	.661
Indirect effect	-0.07		[-0.10, -0.04]		-0.02		[-0.04, -0.01]	
Relational outcome: desire to change partner								
Subjective ambivalence	0.63	0.03	[0.60, 0.69]	<.001	0.36	0.04	[0.29, 0.44]	<.001
Attractive Alternatives								
Total effect	0.01	0.04	[-0.06, 0.08]	.760	-0.01	0.03	[-0.07, 0.06]	.857
Direct effect	-0.07	0.03	[-0.14, 0.01]	.02	-0.05	0.03	[-0.11, 0.01]	.123
Indirect effect	0.08		[0.05, 0.12]		0.04		[0.02, 0.07]	
Relational outcome: thoughts of break-up								
Subjective ambivalence	0.40	0.02	[0.36, 0.44]	<.001	0.26	0.03	[0.21, 0.31]	<.001
Attractive Alternatives								
Total effect	0.15	0.02	[0.10, 0.20]	<.001	0.14	0.02	[0.10, 0.18]	<.001
Direct effect	0.10	0.02	[0.06, 0.14]	<.001	0.11	0.02	[0.07, 0.15]	<.001
Indirect effect	0.05		[0.03, 0.08]		0.03		[0.01, 0.05]	

¹⁰ Given that the main focus in the diary analyses was on the daily within-person fluctuations in desire and ambivalence (while controlling for the person means), we report the within-person centered associations in the manuscript. The between-person associations (controlling for the within-person centered scores) also suggest that people who experienced greater desire on average, also experienced greater ambivalence, and lower relational and personal wellbeing. For full results of the between-person associations, see the Supplemental Material.

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	Relational outcome: life satisfaction							
Subjective ambivalence	-0.29	0.03	[-0.36, -0.23]	<.001	-0.08	0.04	[-0.17, -0.01]	.062
Attractive Alternatives								
Total effect	-0.02	0.04	[-0.09, 0.05]	.506	-0.01	0.03	[-0.08, 0.05]	.683
Direct effect	0.02	0.04	[-0.05, 0.08]	.659	-0.01	0.03	[-0.07, 0.06]	.897
Indirect effect	-0.04		[-0.06, -0.02]		-0.01		[-0.01, -0.001]	
	Personal outcome: stress							
Subjective ambivalence	0.30	0.04	[0.23, 0.37]	<.001	0.16	0.04	[0.07, 0.25]	.001
Attractive Alternatives								
Total effect	0.06	0.04	[-0.02, 0.13]	.127	0.05	0.04	[-0.02, 0.12]	.178
Direct effect	0.02	0.04	[-0.06, 0.09]	.631	0.03	0.04	[-0.04, 0.10]	.408
Indirect effect	0.04		[0.02, 0.06]		0.02		[0.01, 0.03]	

Note. This table reports the within-person effect of desire for an attractive alternative on personal and relational outcomes through subjective ambivalence, with and without controlling for daily partner evaluation. All models include person mean scores of the predictors. Subjective ambivalence coefficients are path *b* in the mediation models, and were estimated controlling for path *a* of attractive alternatives.

The same mediation models were conducted with flirting with the attractive alternative as the independent variable. All results are displayed in Table 3. As expected, daily flirting was associated with greater same-day ambivalence towards the partner ($b = 0.21, SE = 0.05, 95\% CI [.11, .31], p < .001$), and remained significant when controlling for partner evaluation ($b = 0.15, SE = 0.04, 95\% CI [.08, .23], p < .001$). Next, in separate models, mediation analyses revealed a significant main effect of daily ambivalence on relationship satisfaction, desire to change the partner, thoughts of breakup, life satisfaction, and stress, controlling for daily flirting. Second, in all models the indirect effects did not contain zero, indicating that ambivalence was a significant (partial) mediator between flirting with an alternative and relationship satisfaction, desire to change the partner, thoughts of breakup, life satisfaction, and stress. In all models, main effects as well as indirect effects remained significant when controlling for partner evaluation on that same day.

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These results indicate that interest in an alternative was indirectly associated with poorer relationship and personal outcomes through the mediating role of ambivalence, and that these results are independent of daily partner evaluations. Specifically, on days in which people reported higher desire for alternatives (either by having more desirous thoughts or flirting more with attractive others) they also reported feeling greater ambivalence towards their partner¹¹, which in turn was associated with poorer relational (lower relationship satisfaction, greater desire to change the partner, and thoughts of breakup) and personal (lower life satisfaction and greater stress) indices on that same day.¹²

Table 3

Results of the daily diary multilevel mediation analysis of flirting with the alternatives in Study 2

Predictor and effect	Main model				Model controlling for partner evaluation			
	<i>b</i>	<i>SE</i>	95% CI	<i>p</i>	<i>b</i>	<i>SE</i>	95% CI	<i>p</i>
Relational outcome: relationship satisfaction								
Subjective ambivalence	-0.52	0.02	[-0.56, -0.49]	<.001	-0.21	0.02	[-0.25, -0.16]	<.001
Flirting with alternative								
Total effect	-0.07	0.04	[-0.15, 0.02]	.138	-0.01	0.03	[-0.07, 0.05]	.737
Direct effect	0.04	0.04	[-0.02, 0.11]	.211	0.02	0.03	[-0.04, 0.08]	.671
Indirect effect	-0.11		[-0.16, -0.06]		-0.03		[-0.05, -0.02]	
Relational outcome: desire to change partner								
Subjective ambivalence	0.63	0.03	[0.57, 0.69]	<.001	0.36	0.04	[0.28, 0.43]	<.001
Flirting with alternative								
Total effect	0.06	0.06	[-0.07, 0.18]	.359	0.001	0.05	[-0.10, 0.11]	.990
Direct effect	-0.07	0.05	[-0.18, 0.03]	.175	-0.05	0.05	[-0.16, 0.05]	.305
Indirect effect	0.13		[0.07, 0.19]		0.05		[0.03, 0.08]	
Relational outcome: thoughts of break-up								
Subjective ambivalence	0.40	0.02	[0.36, 0.44]	<.001	0.27	0.03	[0.22, 0.32]	<.001
Flirting with alternative								
Total effect	0.23	0.04	[0.15, 0.31]	<.001	0.20	0.04	[0.13, 0.27]	<.001

¹¹ We also conducted additional analyses to explore potential daily lagged effects and found that greater daily desire for an alternative predicted greater ambivalence the following day, controlling for previous day's ambivalence (and partner evaluation), but this was not the case for flirting with the alternative, where the relationship with next day ambivalence was non-significant. Results are reported in the Supplemental Material.

¹² We also explored whether the association between *alternatives* and *ambivalence* (both those with the intake and diary as predictors) were moderated by gender. Contrary to what was found in Study 1, we did not find a significant interaction by gender in Study 2 ($ps > .70$). See Supplemental Material for the full analyses.

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Direct effect	0.15	0.04	[0.08, 0.22]	<.001	0.16	0.03	[0.09, 0.22]	<.001
Indirect effect	0.08		[0.04, 0.12]		0.04		[0.02, 0.06]	
Relational outcome: life satisfaction								
Subjective ambivalence	-0.30	0.03	[-0.36, -0.23]	<.001	-0.09	0.04	[-0.17, -0.01]	.038
Flirting with alternative								
Total effect	0.05	0.06	[-0.07, 0.17]	.403	0.08	0.06	[-0.03, 0.20]	.146
Direct effect	0.11	0.06	[-0.003, 0.23]	.056	0.10	0.06	[-0.07, 0.21]	.093
Indirect effect	-0.06		[-0.10, -0.03]		-0.01		[-0.03, -0.001]	
Personal outcome: stress								
Subjective ambivalence	0.30	0.04	[0.23, 0.37]	<.001	0.17	0.05	[0.08, 0.26]	<.001
Flirting with alternative								
Total effect	0.04	0.06	[-0.08, 0.17]	.495	0.02	0.06	[-0.11, 0.14]	.795
Direct effect	-0.02	0.06	[-0.14, 0.10]	.757	-0.01	0.06	[-0.013, 0.11]	.880
Indirect effect	0.06		[0.03, 0.10]		0.03		[0.01, 0.05]	

Note. This table reports the within-person effect of behavioral interest (i.e. flirting) towards

an attractive alternative on personal and relational outcomes through subjective ambivalence, with and without controlling for daily partner evaluation. All models include person mean scores of the predictors. Subjective ambivalence coefficients are path *b* in the mediation models, and were estimated controlling for path *a* of attractive alternatives.

Discussion

Compared to those who did not, people who had an attractive alternative in their life (i.e. the majority of participants), as well as people who experienced greater desire for an alternative, experienced greater ambivalence towards their current romantic partner. However, the association between the *presence of an attractive* alternative and subjective ambivalence became marginally significant when controlling for partner evaluation. *Desire for the alternative*, on the other hand, seemed to be more strongly associated with subjective ambivalence, also above and beyond partner evaluation. Interestingly, the number of alternatives present in one's life was not linked with greater ambivalence, showing that the effects are not driven by the quantity of alternatives but more by how desirable the alternative is. This suggests that, while the majority of people seem to be able to identify an appealing alternative in their life, it is especially the desire for the alternative that is related to

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ambivalence. Additionally, Study 2 provides greater ecologically valid evidence for the link between attractive alternatives and ambivalence, showcasing the daily consequences of ambivalence for personal and relational outcomes and the unique role that ambivalence plays in romantic relationships (above and beyond negative evaluations of the partner).

Furthermore, by controlling for people's average levels of desire and ambivalence in the daily diary analyses, this study also disentangles the within-person from the between-person associations, highlighting the nefarious associations between daily increases in desire and ambivalence above and beyond people's general tendencies to desire others and experience mixed feelings towards the partner. To further test the link between attractive alternatives and ambivalence, and to particularly focus on the influence of desire for the alternative in daily life as well as over longer periods of time, we conducted another study with couples in which we tested our hypothesis in a daily diary as well as longitudinally over the course of one year.

Study 3

Method

Participants

Participants were 174 heterosexual couples ($N = 348$ individuals) living in the Netherlands. As in Study 2, sample size was determined a priori on the basis of the current best practice guidelines in relationship science (Finkel et al., 2015), as well as financial and time constraints, and was paired with a repeated measure and longitudinal design to maximize power. Participants' mean age was 24.7 years ($SD = 6.4$; ranging from 18 years to 69 years). At the time of intake, participants reported being together for 3.8 years on average ($SD = 4.5$; ranging from 4 months to 42.6 years) and 50% lived together. All participants were recruited in the Netherlands through personal approach, social media, and various websites, and were required to speak Dutch and be in an exclusive romantic relationship of at least 4 months. Sensitivity power analyses were conducted as in Study 2 and showed 80%

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power to detect an unstandardized association of at least $b = .053$ ($SE = .02$) between daily desire for alternatives and ambivalence, and 81% power to detect an unstandardized association of $b = .11$ ($SE = .04$) between quality of attractive alternatives at an earlier time point and ambivalence at a later time point in a replication study. See Supplemental Material for details.

Procedure

Couples first came to the lab for an intake session. After signing informed consent, partners were separated and each participant completed demographics and various baseline questionnaires.¹³ At the end of the intake session, couples were given instructions and information about the diary phase of the study, which started the following day. Every evening, for 14 consecutive days, participants received an email at 8.00 p.m. with a link to complete the daily questionnaire, which was administered through Qualtrics. Participants were instructed to complete the survey before midnight, in a quiet environment, and without communicating with their partner. Participants were then contacted every 4 months for 3 follow-up waves. In these assessments, participants completed the same measurements as during the intake, but 4 months, 8, and 12 months after the completion of the diary. Participants were compensated up to €50 if they participated in the intake and completed at least 80% of the diary signals and at least two of the follow-ups. Participants were also entered into a raffle for a chance to win an iPad. This study was approved by the Scientific and Ethical Review Board of the Vrije Universiteit Amsterdam (#2016-134) and all participants provided consent before starting the study.

¹³ This study was part of a larger study with people in a romantic relationship. Only variables relevant to the current investigation are reported here. Other variables, not theoretically associated with the present study, were not considered.

Measures

Intake

During the laboratory intake session, participants completed measures of *quality of attractive alternatives* in their life (5 items; e.g. “The people other than my partner with whom I might become involved are very appealing”; $\alpha = .74$) measured on a 7-point scale from 1 (*Not at all*) to 7 (*Completely*) (Rusbult, Martz, Agnew, 1998), and of *subjective ambivalence* (3 items; e.g. “When thinking about your partner, how mixed are your feelings toward him/her?”; $\alpha = .87$) measured on a 9-point scale from 1 (*Not at all*) to 9 (*Extremely*) (Priester & Petty, 1996).

For relational outcome measures, participants rated their *relationship satisfaction* (5 items; e.g. “I feel satisfied with our relationship”; $\alpha = .84$) measured on a 7-point scale from 1 (*Not at all*) to 7 (*Completely*) (Rusbult et al., 1998), and *thoughts of breakup* (3 items; e.g. “Have you ever discussed the possibility of breaking up with your partner while talking to a close friend?”; $\alpha = .84$) measured on a 7-point scale from 1 (*Never*) to 7 (*Every day*) (adapted from the Marital Instability Index, Booth et al., 1983; Impett et al., 2010).

For personal well-being outcomes, participants rated their *satisfaction with life* (3-item; e.g. “I am satisfied with my life”; $\alpha = .88$) measured on a 7-point scale from 1 (*Strongly disagree*) to 7 (*Strongly agree*) (Diener et al., 1985), *anxiety* (3 items; e.g. “Worrying thoughts go through my mind”; $\alpha = .75$), *depression* (3 items; e.g. “I can laugh and see the funny side of things”; $\alpha = .53$) measured on a 7-point scale from 1 (*Never*) to 7 (*Very often*), and *general physical health* (1 item; “How would you evaluate your current physical health?”), measured on a 7-point scale from 1 (*Very unhealthy*) to 7 (*Very healthy*).

Finally, *partner evaluation* was included as a control variable (5 items; e.g. “I like my partner very much”: $\alpha = .88$) measured on a 7-point scale from 1 (*Not at all*) to 7 (*Completely*).

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Diary

During the daily diary phase, participants reported each day on their *desire for alternatives* (1-item; “I felt physically attracted to or had a fantasy about someone else than my partner”) and *subjective ambivalence* (1-item; “Today, I had mixed feelings toward my partner”). In terms of relational outcomes, participants rated their *relationship satisfaction* (1-item; “I feel satisfied with my relationship with my partner”), *attempt to change partner* (1-item; “Today I tried to change my partner into the person I would like him/her to be”). For personal well-being outcomes, participants reported their *life-satisfaction* (1-item; “Right now, my life is close to my ideal”), and *stress* (1-item; “Right now, I feel stressed”). All items were measured on a 7-point scale from 1 (*Not at all*) to 7 (*Extremely*). Finally, they also rated their *partner evaluation* (1-item; “Right now, how would you evaluate your partner?”) on a 9-point scale from 1 (*Completely negatively*) to 9 (*Extremely positively*).

Table 4

Means, standard deviations, and correlations among variables of interest in the diary data of Study 3

Variables of interest	M	SD	1	2	3	4	5	6	7
1. Desire for alternatives	1.74	1.46	1						
2. Relational ambivalence	1.64	1.63	.16*	1					
3. Relationship satisfaction	6.26	.95	-.11*	-.59*	1				
4. Desire to change the partner	1.74	1.23	.12*	.36*	-.29*	1			
5. Life satisfaction	5.09	1.24	-.06*	-.27*	.39*	-.16*	1		
6. Stress	2.85	1.67	.07*	.21*	-.21*	.12*	-.47*	1	
7. Explicit partner evaluation	7.67	1.29	-.10*	-.50*	.69*	-.24*	.36*	-.18*	1

Note. All variables were assessed on a scale of 1-7, except for relationship explicit partner evaluation, which were assessed on a scale of 1-9. Correlations represent zero-order correlations across all measurement time points. * $p < .01$

Follow-up

Four, eight, and twelve months after completing the diary phase, participants completed the same measures as in the intake phase in three follow-up questionnaires, which included *quality of attractive alternatives* (from $\alpha = .81$ to $\alpha = .85$) and *subjective ambivalence* (from $\alpha = .86$ to $\alpha = .90$), relational outcome measures (*relationship satisfaction*, all follow-ups $\alpha = .91$, and *thoughts of breakup*, from $\alpha = .78$ to $\alpha = .86$), and personal wellbeing outcomes (*satisfaction with life*, from $\alpha = .90$ to $\alpha = .91$, *anxiety*, from $\alpha = .79$ to $\alpha = .80$, *depression*, from $\alpha = .72$ to $\alpha = .76$ and *general physical health*) and *partner evaluation* (from $\alpha = .92$ to $\alpha = .94$). In addition, participants also completed another relational outcome measure, *attempts to change the partner* (1-item; “In the last 4 months, I tried to change my partner into the person I would like him/her to be”) measured on a 7-point scale from 1 (*Not at all*) to 7 (*Very often*).

Results***Analytical Strategy***

Due to the non-independence and nested nature of the data (multiple measurements within participants and participants within the couple), multilevel analyses were performed (Kenny et al., 2006), with a crossed two-level model in which participants were nested within couple and crossed with time points. Intercepts were treated as random effects, and slopes as fixed effects. With the daily diary assessments, we used the same analytical strategy adopted in Study 2. That is, we person-centered all predictor variables and included also the person mean in all models to examine within-person variations across the 14-days while controlling for people’s general tendencies across all diary days (Bolger & Laurenceau, 2013; Zhang et al., 2009). As in Study 2, this approach allows to disentangle the within- and between-person differences, thereby estimating the within person fluctuations from day to day while ensuring that the effects are not driven by between person variances.

With the follow-up assessments, time lagged multilevel analyses were performed to test whether our predictors would be related to changes in the outcome variables at later time points. Given that the same measures were used at intake and the three follow-ups (with the exception of “attempts to change the partner”, which was added in all follow-ups but not at intake), four total time points were considered for this analysis. That is, we tested whether earlier alternatives predicted change in later ambivalence (controlling for earlier ambivalence) and then whether later ambivalence was associated with later relational and personal well-being (controlling for earlier alternatives, ambivalence, and indices of well-being). By considering ambivalence at later time points as the mediator in all models and controlling for earlier ambivalence, it is possible to determine whether it is indeed the change in ambivalence rather than initial ambivalence at baseline that drives and mediates the effect of alternatives on personal and relational well-being. Finally, for both diary and the follow-up assessments, mediations were conducted using the same methodology as in Study 1 and 2, first through the joint-significant test of the mediation pathways and then the estimation of the fixed effects using MCMAM (Selig & Preacher, 2008; Yzerbyt et al., 2018).

Diary

As expected, we found a significant and positive association between daily desire for alternatives and ambivalence ($b = 0.05$, $SE = 0.01$, 95% CI [0.03, 0.08], $p < .001$).¹⁴ This association remained significant when controlling for daily partner evaluation ($b = 0.04$, $SE = 0.01$, 95% CI [0.02, 0.06], $p = .001$).¹⁵ Next, to investigate whether ambivalence mediated the

¹⁴ As in the other studies, we also explored whether this association was moderated by gender, and found a significant interaction of gender and desire on ambivalence ($p = .027$). Given that this was an exploratory analysis, and that we did not find consistent evidence for this interaction across all studies, we report the moderation analyses in the Supplementary Material.

¹⁵ As tested in Study 2, we also explored whether greater daily desire for an alternative predicted greater ambivalence the following day, controlling for the previous day’s ambivalence, but found no significant relationship. Results are reported in the Supplemental Material. One reason why we found inconsistent evidence for daily lagged effects across our studies may be because it would require much higher levels of daily desire to influence ambivalence the next day above and beyond the levels of ambivalence already experienced on the same day. Such strong changes in ambivalence may not always occur on a daily basis, but rather over longer periods of time (e.g., Collins & Graham 2002), as the main lagged analyses in Study 3 suggests.

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effect of alternatives on relational (i.e., relationship satisfaction and desire to change partner) and personal (i.e., life satisfaction and stress) outcomes, we performed a series of mediations analyses, testing the indirect effect with the MCMAM. All within-person results (while controlling for the person means) are displayed in Table 5. For the between-person associations, see the Supplemental Material.¹⁶

In separate models, results revealed a significant main effect of ambivalence on relationship satisfaction, desire to change the partner, life satisfaction, and stress, controlling for desire for alternatives that same day. Second, in all models, the indirect effects did not contain zero, indicating that ambivalence was a significant mediator between desire for alternatives and relationship satisfaction, desire to change the partner, life satisfaction, and stress. Importantly, as also seen in Table 5, main effects as well as indirect effects remained significant in each model when controlling for partner evaluation on that same day.

These results indicate that desire for others was indirectly associated with poorer relationship and personal outcomes through the mediating role of ambivalence, and that these results are independent of daily partner evaluations. Specifically, on days in which people reported higher desire for alternatives, they also reported feeling higher ambivalence towards their partner, which in turn was associated with poorer relational (lower relationship satisfaction and greater desire to change the partner) and personal (lower life satisfaction and greater stress) indices on that same day, above and beyond their general tendency to experience desire for an alternative and mixed feelings towards their partner.

¹⁶ Given that the main focus in the diary analyses was on the daily within-person fluctuations in desire and ambivalence (while controlling for the person means), we report the within-person centered associations in the manuscript. The between-person associations (controlling for the within-person centered associations) also suggest that people who experienced greater desire on average also experienced greater ambivalence. Overall, both the daily fluctuations of desire and ambivalence as well as greater chronic levels of desire and ambivalence seem to be detrimental for people's personal and relational wellbeing.

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Table 5

Results of the daily diary multilevel mediation analysis of Study 3

Predictor and effect	Main model				Model controlling for partner evaluation			
	<i>b</i>	<i>SE</i>	95% CI	<i>p</i>	<i>b</i>	<i>SE</i>	95% CI	<i>p</i>
Relational outcome: relationship satisfaction								
Subjective ambivalence	-0.29	0.01	[-0.31, -0.28]	<.001	-0.18	0.01	[-0.20, -0.16]	<.001
Attractive Alternatives								
Total effect	-0.01	0.001	[-0.03, 0.003]	0.117	0.0003	0.01	[-0.01, 0.01]	.971
Direct effect	0.002	0.01	[-0.01, 0.02]	0.830	0.01	0.01	[-0.01, 0.02]	.298
Indirect effect	-0.02		[-0.02, -0.01]		-0.01		[-0.01, -0.003]	
Relational outcome: desire to change partner								
Subjective ambivalence	0.27	0.02	[0.24, 0.30]	<.001	0.24	0.02	[0.20, 0.27]	<.001
Attractive Alternatives								
Total effect	0.02	0.01	[-0.004, 0.05]	.106	0.01	0.01	[-0.01, 0.04]	.262
Direct effect	0.003	0.01	[-0.02, 0.02]	.789	0.002	0.01	[-0.02, 0.03]	.878
Indirect effect	0.01		[0.01, 0.02]		0.01		[0.004, 0.01]	
Relational outcome: life satisfaction								
Subjective ambivalence	-0.17	0.01	[-0.19, -0.14]	<.001	-0.09	0.02	[-0.12, -0.07]	<.001
Attractive Alternatives								
Total effect	-0.01	0.01	[-0.03, 0.01]	.458	0.001	0.01	[-0.02, 0.02]	.930
Direct effect	-0.001	0.01	[-0.02, 0.02]	.952	0.003	0.01	[-0.02, 0.02]	.770
Indirect effect	-0.01		[-0.01, -0.01]		-0.01		[-0.01, -0.001]	
Personal outcome: stress								
Subjective ambivalence	0.21	0.02	[0.17, 0.25]	<.001	0.14	0.02	[0.10, 0.19]	<.001
Attractive Alternatives								
Total effect	0.02	0.02	[-0.01, 0.05]	.189	0.01	0.02	[-0.02, 0.04]	.415
Direct effect	0.01	0.02	[-0.02, 0.04]	.512	0.01	0.02	[-0.02, 0.04]	.634
Indirect effect	0.01		[0.01, 0.02]		0.01		[0.002, 0.01]	

Note. This table reports the within-person effect of desire for an attractive alternative on

personal and relational outcomes through subjective ambivalence, with and without

controlling for daily partner evaluation. All models include person mean predictors.

Subjective ambivalence coefficients are path *b* in the mediation models, and were estimated

controlling for path *a* of attractive alternative.

Follow ups

Next, four-wave time-lagged regression analyses were conducted to test the hypotheses over time (every four months, for a period of one year). First, the association between attractive alternatives and ambivalence was tested with a model in which later ambivalence was regressed on quality of attractive alternatives at an earlier time point controlling for ambivalence at an earlier time point. As predicted, quality of attractive alternatives at an earlier time point was significantly associated with greater ambivalence at a later time point ($b = 0.18$, $SE = 0.05$, 95% CI [0.09, 0.27], $p < .001$).¹⁷ Importantly, these results remain significant when controlling for earlier partner evaluation ($b = 0.13$, $SE = 0.05$, 95% CI [-0.64, -0.21], $p = .009$). Interestingly, ambivalence at an earlier time point was not associated with greater attraction to alternatives at a later time point ($b = 0.03$, $SE = 0.03$, 95% CI [-0.03, 0.09], $p = .377$), providing support for the tested direction of the hypothesis.

Next, to investigate whether ambivalence mediated the effect of alternatives on relational and personal outcomes, we performed a series of mediations analyses, and again tested the indirect effect with the MCMAM. All results are displayed in Table 6. In separate models, results revealed a significant main effect of later ambivalence on later relationship satisfaction, later thoughts of breakup, later attempts to change partner, later life satisfaction, later anxiety, later depression and later general physical health, controlling for ambivalence, alternatives, and the outcome variable at an earlier time point. Second, in all models, the indirect effects did not contain zero, indicating that ambivalence was a significant mediator between desire for alternatives and relational and personal well-being (see Table 6).

Furthermore, as shown in Table 6, all main effects of subjective ambivalence as well as

¹⁷ As in all other studies, we also explored whether this interaction was moderated by gender, and found no significant interaction ($p = .463$). Again, given the exploratory nature of this moderation analysis as well as the inconsistent pattern of results across studies, we report these results in the Supplementary Materials. In summary, gender was a significant moderator between desire and ambivalence in Study 1 and in the daily associations in Study 3, with greater desire linked with greater ambivalence for men but not for women, but it was not a significant moderator in Study 2 nor in the longitudinal associations in Study 3.

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indirect effects remained significant when controlling for partner evaluation. These results indicate that, when people reported higher desire for alternatives, they experienced greater ambivalence towards their partner later on, and in turn experienced poorer relational (lower relationship satisfaction, greater thoughts of breakup, greater desire to change the partner) and personal (poorer life satisfaction, greater stress, and poorer physical health) outcomes.

Table 6

Results from the time lagged multilevel mediation analyses in Study 3

Predictor and effect	Main lagged model				Model controlling for partner evaluation			
	<i>b</i>	<i>SE</i>	95% CI	<i>p</i>	<i>b</i>	<i>SE</i>	95% CI	<i>p</i>
Relational outcome: relationship satisfaction								
Subjective ambivalence	-0.36	.02	[-0.39, -0.32]	<.001	-0.36	0.02	[-0.39, -0.32]	<.001
Attractive Alternatives								
Total effect	-0.05	0.03	[-0.11, -0.001]	.046	-0.04	0.03	[-0.10, 0.01]	.138
Direct effect	-0.01	0.03	[-0.06, 0.04]	.708	-0.002	0.03	[-0.05, 0.05]	.952
Indirect effect	-.05		[-0.08, -0.01]		-0.04		[-0.08, -0.01]	
Relational outcome: thoughts of breakup								
Subjective ambivalence	0.3	0.02	[0.26, 0.35]	<.001	0.31	0.02	[0.26, 0.35]	<.001
Attractive Alternatives								
Total effect	0.06	0.03	[0.001, 0.12]	.046	0.04	0.03	[-0.02, 0.11]	.188
Direct effect	-0.001	0.03	[-0.06, 0.05]	.980	0.01	0.03	[-0.05, 0.07]	.811
Indirect effect	0.04		[0.02, 0.08]		0.04		[0.01, 0.07]	
Relational outcome: attempts to change partner								
Subjective ambivalence	0.21	0.05	[0.11, 0.31]	<.001	0.21	0.05	[0.11, 0.31]	<.001
Attractive Alternatives								
Total effect	0.14	0.05	[0.04, 0.24]	.007	0.09	0.06	[-0.02, 0.20]	.10
Direct effect	0.07	0.05	[-0.03, 0.18]	.164	0.07	0.06	[-0.04, 0.18]	.225
Indirect effect	0.03		[0.01, 0.06]		0.02		[0.0002, 0.05]	
Personal outcome: life satisfaction								
Subjective ambivalence	-0.19	0.03	[-0.24, -0.13]	<.001	-0.19	0.03	[-0.25, -0.13]	<.001
Attractive Alternatives								
Total effect	0.01	0.04	[-0.05, 0.08]	.678	0.03	0.04	[-0.05, 0.10]	.448
Direct effect	0.04	0.04	[-0.3, 0.11]	.215	0.04	0.04	[-0.04, 0.11]	.321
Indirect effect	-0.03		[-0.06, -0.02]		-0.05		[-0.05, -0.01]	
Personal outcome: anxiety								
Subjective ambivalence	0.14	0.04	[0.07, 0.21]	<.001	0.14	0.04	[0.07, 0.21]	<.001
Attractive Alternatives								
Total effect	0.01	0.04	[-0.07, 0.09]	.762	-0.001	0.05	[-0.09, 0.09]	.984
Direct effect	-0.002	0.04	[-0.09, 0.08]	.956	0.001	0.05	[-0.09, 0.09]	.982
Indirect effect	0.03		[0.01, 0.05]		0.02		[.0003, 0.04]	
Personal outcome: depression								

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Subjective ambivalence	0.20	0.03	[0.14, 0.25]	<.001	0.20	0.03	[0.14, 0.26]	<.001
Attractive Alternatives								
Total effect	0.02	0.04	[-0.05, 0.08]	.675	-0.02	0.04	[-0.09, 0.06]	.628
Direct effect	-0.03	0.04	[-0.10, 0.04]	.373	-0.03	0.04	[-0.10, 0.04]	.443
Indirect effect	0.03		[0.01, 0.05]		0.02		[0.01, 0.04]	
	Personal outcome: physical health							
Subjective ambivalence	-0.09	0.03	[-0.16, -0.03]	.004	-0.09	0.03	[-0.16, -0.03]	.005
Attractive Alternatives								
Total effect	0.01	0.03	[-0.05, 0.08]	.718	0.02	0.04	[-0.05, 0.09]	.580
Direct effect	0.03	0.04	[-0.04, 0.10]	.438	0.03	0.04	[-0.04, 0.11]	.403
Indirect effect	-0.02		[-0.03, -0.004]		-0.01		[-0.03, -0.002]	

Note. This table reports the effect of desire for attractive alternatives on personal and relational outcomes through change in subjective ambivalence assessed every four months over the course of one year, with and without controlling for baseline partner evaluation.

Discussion

Consistent with the hypotheses and replicating findings from Study 2, in the diary study, people who experienced greater desire for attractive alternatives on that day, also experienced greater mixed feelings towards the partner, above and beyond the way they esteemed their partner that day. Ambivalence, in turn, was connected with poorer relationship and personal well-being outcomes. These within person associations held when controlling for between-person differences (i.e. people's average levels of desire and ambivalence), showcasing the deleterious within-person effects of the daily increases in desire and ambivalence above and beyond people's general desire for alternatives and mixed and conflicting feelings towards the partner. This pattern of results was replicated and extended in the longitudinal data set, in which the effects were tested in a longitudinal fashion every four months for a period of one year. Findings suggest that changes in ambivalence over time (above and beyond the initial level of ambivalence) drive and mediate the effect of alternatives on (poorer) personal and relational wellbeing over time (above and beyond baseline indices of well-being and partner evaluation). Notably, we did not find support for the other direction (i.e. ambivalence leading to greater desire for alternatives over time).

General Discussion

The world is full of possibilities beyond the current reality. When it comes to relationships, although people generally are motivated to stay with their current romantic partner, the allure of attractive alternatives is often felt, and can be destabilizing if not fatal to the current romantic relationship (e.g. Finkel et al., 2002). While there is consensus in the literature that attractive alternatives are threatening to relationships (e.g. Tran et al., 2019), at least in the context of monogamy, much less is known about *why* they are so detrimental, and even less about the processes that take place within the partner that experiences the extra-dyadic desire. In the present investigation, using experimental, daily diary, and longitudinal approaches, we found that when people experience desire for attractive alternatives, they also reported feeling more ambivalent (i.e. conflicted) about their current romantic partner and their relationship (Study 1, 2, and 3). Furthermore, when people experienced greater ambivalence toward their partner they also experienced poorer personal and relational outcomes, such as lower relationship and life satisfaction and greater thoughts of break-up and stress, on a daily basis (Study 2 and 3) as well as over longer periods of time (Study 3). All results held when controlling for partner evaluation, excluding the possibility that negative evaluations of the partner were the driver of the link between attractive alternatives and poor personal and relational outcomes. This is in line with theoretical and empirical work that distinguishes ambivalence from simple negativity (e.g. Uchino et al., 2014), and highlights the unique role that ambivalence plays in interpersonal contexts.

The current work contributes to the body of literature on the implications of attractive alternatives on relationships (e.g. Finkel et al., 2002) and extends our understanding of the *ways in which* alternatives can be harmful in everyday life situations. Relationship science has traditionally emphasized the role that motivation plays in maintaining commitment in the face of attractive alternatives (Rusbult, 1983; Tran et al., 2019) but there is not much work

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explaining the role that desire for alternatives plays in daily life and over time for those who do come to experience it. Our work is the first to examine the evaluative process that occurs when extra-dyadic interest is sparked, showing that the pull towards the desired other brings saliency to the conflicting feelings people hold in their relationship, thereby threatening the well-being of the partnership. Thus, this work adds to the classic literatures in relationship science (e.g. interdependence theory and the investment model of relationships; Rusbult, 1980; Thibaut & Kelley, 1959) that have long identified the threat that alternatives pose, the costs and benefits that people weigh when evaluating their relationships compared to potential other options, but have not examined the affective mechanism through which the threat and the subsequent evaluative processes occur. Furthermore, our work highlights for the first time how experiencing desire for attractive alternatives – even outside of the context of sexual infidelity – is also distressing and challenging for the desirer themselves, undermining their own well-being. Thus, by examining the emotional experience of those who come to feel extra-dyadic interest, the present work offers a significant contribution to the literature as it extends the ways in which we understand attractive alternatives to be threatening.

An interesting finding that transpired from our research is that, while the vast majority of people seem to be able to identify an attractive alternative in their life (68.8%, Study 1 and 75.3% in Study 2), simply having one may not be sufficient to put relationships in jeopardy. Indeed, in Study 1, while only participants who indicated that they had an attractive alternative were included in the experimental study, it was especially the desire for the attractive alternative that increased ambivalence. In Study 2, desire for the alternative was more strongly linked with ambivalence than the simple presence of an alternative in one's life. Furthermore, the quantity of alternatives did not matter for feelings of ambivalence. This is interesting as the literature on attractive alternatives has highlighted the role that the *quality*

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of alternatives plays in undermining relationship longevity (Rusbult, 1983; Tran et al., 2019), but has paid little attention to whether the *quantity* of alternatives matters. Our work suggests that while attractive alternatives seem to be greatly destabilizing to relationships, it is the *desire* towards the alternative that is more strongly linked with greater internal conflict and poorer personal and relational outcomes. Interestingly, many studies assessing people's evaluations of their relationship in light of attractive alternatives have often relied on ratings of others that were not personally known to the participants (e.g. picture ratings of attractive strangers, McNulty et al., 2018; Ritter et al., 2010). By asking participants whether they had an attractive alternative in their life (in Study 1 and 2) and the degree to which they desired them, we were able to better capture the potential threat of real-life alternatives and maximize ecological validity by assessing how people evaluate and manage their feelings of ambivalence when a *known* alternative is part of the picture, and not simply when they experience interest towards attractive strangers in pictures.

The present research also contributes to the wider ambivalence literature – that has largely focused on abstract ideas (e.g. a labor law; Van Harreveld et al., 2009) or objects (e.g. sweets, Schneider et al., 2020) – and applies it to another important domain, that of romantic relationships. This domain is an especially valuable context in which to examine how mixed and conflicting feelings play out in daily life, as ambivalence towards a partner is, arguably, particularly unsettling given the powerful motivation people have to view their partner in an overly positive way (Miller et al., 2006; Murray, 1999). Our work is in line with the ABC Model of Ambivalence whereby ambivalence shapes people's affective, behavioral, and cognitive responses (van Harreveld et al., 2015), builds off of the literature on subjective ambivalence as a function of decision making (e.g. Reich & Wheeler, 2016), and applies these literatures to a relational context in which decisions are highly-personal and consequential. In romantic relationships, decisions that may affect the continuity of the

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relationship are often difficult, and people experience great conflict as they weigh the various factors in order to make a choice. For example, when people are engaging in stay-or-leave decisions, they are able to indicate several reasons for wanting to stay in the relationship (e.g. companionship) as well as several reasons for wanting to leave (e.g. lack of enjoyment), and tend to feel strongly about both sides (Joel et al., 2018). In a similar way, our research indicates that attractive alternatives trigger a similar evaluative process, in which people must compare their current relationship partner with the alternatives (Le & Agnew, 2003), and assess the rewards and costs associated with each (Rusbult, 1980). Indeed, people in the daily diary and longitudinal studies thought about breaking up with their partner but also desired their partner to change, a possible indication of the conflict between the desire to maintain their current relationship and the desire for another appealing potential. By testing this, our work provides rich insight into the emotional processes of ambivalence that have been highlighted in other relevant literatures (e.g. social cognition; van Harreveld et al., 2015) and goes beyond one-time lab assessments and investigating the daily and longitudinal consequences of ambivalence for people's personal and relational wellbeing. Furthermore, while previous work has highlighted the negative personal consequences of ambivalence (e.g. negative health outcomes; Birmingham et al., 2019), it has rarely examined its antecedents. Given that ambivalence is consequential, and that it can be functional to be attuned to both positive and negative aspects of a relationship (McNulty, 2016), understanding when it becomes salient is an important avenue of research.

One could argue for the opposite direction of the effect, such that people who are already ambivalent about their partner may be more prone to experience desire towards alternatives. For instance, given its unpleasantness (van Harreveld et al., 2009), people who experience ambivalence toward their partner may desire to reduce or eliminate their ambivalence, making them more open to information that may sway them in one direction or

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another in order to resolve their ambivalence and, thus, more vulnerable to feelings of extra-dyadic attraction. However, the experimental and longitudinal data provide experimental and temporal evidence for the hypothesized direction, that is that desire leads to greater ambivalence, and not that ambivalence leads to greater desire. Indeed, in the time-lagged analysis of the longitudinal data of Study 3, when testing exploratorily whether ambivalence at an earlier time point may also be linked to greater interest in an alternative later on, we found no significant association.

It is important to note that, while the present investigation highlights the ways in which alternative and ambivalence have detrimental consequences for personal and relationship well-being, findings that are aligned with most theoretical and empirical work on ambivalence (e.g. van Harreveld et al., 2015), there may be instances in which feelings of attraction and inner conflict about the relationship may also be functional, even if unpleasant. Indeed, functional (Fischer & Manstead, 2008; Larsen et al., 2003) and a social-functionals view of emotions (Van Kleef, 2009) emphasize the adaptive aspect of emotions and the important role they play in people's interpersonal lives. Related research in the mixed emotions literature has also shown that conflicting feelings can be useful in certain contexts (e.g. to enhance creativity; Fong, 2006), albeit this research is scarcer when it comes to romantic relationships. For example, while ambivalence has generally been found to be maladaptive, such as by increasing cognitive inflexibility (van Harreveld et al., 2009), when people are able to identify the origin of their ambivalence, such as their romantic partner, they are better at processing relevant information necessary for decision making (e.g. Guerana & Hernandez, 2016). Indeed, people who experience ambivalence can be more motivated to make positive changes in their relationship in order to alleviate problems (Faure et al., 2021; Thompson & Holmes, 1996) and are more attuned to the daily positive and negative relational experiences (Joel et al., 2021), which, albeit turbulent and unpleasant, may

be helpful when evaluating the costs and benefits of the relationship and stay-or-leave decisions. In sum, while the literature on ambivalence has generally focused on its negative effects, future research could investigate ways in which it may actually be functional in the context of close relationships.

It is also relevant to note that the present work examined only one form of ambivalence: subjective ambivalence, which is an explicit rating of the extent one is experiencing mixed and conflicting feelings (Priester & Petty, 1996). However, other possible emotional profiles are possible (Oceja & Carrera, 2009); to take the context of attractive alternatives as an example, people may experience a mix of guilt and desire, fear and longing, which may be different than experience positive and negative feelings towards the partner, and activate different responses, such as approach or avoidance behaviors (Pratt & Pradies, 2011). A systematic review or an empirical comparison of the different types of ambivalence and the possible different emotional profiles that it captures within the context of romantic relationships would be an excellent avenue for future research.

The findings and theoretical implications from the present work also offer potentially interesting insight for practitioners working with couples. For example, while attractive alternatives can be a threat to relationships, they may not be a cause of concern in and of themselves, but rather should trigger alarm bells particularly when they elicit strong feelings of desire. This is an important distinction and could inform where the focus of potential interventions should lie.¹⁸ Furthermore, given the strong link between the automatic attention towards alternatives and subsequent sexual infidelity and break-up (McNulty et al., 2018), it is important for relationship longevity that these feelings of desire be addressed, as doing so

¹⁸ While the present work can offer insight that could be of great interest to practitioners and intervention researchers, we do not yet advise a direct application of this work to a real-life setting. Rather, in line with recent calls for caution around implications and applications of theoretical contribution (e.g. Lewis & Wai, 2021), we encourage future research to build upon the findings presented here to determine ulterior contextual aspects that should be considered when applying findings from relationship science (e.g. Ross et al., 2019), such as those we address in the discussion of the limitations of the current work.

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may offer an opportunity to prevent cheating before it potentially occurs. Fortuitously, people may be particularly motivated to address their feelings – and thus interventions potentially particularly effective – given that people who experience ambivalence are also highly driven to resolve it as such conflict is generally unpleasant to experience (van Harreveld et al., 2009). Whether that resolution results in a re-evaluation of the current partner, relationship dissolution, or other, will be up to each individual to determine.

It is important to address the limitations of the current work. First, the present investigation is couched within a monogamy framework, in which people are expected (and expect themselves) to only be romantically involved with one person at a time (Conley et al., 2013). However, for people in open or consensual non-monogamous relationships, where expectations are different in terms of romantic and intimate involvement (Conley et al., 2013), experiencing interest in attractive alternatives may not trigger or increase ambivalence at all, given that they do not have to necessarily choose between the current partner and another. Thus, attractive alternatives may not represent a threat to the relationship in the way that they do for people in monogamous relationships. Second, while the samples from the studies were heterogeneous in terms of age and relationship length, which provides generalizability of the findings across the personal and relational lifespan, the same cannot be said about the generalizability across cultures. Indeed, the majority of participants were Westerners, which is a limitation because the negative effects of ambivalence may be influenced by culture: for example, people from Eastern backgrounds tend to be greater dialectical thinkers than Westerners, which is the tendency and ability to accept contradiction more easily and see it as an inevitable aspect of life (for a review, see Spencer-Rogers et al., 2010). As such, experiencing ambivalence towards a partner may not be as alarming and detrimental for people who tend to accept and better tolerate contradiction in their life. However, while the effect of ambivalence on personal and relational outcomes may be

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influenced by the cultural context, there is reason to believe that the link between attractive alternatives and ambivalence may instead generalize broadly across cultures, given the widespread norm of monogamy around the world and the harsh judgement of norm deviations (Conley et al., 2013). That being said, future work would benefit from examining these processes cross-culturally.

Despite these boundaries, the present work has several important strengths. In addition to the high power of the studies, the use of a combination of research designs that provide, first, experimental evidence for the effect of alternatives on ambivalence, second, ecologically valid evidence of this effect as well as its implications for personal and relational well-being on a daily basis and, third, longitudinal evidence over the course of one-year, highlight both the immediate and lasting influence of alternatives on relationships through ambivalence and offer greater confidence in the robustness of the effects. Furthermore, the use of within-person centering in the daily diary studies, while controlling for between-person differences, offers a fine-grained assessment of the effects in daily life, showcasing how daily fluctuations in desire can result in corresponding shifts in ambivalence, above and beyond how much people generally desired an alternative or how much they generally experienced mixed and conflicting feelings towards their partner. Finally, in the time-lagged analysis, by controlling for ambivalence at earlier time points and testing later ambivalence as the mediator, we could determine that change in ambivalence rather than initial ambivalence was the driver of the mediation effect of alternatives on personal and relational outcomes. These methodological and statistical approaches allowed us to test both the causal and temporal role that alternatives play in relationships and assess how the wanderer's evaluations of their partner – in light of desire for an alternative – influence personal and relational outcomes on a daily basis and overtime.

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Together, our work indicates that ambivalence plays a key role in *how* attractive alternatives exert influence on relationships, and provides unique evidence for both its short- and long-term effects on the relationship and wellbeing of those who come to experience extra-dyadic interest. Given that most people seem to be able to identify an attractive alternative in their life and that desire for the alternative can be fatal for people in monogamous relationships, not only is understanding how they play out in relationships is important for understanding *why* attractive alternatives can be so detrimental, but also for paving the way for interventions that can best help individuals and couples manage these common situations.

Conclusion

Attractive alternatives pose one of the most serious threats to the longevity of romantic relationships. Our work shows that attractive alternatives are so detrimental in part because they elicit or exasperate feelings of ambivalence towards the current romantic partner. In situations in which desire for an alternative is felt, the desirer is more likely to doubt and question the relationship, with detrimental consequences for their own and relational well-being. Thus, as alluring as an attractive alternative may be, desirers themselves suffer when experiencing desire for someone other than their current romantic partner.

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