UNIVERSITY of CALIFORNIA PRESS | Collabra: Psychology

Carlier, C., Henninger, M., Verhees, M., Sels, L., Kuppens, P., & Ceulemans, E. (2026). Are Romantic Partners More Emotionally Similar in the Moment Than Simulated Strangers: Experiential Versus Couple Effects. *Collabra: Psychology*, *12*(1). https://doi.org/10.1525/collabra.171708

Social Psychology

Are Romantic Partners More Emotionally Similar in the Moment Than Simulated Strangers: Experiential Versus Couple Effects

Chiara Carlier[1][a], Mirka Henninger[2], Martine Verhees[1], Laura Sels[3], Peter Kuppens[1], Eva Ceulemans[1]

[1] Research Group of Quantitative Psychology and Individual Differences, Faculty of Psychology and Educational Sciences, KU Leuven, Belgium, [2] Center for Statistics & Data Science, Faculty of Psychology, University of Basel, Switzerland, [3] Department of Experimental Clinical and Health Psychology, Ghent University, Ghent, Belgium

Keywords: dyads, emotions, similarity, experiences

https://doi.org/10.1525/collabra.171708

Collabra: Psychology

Vol. 12, Issue 1, 2026

Emotional similarity in romantic couples has mostly been studied by examining whether emotional valence of both partners covaries over time, yielding one similarity score per couple. However, emotional experience is multidimensional and emotional similarity will change over time and situations. Moreover, strangers that show little initial similarity might become more similar when experiencing similar situations (experiential effect), raising the question whether being in a relationship actually adds similarity (couple effect) on top of these experiential factors. Here we investigate the contribution of experiential versus couple effects in partner's emotional similarity, while embracing the multidimensional nature of emotional experience by assessing momentary emotional profile similarity scores. In two independent datasets, we compared romantic partners to simulated strangers and detected which experiential factors predict momentary similarity scores using regression trees. Results reveal that romantic partners are indeed more emotionally similar than simulated strangers, even when accounting for the identified experiential factors, amongst others, valence and contact with partner.

Introduction

Interpersonal similarity is a fundamental building block of romantic relationships. However, evidence is still mixed that greater similarity predicts greater relationship satisfaction (e.g., Gonzaga et al., 2007, 2010). One key area where partner similarity is still important to be elucidated, is in emotional experience. Emotions guide how people interact with others, and how others respond to these emotions is critical for individual and relationship well-being (e.g., Farrell & Stanton, 2019; Schoebi & Randall, 2015; Van Kleef, 2009). As such, feeling similar to your partner when faced with similar situations is considered to be important to coordinate our thoughts and behaviors during these events to facilitate understanding and to help us feel more connected to each other (e.g., Anderson et al., 2003). However, emotional similarity can also be detrimental in specific settings: for instance, both partners feeling hard emotions of anger or frustration during a conflict can also lead to more negative outcomes (Sanford, 2007). Yet, random strangers can also be expected to be emotionally similar when experiencing similar situations, raising the question whether being in a relationship actually adds similarity on top of experiential factors. Given the cardinal role of emotions in romantic relationships, answering this question is needed, while properly accounting for the multidimensional and momentary nature of emotions.

Emotional Similarity as a Multidimensional, Momentary Construct

So far, emotional similarity in romantic couples has typically been studied in terms of valence synchrony, that is, covariation of both partners' emotional valence across time (Brown et al., 2022; Butler, 2015; Chen et al., 2024; Sels, Cabrieto, et al., 2020), yielding one emotional similarity score per couple. This approach is limited for two main reasons. First, people often experience a mixture of multiple different emotions at the same time, with this mixture being differently composed across situations, although these situations might have a similar valence as people may differentiate between several discrete negative emotions (e.g., Barrett et al., 2001; Erbas et al., 2016, 2022; Hershfield et al., 2013). To give an example, in a setting where both partners feel negative, one partner might feel very sad and depressed, a little bit anxious, but not angry at all, while the other partner might feel a lot of anger, a little bit of anxiety but not lonely or sad at all. This results in a similar valence, but very different profiles of discrete emotions. This complex emotional blend should best be taken into account

a Corresponding author: Chiara Carlier, chiara.carlier@kuleuven.be, Tiensestraat 102, 3000 Leuven, Belgium

Downloaded from online.ucpress.edu/collabra/article-pdf/12/1/171708/949853/collabra_2026_12_1_171708.pdf by KU Leuven user on 06 October 2026

when quantifying emotional similarity, rather than focusing on valence only. Building on the work of Carlier et al. (2024) and De Leersnyder et al. (2013) this can be achieved by computing how strongly the scores of both partners on different emotions covary at a specific moment, yielding momentary similarity scores.

Second, given that emotions arise and change in response to intra- and interpersonal events (Frijda, 1988), romantic partners are likely more emotionally similar to each other in some situations than in others (Sels et al., 2022). Similarity can be expected to be stronger in moments that are categorized or experienced in the same way by both partners. For instance, one could observe a partner that is home alone, while the other is out and about, this moment in time can be experienced very differently by the two partners and in turn only elicits loneliness in just one of them. In contrast, one could observe a stressful event such as a missed flight that affects both partners and thus is more likely to be experienced similarly by both partners, eliciting anxiety in both. Thus, we expect the momentary emotional similarity in the home alone situation to be lower than that for the stressful event. This shows that explicitly capturing how partners' profiles of emotional states are similar in the moment, and how this similarity may be related to their intra- and interpersonal experiences, is needed to further enhance our understanding of emotional similarity. The current study will thus look into experiential factors such as the attributed valence to a situation, the experienced desire towards the partner or merely the reported presence of the partner. This is broader than just situational aspects (e.g., was the partner involved) and also includes the experience of the person.

Momentary Emotional Similarity in Romantic Relationships: Experiential or Couple Effect?

Building further on this, when considering momentary emotional profile similarity between partners, important questions are: (1) Do romantic partners exhibit emotional profile similarity at all (i.e., is there a couple effect), (2) Is any observed similarity merely the result of partners frequently experiencing similar situations and interpreting them in the same way (i.e., an experiential effect), or, (3) Does being romantic partners account for similarity beyond these experiential influences (i.e., a couple effect beyond experience), where partners who experience a situation in the same way are more emotionally similar than strangers who experience similar situations.

Such a couple effect, where romantic partners tend to be more emotionally similar than strangers, can be expected because of different reasons. First, on a couple level, there is robust evidence for the phenomenon of assortative mating, which means that we select partners that are similar to ourselves in a variety of traits, including affective disorders (Luo, 2017; Mathews & Reus, 2001; Schwartz, 2013). Additionally, on a more momentary level, the process of emotional contagion describes that partners can start to feel similarly during conversations due to the disclosure of feelings, and sympathizing with one another (Hatfield et al., 1993). Moreover, partners can easily catch each other's negative emotions such as stress, spilling over from one partner to the other (e.g., Neff & Karney, 2007), which would also result in more similar emotions at specific times, or even lead to convergence over time (Anderson et al., 2003). Finally, again on a more momentary level, cohabiting couples share a life together, and as a result, also share many emotional experiences. They often engage in similar activities (e.g., cooking, holidays), are impacted by the same event (e.g., a sick child, a car breaking down), and as such, have similar experiences. In the current paper, this will be captured in the experiential factors.Until now, empirical evidence regarding experiential and couple effects on emotional similarity mostly made use of lab studies. In these studies, the experience was either held constant across couples or manipulated by altering the valence of the lab task or the presence of the partner. The couple effect was studied by comparing existing couples and randomly composed ones (e.g., Bruder et al., 2012). This way, Helm et al. (2014), for instance, found evidence for an effect of the presence of the partner by showing that the heart rates of romantic partners became more similar when their partner was present in the same room. Kykyri et al. (2024) analyzed a couple's therapy lab session, divided into interactions and found that synchrony in electrodermal activity was significantly related to non-verbal emotion expression and emotional valence of the interaction. In strangers as well, experiential factors like emotion expression and shared experience with a joint outcome were related to higher synchrony in facial expressions (Lei & Gratch, 2023). Evidence for a couple effect was provided by Cwir et al. (2011) who found that inducing a minimal social connection in participants was linked to more similarity in psychological and physiological states during a given stressful interaction. Chen et al. (2024) reported further evidence of a couple effect, by demonstrating that romantic partners showed more emotional synchronization in their ratings and prefrontal cortex than close friends while watching emotion-inducing movie snippets, suggesting that emotional similarity is dependent on the relationship.

While these experimental studies are well-suited for controlling certain experiential and couple features and studying emotional similarity in specific contexts, they are less suited for investigating the appearance of emotional similarity in mundane real-life situations. Therefore, to complement the laboratory findings, researchers recently have turned to experience sampling methods and started to investigate emotional similarity in romantic couples in daily life. Experience sampling implies that both partners report on their current multidimensional emotions when prompted by an app on their smartphone. Important for our goals, daily life studies also allow to assess multiple potentially relevant experiential factors, such as mere presence of the partner, the occurrence of mutually experienced positive or negative events (e.g., couple conflict), disclosure of events to the partner, frequency of messaging, feeling connected with a partner, responsiveness to the partner and more (see e.g., Bar-Shachar & Bar-Kalifa, 2021; Hicks & Diamond, 2008; Sels et al., 2016; Sels, Ruan, et al., 2020; Steinebach et al., 2025). This richness, however, comes with

Downloaded from online.ucpress.edu/collabra/article-pdf/12/1/171708/949853/collabra_2026_12_1_171708.pdf by KU Leuven user on 06 October 2026

the downside that it is hard to investigate all these factors simultaneously as integrating all of them in a statistical analysis is not straightforward. Therefore, most emotional similarity research opts to focus on a few experiential factors. Controlling for the presence of the partner, however, revealed no differences in emotional similarity in past research (Sels et al., 2016).

We set out to advance this strand of research by including all assessed experiential factors from two previously collected dyadic experience sampling studies in the analysis and detecting which of these variables are relevant for understanding emotional similarity by means of multilevel regression trees (Fokkema et al., 2018, 2025). This data-driven, exploratory statistical approach looks for relevant factors by checking whether splitting the data based on the values of the associated variables leads to significant differences in momentary similarity scores. As a data-driven approach, the tree method is particularly suitable for detecting higher-order interaction effects between these factors and, in contrast to classical statistical models, these interactions do not need to be specified a priori. Still, the tree relies on a statistical stopping criterion, and therewith avoids so-called overfitting which is a common threat in machine learning (Strobl et al., 2009; Zeileis et al., 2008). As this exploratory research, we do not form any hypotheses as to which of these experiential factors would influence momentary emotional similarity. Moreover, to investigate the existence of a couple effect, we build on recent methodological work by Moulder et al. (2018) and Bodner et al. (2021) who advocate comparing the analyses done in real couples to analyses done in pseudo couples, created by randomly pairing data from partners of different couples to simulate strangers. This random pairing breaks the couple bond between partners and allows us to investigate whether the emotional similarity in romantic couples is not just significantly different from zero, but from the baseline similarity that is shared by any two strangers.

Current Study

The current study addresses the following three questions: (1) Do romantic partners show more momentary emotional similarity than strangers (couple effect)?; (2) Which experiential factors are associated with changes in momentary emotional profile similarity (experiential effects)?; and (3) Are romantic partners more emotionally similar than strangers when controlling for these experiential factors (couple effect beyond experience)? To do this, we have reanalyzed the data from two experience sampling studies of romantic couples (Sels, Cabrieto, et al., 2020; Sels et al., 2017).

Materials and Methods

Participants

The first and second study included 50 and 94 mixed-gender couples (half men, half women), respectively. These couples were recruited in 2014-2015 and 2016-2017 through social media, flyers and advertisements in public places and relationship therapy centers, using four recruitment criteria: (1) in a relationship for at least two months, (2) heterosexual, (3) over the age of 18, (4) both partners willing to participate in the study. The mean age of the first sample (see Sels et al., 2017) was 27.75 years old (*SD* = 10.60, range = 18 – 70) and the couples were on average together for 72.06 months (*SD* = 107.79, *range* = 2 months – 35 years). Ten of the couples were married, 18 lived together without being married and 22 couples did not live together. Participants received a compensation of 40 euros per person upon completion of the study. The mean age of the second sample (see Sels, Cabrieto, et al., 2020) was 26.04 years old (*SD* = 5.27, *range* = 18 – 53) and the couples were on average together for 4.5 years (*SD* = 2.80, *range* = 7 months – 21 years). Seven of the couples were married, 89 lived together without being married and five couples did not live together. Participants received a compensation of 50 euros per person upon completion of the study.

Procedure

Study 1

Participants were invited to attend a group session in the lab where they received information about the study and individually completed a set of self-report questionnaires. During this session, participants received a smartphone to perform the experience sampling part of the study and instructions on its use. Momentary surveys were sent to the participants ten times a day for seven to eight consecutive days and inquired about participants' emotions (and perceptions) of themselves and their partners, as well as some experiential information. The timing of these surveys was pseudorandomized between 10 AM and 10 PM, meaning that this time period was divided into ten equal intervals and one survey was sent randomly within each time interval and stayed open for 90 seconds. Partners of the same couple received each survey at the exact same time, but the item order within the survey was randomized to prevent cooperation. The compliance of this study was high (*M* = 93%, *SD* = 5%, *range* = 76 – 100%).

Study 2

Participants first completed a pre-lab questionnaire at home. Next, they performed a dyadic interaction experiment (not used in the current study) and were given instructions for experience sampling. Participants received a smartphone which they used to answer short surveys on their emotions, perceptions and experiential information several times a day for seven to eight consecutive days. Prompts to fill in these surveys were sent six times a day from 5 PM to 10 PM on weekdays and 14 times a day from 10 AM to 10PM on weekend days. Again, these periods were divided into six or 14 equal intervals and one survey was sent within each of these intervals and stayed open for 90 seconds. These time slots were chosen because they are outside of regular working hours and thus more likely to contain interactions between partners. Partners received each survey at the exact same time. The compliance of this

Downloaded from online.ucpress.edu/collabra/article-pdf/12/1/171708/949853/collabra_2026_12_1_171708.pdf by KU Leuven user on 06 October 2026

experience sampling part was high (*M* = 93%, *SD* = 6%, *range* = 70 – 100%).

Materials

Momentary Emotional Similarity

At every measurement occasion, participants rated to which extent they felt multiple discrete emotions at that moment using a 0 (*not at all*) to 100 (*very*) visual analogue scale. For the first study these emotions were: angry, anxious, depressed, sad, happy, relaxed, satisfied, and cheerful. For the second study they were: angry, anxious, lonely, sad, happy, and relaxed. To capture the momentary emotional similarity between partners, at every measurement occasion, the Spearman's ρ was computed between the discrete emotion ratings of the first partner and those of the second partner, leading to one similarity score per couple per measurement. Note that other association measures could have been used and would have conveyed different information (Carlier et al., 2024). Spearman's ρ is a bipolar similarity measure that only captures the shape similarity, which reflects to what extent both partners rate the same emotions as either more or less intense compared to their other emotions. Because we are most interested in this relative rather than absolute similarity, we opted for the Spearman's ρ as primary measure as it is robust due to its reliance on rank-information. However, for a more complete picture, we also repeated the analyses with the Euclidean distance in supplement. The Euclidean distance is a unipolar measure that reflects a summary of the distance between each pair of emotion ratings (e.g., angry-angry, sad-sad) and hence, captures dissimilarity in the shape, but also the variance and average of the emotion ratings of both partners, thus possibly giving lower scores when partners are in fact feeling similar emotions but with a different intensity.

Before computing the Spearman's ρs, we person-mean centered all emotion ratings. This was done to remove the mean differences between positive emotions, which are usually rated on the upper half of the scale, and negative emotions, which are usually rated on the lower half of the scale. These response tendencies would otherwise dominate the shape of the emotion profiles and similarity therein (Fischer & Milfont, 2010; Furr, 2008; Kenny et al., 2006).

Experiential Factors

The experience sampling surveys also included items that provide information on the concurrent intra- and interpersonal experiences. We included all items, except for the ones about perceptions of the partner's internal state. Specifically, we have only included reports about one's own experiences and behaviors and not about how one perceives their partner to feel or behave (e.g., did your partner express their emotions). All selected covariates were answered separately by each partner, leading to 22 covariates in Study 1 and 22 covariates in Study 2 (Table 1,2).

Statistical Analyses

Preparation of Pseudo Couples

To be able to compare real romantic couples to pseudo couples that simulate strangers, we created 1000 pseudo samples. In each of these samples, the couple composition is perturbed, so that the measurement occasions and associated emotion ratings of each man are paired with those of a random woman from another couple. We then computed the average Spearman's ρ in each pseudo sample to create a sampling distribution of the average momentary emotional similarity in pseudo couples. Next, we selected the pseudo samples that correspond to the 5^{th}, 50^{th} and 95^{th} percentile of this sampling distribution. Together these three samples represent the pseudo samples with the almost lowest (P5), the median (P50) and the almost highest (P95) average similarity in pseudo couples, acting as a workable proxy for the full range of possible baselines of similarity in the population. This left us with one sample of real couples and three samples of pseudo couples for both Study 1 and Study 2. When computing the couple effect (i.e., whether there is a difference between real romantic couples and pseudo couples) we thus conduct three tests per study with varying strictness (i.e., the test with the P95 pseudo sample will have the lowest power, and the one with the P5 pseudo sample the highest).

Step 1: Momentary Emotional Similarity Between Romantic Partners and Strangers

To examine whether romantic partners (real couples) display more emotional profile similarity than simulated strangers (pseudo couples), while accounting for the nesting of measurement occasions within couples, we fitted three random intercept multilevel regression models to the emotional profile similarity scores. Each model was fitted on the combined data of the real couples and one of the three selected pseudo samples (e.g., real Spearman's ρs combined with 5^{th} percentile pseudo Spearman's ρs). The binary couple-level dummy variable 'real couple' then indicated for each measurement occasion whether it belonged to a real or a pseudo couple. The inclusion of this predictor allows to test for the existence of a couple effect.

Step 2: Selection of Experiential Factors

To select which momentary experiential variables are related to momentary emotional similarity strength, we employed multilevel regression trees using the R package *glmertree* (Fokkema et al., 2018). These trees are able to handle the multitude of experiential factors assessed in our experience sampling studies all at once and account for the nesting of measurement occasions in couples by means of random intercepts. For both studies, we used the 11 time-varying experiential factors once rated by the men and once rated by the women (22 in total per study) as level 1 covariates in those trees. As can be seen in Figure 1, a regression tree splits the available measurement occasions based on the available experiential covariates into signif-

Downloaded from online.ucpress.edu/collabra/article-pdf/12/1/171708/949853/collabra_2026_12_1_171708.pdf by KU Leuven user on 06 October 2026

Table 1. All experiential factors of Study 1

Covariate	Question	Coding
valence arousal grid	Indicate how you feel at this moment (indicate on a 9x9 grid with valence on x-axis and arousal on y-axis)	Divided 9x9 grid in 4 quadrants: high valence, high arousal (1); low valence, high arousal (2); low valence, low arousal (3); high valence, low arousal (4)
positive event	Has anything positive in which your partner was (not) involved, happened since the last beep?	no (0), yes alone (1), yes together (2)
negative event	Has anything negative in which your partner was (not) involved, happened since the last beep?	no (0), yes alone (1), yes together (2)
contact with partner + now with partner	Did you and your partner have contact since the last beep? + Are you with your partner at the moment	no (0), contact minority of time (1), contact half of time (2), contact majority of time (3), contact all the time (4), contact now (5)
expressed emotions	Have you expressed your emotions towards your partner since the last beep?	no or suppressed emotions (0), yes (1)
warmth dominance grid	Indicate how you position yourself relative to your partner at the moment (indicate on a 9x9 grid with valence on x-axis and arousal on y-axis)	Divided 9x9 grid in 4 quadrants: high warmth, high dominance (1); low warmth, high dominance (2); low warmth, low dominance (3); high warmth, low dominance (4)
problem discussion	Have you talked with your partner about a problem that one of you or both encountered?	no (0), yes (1)
love	How much do you love your partner at the moment?	0-100
wavelength	Do you have the feeling that you and your partner are on the same wavelength at the moment?	0-100
stress	Did you experience stress since the last beep?	0-100
self-confidence	How much confidence do you experience at the moment?	0-100

icantly distinct subgroups of measurement occasions with similar values of the Spearman's ρ. Some levels of a covariate might be related to a higher Spearman's ρ, while other levels might be related to a lower Spearman's ρ.

Speaking more technically, we specified an intercept-only multilevel model, initially reflecting between-couple differences in the level of emotional similarity. Using the multilevel tree approach, the fixed intercept is tested for instability with respect to each available covariate (Zeileis et al., 2008). If instability is present, this indicates that the intercept differs across subgroups of measurement occasions defined by that covariate (i.e., a group difference). In such cases, the sample is split on the most relevant covariate using a cut point that yields the greatest improvement in model fit. This procedure recursively partitions the covariate space until no further significant instabilities in the intercept are detected, that is, until no additional measurement occasion subgroup differences can be identified. As a result, the sample is partitioned according to different covariates allowing us to explore how these covariates jointly (e.g., via interactions) predict momentary emotional similarity in couples and pseudo couples.

We also tested the stability of the obtained splits in the multilevel trees by means of subsampling, using the R package *stablelearner* (Philipp et al., 2018). By running the analyses on 500 subsamples (the default in the package, which typically leads to stable results), we obtain a measure of stability in covariate selection in the multilevel tree. We then retained the covariates that were selected in at least 50% of the subsamples for the next step, indicating that they could play an important role in predicting emotional similarity. Note that there are no clear guidelines as to which cutoff to use, which is why we opted for chance level. We performed this analysis for the two samples with real couples (from the two studies) and the six samples with pseudo couples separately, in order to compare which covariates predicted momentary similarity only in romantic couples and which also had an effect in pseudo couples. It is important to remark here that not all covariates will have the same meaning in pseudo couples. For instance, 'contact with the partner' or 'expressing emotions to the partner' refer to the couple partner in real couples, but refer to a person outside of the coupling for pseudo couples.

Downloaded from online.ucpress.edu/collabra/article-pdf/12/1/171708/949853/collabra_2026_12_1_171708.pdf by KU Leuven user on 06 October 2026

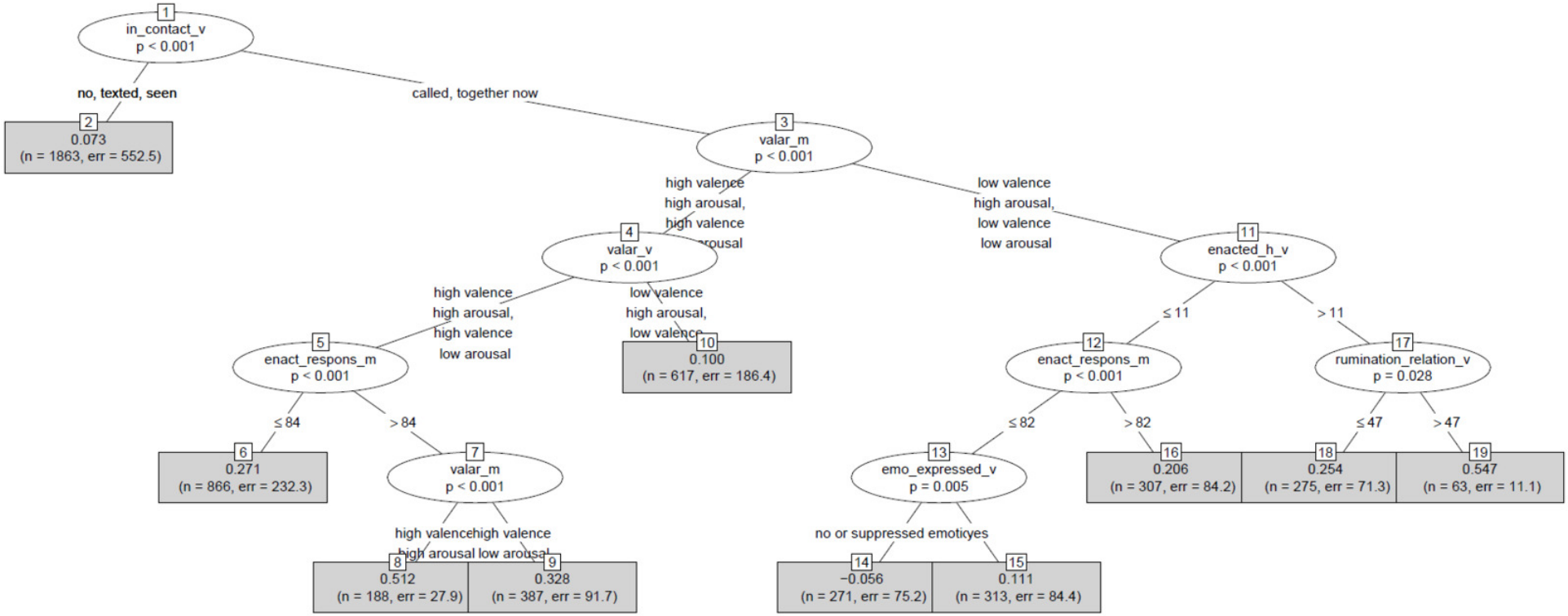


Figure 1. Spearman's ρ regression tree based on the full sample of real couples in Study 2

Downloaded from online.ucpress.edu/collabra/article-pdf/12/1/171708/949853/collabra_2026_12_1_171708.pdf by KU Leuven user on 06 October 2026

Table 2. All experiential factors of Study 2

Covariate	Question	Coding
valence arousal grid	Indicate how you feel at this Moment (indicate on a 9x9 grid with valence on x-axis and arousal on y-axis)	Divided 9x9 grid in 4 quadrants: high valence, high arousal (1); low valence, high arousal (2); low valence, low arousal (3); high valence, low arousal (4)
enjoyable event with partner	Did you have a nice moment with your partner since the last beep?	no (0), yes (1)
conflict with partner	Did you have a conflict with your partner since the last beep?	no (0), yes (1)
contact with partner + now with partner	Did you and your partner have contact since the last beep? + Are you with your partner at the moment	no (0), texted (1), called (2), together seen (3), together now (4)
expressed emotions	Have you expressed your emotions towards your partner since the last beep?	no or suppressed emotions (0), yes (1)
enacted responsiveness	To what extent are you trying to make your partner feel understood and appreciated?	0-100
indifference	Do you feel indifferent and uninterested towards your partner?	0-100
irritation	Do you feel irritated by your partner?	0-100
desire	To what extent to do you feel like making love with your partner?	0-100
rumination about relationship	Have you worried about your relationship since the last beep?	0-100
positive reminiscence about relationship	Have you thought with pleasure about your relationship since the last beep?	0-100

Step 3: Controlling for Experiential Factors

In the third step, the experiential covariates that were selected in the previous step, were all added to the multilevel model that was described in Step 1. The categorical experiential covariates were first recoded into binary dummy variables, based on how they were split in the trees (e.g., for the valence arousal grid this could be 1 = high valence with either low or high arousal and 0 = low valence with either low or high arousal). Since similarity is something that happens between both partners, we were mostly interested in the interactions of these covariates between men and women, predicting the momentary emotional similarity. Then, for instance, if the covariate 'valence (female)' was selected, the interaction term 'valence (female)' x 'valence (male)' was added as a predictor of momentary emotional similarity with the values high x high valence, high x low valence, low x high valence, and low x low valence. The goal of this model was to assess the couple effect (real versus pseudo couples) on momentary emotional similarity (nested within couples), on top of the selected experiential covariates (experiential effects). If the couple effect would be significant, this would mean that on top of all experiential covariates, there is still an effect on momentary emotional similarity of being in a real couple as opposed to forming a pseudo couple.

Results

Step 1: Momentary Emotional Similarity Between Romantic Partners and Strangers

The Spearman's ρ measure of emotional similarity for real couples (*M~Study 1~* = 0.12, *SD~Study 1~* = 0.50; *M~Study 2~* = 0.15, *SD ~Study 2~* = 0.54) was on average higher than the emotional similarity for pseudo couples in all pseudo samples and this difference was always significant at the .05 significance level (Table 3). The descriptives of the pseudo samples belonging to the 5^{th}, 50^{th}, and 95^{th} percentile means that were used in further analyses can be found in Table S3 and S4 in supplement.

Step 2: Selection of Experiential Factors

Figure 1 depicts the multilevel regression tree fitted on the data of the real couples in 2 (for resolution reasons, the tree of Study 1 can be found in supplement) with in each node either the selected experiential covariate and how its levels are split, or the estimated Spearman's ρ intercept for a given subset. As an illustration, taking a look at the tree, shows that the factors 'contact with partner' (female partner), 'valence arousal grid' (male and female partner), 'irritation' (male and female partner), 'enacted responsiveness' (male partner), 'rumination about relationship' (female partner), and 'expressed emotions' (female partner) were initially selected. The stability check on the 500 subsamples of the data, however, indicated that the ex-

Downloaded from online.ucpress.edu/collabra/article-pdf/12/1/171708/949853/collabra_2026_12_1_171708.pdf by KU Leuven user on 06 October 2026

Table 3. Multilevel regression analyses in all pseudo samples

	Study 1					Study 2				
	Coefficient	*SD*	*df*	*t*	*p*	*Coefficient*	*SD*	*df*	*t*	*p*
P5										
Intercept	0.01	0.01	100.42	0.65	.515	0.002	0.01	216.90	0.18	.856
Couple effect	**0.11**	0.02	98.77	5.39	< .001	**0.16**	0.01	8918.53	14.04	< .001
P50										
Intercept	**0.03**	0.01	101.02	2.13	.035	0.02	0.01	216.16	1.91	.057
Couple effect	**0.09**	0.02	99.44	4.28	< .001	**0.14**	0.01	8917.16	12.36	< .001
P95										
Intercept	**0.05**	0.02	100.13	3.24	.0016	**0.04**	0.01	192.75	3.42	< .001
Couple effect	**0.07**	0.02	98.83	3.38	.0011	**0.12**	0.01	8917.48	10.70	< .001

Downloaded from online.ucpress.edu/collabra/article-pdf/12/1/171708/949853/collabra_2026_12_1_171708.pdf by KU Leuven user on 06 October 2026

Table 4. Covariates selected in 50% of subsampled Spearman trees

	Real	Pseudo P5	Pseudo P50	Pseudo P95
Study 1				
Selected	**Valence-arousal (male, 443)**, valence-arousal (female, 421), stress (male, 299), contact (female, 279)	**Valence-arousal (female, 500)**, valence-arousal (male, 500), self-confidence (male, 382), wavelength (female, 366), stress (male, 309)	**Valence-arousal (female, 500)**, valence-arousal (male, 495), self-confidence (male, 434), self-confidence (female, 297), stress (male, 277)	**Valence-arousal (female, 495)**, valence-arousal (male, 489), stress (male, 349), self-confidence (male, 313)
Study 2				
Selected	**Valence-arousal (male, 475)**, valence-arousal (female, 455), contact (female, 293)	**Valence-arousal (female, 498)**, valence-arousal (male, 491), irritation (male, 317)	**Valence-arousal (female, 486)**, valence-arousal (male)	**Valence-arousal (male, 375)**, valence-arousal (female, 372)

Note: Bold indicates the most frequent covariate for each cell. numbers in between parentheses indicate the number of subsamples out of 500. gender indicates which variant of each covariate is meant

periential covariates 'valence arousal grid' (male and female partner), 'contact with partner' (female partner), and 'stress' (male partner, only in Study 1) were most strongly associated with momentary emotional similarity since they were selected in at least 50% of these 500 subsampled regression trees. All of these covariates, except for 'contact with partner', were also selected in the samples with pseudo couples, indicating that these covariates can also predict emotional similarity between strangers. 'Valence arousal grid' was the most important experiential covariate in these data sets. For a summary of these findings, see Table 4.

However, when looking at the regression tree based on the full sample of real couples, it becomes clear that for the most important covariate, namely 'valence-arousal grid', the male and female scores have to be taken into account simultaneously to understand differences in similarity (Figure 1; see Supplement for larger size). High valence in both partners was associated with the most similarity, followed by low valence in both partners, while having a different valence was associated with less similarity (Figure 2). This means that experiencing a similar valence, and especially high valence, is associated with more momentary emotional similarity in our data sets (see Henninger et al., 2023; Molnar, 2020, for more details on interpreting machine learning models using prediction visualizations).

Step 3: Controlling for Experiential Factors

When incorporating the interactions of all male and female selected experiential factors in the multilevel regression models of step 1, we still found significant couple effects in all but one out of the six samples with both real and pseudo couples (Table 5). This indicates that the couple has an effect on momentary emotional similarity, on top of the experiential effects. The full regression results can be consulted in supplement tables S6-S11.

Discussion

We aimed to compare momentary emotional similarity in romantic partners to that in simulated strangers (couple effect), detect experiential factors associated with differences in momentary emotional profile similarity (experiential effect), and then compare romantic partners and strangers when controlling for these experiential factors (couple effect beyond experience).

Regarding the first, we indeed found a higher Spearman's ρ between the momentary emotions of romantic partners than between the momentary emotions of simulated strangers in both studies. This means that romantic partners generally experience similar emotion profiles, regardless of the intensity of these emotions (Carlier et al., 2023) and that this similarity is significantly larger than the similarity that exists between any two persons at a random timepoint (e.g., due to cultural similarity). But is this emotional similarity simply due to the experience of similar circumstances in the moment (experiential factors), or because romantic partners are more emotionally similar even when controlling for these experiential factors (couple effect beyond experience)?

With respect to the experiential effect, we investigated which experiential factors play a role in displaying momentary emotional similarity. We found that contact and valence during the experience were important, and especially the interaction in valence between partners. When both partners experienced high valence, their momentary emotional similarity was highest, followed by both experiencing negative valence. This is similar to the effect of valence in Kykyri et al. (2024), where movement synchrony was highest for interactions with positive valence, followed by negative valence, and lowest for mixed-valence interactions and Lei & Gratch (2023), where discrepancy in valence was linked to lower synchrony in facial expressions. Surprisingly, some factors that one might have expected to be important, like the expression of one's emotions to the partner or having discussed certain issues, were not found to be uniquely associated with momentary similarity in the

Downloaded from online.ucpress.edu/collabra/article-pdf/12/1/171708/949853/collabra_2026_12_1_171708.pdf by KU Leuven user on 06 October 2026

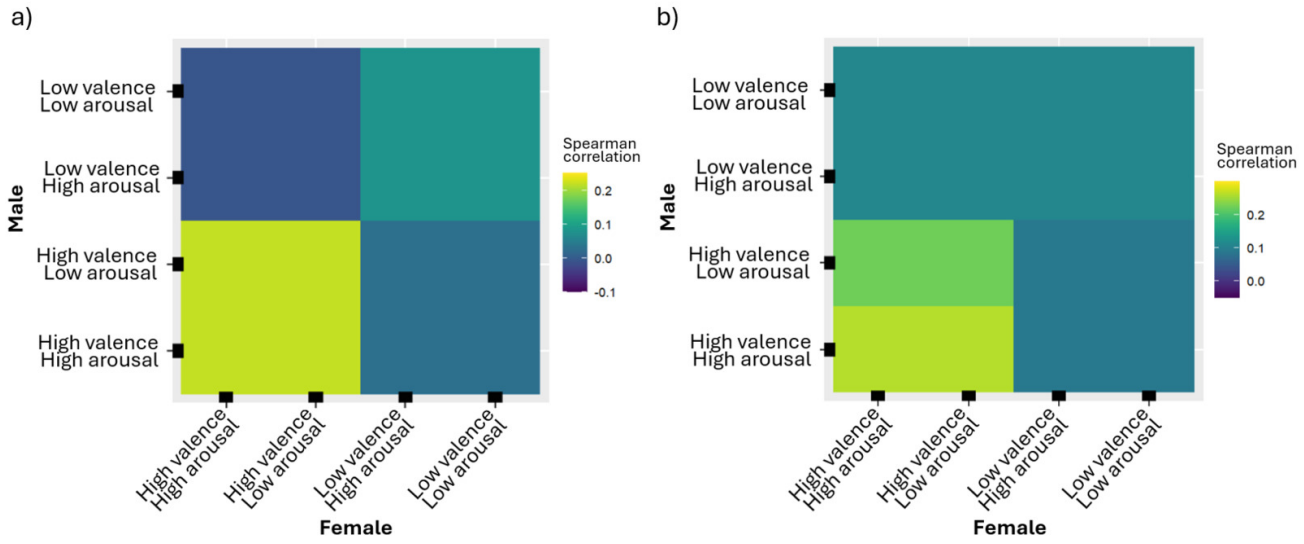


Figure 2. Interaction plots of male and female valance-arousal for the real couples in Study 1 (a) and Study 2 (b)

Table 5. Coefficients of the couple effect from the regressions in all pseudo samples

	Coefficient	*SD*	*df*	*t*	*p*
Study 1					
Couple effect P5	**0.08**	0.02	117.18	3.71	< .001
Couple effect P50	**0.05**	0.02	114.04	2.35	.020
Couple effect P95	0.03	0.02	116.08	1.61	.110
Study 2					
Couple effect P5	**0.15**	0.01	8945.08	11.42	< .001
Couple effect P50	**0.11**	0.01	8942.30	8.97	< .001
Couple effect P95	**0.10**	0.01	8939.18	7.85	< .001

emotion rating profiles, which is inconsistent with previous studies on facial and physiological synchrony (Coutinho et al., 2019; Kykyri et al., 2024; Lei & Gratch, 2023). Additionally, valence was also a predictor of emotional similarity between strangers, meaning that a general positive experience (and to a lesser extent also negative) in any two persons was associated with more emotional similarity (similar to Lei & Gratch, 2023). In contrast, similar to the cardiac synchrony study by Helm et al. (2014), contact with the partner was only associated with more emotional similarity in romantic partners and not the simulated strangers. However, caution is warranted for this item, as 'contact with the partner' meant 'contact with the couple partner' in real couples but 'contact with another person' in pseudo couples. Taking this into account, it is indeed the presence of both partners that is associated with higher emotional similarity and no other artefacts that could be linked to the presence of any person.

Bringing the previous two points together, we found that the couple effect was always significant on top of the experiential factors in Study 2, and in two out of the three samples in Study 1. Thus, the emotion profiles of romantic partners align more than can be expected solely based on experiential factors. Further studies will need to look into the functionality of the found emotional similarity in romantic couples and the mechanisms underlying this. Emotional similarity may arise because we tend to pick romantic partners that are more emotionally similar to us (e.g., Luo, 2017; Schwartz, 2013) and/or because we become more emotionally similar to our partners over time, which may benefit the relationship in some cases or less so in other cases (Anderson et al., 2003; Sanford, 2007). In any case, there is a unique emotional bond that exists between romantic partners, going beyond merely experiencing more similar situations.

In the supplement, we also report the results for all analyses based on the Euclidean distance as a similarity measure. The Euclidean distance does not only take the similarity in the shape of the emotional profile into account, but also the similarity in the intensity of the emotions and the variance therein. Overall, conclusions were similar for both measures, with a couple effect found on top of the experiential factors of which valence was the most important one. The largest differences were the fact that 'contact with partner' was not selected as a experiential factor based on this measure and that the sample size played a role in being able to detect a significant difference between real couples and pseudo couples, because Study 2

Downloaded from online.ucpress.edu/collabra/article-pdf/12/1/171708/949853/collabra_2026_12_1_171708.pdf by KU Leuven user on 06 October 2026

(94 couples) had more significant results than Study 1 (only 50 couples).

Limitations and Future Directions

Because the current paper reanalyzed previously collected dyadic data sets, we did not perform a priori sample size planning. This would have been unfeasible for the tree analysis anyhow, as we would have had to assume the exact tree structure including the effect sizes for each split as well as the subgroup sizes. We have performed a post-hoc power analysis for the couple effect in the multilevel models on top of the experiential factors that were signaled as important by the tree analyses. More information on this can be found in supplement. The analysis shows that the power might indeed be too low for some, but not all of the Study 1 couple effects (50 couples). For Study 2 (94 couples), power is always very high.

In addition, the experiential factors assessed in the experience sampling surveys might not have been optimized for their current use. We did not have any hypotheses for the current items and most of them were intra- and interpersonal states. Future research could extend the current findings by also looking into the influences of more objective characteristics of situations, to complement the current subjective experience of situations. Moreover, further research could look into why certain intuitive experiential factors like the expression of emotions or feeling on the same wavelength as the partner were not associated with more momentary emotional similarity. Next, in daily life studies, it is not possible to bring real and pseudo couples into the exact same situations, but rather to assess similar experiential characteristics. As previously mentioned, the item 'contact with partner', even had a different meaning in real couples and pseudo couples, making it harder to interpret. An interaction study where romantic partners are invited to the lab to interact once with each other and once with a partner from someone else, during which emotion profiles would have to be reported for different times throughout this interaction, could help to control these experiential factors more closely in pseudo couples.

Lastly, our samples exclusively consisted of monogamous mixed-gender couples, which limits the generalizability to other romantic relationship forms. Although previous research indicated same-sex couples are similar to different-sex couples in terms of general relational functioning (Joyner et al., 2019), future research could be useful to study whether this is also true for emotional similarity in particular.

Conclusion

In conclusion, this study found that approaching emotional similarity between romantic partners in a multidimensional, momentary way provided additional insight in how emotional similarity comes about. We showed that in general, romantic partners show a meaningful level of emotional profile similarity (eclipsing that of simulated strangers), we identified some of the experiential variables that relate to changes in this similarity over time and demonstrated that being a couple explains part of the similarity on top of sharing experiential information.

Contributions

Contributed to conception and design: CC, MH, MV, LS, PK, EC

Contributed to acquisition of data: LS, PK, EC

Contributed to analysis and interpretation of data: CC, MH, MV, PK, EC

Drafted and/or revised the article: CC, MH, MV, LS, PK, EC

Approved the submitted version for publication: CC, MH, MV, LS, PK, EC

Funding Information

The research reported in this article was supported by an FWO fellowship granted to Chiara Carlier (1153725N), KU Leuven Research Council grants C14/19/054, C14/23/062, and iBOF/21/090 awarded to E. Ceulemans and P. Kuppens and by a research grant from the EOS Excellence of Science program (G0I2422N) awarded to E. Ceulemans.

Ethics Statement

IRB approval for this study was obtained (G- 2016 02 466) by the KU Leuven Social and Societal Ethics Committee.

Competing Interests

The authors report no conflict of interest.

Data Accessibility Statement

For this study, two data sets, previously collected, were reanalyzed. These data sets and more information on how to request them are listed in the EMOTE data base (Kalokerinos et al., 2025) under 'Leuven couples study 2014' and 'Leuven couples study 2016'.

Transparency and Openness

Data were analyzed using R, version 4.1.3 (R Core Team, 2022) and the packages *ggplot2* version 3.4.2 (Wickham, 2016), *iml* version 0.11.1 (Molnar et al., 2018), *stablelearner* version 0.1-5 (Philipp et al., 2018), *glmertree* version 0.2-4 (Fokkema et al., 2018), *lmerTest* version 3.1-3 (Kuznetsova et al., 2017), and *lme4* version 1.1-33 (Bates et al., 2015). R syntaxes used for the different analysis steps are available on OSF. This study's analyses were not preregistered.

Editors: David Grüning (Associate Editor)

Submitted: June 17, 2025 PDT. Accepted: September 01, 2026 PDT. Published: October 05, 2026 PDT.

Downloaded from online.ucpress.edu/collabra/article-pdf/12/1/171708/949853/collabra_2026_12_1_171708.pdf by KU Leuven user on 06 October 2026

Downloaded from online.ucpress.edu/collabra/article-pdf/12/1/171708/949853/collabra_2026_12_1_171708.pdf by KU Leuven user on 06 October 2026

This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CCBY-4.0). View this license's legal deed at http://creativecommons.org/licenses/by/4.0 and legal code at http://creativecommons.org/licenses/by/4.0/legalcode for more information.

References

Anderson, C., Keltner, D., & John, O. P. (2003). Emotional convergence between people over time. *Journal of Personality and Social Psychology*, *84*(5), 1054–1068. https://doi.org/10.1037/0022-3514.84.5.1054

Barrett, L. F., Gross, J., Christensen, T. C., & Benvenuto, M. (2001). Knowing what you're feeling and knowing what to do about it: Mapping the relation between emotion differentiation and emotion regulation. *Cognition & Emotion*, *15*(6), 713–724. https://doi.org/10.1080/02699930143000239

Bar-Shachar, Y., & Bar-Kalifa, E. (2021). Responsiveness processes and daily experiences of shared reality among romantic couples. *Journal of Social and Personal Relationships*, *38*(11), 3156–3176. https://doi.org/10.1177/02654075211017675

Bates, D., Mächler, M., Bolker, B., & Walker, S. (2015). Fitting Linear Mixed-Effects Models Using lme4. *Journal of Statistical Software*, *67*(1), 1–48. https://doi.org/10.18637/jss.v067.i01

Bodner, N., Tuerlinckx, F., Bosmans, G., & Ceulemans, E. (2021). Accounting for auto-dependency in binary dyadic time series data: A comparison of model- and permutation-based approaches for testing pairwise associations. *British Journal of Mathematical and Statistical Psychology*, *74*(S1), 86–109. https://doi.org/10.1111/bmsp.12222

Brown, C. L., Chen, K.-H., Wells, J. L., Otero, M. C., Connelly, D. E., Levenson, R. W., & Fredrickson, B. L. (2022). Shared emotions in shared lives: Moments of co-experienced affect, more than individually experienced affect, linked to relationship quality. *Emotion*, *22*(6), 1387–1393. https://doi.org/10.1037/emo0000939

Bruder, M., Dosmukhambetova, D., Nerb, J., & Manstead, A. S. R. (2012). Emotional signals in nonverbal interaction: Dyadic facilitation and convergence in expressions, appraisals, and feelings. *Cognition and Emotion*, *26*(3), 480–502. https://doi.org/10.1080/02699931.2011.645280

Butler, E. A. (2015). Interpersonal Affect Dynamics: It Takes Two (and Time) to Tango. *Emotion Review*, *7*(4), 336–341. https://doi.org/10.1177/1754073915590622

Carlier, C., Karch, J. D., Kuppens, P., & Ceulemans, E. (2024). A Comparison of Measures for Assessing Profile Similarity in Dyads. *Psychologica Belgica*, *64*(1), Article 1. https://doi.org/10.5334/pb.1297

Carlier, C., Sels, L., Kuppens, P., & Ceulemans, E. (2023). Momentary profile similarity measures to capture similarity in multivariate dyadic time series. *PsyArXiv*. https://doi.org/10.31234/osf.io/75ebc

Chen, Y., Liu, S., Hao, Y., Zhao, Q., Ren, J., Piao, Y., Wang, L., Yang, Y., Jin, C., Wang, H., Zhou, X., Gao, J.-H., Zhang, X., & Wei, Z. (2024). Higher emotional synchronization is modulated by relationship quality in romantic relationships and not in close friendships. *NeuroImage*, *297*, 120733. https://doi.org/10.1016/j.neuroimage.2024.120733

Coutinho, J., Oliveira-Silva, P., Fernandes, E., Gonçalves, O. F., Correia, D., Perrone Mc-Govern, K., & Tschacher, W. (2019). Psychophysiological Synchrony During Verbal Interaction in Romantic Relationships. *Family Process*, *58*(3), 716–733. https://doi.org/10.1111/famp.12371

Cwir, D., Carr, P. B., Walton, G. M., & Spencer, S. J. (2011). Your heart makes my heart move: Cues of social connectedness cause shared emotions and physiological states among strangers. *Journal of Experimental Social Psychology*, *47*(3), 661–664. https://doi.org/10.1016/j.jesp.2011.01.009

De Leersnyder, J., Mesquita, B., Kim, H., Eom, K., & Choi, H. (2013). Emotional fit with culture: A predictor of individual differences in relational well-being. *Emotion*, *14*(2), 241. https://doi.org/10.1037/a0035296

Erbas, Y., Kalokerinos, E. K., Kuppens, P., van Halem, S., & Ceulemans, E. (2022). Momentary Emotion Differentiation: The Derivation and Validation of an index to Study Within-Person Fluctuations in Emotion Differentiation. *Assessment*, *29*(4), 700–716. https://doi.org/10.1177/1073191121990089

Erbas, Y., Sels, L., Ceulemans, E., & Kuppens, P. (2016). Feeling Me, Feeling You: The Relation Between Emotion Differentiation and Empathic Accuracy. *Social Psychological and Personality Science*, *7*(3), 240–247. https://doi.org/10.1177/1948550616633504

Farrell, A. K., & Stanton, S. C. E. (2019). Toward a Mechanistic Understanding of Links Between Close Relationships and Physical Health. *Current Directions in Psychological Science*, *28*(5), 483–489. https://doi.org/10.1177/0963721419855657

Fischer, R., & Milfont, T. L. (2010). Standardization in psychological research. *International Journal of Psychological Research*, *3*(1), Article 1. https://doi.org/10.21500/20112084.852

Fokkema, M., Henninger, M., & Strobl, C. (2025). One model may not fit all: Subgroup detection using model-based recursive partitioning. *Journal of School Psychology*, *109*, 101394. https://doi.org/10.1016/j.jsp.2024.101394

Fokkema, M., Smits, N., Zeileis, A., Hothorn, T., & Kelderman, H. (2018). Detecting treatment-subgroup interactions in clustered data with generalized linear mixed-effects model trees. *Behavior Research Methods*, *50*(5), 2016–2034. https://doi.org/10.3758/s13428-017-0971-x

Frijda, N. H. (1988). The laws of emotion. *American Psychologist*, *43*(5), 349–358. https://doi.org/10.1037/0003-066X.43.5.349

Furr, R. M. (2008). A Framework for Profile Similarity: Integrating Similarity, Normativeness, and Distinctiveness. *Journal of Personality*, *76*(5), 1267–1316. https://doi.org/10.1111/j.1467-6494.2008.00521.x

Downloaded from online.ucpress.edu/collabra/article-pdf/12/1/171708/949853/collabra_2026_12_1_171708.pdf by KU Leuven user on 06 October 2026

Gonzaga, G. C., Campos, B., & Bradbury, T. (2007). Similarity, convergence, and relationship satisfaction in dating and married couples. *Journal of Personality and Social Psychology*, *93*(1), 34–48. https://doi.org/10.1037/0022-3514.93.1.34

Gonzaga, G. C., Carter, S., & Galen Buckwalter, J. (2010). Assortative mating, convergence, and satisfaction in married couples. *Personal Relationships*, *17*(4), 634–644. https://doi.org/10.1111/j.1475-6811.2010.01309.x

Hatfield, E., Cacioppo, J. T., & Rapson, R. L. (1993). Emotional Contagion. *Current Directions in Psychological Science*, *2*(3), 96–99. https://doi.org/10.1111/1467-8721.ep10770953

Helm, J. L., Sbarra, D. A., & Ferrer, E. (2014). Coregulation of respiratory sinus arrhythmia in adult romantic partners. *Emotion*, *14*(3), 522–531. https://doi.org/10.1037/a0035960

Henninger, M., Debelak, R., Rothacher, Y., & Strobl, C. (2023). Interpretable machine learning for psychological research: Opportunities and pitfalls. *Psychological Methods*. https://doi.org/10.1037/met0000560

Hershfield, H. E., Scheibe, S., Sims, T. L., & Carstensen, L. L. (2013). When Feeling Bad Can Be Good: Mixed Emotions Benefit Physical Health Across Adulthood. *Social Psychological and Personality Science*, *4*(1), 54–61. https://doi.org/10.1177/1948550612444616

Hicks, A. M., & Diamond, L. M. (2008). How was your day? Couples' affect when telling and hearing daily events. *Personal Relationships*, *15*(2), 205–228. https://doi.org/10.1111/j.1475-6811.2008.00194.x

Kalokerinos, E. K., Russo-Batterham, D., Koval, P., Moeck, E. K., Grewal, K. K., Greenaway, K. H., Shrestha, K. M., Garrett, P., Michalewicz, A., Garber, J., & Kuppens, P. (2025). *The EMOTE Database: An open, searchable database of experience sampling data mapping everyday life* [Manuscript in preparation].

Kenny, D. A., Kashy, D. A., & Cook, W. L. (2006). *Dyadic data analysis*. Guilford Press.

Kuznetsova, A., Brockhoff, P. B., & Christensen, R. H. B. (2017). lmerTest Package: Tests in Linear Mixed Effects Models. *Journal of Statistical Software*, *82*(13), 1–26. https://doi.org/10.18637/jss.v082.i13

Kykyri, V.-L., Nyman-Salonen, P., Tschacher, W., Tourunen, A., Penttonen, M., & Seikkula, J. (2024). Exploring the role of emotions and conversation content in interpersonal synchrony: A case study of a couple therapy session. *Psychotherapy Research*, 1–17. https://doi.org/10.1080/10503307.2024.2361432

Lei, S., & Gratch, J. (2023). Sources of Facial Expression Synchrony. *2023 11th International Conference on Affective Computing and Intelligent Interaction (ACII)*, 1–8. https://doi.org/10.1109/ACII59096.2023.10388107

Luo, S. (2017). Assortative mating and couple similarity: Patterns, mechanisms, and consequences. *Social and Personality Psychology Compass*, *11*(8), e12337. https://doi.org/10.1111/spc3.12337

Mathews, C., & Reus, V. (2001). Assortative mating in the affective disorders: A systematic review and meta-analysis. *Comprehensive Psychiatry*, *42*(4), 257–262. https://doi.org/10.1053/comp.2001.24575

Molnar, C. (2020). *Interpretable Machine Learning*. Lulu.com.

Molnar, C., Bischl, B., & Casalicchio, G. (2018). iml: An R package for Interpretable Machine Learning. *JOSS*, *3*(26), 786. https://doi.org/10.21105/joss.00786

Moulder, R. G., Boker, S. M., Ramseyer, F., & Tschacher, W. (2018). Determining synchrony between behavioral time series: An application of surrogate data generation for establishing falsifiable null-hypotheses. *Psychological Methods*, *23*(4), 757. https://doi.org/10.1037/met0000172

Neff, L. A., & Karney, B. R. (2007). Stress Crossover in Newlywed Marriage: A Longitudinal and Dyadic Perspective. *Journal of Marriage and Family*, *69*(3), 594–607. https://doi.org/10.1111/j.1741-3737.2007.00394.x

Philipp, M., Rusch, T., Hornik, K., & Strobl, C. (2018). Measuring the Stability of Results From Supervised Statistical Learning. *Journal of Computational and Graphical Statistics*, *27*(4), 685–700. https://doi.org/10.1080/10618600.2018.1473779

R Core Team. (2022). *R: A Language and Environment for Statistical Computing*. R Foundation for Statistical Computing. https://www.R-project.org/

Sanford, K. (2007). Hard and soft emotion during conflict: Investigating married couples and other relationships. *Personal Relationships*, *14*(1), 65–90. https://doi.org/10.1111/j.1475-6811.2006.00142.x

Schoebi, D., & Randall, A. K. (2015). Emotional Dynamics in Intimate Relationships. *Emotion Review*, *7*(4), 342–348. https://doi.org/10.1177/1754073915590620

Schwartz, C. R. (2013). Trends and Variation in Assortative Mating: Causes and Consequences. *Annual Review of Sociology*, *39*(Volume 39, 2013), 451–470. https://doi.org/10.1146/annurev-soc-071312-145544

Sels, L., Cabrieto, J., Butler, E., Reis, H., Ceulemans, E., & Kuppens, P. (2020). The occurrence and correlates of emotional interdependence in romantic relationships. *Journal of Personality and Social Psychology*, *119*(1), 136–158. https://doi.org/10.1037/pspi0000212

Sels, L., Ceulemans, E., Bulteel, K., & Kuppens, P. (2016). Emotional Interdependence and Well-Being in Close Relationships. *Frontiers in Psychology*, *7*, 283. https://doi.org/10.3389/fpsyg.2016.00283

Sels, L., Ceulemans, E., & Kuppens, P. (2017). Partner-expected affect: How you feel now is predicted by how your partner thought you felt before. *Emotion*, *17*(7), 1066–1077. https://doi.org/10.1037/emo0000304

Sels, L., Ruan, Y., Kuppens, P., Ceulemans, E., & Reis, H. (2020). Actual and Perceived Emotional Similarity in Couples' Daily Lives. *Social Psychological and Personality Science*, *11*(2), 266–275. https://doi.org/10.1177/1948550619845927

Downloaded from online.ucpress.edu/collabra/article-pdf/12/1/171708/949853/collabra_2026_12_1_171708.pdf by KU Leuven user on 06 October 2026

Sels, L., Schat, E., Verhofstadt, L., & Ceulemans, E. (2022). Introducing change point detection analyses in relationship research: An investigation of couples' emotion dynamics. *JOURNAL OF SOCIAL AND PERSONAL RELATIONSHIPS*. https://doi.org/10.1177/02654075211070558

Steinebach, P., Stein, M., & Schnell, K. (2025). Messenger-based assessment of empathic accuracy in couples' smartphone communication. *BMC Psychology*, *13*(1), 147. https://doi.org/10.1186/s40359-025-02483-9

Strobl, C., Malley, J., & Tutz, G. (2009). An introduction to recursive partitioning: Rationale, application, and characteristics of classification and regression trees, bagging, and random forests. *Psychological Methods*, *14*(4), 323–348. https://doi.org/10.1037/a0016973

Van Kleef, G. A. (2009). How Emotions Regulate Social Life: The Emotions as Social Information (EASI) Model. *Current Directions in Psychological Science*, *18*(3), 184–188. https://doi.org/10.1111/j.1467-8721.2009.01633.x

Wickham, H. (2016). *ggplot2: Elegant Graphics for Data Analysis*. Springer-Verlag New York. https://ggplot2.tidyverse.org

Zeileis, A., Hothorn, T., & Hornik, K. (2008). Model-Based Recursive Partitioning. *Journal of Computational and Graphical Statistics*, *17*(2), 492–514. https://doi.org/10.1198/106186008X319331

Downloaded from online.ucpress.edu/collabra/article-pdf/12/1/171708/949853/collabra_2026_12_1_171708.pdf by KU Leuven user on 06 October 2026