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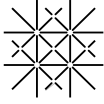FAKULTÄT FÜR PSYCHOLOGIE 2003 UNIVERSITÄT BASEL

Happy You, Happy Me?

Couple Interrelations in Subjective Well-Being

from a Descriptive, Functional, and Life Span

Perspective

Inauguraldissertation zur Erlangung der Würde einer Doktorin der Philosophie vorgelegt der Fakultät

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TABLE OF CONTENTS

ABSTRACT

The present dissertation focused on one of the most immediate developmental contexts in adulthood—the romantic relationship—and examined the interrelations in couple members' experiences of subjective well-being. At the intersection of personality, social, and life span psychology this work sought to corroborate and expand our current understanding regarding the nature and the relational implications of couple interrelations in subjective well-being until the end of the romantic life span.

To that end, three studies were conducted, all of which relied on representative panel data (i.e., SHP, pairfam, SOEP). Couple-level analyses were employed to disentangle the intra- and interpersonal ties between romantic partners' subjective well-being on the one hand, and their implications for relationship happiness and stability, on the other. Insights derived from these studies can be organized along a descriptive, functional, and life span perspective.

Regarding the descriptive perspective, this dissertation applied the bottom-up model of life satisfaction (Diener, 1984) to the developmental unit of the couple. Findings suggest that couple members' overall evaluations of life are shaped not only by their own but also by their partners' satisfaction with various life domains. Taking a closer look at the strength of association between domain and life satisfaction, it was revealed that couple members are more similar than randomly paired individuals in the importance they place on their satisfaction with life together in the household. These similarities in domain importance illustrate that romantic partners are already interdependent in the way they arrive at their overall evaluations of life.

Regarding the functional perspective, this work investigated the role of couple interrelations in subjective well-being for relationship happiness and stability. By disentangling different indicators of couple interrelations and their unique contributions to relationship outcomes, it became evident that stronger couple interrelations in subjective well-being are not universally beneficial. Instead, the present findings suggest that a stronger susceptibility to the romantic partner might be unfavorable in challenging times, facilitating a transactional downward spiral toward separation. By contrast, couple similarities in domain importance and in the strength of romantic partners' susceptibility to each other predicted higher levels of relationship happiness. These findings illustrate the necessity to capture different indicators of couple interrelations when trying to arrive at a more nuanced understanding of its relational implications.

Finally, and regarding the life span perspective, this dissertation examined couple interrelations in subjective well-being in an end-of-life context. The current results suggest that couple members approaching the death of one partner, as opposed to couples that did not experience this stressful phase of life, showed increasing disparities and weaker between partner correlations in their changes in life satisfaction. However, these diverging developmental trajectories were not rooted in a diminishing transmission of romantic partners' life satisfaction. Instead, to-be-deceased and to be-bereaved partners remained susceptible to each other's declining levels of life satisfaction. These findings illustrate that romantic partners seem to co-produce each other's well- *and* ill-being until the end of their shared life span as a couple.

Insights gained from this cumulative dissertation will be used to derive an overarching update regarding the understanding of couple interrelations in subjective well-being and to provide an outline of important steps for future research.

1   Introduction

The science of happiness and the question of what makes people happy (or unhappy) has enthralled philosophers, economists, and psychologists for a long time (Heller, Watson, & Ilies, 2004). 'True happiness' is, however, a concept that is hard to capture, which is why many researchers rely on the construct of subjective well-being to approach the characteristics of a happy person (Diener et al., 2009). Subjective well-being can be understood as an umbrella term that entails cognitive evaluations of one's life in general and various life domains on the one hand, and emotional evaluations of positive and negative affect, on the other (Diener, 1984; Diener et al., 2003). On a more global level, judgments of subjective well-being indicate whether someone is living a 'good life' by their own personal standards (Diener & Suh, 2000). Hence, subjective well-being represents an important indicator and outcome of successful development (Baltes, 1987). At the same time, subjective well-being can itself act as a catalyst for positive development in that happier people tend to show better health-related, interpersonal, and career outcomes (Abele-Brehm, 2014; Diener & Chan, 2011; Gustavson et al., 2016; Hittner et al., 2020). Considering this virtuous cycle, a myriad of studies have investigated the factors that shape peoples' subjective well-being and its developmental trajectories across the life span.

The present dissertation follows up on this pursuit and broadens its focus from an individual-level toward a couple-level examination of subjective well-being. In doing so, the current dissertation seeks to acknowledge that human development unfolds within social contexts (Reis et al., 2000) and that—at least for people living in a romantic relationship—the romantic partner can act as a fundamental source of subjective well-being (Hoppmann & Gerstorf, 2016). This proposition is supported by an accumulating body of evidence showing that romantic partners' experiences of life satisfaction, domain satisfaction, and emotional well-being are highly intertwined (e.g. Hoppmann et al., 2011; Schimmack & Lucas, 2010; Sels et al., 2016).

Nevertheless, much remains unexplored about the nature of couple interrelations in subjective well-being, its implications for relationship functioning, and its development across the romantic life span. To provide insights into these unresolved issues, this work focuses on life and domain satisfaction and re-examines couple interrelations in subjective well-being along three perspectives: a descriptive, a functional, and a life span perspective. In doing so, this work integrates and tests theoretical conceptions that are rooted in personality, social, and life span psychology. At the intersection of these three psychological disciplines, this work aims to arrive at a more holistic *and* more fine-tuned understanding of how romantic partners co-produce each other's developmental outcomes—and in particular—their experiences of subjective well-being.

The current cumulative dissertation is structured as follows: Chapter 2 provides an outline of current theoretical propositions and empirical evidence on couple interrelations in subjective well-being, both of which created the impetus for the research questions presented in Chapter 3. Chapter 4 gives an overview of the studies that were conducted to answer these research questions, while Chapter 5 offers a synopsis of evidence derived from these studies. Finally, Chapter 6 offers a general discussion in light of this dissertation's three guiding perspectives and an outlook for future research.

2   Theoretical Background

2.1   The Romantic Couple as a Developmental Unit to Study Subjective Well-Being

It is a central theme of life span psychology that development is embedded in contexts that shape people's thoughts, behaviors, and feelings (Baltes, 1987; Bronfenbrenner, 1979). In recent years, calls have become louder to take a closer look at the social contexts of development and to "consider the intertwining behavioral stream of two or more individuals" (Baltes & Carstensen, 1999, p. 217). The present dissertation follows these calls and focuses on the context of the romantic relationship, representing a developmental unit of particularly strong interdependence (Kelley et al., 1983). Its unique role for development is nurtured by the considerable amount of time that couple members typically spend together (Neilson & Stanfors, 2018); the experience of very similar environments and challenges in life (Luhmann et al., 2014); as well as a high interest in the loved one's well-being, especially because dissatisfactions of one partner often have implications for the entire couple (Hoppmann & Gerstorf, 2016). Hence, it is unsurprising that the developmental unit of the couple has received more and more attention in the literature on subjective well-being.

Cross-sectional studies have documented that romantic partners resemble each other in their experiences of subjective well-being, as indicated by considerable correlations between both partners' concurrent reports of well-being (e.g. Bookwala & Schulz, 1996; Goodman & Shippy, 2002; Townsend et al., 2001). Such cross-sectional similarities can be due to selection effects—by which similarly happy persons are more likely to start a relationship with each other—or they can be the result of a continuous process—by which romantic partners change in a coordinated way across time (Hoppmann & Gerstorf, 2016). Consequently, to gain a deeper understanding of the ongoing interrelations in subjective well-being, longitudinal studies including both partners are needed. Schimmack and Lucas (2010) addressed this issue by using 22 yearly reports of spouses participating in the German Socioeconomic Panel Study (SOEP). The authors disentangled initial from ongoing similarity in partners' life and domain satisfaction. In doing so, they demonstrated that between-partner correlations in subjective well-being go beyond initial selection effects and that romantic partners' life satisfaction changes in the same direction across time. Hoppmann et al. (2011) also provided evidence that romantic partners' developmental trajectories of subjective well-being are highly intertwined: The authors reported a substantial between-partner correlation ($r = .77$) for changes in both partners' self-reported happiness across 35 years of observation. Finally—and offering further support for couple interrelations—similarities in subjective well-being were found to increase in dating couples that stayed together (Anderson et al., 2003) while they were found to diminish after divorce (Wortman & Lucas, 2016). Together, these studies illustrate that there is something unique about the developmental context of the romantic relationship that causes partners to "wax and wane together" (Hoppmann et al., 2011, p. 2). But what is it that makes romantic partners stick together in their experiences of subjective well-being?

Orth et al. (2018) distinguish two sources of ongoing similarity in romantic partners' developmental trajectories of subjective well-being. First, ongoing similarity may result from intradyadic transmissions by which couple members mutually influence each other's subjective well-being. These mutual transmissions may involve unconscious processes (Hatfield et al., 1993; Larson & Almeida, 1999; Thompson & Bolger, 1999) or they can entail a more active regulation of partner well-being, for

instance through physical touch (Debrot et al., 2013). Furthermore, couple members may also influence each other through their interaction styles, resulting in indirect well-being cross-overs between partners (Westman, 2001). As a second source of ongoing similarity, Orth et al. (2018) propose extradyadic influences that affect both partner's evaluations of well-being in a similar, yet independent way. That is, shared living conditions and resources, such as the financial situation, family life, and leisure time (Luhmann et al., 2014) may shape both partners' experiences of subjective well-being, resulting in very similar developmental trajectories, without the need for intradyadic influences. At the beginning of this dissertation project, at least three longitudinal studies had disentangled the described sources of ongoing similarity in the subjective well-being of romantic couples (Gustavson et al., 2016; Orth et al., 2018; Powdthavee, 2009). These studies found that couple members mutually influenced each other's life satisfaction over time, even when accounting for substantial initial similarities in life satisfaction as well as shared environmental circumstances.

The above findings underline the importance of considering the couple as a developmental unit to gain a more profound understanding of the determinants of subjective well-being across adulthood. It appears that subjective well-being is not a "private affair" (Gustavson et al., 2016, p. 1306) but that romantic partners are highly coordinated in their developmental trajectories of subjective-well-being. These coordinated developments seem to go beyond initial selection effects and are maintained by ongoing intradyadic transmissions and extradyadic factors that influence couple members' subjective well-being. These findings also illustrate that couple interrelations can be investigated from very different angles, including couple similarity, correlated changes, and intradyadic transmission effects—all of which contribute their own puzzle piece to our understanding of romantic partners' intertwined experiences of subjective well-being. In the present dissertation, the term *couple interrelations in subjective well-being* is used as an umbrella term to describe the different ways in which the codevelopmental ties between romantic partners can be conceptualized and investigated.

Altogether, these insights built the basis of the present dissertation and—at the same time—they fueled novel questions pertaining to the nature and implications of couple interrelations in subjective well-being across the romantic life span. The following sections provide an outline of unresolved issues that have guided the present work and that can be organized along a descriptive perspective, a life span perspective, and a functional perspective.

2.2   A Bottom-Up Approach to Describe Couple Interrelations in Subjective Well-Being

The first aim of this dissertation was to provide novel descriptive insights into the nature of couple interrelations in subjective well-being. Applying a personality psychological perspective, this dissertation transferred the traditional bottom-up of life satisfaction (Diener, 1984) to the context of romantic relationships and examined the intra- and interpersonal ties between domain and life satisfaction in couples.

The bottom-up model of life satisfaction (Diener, 1984) maintains that the sources of life satisfaction are rooted in a favorable living environment and in an accumulation of positive experiences. In this view, "a happy person is one with many happy moments" (Diener, 1984, p. 565). Cross-sectional and longitudinal evidence supports this proposition, suggesting that people's overall evaluations of life are constituted by their satisfaction with various life domains, including health, finances, work, standard of living, leisure time, family, and relationships (Busseri & Mise, 2019; González et al., 2010; Loewe et

al., 2014; Margolis & Myrskylä, 2013; McAdams et al., 2012; Rojas, 2007). Yet, based on the outlined evidence on couple interrelations in subjective well-being (see chapter 2.1), an individual-level perspective on the sources of life satisfaction (Diener, 1984) may fall short of understanding the contributors of life satisfaction in adulthood. Considering that couple members themselves represent an important living environment for each other (Gustavson et al., 2016), it is likely that their satisfaction with life is also dependent on the partner's domain-specific (dis)satisfaction. Hence, this dissertation expands the equation of life satisfaction to acknowledge the romantic partner and their satisfaction with various life domains as an additional bottom-up source of life satisfaction. Specifically, this work examines whether couple members' satisfaction with life in general is not only dependent on their own but also on their partner's satisfaction with various life domains. In doing so, this investigation expands our understanding of couple interrelations in life satisfaction because it paints a more fine-grained picture regarding the bottom-up domains of partner satisfaction that relate to personal satisfaction with life.

Despite the well-established link between domain satisfaction and life satisfaction, the whole appears to be more than the sum of its parts (Diener, 1984; Diener et al., 1985). That is, individuals differ in their composition of life satisfaction, and in particular, in the importance they place on their satisfaction with various life domains when coming to an overall evaluation of life (Hsieh, 2003; Oishi, Diener, Suh, et al., 1999; Rohrer & Schmukle, 2018). This variation in domain importance (Campbell et al., 1976) can be understood as a psychological process, by which a domain satisfaction is weighed before being integrated into overall judgements of life satisfaction (Diener, 1984). Previous studies found that people who find themselves in a similar developmental stage, who share a comparable cultural background, and who reveal a similar set of value orientations also resemble each other with regard to their domain importance (Hsieh, 2005; Oishi, Diener, Lucas, et al., 1999; Oishi, Diener, Suh, et al., 1999). This raises the question, whether domain importance, and hence the hedonic weight of certain life domains, is also interrelated among romantic partners. This question appears particularly plausible when considering that people tend to select themselves into relationships and maintain romantic bonds with others who show similar sociodemographic and psychological characteristics (Arrànz Becker, 2013; Buss, 1985; Caspi & Herbener, 1990; Denzinger et al., 2017; Gonzaga et al., 2010; Luo, 2017). In fact, couple members were found to be similar in terms of age (George et al., 2015; Schwartz & Graf, 2009; Watson et al., 2004); ethnic and religious background (Schwartz & Graf, 2009); as well as various attitudes, values, and life goals (Denzinger et al., 2017; Gaunt, 2006; Luo, 2009; Luo et al., 2008; Luo & Klohnen, 2005; Watson et al., 2004). It was therefore another objective of this dissertation to examine whether couple members are also similar in the importance they place on certain life domains when coming to an overall evaluation of life. In testing this assumption, this work goes beyond previous couple-level investigations of subjective well-being because it explores couple interrelations at the potentially intertwined way in which romantic partners come to their overall evaluation of life.

2.3   The Adaptiveness of Couple Interrelations in Subjective Well-Being

The second goal of this dissertation was to paint a more nuanced picture regarding the role of couple interrelations in subjective well-being for relationship outcomes. Guided by theoretical frameworks of social psychology, this work took a closer look at three indicators of couple interrelations in subjective well-being (i.e., couple similarity, intradyadic transmissions, mutuality) and disentangled their unique contributions to relationship happiness and stability.

The role of couple similarity. It is a widely held assumption that couple similarities in basic orientations toward life facilitate relationship functioning: Similarity between partners is expected to foster attraction, mutual understanding, and validation (Anderson et al., 2003; Berscheid & Hatfield Walster, 1969; Byrne, 1961). Dissimilarity, on the other hand, is assumed to hamper the coordination of everyday life and thus to increase the likelihood of conflicts and dissatisfactions within a romantic relationship (Luo, 2017). Based on the theorized benefits it should be expected that couple members who share a similar view on the world are more satisfied in their relationship. To explore this possibility, the present work focuses on couple similarities in domain importance and examines whether couples are happier in their relationship if they resemble each other in how they come to their overall evaluation of life.

So far, evidence has been mixed regarding the relational benefits of couple similarity (for a review see Luo, 2017). While some studies discovered beneficial effects of attitude, value, and goal similarities (Arrànz Becker, 2013; Gaunt, 2006; Leikas et al., 2018; Luo, 2009; Luo et al., 2008), other findings did not support a positive association between couple similarities and relationship satisfaction (Luo & Klohnen, 2005; Watson et al., 2004). To explain previous inconsistencies, Gaunt (2006) proposed that, with regard to couple similarity, "some dimensions contribute more than others to explaining marital satisfaction" (p.1402). In particular, similar attitudes are assumed to be more relevant for relational outcomes if they target the area of family and relationship life—most likely because they have stronger ramifications for daily relationship behaviors. Consequently, a domain-specific examination of the relational benefits of couple similarity might help alleviate previous inconsistencies. Alternatively, mixed findings on the role of couple communalities might also be an artefact of the employed similarity measure (Weidmann et al., 2017). The majority of previous investigations has relied on between-partner difference scores or profile correlations to examine the role of couple similarity in basic attitude, value, and goal orientations (for an exception see Leikas et al., 2018). These approaches are, however, limited in disentangling the effects of similarity at all possible combinations of romantic partners' characteristics (for a discussion see Edwards, 2001; Griffin et al., 1999; Nestler et al., 2015).

The present dissertation seeks to re-examine the relational implications of couple communalities within the realms of subjective well-being a) by disentangling the role of couple similarity in the importance of various life domains and b) by taking advantage of recent methodological advances in the field of similarity research. Based on theoretical notions on the relational benefits of couple similarity in basic orientations toward life (Berscheid & Hatfield Walster, 1969; Byrne, 1961), it is expected that couple members who resemble each other in their domain importance, are happier in their relationship. To test this expectation and to overcome previous methodological limitations, this dissertation employed domain-specific dyadic response surface analyses (Schönbrodt et al., 2018). In doing so, this investigation allows for fine-grained and unexplored insights into the relational benefits of couple interrelations in subjective well-being.

The role of intradyadic transmissions. As outlined earlier, observable similarities in subjective well-being may have different sources, including initial selection effects, intradyadic transmissions, and shared environmental influences (Hoppmann & Gerstorf, 2016; Orth et al., 2018). A closer look at these different sources of similarity is crucial when trying to gain a more profound understanding of the relational implications of couple interrelations in subjective well-being. According to interdependence

theory (Rusbult & Van Lange, 2008), the strength of intradyadic transmission effects should play a particularly important role in this regard. Indeed, interdependence theory (Rusbult & Van Lange, 2008) maintains that strong reciprocal ties between romantic partners represent a characterizing component of a well-functioning relationship. It is assumed that, only if romantic partners are susceptible to each other's thoughts and feelings, they are able to make decisions with their own and their partner's needs in mind. Consequently, stronger intradyadic transmissions of subjective well-being can be seen as a prerequisite for a positive relationship climate in which both partners and the relationship are able to thrive. Weaker bonds, on the other hand, are assumed to pose a risk for relationship instability (Joel et al., 2018; Rusbult & Van Lange, 2008).

So far, however, few studies have examined the link between couple interrelations in subjective well-being and relationship stability. Anderson et al. (2003) found that dating couples who showed stronger between-partner correlations in subjective well-being reported increases in relationship satisfaction in the following six months and, most notably, were also less likely to break up in this time interval. These findings underline the role of strong interpersonal ties when it comes to the longevity of a romantic relationship. Two other studies reported increasing dissimilarities in life satisfaction in couple members that separated (Guven et al., 2012; Schade et al., 2016). Moreover, Finn et al. (2020) identified weaker correlated changes between separating compared to stable partners' relationship satisfaction. Consequently, there is some evidence to suggest that the well-being of romantic partners decouples prior to separation.

To delve deeper into the proposition that a declining susceptibility to each other's subjective well-being can act as a harbinger of separation, this work investigated the characteristic patterns *and* changes in the longitudinal transmission of life and relationship satisfaction before the dissolution of a romantic relationship. In doing so, this work expands previous investigations on couple interrelations in subjective well-being and relationship stability in two ways. First, the present dissertation acknowledges that the path to separation takes time and involves multiple steps (Knapp, 1987). The decoupling of life and relationship satisfaction in separating partners is therefore examined as a continuous process that unfolds across time-to-dissolution. Second, instead of investigating between-partner level differences and correlations (Anderson et al., 2003; Finn et al., 2020; Guven et al., 2012; Schade et al., 2016), this work directly examines how romantic partners' well-being is transmitted on a longitudinal scale and how a declining strength of transmission might forecast relationship instability. This approach provides a stronger test of interdependence theory emphasizing the risks of a vanishing susceptibility between couple members' well-being (Kelley et al., 1983; Rusbult & Van Lange, 2008).

The role of mutuality. Despite the emphasized advantages of reciprocal ties between romantic partners' experiences, strong bonds between couple members' subjective well-being must not be ubiquitously favorable for a relationship (Butner et al., 2007). Interdependence theory also defines some boundary conditions for the relational benefits of romantic partners' susceptibility to each other. It posits that the strength of dependence between partners should be balanced for couple interdependence to be beneficial. In other words, it does not suffice to look at the strength of couple members' susceptibility to each other, but it is important to also consider the degree of mutuality. Interdependence theory proposes that similar levels of dependence between partners create a more favorable relationship climate in which interactions feel 'safer' and are more stable and affectively serene" (Rusbult & Van

Lange, 2008, p. 2053). In contrast, uneven patterns of dependence are assumed to foster an imbalance of control and power within the relationship and feelings of insecurity in the more dependent partner (Rusbult & Van Lange, 2008). So, far, there is a lack of studies addressing this proposition for the field of subjective well-being. The present work seeks to fill this gap by focusing on the interpersonal ties between romantic partners' domain and life satisfaction. To that end, it was examined whether couple members are happier in their relationship if they are more similar in their susceptibility to each other's domain satisfaction when evaluating their overall satisfaction with life. Consequently, evidence derived from this dissertation enables us to carefully inspect not only the relational benefits of both partners' susceptibility to each other but also the importance of being in tune with regard to this susceptibly—thereby testing to two basic tenets of interdependence theory within the realms of subjective well-being.

2.4   Couple Interrelations in Subjective Well-Being in an End-of-Life Context

The third and final goal of this dissertation was to explore romantic partners' interrelations in subjective well-being until the end of their shared life span. In following this objective, the current work zoomed into an end-of-life relationship context to examine the interrelations in life satisfaction in couples that approached the death of one partner.

Life span theoretical frameworks emphasize the role of contextual influences that shape individual development from infancy to old age (Baltes, 1987; Baltes et al., 2006; Bronfenbrenner, 1979). The social context, and especially the romantic couple, is seen as a particularly powerful context, in which partners co-produce each other's health, cognitive functioning, and subjective well-being (Baltes & Carstensen, 1999; Hoppmann & Gerstorf, 2009). Several arguments have been put forward to explain why the strength of couple interrelations should reach a climax in old age (Berg & Upchurch, 2007; Carstensen et al., 1996; Hoppmann & Gerstorf, 2016). On the one hand, long-standing couples are assumed to have turned into well-established teams across the shared history of their relationship (Hoppmann & Gerstorf, 2009). They capitalize from each other's strengths and compensate for each other's weaknesses, thereby optimizing each other's developmental outcomes, including subjective well-being (Baltes & Carstensen, 1999; Hoppmann & Gerstorf, 2009; Hoppmann & Gerstorf, 2016). Late in life, when the gain-to-loss ratio of physical, cognitive, and social development increasingly leans towards losses (Baltes & Baltes, 1990), couple interrelations are assumed to amplify because romantic partners need to rely more excessively on each other as a source of support (Berg & Upchurch, 2007). On the other hand, and from the perspective of socio-emotional selectivity theory (SST; Carstensen et al., 2003), old age is accompanied by an increased motivation to create meaningful affective experiences. When transferred to the developmental unit of the couple, it is assumed that a vanishing future time perspective comes with stronger regulative efforts to optimize the emotional relationship climate (Carstensen et al., 1996). This regulative emphasis on emotional experiences may also increase the susceptibility to the romantic partner and thus foster particularly strong patterns of couple interdependence in subjective well-being (Hoppmann et al., 2011).

When following these two lines of argumentation, it should be expected that the end-of-life context might act as a powerful catalyst for couple interrelations in romantic partners' subjective well-being. So far, however, previous studies examining subjective well-being in an end-of life context, have applied an individual-level perspective. One line of research has focused on the perspective of the dying person; while another has focused on the perspective of the bereaved person. Studies focusing on the dying

person have documented accelerated declines in life satisfaction in the immediate proximity to death (Gerstorf, Ram, Estabrook, et al., 2008; Gerstorf et al., 2010; Gerstorf, Ram, Röcke, et al., 2008; Mroczek & Spiro III, 2005). This phenomenon has been referred to as terminal decline—"the change that accrues as time runs out" (Gerstorf & Ram, 2015, p. 211)—and likely reflects severe deteriorations in other domains of functioning toward the end of life (i.e., cognitive, physical, and emotional functioning; for a review see Cohen-Mansfield et al., 2017). At the same time, evidence on the complementary perspective of the bereaved person suggests that the loss of a partner is not only followed but also preceded by characteristic declines in life satisfaction (Anusic & Lucas, 2014; Infurna et al., 2016; Lucas et al., 2003; Yap et al., 2012). These anticipatory well-being declines might mirror the physically and mentally burdensome experience of caregiving (Kaschowitz & Brandt, 2017; Schulz & Sherwood, 2008) as well as chronic feelings of insecurity and responsibility (Evans, 1994; Gardner, 2008; Nielsen et al., 2016; Schulz & Sherwood, 2008). In sum, both lines of research suggest that the years before [partner] death represent a challenging phase of life that jeopardizes the well-being of the to-be-deceased and to-be-bereaved person. Yet, both research strands have neglected the potentially intertwined experiences of couples that master this ultimate phase of life together as a developmental unit.

The present dissertation seeks to reconcile these two lines of research by employing an interdependent approach to examine the trajectories and the dyadic interrelations in life satisfaction in couples that approach the death of one partner. It is expected that both partners' experience and exposure to various and accumulating losses, an intensified pattern of support and care provision, as well as the awareness of a limited (shared) time perspective (Carstensen et al., 2003; McLean & Jones, 2007) turn this late phase of life into a uniquely stressful and highly intertwined relationship context, fostering exacerbated interrelations in life satisfaction. To test this assumption, the present work examined whether couple members approaching [partner] death would reveal stronger interrelations in life satisfaction than couple members who did not experience this developmental challenge. As indicators of couple interrelations in life satisfaction, this work focuses on correlated changes as well as longitudinal transmission effects between romantic partners' life satisfaction. By exploring how couple interrelations in subjective well-being evolve prior to [partner] death, the present dissertation acknowledges the contextualized nature of development up until the end of life (Baltes, 1987; Bronfenbrenner, 1979), thereby providing novel insights into the interpersonal determinants of late-life well-being.

3   Summary and Research Questions

This dissertation examines couple interrelations at the intersection of personality, social, and life span psychology. In doing so, it aims to provide novel insights into the bottom-up nature of couple interrelations in subjective well-being (Study 1), its implications for relationship happiness and stability (Study 1 and Study 2), and its development until the end of the shared life span (Study 3). Figure 1 provides an integrative overview of the present dissertation concept and the studies that answer six research questions. These research questions can be organized along a descriptive, functional, and life span perspective.

Descriptive Perspective. *Research Question 1*: Is couple members' overall satisfaction with life related not only to their own but also to their partner's satisfaction with various life domains? *Research Question 2*: Are couple members more similar than randomly paired individuals in the importance they place on certain life domains when coming to an overall evaluation of life.

Functional Perspective. *Research Question 3*: Do couple similarities in domain importance predict relationship happiness? *Research Question 4*: Is the dissolution of a romantic relationship foreshadowed by a declining strength in the intradyadic transmission of couple members' life and relationship satisfaction? *Research Question 5*: Does the mutuality of partner dependence predict relationship happiness?

Life Span Perspective. *Research Question 6*: Do couple members who approach the death of one partner show stronger interrelations in life satisfaction than couples who do not experience this developmental challenge?
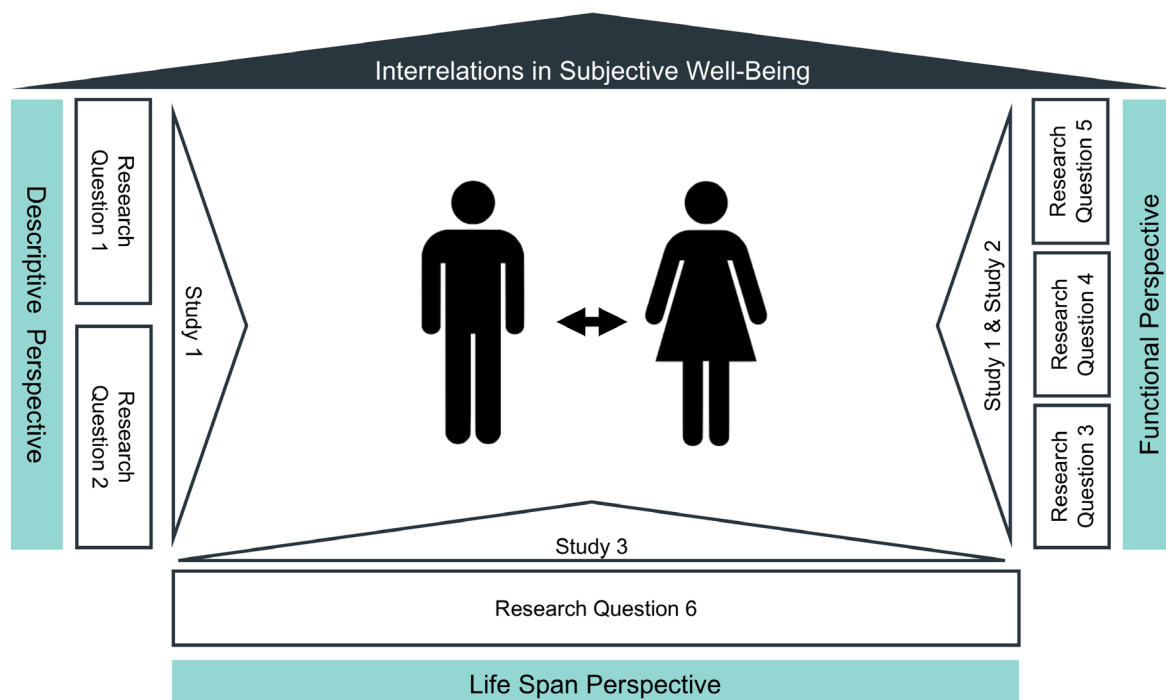

Figure 1. Dissertation concept. Study 1: Wünsche, Weidmann, & Grob (2020a); Study 2: Wünsche, Weidmann, Ledermann et al. (2020); Study 3: Wünsche, Weidmann, & Grob (2020b).

4   Methods

4.1   Data Sources and Procedures

All of the presented research questions were investigated with archival panel data collected in Switzerland and Germany. Specifically, Study 1 used data of the Swiss Household Panel (SHP, version 6097-4); Study 2 was based on the on the German Family Panel (pairfam, version 10.0), and Study 3 relied on the German Socio-Economic Panel (SOEP, version 32).

SHP. The SHP is an ongoing representative study that collects data of adults living in private households in Switzerland. It has been conducted on an annual basis since the year 1999. Starting with a stratified random sample of 5,074 households, two refreshment samples were added in in 2004 (2,538 households) and 2013 (4,093 households). To be eligible for the SHP, participants need to be older than 13 years. For the most part, data are collected via computer-assisted telephone interviews (CATI; see Voorpostel et al., 2018 for more detailed information on the study design). To address Research Questions 1, 2, 3, and 5, Study 1 relied on waves 1 to 17 of the SHP (2001-2017). The first two survey years were excluded because they did not contain all of the study-relevant variables.

pairfam. The pairfam is a German multi-actor panel survey that was first conducted in 2008. Since then, anchor persons have been interviewed via computer-assisted personal interviews (CAPI) on a yearly basis. The initial anchor sample was randomly selected from three birth cohorts (ages 15–17, 25–27, and 35–37 years). Consequently, the pairfam sample is representative of German residents who were born in these cohorts. In each wave, anchor persons are asked for consent to invite their partners, parents, and children to also participate in the study. Anchor persons' partners are surveyed via paper-and-pencil questionnaire. Fifty percent of all anchor person's partners regularly participate in the survey. A more detailed description of the pairfam is provided by Huinink et al. (2011). To explore Research Question 4, Study 2 was based on all available waves of the pairfam (i.e., 2008–2017).

SOEP. The SOEP is a nationally representative panel survey of German adults living in non-institutionalized households. The initial sample of households was drawn in 1984. Since then, the SOEP has been conducted on a yearly basis and it was enlarged and refreshed using a multi-stage random sampling procedure. In 2017, the SOEP panel comprised 30,000 individuals belonging to 15,000 households. Data are collected via CAPI that are conducted with household members aged 16 years or older. A comprehensive overview of the SOEP design and rationale is provided by Goebel et al. (2019). To examine Research Question 6, Study 3 made use of all available SOEP waves (i.e., 1984–2015).

4.2   Samples and Measures

Study 1. Study 1 used data of the SHP to examine the intra- and interpersonal link between couple members' domain satisfaction and life satisfaction and to explore whether couple similarities in domain importance predict relationship happiness. In the SHP, life satisfaction is assessed on an annual basis and it was introduced to the survey in 2000. Participants respond to the following question on an 11-pont scale: "In general, how satisfied are you with your life if 0 means 'not at all satisfied' and 10 means 'completely satisfied'?". Regarding domain satisfaction, Study 1 focused on six life domains: health, finances, life together in the household, housework, leisure time, and personal relationships. In each wave, participants indicated how satisfied they were with these domains of life. Finally, relationship happiness was assessed in 2016 and 2017 by asking participants "In general, how happy are you in

your actual couple relationship, if 0 means 'very unhappy' and 10 'very happy'?". For the present analyses a subsample of female-male couples participating in the SHP was selected. Specifically, couples were selected if both partners at least once reported on their relationship happiness; if they at least once reported on their domain and life satisfaction prior to reporting on their relationship happiness; and if both partners provided information on the sociodemographic matching variables (i.e., baseline age, years of education, parental status, employment status). 2,285 couples met these criteria. Based on the identified couple sample, a matched sample of 2,285 random pairs was created. Due to the matching procedure, randomly paired individuals were comparable to their real couple counterparts, at least when considering between-partner differences in age, years of education, parental status, and employment status.

Study 2. Using data of the pairfam panel, Study 2 examined whether couple interrelations in life and relationship satisfaction diminishes in the years prior to separation. Life and relationship satisfaction are measured with the single-item questions "All in all, how satisfied are you with your life at the moment?" and "All in all, how satisfied are you with your relationship?". In each survey year, participants responded to these questions on an 11-point scale ranging from 0 (*very dissatisfied*) to 10 (*very satisfied*). The event sample contained anchor persons and their partners, if they separated in the course of the study; if they participated together in at least two consecutive waves prior to separation; and if they reported on the relevant variables for the matching procedure (baseline age, education, labor force status, previous divorce, marital union, parental status, binationality of the couple, relationship duration). Using propensity score matching, a control sample of stable couples was created. This control sample showed a similar baseline likelihood to separate but their relationship persisted across the observation period. The final event and control samples contained 450 separating couples and 450 stable couples.

Study 3. To investigate couple interrelations in life satisfaction in the years prior to [partner] death, Study 2 relied on SOEP data. In the SOEP, life satisfaction is assessed on a yearly basis and with the single-item question "All things considered, how satisfied are you with your life?". Participants responded to this question on a scale ranging from 0 (*totally dissatisfied*) to 10 (*totally satisfied*). Multiple selection criteria were employed to identify the analysis sample for the research question at hand. Specifically, couples were selected if (exactly) one partner died in the course of the study; if both partners reported on their life satisfaction (at least) in the three successive years prior to [partner] death; if neither partner reported the loss of a partner in any of the previous waves; and if both partners provided information on the matching variables (baseline age, years of education, disability status, parental status, employment status). Having identified the final event sample, propensity score matching was employed to identify a control sample of couples that revealed a comparable baseline likelihood to experience [partner] death, but in which neither partner died during the observation period. These steps resulted in an event sample of 1,450 couples and a control sample of 1,450 couples.

4.3   Statistical Approach

Study 1. To unravel the intra- and interpersonal link between domain satisfaction and life satisfaction in couples (Research Question 1), multilevel actor-partner interdependence models (APIM; Kenny, 1996; Kenny & Cook, 1999) were employed. In these models, both couple members' life satisfaction at a given point in time was predicted by their own and their partners' concurrent domain satisfaction (i.e., person-mean-centered) as well as their own and their partners' average domain

satisfaction across the entire observation period. Intrapersonal links connecting domain and life satisfaction *within* partners were extracted for each person and used as an indicator of domain importance. Interpersonal links connecting domain and life satisfaction *between* partners were extracted as an indicator of partner dependence. To examine whether couples are more similar in their domain importance than random pairs (Research Question 2), the same analytical procedure was applied to the matched sample of random pairs. Regression analyses were conducted to test whether couples and random pairs differed with regard to between-partner dissimilarities in domain importance. Finally, dyadic response surface analyses (Humberg et al., 2019; Schönbrodt et al., 2018) were employed to examine how similarities in domain importance (Research Question 3) and partner dependence (Research Question 5) were related to both partners' relationship happiness. All analyses were conducted in R (R Core Team, 2019), using the nlme (Pinheiro et al., 2019), lavaan (Rosseel, 2012), and RSA (Schönbrodt & Humberg, 2020) packages.

Study 2. To uncover whether the interdependence in subjective well-being diminishes as couple members approach separation (Research Question 4), the present dissertation employed APIMs (Kenny, 1996; Kenny & Cook, 1999) to examine how life and relationship satisfaction is transmitted between partners across time. In these models, both partners' life (or relationship) satisfaction was predicted by their own and their partner's life (or relationship) satisfaction in the previous year (person-mean-centered) as well as by the partner's average life (or relationship) satisfaction across the entire observation period. It was also tested whether the strength of the transmission effects was moderated by time-to-event. Findings were compared to a control sample of stable couples that did not separate during the study. All analyses were conducted in SAS using MIXED procedure (Littell et al., 2006).

Study 3. To investigate couple interdependence in life satisfaction in the years preceding the death of one partner (Research Question 6), two analytical steps were taken. In a first step, multilevel dyadic growth models (Kashy & Donnellan, 2008) were employed to estimate the trajectories of life satisfaction in to-be-deceased and to-be-bereaved partners. These models also allowed to capture between-partner correlations in the estimated levels and changes in life satisfaction as couple members approached the year of [partner] death. In a second step, multilevel APIMs (Kenny, 1996; Kenny & Cook, 1999) were specified to examine how life satisfaction is transmitted between to-be-deceased and to-be-bereaved partners. Specifically, both partners' life satisfaction at a given time point was predicted by their own and their partner's life satisfaction reported in the previous survey year (person-mean-centered). Similar to Study 2, it was also explored whether the strength of the transmission effects interacted with time-to-event. To ensure that the obtained results are characteristic of the context of impending [partner] death, findings were compared to a control sample of couples in which neither partner died during the study. All analyses were conducted in SAS using MIXED procedure (Littell et al., 2006).

5   Synopsis of Results

Study 1. Findings of Study 1 suggest significant intrapersonal associations between domain and life satisfaction for all of the investigated life domains. Most importantly, the results also suggest significant interpersonal associations between domain and life satisfaction. That is, both female and male couple members were more satisfied with life on occasions when their partner was more satisfied (than usual for them) with their financial situation, life together in the household, distribution of housework, or personal relationships. For the domain of leisure time, the interpersonal effect of partner fluctuations was not significant. With regard to health, a gender-specific effect was observable: Females but not males were more satisfied with life on occasions when their partner was more satisfied (than usual for them) with their health. Average domain satisfaction was also related to overall life satisfaction on an intra- and interpersonal scale. The only exception emerged for the financial domain. Couple members' average level of financial satisfaction did not predict the partner's life satisfaction. Regarding couple similarities in domain importance, significant differences between couples and random pairs were only observed for the domain of life together in the household: Couples were more similar than random pairs in how strongly their overall satisfaction with life was linked to their satisfaction with life together in the household. The relational benefits couple similarity in domain importance were also limited to the domain of life together in the household. That is, higher levels of couple similarity in the importance of life together in the household were linked to higher levels of relationship happiness. Finally, and regarding the mutuality of partner dependence, congruent levels of partner dependence in the domains of life together in the household and leisure time were associated with higher levels of relationship happiness.

Study 2. The results of Study 2 suggest that separating and stable couple members' reports of life and relationship satisfaction were positively associated with their partners' average satisfaction across waves. Regarding life satisfaction, this association was more pronounced in separating couples. Moreover, significant longitudinal transmission effects of within-partner fluctuations in relationship and life satisfaction were only observed in separating but not in stable couple members. However, these longitudinal transmission effects were gender-specific. That is, males but not females were susceptible to their partner's fluctuations in life satisfaction, while females but not males were susceptible to their partner's fluctuations in relationship satisfaction. The strength of these transmission effects appeared to remain stable across time-to-separation, suggesting that relationship dissolutions are not foreshadowed by a vanishing interdependence.

Study 3. Findings of Study 3 suggest that both to-be-deceased and to-be-bereaved partners experienced significant and accelerated declines in life satisfaction in the years before [partner] death. Among to-be-deceased partners, the observed declines were more pronounced. Partners in the control sample also showed significant and accelerated declines in life satisfaction. Yet, compared to the event sample, these declines were less intense and they did not differ between partners. We also observed that couples approaching [partner] death experienced weaker between-partner correlations in their declines of life satisfaction than couples that did not experience [partner] death. Finally, life satisfaction was significantly transmitted between partners and the strength of this effect did not differ between the samples or across time-to-event.

6   Discussion

The romantic couple represents a powerful unit to study how developmental outcomes are co-produced in relation to close others (Hoppmann & Gerstorf, 2016). The three studies included in this dissertation focused on the codevelopmental ties between romantic partners' subjective well-being. In doing so, this work took a closer look at the nature and adaptiveness of couple interrelations until the end of the shared romantic life span. In the following, insights derived from these studies will be summarized and discussed along a descriptive, a functional, and a life span perspective. They will also be used to conclude with an integrative update regarding our understanding of couple interrelations in subjective well-being, on the one hand, and a call for future research on the other.

6.1   Descriptive Perspective

The first aim of this dissertation was to expand our understanding of the nature of couple interrelations in subjective well-being by describing the intra- and interpersonal ties between domain satisfaction and life satisfaction in romantic couples. Drawing from the field of personality psychology, the present work applied the bottom-up model of life satisfaction (Diener, 1984) to the developmental unit of the couple.

The present findings suggest that personal satisfaction with health, finances, life together in the household, the distribution of housework, leisure time, and personal relationship had significant intra- and interpersonal ramifications for both partners' life satisfaction. Specifically, couple members tended to be the most satisfied with life if they *and* their partners were currently more satisfied (than usual for them) and if they *and* their partners generally tended to be more satisfied (than other sample members) with various life domains. These findings complement earlier individual-level research documenting bottom-up associations between domain satisfaction and life satisfaction (Busseri & Mise, 2019; Easterlin, 2006; González et al., 2010; Loewe et al., 2014; Margolis & Myrskylä, 2013; McAdams et al., 2012; Rojas, 2007) and they also corroborate couple-level evidence on the interpersonal ties between romantic partners' subjective well-being (Gustavson et al., 2016; Orth et al., 2018; Powdthavee, 2009; Schimmack & Lucas, 2010). Yet, the current dissertation goes beyond previous couple-level investigations of subjective well-being because it disentangles the domains as well as the sources of variation in partners' satisfaction that might account for the codevelopmental ties in romantic partners' overall satisfaction with life. In following this approach, it became evident that for some life domains, couple interrelations were gender-specific (i.e., health), while for others, couple interrelations only unfolded at the level of within-partner fluctuations (i.e., finances) or average tendencies (i.e., leisure time). From an applied standpoint, these findings—and particularly those on within-partner fluctuations in domain satisfaction—provide valuable insights into the intra- and interpersonal processes contributing to couple members' life satisfaction because they show for *whom* and for *which* life domains a boost (or decline) in satisfaction might come along with a boost (or decline) in both partners' life satisfaction. At the same time, and viewed through a theoretical lens, the present findings strongly underpin the proposition to expand the bottom-up equation of life satisfaction (Diener, 1984) by adding the romantic partner and their satisfaction with various life domains as a complementary source of life satisfaction.

To capture couple interrelations in the way that romantic partners arrive at their overall evaluations of life, it was examined whether romantic partners resemble each other in their domain importance, that

is, in the strength of association between their domain and life satisfaction. According to the present findings, such couple interrelations appear to be limited to the domain of life together in the household. That is, couples, as opposed to random pairs, were more similar in how strongly their satisfaction with life together in the household was related to their satisfaction with life in general. For the remaining life domains, couple members were no more similar than random pairs regarding their domain importance. The unique role of life together in the household is best understood when considering that this life domain is highly intertwined with daily relationship life itself. It is therefore possible that a misfit regarding the importance of this highly relationship-relevant life domain is particularly delicate and acts as a "deal-breaker" (Watson et al., 2004, p. 1064) for the maintenance of a romantic bond. Following this line of argumentation, it can be speculated that especially those romantic unions stood the test of time (and ended up the present data), where partners placed a similar importance on life together in the household. Transferred to our understanding of the nature of couple interrelations in subjective well-being, these findings imply that romantic partners are not only interdependent regarding their experiences of domain and life satisfaction but they also resemble each other in the way they arrive at their overall evaluation of life—at least when considering a domain that is pertinent to relationship life. This provides initial hints that we should consider adding a fourth component to the three theorized sources of observable couple interrelations in subjective well-being (Hoppmann & Gerstorf, 2016; Orth et al., 2018). Potentially, romantic partners are not only interrelated in their experiences of life satisfaction because they 1) select themselves into relationships with others who are equally satisfied, 2) mutually influence each other's satisfaction across time and 3) share similar life circumstances and every-day-life challenges. Instead, couple members may also arrive at comparable levels of life satisfaction because they share a common formula to integrate their bottom-up sources of well-being— and especially those related to relationship life—into their subjective evaluations of well-being. Future research is encouraged to further explore this additional source of observable couple interrelations and to apply a top-town perspective (Diener, 1984) to scrutinize common personality characteristics of romantic partners that might account for similarities in their equation of happiness.

6.2   Functional Perspective

The second aim of this dissertation was to take a closer look at the relational implications of couple interrelations in subjective well-being. Drawing from social psychological conceptions, this work sought to disentangle the adaptive potential of couple similarity and intradyadic transmission effects as well as the mutuality of partner dependence within the realms of subjective well-being.

The present dissertation employed state-of-the-art methods and followed a domain-specific approach to examine whether couple similarities in domain importance are linked to relationship happiness. When considering the present findings, it appears that the relational benefits of couple similarity are limited to the domain of life together in the household: Dyadic response surface analyses (Schönbrodt et al., 2018) implied that romantic partners were the happiest in their relationship if both couple members placed congruent levels of importance on the domain of life together in the household. For the remaining life domains couple similarity did not matter for relationship happiness. These findings support Gaunt's (2006) proposition that a misfit between romantic partners' basic orientations toward life is most delicate if these orientations directly map on the domains of family and relationship life. Considering that attitudes are most valid predictors of behavior if both originate the same target context

(Ajzen & Fishbein, 1977) it could be imagined that incompatible priorities in the domain of life together in the household impede the coordination of daily relationship activities, thereby creating a breeding ground for conflicts and dissatisfaction (Anderson et al., 2003; Luo, 2017). Combined with the observation that the importance of life together in the household was the only domain in which romantic partners' domain importance was found to be more similar than randomly paired individuals', it can be concluded that shared priorities in this area of life play a special role for relationship functioning. These findings also provide a novel perspective for our understanding of the adaptiveness of couple interrelations in subjective well-being because they suggest that couple similarities in the hedonic weight of certain life domains matter for romantic partners' relationship happiness.

Investigations of couple similarities can provide important answers as to why some relationships are happy and persist while others are burdensome and dissolve. Yet, such investigations do not inform about the underlying sources of couple similarity and how they affect different relationship outcomes, including relationship stability. The present dissertation therefore aimed to take a closer look at the relational implications of one of these sources and examined the role of intradyadic transmission effects of life and relationship satisfaction for romantic longevity. Based on theoretical conceptions on the relational benefits of a stronger susceptibility between romantic partners' thoughts and feelings (Joel et al., 2018; Rusbult & Van Lange, 2008), it was expected that a decoupling of romantic partners' subjective well-being might act as a harbinger of separation. Findings of the present dissertation did not support this proposition. The years prior to separation were not characterized by a decline in romantic partners' susceptibility to each other's life and relationship satisfaction. On the contrary, separating but not stable couples showed significant longitudinal transmission effects of within-partner fluctuations in life and relationship satisfaction. These findings paint a very different picture than that obtained from earlier studies which documented weakening interpersonal ties between separating partners' life and relationship satisfaction (Finn et al., 2020; Guven et al., 2012). To resolve these inconsistencies, it needs to be pointed out that previous investigations relied on between-partner difference scores and correlated change analyses, while the present work investigated longitudinal intradyadic transmission effects to capture the mutual influence that romantic partners exert on each other. By focusing on couple members' susceptibility to each other's life and relationship satisfaction it could be shown that—against existing literature and previously held expectations—the context of impending separation was characterized by a stronger sensitivity to romantic partners' ups and downs in satisfaction. These findings may speak to the possibility that a higher sensitivity to romantic partners' fluctuations in life and relationship satisfaction is not a universally favorable relationship feature. In fact, additional analyses also suggested that separating couples experienced significant declines in life and relationship satisfaction that were not observed in couples that did not approach separation. Hence, being susceptible to the romantic partner's declining life and relationship satisfaction may have exacerbated the deteriorating relationship climate and created a reciprocal downward spiral toward separation. It may therefore be concluded that a sensitivity to romantic partner's fluctuations in relationship and life satisfaction is less adaptive in times of relational distress.

Another angle from which the benefits of couple interrelations in subjective well-being can be investigated and differentiated is offered by the perspective of mutuality. Relying on the proposition that romantic partner's sensitivity to each other's thoughts and feelings should be balanced to create a

healthy relationship climate (Rusbult & Van Lange, 2008), the present dissertation examined whether romantic partners are happier in their relationship if both show a comparable dependence on each other's satisfaction with various life domains when coming to an overall evaluation of life. The current findings provide initial support for this proposition—although only for the domains of life together in the household and leisure time. Romantic partners tended to be happier if they were equally dependent upon one another, that is, when they resembled each other in how susceptible they are to each other's ups and downs in domain satisfaction. This beneficial link is in line with the conception that mutual dependence creates a more benevolent relationship climate; while a disproportion of dependence is expected to foster an imbalance of power between partners and a sense of insecurity in the more dependent partner (Rusbult & Van Lange, 2008). The present investigation is the first to examine the relational benefits of mutuality in couple members' susceptibility to each other's subjective well-being. Hence, future research is needed to replicate these exploratory insights.

In sum, the present work implies that it is not warranted to assume ubiquitously positive effects of stronger interpersonal ties between romantic partners' subjective well-being. Instead, it is crucial to apply a more fine-grained perspective to sharpen our understanding of the relational benefits of couple interrelations in subjective well-being and the boundary conditions under which these benefits unfold. Along these lines, the examined relationship context as well as the chosen indicators of couple interrelations may have important implications for conclusions regarding its adaptiveness.

6.3   Life Span Perspective

The third and final goal of this dissertation was to examine the interrelations in subjective well-being until the end of a romantic relationship due to the death of one partner. Based on life span theoretical conceptions, which propose a high point of couple interrelations in old age (Baltes & Carstensen, 1999; Berg & Upchurch, 2007; Carstensen et al., 1996; Hoppmann & Gerstorf, 2016), it was explored whether an end-of-life context acts as a catalyst of amplified couple interrelations in subjective well-being. To test this assumption, the present dissertation focused on life satisfaction and tested whether couple members approaching [partner] death revealed stronger couple interrelations in life satisfaction than couple members who were not experiencing this developmental challenge.

The current findings suggest that couples approaching and not approaching [partner] death showed substantial interrelations in their developmental trajectories of subjective well-being as indicated by strong between-partner correlations in their experienced changes in life satisfaction. Yet, the proposition of reinforced couple interrelations in life satisfaction in an end-of-life relationship context could not be supported. Couple members approaching [partner] death but not those in the control sample showed increasing disparities in their levels of life satisfaction and they also revealed weaker between-partner correlations in their changes in life satisfaction. Importantly, however, the divergent developmental trajectories of life satisfaction cannot be explained by a vanishing susceptibility between to-be-deceased and to-be-bereaved partners' life satisfaction: Significant longitudinal transmission effects were observed in both samples of couples and they neither differed in strength between the samples nor did they change across time. These findings, once more, illustrate the necessity to disentangle different indicators of couple interrelations to paint a more comprehensive picture of the nature of interdependence in couple members' subjective well-being.

It is proposed that the sources for increasing disparities in to-be-deceased and to-be-bereaved partners' life satisfaction are rooted in both partners' unique individual-level experiences associated with the context of impending death and partner loss. It appears that the challenges involved with the terminal stage of life, including mortality-related physical, cognitive, and socio-emotional constraints (Cohen-Mansfield et al., 2017), took a greater toll on to-be-bereaved partners regulatory capacities than did the burdensome experiences of worry, insecurity and caregiving on to-be-bereaved partners (Evans, 1994; Gardner, 2008; Kaschowitz & Brandt, 2017; Nielsen et al., 2016; Schulz & Sherwood, 2008). Apparently, these differential challenges resulted in more individualized but not in more immunized developmental trajectories of life satisfaction. That is, even if couple members' levels of life satisfaction increasingly drifted apart, their susceptibility to each other's well-being remained unchanged—even in times of accelerated decline. Consequently, romantic partners seem to co-produce each other's well- and ill-being until very late in life. This underpins the proposition to acknowledge the contextualized nature of development across the *entire* life span—from the cradle to the grave—to fully understand the determinants of successful development and ageing (Baltes, 1987; Baltes et al., 2006; Bronfenbrenner, 1979).

In sum, it could be shown that the context of impending [partner] death did not act as a catalyst for increasing (but also not for decreasing) couple interrelations in the developmental unit of the couple. It should be emphasized, however, that this does not imply that old age is not characterized by an exacerbated interdependence between romantic partners. In the present sample, couple members were in their late fifties at baseline (*M* = 58, *SD* = 13). When comparing their interrelations in life satisfaction to those observed in stable couples of Study 2 (who were in their late twenties at baseline; *M* = 28, *SD* = 8), it is striking that older but not younger couple members influenced each other's life satisfaction on a longitudinal scale. Hence, the case is not yet closed for the theorized age-related increases in couple members' interrelations in subjective well-being. Future research is needed to directly examine changes in couple members' susceptibility to each other's subjective well-being across the entire romantic life span.

6.4   Strengths and Limitations

The present dissertation has strengths and limitations. From a conceptual perspective, it is a strength that subjective well-being within romantic relationships was examined from a broader *and* a more detailed perspective. This investigation is broader because couple interrelations in subjective well-being were analyzed through the paradigmatic lenses of personality, social, and life span psychology. By applying these different perspectives to one and the same phenomenon, this dissertation provided a more holistic understanding regarding the nature and relational implications of couple interrelations until the end of the shared life span. It is more detailed because the present dissertation disentangled different indicators of couple interrelations in subjective well-being, their differential links with relationship outcomes, and their evolution until the end of the shared romantic life span—due to separation or due to the death of one partner. In doing so, this dissertation showed that it is valuable to examine couple interrelations in subjective well-being in different life domains and relationship contexts but also at different levels of resolution, including couple similarity, correlated changes, intradyadic transmissions, and the mutuality of partner dependence. It is one of the major contributions of this work to reveal that conclusions regarding the nature and adaptiveness of couple interrelations across the life

span heavily depend on conceptual and also methodological choices. From a methodological point-of-view it is a strength of this dissertation that findings are based on three different representative panel studies and state-of-the art analytical approaches to capture dyadic interrelations in subjective well-being on the one hand, and their link with relationship outcomes on the other. Furthermore, this work used randomly selected as well as propensity-score matched control groups to assure that the observed patterns of interrelations are rooted in the specific developmental context of the couple.

Despite these conceptual and methodological strengths, the present dissertation has three major limitations that might inspire future research in this field. First, this work exclusively focused on cognitive dimensions of subjective well-being and did not examine the reciprocal ties between romantic partners' emotional well-being. It is known, however, that positive and negative affect also covary between couple members (e.g., Butner et al., 2007; Saxbe & Repetti, 2010; Schoebi, 2008). Based on the present findings it remains an unanswered question how stronger couple interrelations in positive and negative dimensions of subjective well-being differentially feed into different relational outcomes and how they evolve until the end of the shared romantic life span. Second, the present dissertation exclusively relied on annual panel data to capture intradyadic transmission effects of subjective well-being within couples. Such data do not allow for a closer examination of the pathways of well-being transmission between partners. In other words, the cognitive, behavioral, and emotional mechanisms underlying the observable interrelations could not be explored in this dissertation. Finally, although this work investigated the nature and implications of couple interrelations in different relationship contexts, it did not apply a more differential perspective to explain heterogeneity in the strength of couple interrelations and its potential to hamper or facilitate successful development. Taking a closer look at personality characteristics, which act as a toolbox that romantic partners bring into a relationship (Weidmann et al., 2016), might help to illuminate why some couples are more interdependent in their subjective well-being than others and why for some stronger bonds with the partner are experienced as more positive than for others. Relatedly, but from a macro-level perspective, the role of the socio-historical context was also neglected in this work. It could be imagined, however, that changing expectations toward a satisfying relationship and a declining willingness to stay in an unhappy relationship also have ramifications for couple interrelations in subjective well-being—especially late in life. Most likely, future generations of older couples look back on a shorter history of joined collaboration, which should also be reflected in the strength of their codevelopmental ties (Hoppmann & Gerstorf, 2016). These and related questions await to be answered in future studies.

6.5   Integrative Conclusion and Calls for Future Research

At the intersection of personality, social and life span psychology, the present dissertation corroborates and expands previous research on the nature of couple interrelations in subjective well-being and its relational implications across the romantic life span. When dissolving the paradigmatic boundaries of these disciplines, three overarching conclusions and calls for future research can be derived from this work.

First, interrelations in subjective well-being are deeply rooted in the developmental unit of the couple and they can be observed from different descriptive angles: concurrently and longitudinally, within and between different indicators of satisfaction; for partners' average tendencies and for their fluctuations across time. Couple interrelations were also revealed for domain importance—at least when

considering a life domain that is pertinent for relationship life. This latter finding is particularly meaningful for our understanding of the sources of couple interrelations in subjective well-being. It provides initial hints for an additional source of observable couple interrelations in life satisfaction.

Second, couple interrelations in subjective well-being seem to be a double-edged sword. Sharing each other's highest highs and lowest lows brings the potential to optimize one's personal experiences. However, in challenging times, it also carries the risk of becoming more vulnerable (Carstensen et al., 1996; Hoppmann & Gerstorf, 2009; Hoppmann & Gerstorf, 2016). Focusing on two end-of-relationship contexts, this work could show that couple interrelations remained unchanged in stressful times—irrespective of whether a couple was dissolved by choice or by the death of one partner. When considering that both relationship contexts were accompanied by deteriorations in subjective well-being it must be concluded that strong codevelopmental ties have contributed to a downward spiral in life and relationship satisfaction. At the same time, however, these findings also underline the potential for interventions. That is, successful programs to enhance one partner's subjective well-being in challenging times possibly maximize the outcomes for the entire couple (Goodman & Shippy, 2002).

Third, and relatedly, the current findings do not suggest universal relational benefits of stronger interpersonal ties between romantic partners' subjective well-being. Instead, the present dissertation strongly suggest that it is important to disentangle different indicators of couple interrelations in subjective well-being when interested in its ramifications for relationship functioning. While a higher susceptibility to romantic partners' (dis)satisfactions can potentially exacerbate an existing negative relationship climate, couple similarity in domain importance as well as the mutuality of partner dependence seem to bring advantages for relationship happiness. In sum, evidence derived from this dissertation challenges one of the basic tenets of interdependence theory, which sees a strong susceptibility between partners as a foundation for a well-functioning relationship (Rusbult & Van Lange, 2008). Regarding subjective well-being, this universal claim is not warranted.

Future studies might apply a threefold focus when delving deeper into the nature of couple interrelations in subjective well-being and its relational implications across the romantic life span. First, to illuminate the cognitive, behavioral, and emotional pathways of well-being transmission between romantic partners, future investigations would benefit from the use of measurement burst designs. Such designs would allow to investigate couple interrelations where they occur—in daily life. At the same time, they would offer a powerful tool to track micro-level transmissions across longer time frames, ideally across the entire romantic life span. Second, when investigating couple interrelations in every-day life and across the romantic life span, future studies should take a closer look at the differential transmission of positive and negative emotional well-being. This would provide a more differential understanding of how romantic partners co-produce each other's well- and ill-being until old age. Third, it is an important task for future research to examine how couple members' personality characteristics and the embeddedness in socio-historical context shape couple interrelations in subjective well-being and its implications for the individual and the relationship. Integrating these micro- and macro-level perspectives on development (Brandtstädter & Greve, 1994) by means of combined micro- and macro-longitudinal designs would help to arrive at a more profound understanding of the codevelopmental ties between romantic partners, their role for different developmental outcomes and their evolution across the romantic life span.

7   References

Abele-Brehm, A. E. (2014). The Influence of Career Success on Subjective Well-Being. In A. C. Keller, R. Samuel, M. M. Bergman, & N. K. Semmer (Eds.), *Psychological, Educational, and Sociological Perspectives on Success and Well-Being in Career Development* (pp. 7-18). Springer Netherlands. https://doi.org/10.1007/978-94-017-8911-0_2

Ajzen, I., & Fishbein, M. (1977). Attitude-behavior relations: A theoretical analysis and review of empirical research. *Psychological Bulletin*, *84*(5), 888-918. https://doi.org/10.1037/0033-2909.84.5.888

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/10.1037/0022-3514.84.5.105

Anusic, I., & Lucas, R. E. (2014). Do social relationships buffer the effects of widowhood? A prospective study of adaptation to the loss of a spouse. *Journal of Personality*, *82*(5), 367-378. https://doi.org/10.1111/jopy.12067

Arrànz Becker, O. (2013). Effects of similarity of life goals, values, and personality on relationship satisfaction and stability: Findings from a two-wave panel study. *Personal Relationships*, *20*(3), 443-461. https://doi.org/10.1111/j.1475-6811.2012.01417.x

Baltes, M. M., & Carstensen, L. L. (1999). Social-psychological theories and their applications to aging: From individual to collective. In V. L. Bengtson & K. W. Schaie (Eds.), *Handbook of theories of aging* (pp. 209-226). Springer.

Baltes, P. (1987). Theoretical propositions of life-span developmental psychology: On the dynamics between growth and decline. *Developmental Psychology*, *23*(5), 611-626.

Baltes, P., Lindenberger, U., & Staudinger, U. (2006). Life span theory in developmental psychology. In D. W & L. RM (Eds.), *Handbook of child psychology: Vol. 1. Theoretical models of human development* (pp. 569-664). Wiley.

Baltes, P. B., & Baltes, M. M. (1990). Psychological perspectives on successful aging: The model of selective optimization with compensation. In P. B. Baltes & M. M. Baltes (Eds.), *Successful aging: Perspectives from the behavioral sciences* (pp. 1-34). Cambridge University Press.

Berg, C. A., & Upchurch, R. (2007). A developmental-contextual model of couples coping with chronic illness across the adult life span. *Psychological Bulletin*, *133*(6), 920-954. https://doi.org/10.1037/0033-2909.133.6.920

Berscheid, E., & Hatfield Walster, E. (1969). Rewards others provide: Similarity. In E. Berscheid & E. Hatfield Walster (Eds.), *Interpersonal attraction*. Addison-Wesley.

Bookwala, J., & Schulz, R. (1996). Spousal similarity in subjective well-being: The Cardiovascular Health Study. *Psychology and Aging*, *11*(4), 582-590. https://doi.org/10.1037//0882-7974.11.4.582

Brandtstädter, J., & Greve, W. (1994). The aging self: Stabilizing and protective processes. *Developmental Review*, *14*(1), 52-80. https://doi.org/10.1006/drev.1994.1003

Bronfenbrenner, U. (1979). *The Ecology of Human Development: Experiments by Nature and Design*. Harvard University Press.

Buss, D. M. (1985). Human Mate Selection: Opposites are sometimes said to attract, but in fact we are likely to marry someone who is similar to us in almost every variable. *American Scientist*, *73*(1), 47-51.

Busseri, M. A., & Mise, T.-R. (2019). Bottom-up or top-down? Examining global and domain-specific evaluations of how one's life is unfolding over time. *Journal of Personality*, *88*, 391-410. https://doi.org/10.1111/jopy.12499

Butner, J., Diamond, L. M., & Hicks, A. M. (2007). Attachment style and two forms of affect coregulation between romantic partners. *Personal Relationships*, *14*(3), 431-455. https://doi.org/10.1111/j.1475-6811.2007.00164.x

Byrne, D. (1961). Interpersonal attraction and attitude similarity. *Journal of Abnormal and Social Psychology*, *62*(3), 713-715. https://doi.org/10.1037/h0044721

Campbell, A., Converse, P. E., & Rodgers, W. L. (1976). Domains of Life Experience. In A. Campbell, P. E. Converse, & W. L. Rodgers (Eds.), *The Quality of American Life: Perceptions, Evaluations, and Satisfactions* (pp. 61-96). Russell Sage Foundation.

Carstensen, L. L., Fung, H. H., & Charles, S. T. (2003). Socioemotional selectivity theory and the regulation of emotion in the second half of life. *Motivation and Emotion*, *27*(2), 103-123. https://doi.org/10.1023/a:1024569803230

Carstensen, L. L., Graff, J., Levenson, R. W., & Gottman, J. M. (1996). Affect in intimate relationships: The developmental course of marriage. In *Handbook of emotion, adult development, and aging* (pp. 227-247). Elsevier.

Caspi, A., & Herbener, E. S. (1990). Continuity and change: Assortative marriage and the consistency of personality in adulthood. *Journal of Personality and Social Psychology*, *58*(2), 250-258. https://doi.org/10.1037/0022-3514.58.2.250

Cohen-Mansfield, J., Skornick-Bouchbinder, M., & Brill, S. (2017). Trajectories of end of life: A systematic review. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *73*(4), 564-572. https://doi.org/10.1093/geronb/gbx093

Debrot, A., Schoebi, D., Perrez, M., & Horn, A. B. (2013). Touch as an interpersonal emotion regulation process in couples' daily lives:The mediating role of psychological intimacy. *Personality and Social Psychology Bulletin*, *39*(10), 1373-1385. https://doi.org/10.1177/0146167213497592

Denzinger, F., Backes, S., & Brandstätter, V. (2017). Same same but different: Similarity of goals and implicit motives in intimate relationships. *Motivation Science*, *4*(1), 60-77. https://doi.org/10.1037/mot0000064

Diener, E. (1984). Subjective well-being. *Psychological Bulletin*, *95*(3), 542-575.

Diener, E., & Chan, M. Y. (2011). Happy people live longer: Subjective well-being contributes to health and longevity. *Applied Psychology: Health and Well-Being*, *3*(1), 1-43. https://doi.org/10.1111/j.1758-0854.2010.01045.x

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction With Life Scale. *Journal of Personality Assessment*, *49*(1), 71-75. https://doi.org/10.1207/s15327752jpa4901_13

Diener, E., Oishi, S., & Lucas, R. E. (2003). Personality, culture, and subjective well-being: Emotional and cognitive evaluations of life. *Annual Review of Psychology*, *54*(1), 403-425.

Diener, E., Scollon, N. C., & Lucas, R. E. (2009). The evolving concept of subjective well-being: The multifaceted nature of happiness. In E. Diener (Ed.), *Assessing Well-Being: The Collected Works of Ed Diener* (pp. 67-100). Springer Netherlands. https://doi.org/10.1007/978-90-481-2354-4_4

Diener, E., & Suh, E. M. (2000). Measuring subjective well-being to compare the quality of life of cultures. In E. Diener & E. M. Suh (Eds.), *Culture and subjective well-being* (pp. 3-12). Bradford Book.

Easterlin, R. A. (2006). Life cycle happiness and its sources: Intersections of psychology, economics, and demography. *Journal of Economic Psychology*, *27*(4), 463-482. https://doi.org/10.1016/j.joep.2006.05.002

Edwards, J. R. (2001). Ten difference score myths. *Organizational Research Methods*, *4*(3), 265-287. https://doi.org/10.1177/109442810143005

Evans, A. J. (1994). Anticipatory grief: A theoretical challenge. *Palliative Medicine*, *8*(2), 159-165. https://doi.org/10.1177/026921639400800211

Finn, C., Johnson, M. D., & Neyer, F. J. (2020). Happily (n) ever after? Codevelopment of romantic partners in continuing and dissolving unions. *Developmental Psychology*, *56*(5), 1022-1028. https://doi.org/10.1037/dev0000897

Gardner, D. S. (2008). Cancer in a dyadic context: Older couples' negotiation of ambiguity and search for meaning at the end of life. *Journal of Social Work in End-of-Life & Palliative Care*, *4*(2), 135-159. https://doi.org/10.1080/15524250802353959

Gaunt, R. (2006). Couple similarity and marital satisfaction: Are similar spouses happier? *Journal of Personality*, *74*(5), 1401-1420. https://doi.org/10.1111/j.1467-6494.2006.00414.x

George, D., Luo, S., Webb, J., Pugh, J., Martinez, A., & Foulston, J. (2015). Couple similarity on stimulus characteristics and marital satisfaction. *Personality and Individual Differences*, *86*, 126-131. https://doi.org/10.1016/j.paid.2015.06.005

Gerstorf, D., & Ram, N. (2015). A framework for studying mechanisms underlying terminal decline in well-being. *International Journal of Behavioral Development*, *39*(3), 210-220. https://doi.org/10.1177/0165025414565408

Gerstorf, D., Ram, N., Estabrook, R., Schupp, J., Wagner, G. G., & Lindenberger, U. (2008). Life satisfaction shows terminal decline in old age: Longitudinal evidence from the German Socio-Economic Panel Study (SOEP). *Developmental Psychology*, *44*(4), 1148-1159. https://doi.org/10.1037/0012-1649.44.4.1148

Gerstorf, D., Ram, N., Mayraz, G., Hidajat, M., Lindenberger, U., Wagner, G. G., & Schupp, J. (2010). Late-life decline in well-being across adulthood in Germany, the United Kingdom, and the United States: Something is seriously wrong at the end of life. *Psychology and Aging*, *25*(2), 477-485. https://doi.org/10.1037/a0017543

Gerstorf, D., Ram, N., Röcke, C., Lindenberger, U., & Smith, J. (2008). Decline in life satisfaction in old age: Longitudinal evidence for links to distance-to-death. *Psychology and Aging*, *23*(1), 154-168. https://doi.org/10.1037/0882-7974.23.1.154

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Gonzaga, G. C., Carter, S., & Buckwalter, J. G. (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

González, M., Coenders, G., Saez, M., & Casas, F. (2010). Non-linearity, complexity and limited measurement in the relationship between satisfaction with specific life domains and satisfaction with life as a whole. *Journal of Happiness Studies*, *11*(3), 335-352. https://doi.org/10.1007/s10902-009-9143-8

Goodman, C. R., & Shippy, R. A. (2002). Is it contagious? Affect similarity among spouses. *Aging & Mental health*, *6*(3), 266-274.

Griffin, D., Murray, S., & Gonzalez, R. (1999). Difference score correlations in relationship research: A conceptual primer. *Personal Relationships*, *6*(4), 505-518. https://doi.org/10.1111/j.1475-6811.1999.tb00206.x

Gustavson, K., Røysamb, E., Borren, I., Torvik, F. A., & Karevold, E. (2016). Life satisfaction in close relationships: Findings from a longitudinal study. *Journal of Happiness Studies*, *17*(3), 1293-1311. https://doi.org/10.1007/s10902-015-9643-7

Guven, C., Senik, C., & Stichnoth, H. (2012). You can't be happier than your wife. Happiness gaps and divorce. *Journal of Economic Behavior & Organization*, *82*(1), 110-130. https://doi.org/10.1016/j.jebo.2012.01.003

Hatfield, E., Cacioppo, J. T., & Rapson, R. L. (1993). Emotional contagion. *Current Directions in Psychological Science*, *2*(3), 96-100. https://doi.org/10.1111/1467-8721.ep10770953

Hittner, E. F., Stephens, J. E., Turiano, N. A., Gerstorf, D., Lachman, M. E., & Haase, C. M. (2020). Positive affect is associated with less memory decline: Evidence from a 9-year longitudinal study. *Psychological Science*. https://doi.org/10.1177/0956797620953883

Hoppmann, C. A., & Gerstorf, D. (2009). Spousal Interrelations in Old Age – A Mini-Review. *Gerontology*, *55*(4), 449-459. https://doi.org/10.1159/000211948

Hoppmann, C. A., & Gerstorf, D. (2016). Social interrelations in aging: The sample case of married couples. In *Handbook of the psychology of aging* (pp. 263-277). Elsevier.

Hoppmann, C. A., Gerstorf, D., Willis, S. L., & Schaie, K. W. (2011). Spousal interrelations in happiness in the Seattle Longitudinal Study: Considerable similarities in levels and change over time. *Developmental Psychology*, *47*(1), 1-8. https://doi.org/10.1037/a0020788

Hsieh, C. M. (2003). Counting importance: The case of life satisfaction and relative domain importance. *Social Indicators Research*, *61*(2), 227-240. https://doi.org/10.1023/A:1021354132664

Hsieh, C. M. (2005). Age and relative importance of major life domains. *Journal of Aging Studies*, *19*(4), 503-512. https://doi.org/10.1016/j.jaging.2005.07.001

Huinink, J., Brüderl, J., Nauck, B., Walper, S., Castiglioni, L., & Feldhaus, M. (2011). Panel Analysis of Intimate Relationships and Family Dynamics (pairfam): Conceptual framework and design. *Zeitschrift für Familienforschung*, *23*(1), 77-101.

Humberg, S., Nestler, S., & Back, M. D. (2019). Response surface analysis in personality and social psychology: Checklist and clarifications for the case of congruence hypotheses. *Social Psychological and Personality Science*, *10*(3), 409-419. https://doi.org/10.1177/1948550618757600

Infurna, F. J., Wiest, M., Gerstorf, D., Ram, N., Schupp, J., Wagner, G. G., & Heckhausen, J. (2016). Changes in life satisfaction when losing one's spouse: Individual differences in anticipation,

reaction, adaptation and longevity in the German Socio-economic Panel Study (SOEP). *Ageing and Society*, *37*(5), 899-934. https://doi.org/10.1017/S0144686X15001543

Joel, S., Impett, E. A., Spielmann, S. S., & MacDonald, G. (2018). How interdependent are stay/leave decisions? On staying in the relationship for the sake of the romantic partner [Peer Reviewed]. *Journal of Personality and Social Psychology*, *115*, 805-824. https://doi.org/10.1037/pspi0000139

Kaschowitz, J., & Brandt, M. (2017). Health effects of informal caregiving across Europe: A longitudinal approach. *Social Science & Medicine*, *173*, 72-80. https://doi.org/10.1016/j.socscimed.2016.11.036

Kashy, D. A., & Donnellan, M. B. (2008). Comparing MLM and SEM approaches to analyzing developmental dyadic data: Growth curve models of hostility in families. In N. A. Card, J. P. Selig, & T. D. Little (Eds.), *Modeling dyadic and interdependent data in the developmental and behavioral sciences* (pp. 165-190). Routledge.

Kelley, H. H., Berscheid, E., Christensen, A., Harvey, J. H., Huston, T. L., Levinger, G., McClintock, E., Peplau, L. A., & Peterson, D. R. (1983). Analyzing close relationships. In H. H. Kelley, E. Berscheid, A. Christensen, J. H. Harvey, T. L. Huston, G. Levinger, & E. McClintock (Eds.), *Close Relationships*. W. H. Freeman.

Kenny, D. A. (1996). Models of non-independence in dyadic research. *Journal of Social and Personal Relationships*, *13*(2), 279-294. https://doi.org/10.1177/0265407596132007

Kenny, D. A., & Cook, W. (1999). Partner effects in relationship research: Conceptual issues, analytic difficulties, and illustrations. *Personal Relationships*, *6*(4), 433-448. https://doi.org/10.1111/j.1475-6811.1999.tb00202.x

Knapp, M. L. (1987). *Social intercourse: from greeting to goodbye*. Allyn and Bacon.

Larson, R. W., & Almeida, D. M. (1999). Emotional transmission in the daily lives of families: A new paradigm for studying family process. *Journal of Marriage and Family*, *61*(1), 5-20. https://doi.org/10.2307/353879

Leikas, S., Ilmarinen, V.-J., Verkasalo, M., Vartiainen, H.-L., & Lönnqvist, J.-E. (2018). Relationship satisfaction and similarity of personality traits, personal values, and attitudes. *Personality and Individual Differences*, *123*, 191-198. https://doi.org/10.1016/j.paid.2017.11.024

Littell, R. C., Milliken, G. A., Stroup, W. W., Wolfinger, R. D., & Schabenberger, O. (2006). *SAS for Mixed Models* (S. Edition, Ed.). SAS Institute Inc.

Loewe, N., Bagherzadeh, M., Araya-Castillo, L., Thieme, C., & Batista-Foguet, J. M. (2014). Life domain satisfactions as predictors of overall life satisfaction among workers: Evidence from Chile. *Social Indicators Research*, *118*(1), 71-86. https://doi.org/10.1007/s11205-013-0408-6

Lucas, R. E., Clark, A. E., Georgellis, Y., & Diener, E. (2003). Reexamining adaptation and the set point model of happiness: Reactions to changes in marital status. *Journal of Personality and Social Psychology*, *84*(3), 527-539. https://doi.org/10.1037/0022-3514.84.3.527

Luhmann, M., Weiss, P., Hosoya, G., & Eid, M. (2014). Honey, I got fired! A longitudinal dyadic analysis of the effect of unemployment on life satisfaction in couples. *Journal of Personality and Social Psychology*, *107*(1), 163-180. https://doi.org/10.1037/a0036394

Luo, S. (2009). Partner selection and relationship satisfaction in early dating couples: The role of couple similarity. *Personality and Individual Differences*, *47*(2), 133-138. https://doi.org/10.1016/j.paid.2009.02.012

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

Luo, S., Chen, H., Yue, G., Zhang, G., Zhaoyang, R., & Xu, D. (2008). Predicting marital satisfaction from self, partner, and couple characteristics: Is it me, you, or us? *Journal of Personality*, *76*(5), 1231-1266. https://doi.org/10.1111/j.1467-6494.2008.00520.x

Luo, S., & Klohnen, E. C. (2005). Assortative mating and marital quality in newlyweds: A couple-centered approach. *Journal of Personality and Social Psychology*, *88*(2), 304-326. https://doi.org/10.1037/0022-3514.88.2.304

Margolis, R., & Myrskylä, M. (2013). Family, money, and health: Regional differences in the determinants of life satisfaction over the life course. *Advances in Life Course Research*, *18*(2), 115-126. https://doi.org/10.1016/j.alcr.2013.01.001

McAdams, K. K., Lucas, R. E., & Donnellan, M. B. (2012). The role of domain satisfaction in explaining the paradoxical association between life satisfaction and age. *Social Indicators Research*, *109*(2), 295-303. https://doi.org/10.1007/s11205-011-9903-9

McLean, L. M., & Jones, J. M. (2007). A review of distress and its management in couples facing end-of-life cancer. *Psycho-Oncology*, *16*(7), 603-616. https://doi.org/10.1002/pon.1196

Mroczek, D. K., & Spiro III, A. (2005). Change in life satisfaction during adulthood: Findings from the Veterans Affairs Normative Aging Study. *Journal of Personality and Social Psychology*, *88*(1), 189-202. https://doi.org/10.1037/0022-3514.88.1.189

Neilson, J., & Stanfors, M. (2018). Time alone or together? Trends and trade-offs amongdual-earner couples, Sweden 1990–2010. *Journal of Marriage and Family*, *80*(1), 80-98. https://doi.org/10.1111/jomf.12414

Nestler, S., Grimm, K. J., & Schönbrodt, F. D. (2015). The social consequences and mechanisms of personality: How to analyse longitudinal data from individual, dyadic, round-robin and network designs. *European Journal of Personality*, *29*(2), 272-295. https://doi.org/10.1002/per.1997

Nielsen, M. K., Neergaard, M. A., Jensen, A. B., Bro, F., & Guldin, M.-B. (2016). Do we need to change our understanding of anticipatory grief in caregivers? A systematic review of caregiver studies during end-of-life caregiving and bereavement. *Clinical Psychology Review*, *44*, 75-93. https://doi.org/10.1016/j.cpr.2016.01.002

Oishi, S., Diener, E., Lucas, R. E., & Suh, E. K. (1999). Cross-cultural variations in predictors of life satisfaction: Perspectives from needs and values. *Personality and Social Psychology Bulletin*, *25*(8), 980-990. https://doi.org/10.1177/01461672992511006

Oishi, S., Diener, E., Suh, E., & Lucas, R. E. (1999). Value as a moderator in subjective well-being. *Journal of Personality*, *67*(1), 157-184. https://doi.org/10.1111/1467-6494.00051

Orth, U., Erol, R. Y., Ledermann, T., & Grob, A. (2018). Codevelopment of well-being and self-esteem in romantic partners: Disentangling the effects of mutual influence and shared environment. *Developmental Psychology*, *54*(1), 151. https://doi.org/10.1037/dev0000400

Pinheiro, J., Bates, D., DebRoy, S., & Sarkar, D. (2019). *Linear and nonlinear mixed effects models* https://cran.r-project.org/web/packages/nlme/nlme.pdf

Powdthavee, N. (2009). I can't smile without you: Spousal correlation in life satisfaction. *Journal of Economic Psychology*, *30*(4), 675-689. https://doi.org/10.1016/j.joep.2009.06.005

R Core Team. (2019). *R: A language and environment for statistical computing* https://www.R-project.org/

Reis, H. T., Collins, W. A., & Berscheid, E. (2000). The relationship context of human behavior and development. *Psychological Bulletin*, *126*(6), 844-872. https://doi.org/10.1037//0033-2909.126.6.844

Rohrer, J. M., & Schmukle, S. C. (2018). Individual importance weighting of domain satisfaction ratings does not increase validity. *Collabra: Psychology*, *4*(1), Article 6. https://doi.org/10.1525/collabra.116

Rojas, M. (2007). The complexity of well-being: A life satisfaction conception and a domains-of-life approach. In I. Gough & J. A. McGregor (Eds.), *Researching well-being in developing countries* (pp. 259-280). Cambridge University Press.

Rosseel, Y. (2012). lavaan: An R package for structural equation modeling. *Journal of Statistical Software*, *48*(2), 1-36. https://doi.org/10.18637/jss.v048.i02

Rusbult, C. E., & Van Lange, P. A. M. (2008). Why we need interdependence theory. *Social and Personality Psychology Compass*, *2*(5), 2049-2070. https://doi.org/10.1111/j.1751-9004.2008.00147.x

Saxbe, D., & Repetti, R. L. (2010). For better or worse? Coregulation of couples' cortisol levels and mood states. *Journal of Personality and Social Psychology*, *98*(1), 92-103. https://doi.org/10.1037/a0016959

Schade, H. M., Hülür, G., Infurna, F. J., Hoppmann, C. A., & Gerstorf, D. (2016). Partner dissimilarity in life satisfaction: Stability and change, correlates, and outcomes. *Psychology and Aging*, *31*(4), 327-339. https://doi.org/10.1037/pag0000096

Schimmack, U., & Lucas, R. (2010). Environmental influences on well-being: A dyadic latent panel analysis of spousal similarity. *Social Indicators Research*, *98*(1), 1-21. https://doi.org/10.1007/s11205-009-9516-8

Schoebi, D. (2008). The coregulation of daily affect in marital relationships. *Journal of Family Psychology*, *22*(4), 595. https://doi.org/10.1037/0893-3200.22.3.595

Schönbrodt, F. D., & Humberg, S. (2020). RSA: An R package for response surface analysis (version 0.10.0). https://cran.r-project.org/package=RSA

Schönbrodt, F. D., Humberg, S., & Nestler, S. (2018). Testing similarity effects with dyadic response surface analysis. *European Journal of Personality*, *32*(6), 627-641. https://doi.org/10.1002/per.2169

Schulz, R., & Sherwood, P. R. (2008). Physical and mental health effects of family caregiving. *Journal of Social Work Education*, *44*(sup3), 105-113. https://doi.org/10.5175/JSWE.2008.773247702

Schwartz, C. R., & Graf, N. L. (2009). Assortative matching among same-sex and different-sex couples in the United States, 1990-2000. *Demographic Research*, *21*, 843-878. https://doi.org/10.4054/demres.2009.21.28

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

Thompson, A., & Bolger, N. (1999). Emotional transmission in couples under stress. *Journal of Marriage and Family*, *61*(1), 38-48. https://doi.org/10.2307/353881

Townsend, A. L., Miller, B., & Guo, S. (2001). Depressive symptomatology in middle-aged and older married couples: A dyadic analysis. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *56*(6), S352-S364. https://doi.org/10.1093/geronb/56.6.S352

Voorpostel, M., Tillmann, R., Lebert, F., Kuhn, U., Lipps, O., Ryser, V. r.-A., Antal, E., Monsch, G.-A., Dasoki, N., & Wernli, B. (2018). *Swiss Household Panel user guide (1999 - 2017)*. https://forscenter.ch/wp-content/uploads/2019/01/shp_user-guide-w19.pdf

Watson, D., Klohnen, E. C., Casillas, A., Nus Simms, E., Haig, J., & Berry, D. S. (2004). Match makers and deal breakers: Analyses of assortative mating in newlywed couples. *Journal of Personality*, *72*(5), 1029-1068. https://doi.org/10.1111/j.0022-3506.2004.00289.x

Weidmann, R., Ledermann, T., & Grob, A. (2016). The interdependence of personality and satisfaction in couples. *European Psychologist*, *21*(4), 284-295. https://doi.org/10.1027/1016-9040/a000261

Weidmann, R., Schönbrodt, F. D., Ledermann, T., & Grob, A. (2017). Concurrent and longitudinal dyadic polynomial regression analyses of Big Five traits and relationship satisfaction: Does similarity matter? *Journal of Research in Personality*, *70*, 6-15. https://doi.org/10.1016/j.jrp.2017.04.003

Westman, M. (2001). Stress and Strain Crossover. *Human Relations*, *54*(6), 717-751. https://doi.org/10.1177/0018726701546002

Wortman, J., & Lucas, R. E. (2016). Spousal similarity in life satisfaction before and after divorce. *Journal of Personality and Social Psychology*, *110*(4), 625-633. https://doi.org/10.1037/pspp0000065

Yap, S. C. Y., Anusic, I., & Lucas, R. E. (2012). Does personality moderate reaction and adaptation to major life events? Evidence from the British Household Panel Survey. *Journal of Research in Personality*, *46*(5), 477-488. https://doi.org/10.1016/j.jrp.2012.05.005

APPENDIX A: Study 1

Happy in the same way?

The link between domain satisfaction and life satisfaction in couples and its implications for relationship happiness

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Abstract

This preregistered study applies a bottom-up model of life satisfaction and examines the intrapersonal and interpersonal ties between domain satisfaction and life satisfaction in couples and their implications for relationship happiness. With a sample of 2,285 female–male couples of the Swiss Household Panel, we ran multilevel actor–partner interdependence models to predict life satisfaction by both partners' domain satisfaction. The obtained person-specific intrapersonal and interpersonal effects were used as indicators of domain importance and partner dependence. We found that (1) romantic partners' levels of life satisfaction at a given time point are associated with their own and their partners' fluctuations and average tendencies in satisfaction with various domains; (2) when evaluating their satisfaction with life in general, couple members are more similar in the importance they place on their satisfaction with life together in the household than randomly paired individuals; and (3) similarities in domain importance and partner dependence are linked to relationship happiness, but the effect is most consistent for the domain of life together in the household.

These findings underscore the fruitfulness of expanding the bottom-up model of life satisfaction and of taking a domain-specific approach to examining the benefits of couple interrelations in subjective well-being.

Words: 199

Keywords: subjective well-being, romantic relationships, similarity, interdependence, dyadic response surface analysis

Happy in the same way? The link between domain satisfaction and life satisfaction in couples and its implications for relationship happiness

Love is that condition in which the happiness of another person is essential to your own.

—Robert A. Heinlein, *Stranger in a Strange Land*

Couple-level investigations of subjective well-being have lent consistent support for Heinlein's view of love. Evidence suggests that partners' experiences of subjective well-being are intertwined (Bookwala & Schulz, 1996; Gustavson et al., 2016; Hoppmann et al., 2011; Schimmack & Lucas, 2010; Townsend et al., 2001) and that stronger patterns of interdependence are associated with relationship stability and satisfaction (Anderson et al., 2003; Gonzaga et al., 2007).

Nevertheless, much remains unexplored about couple-level interrelations in subjective well-being and their implications for relationship functioning. The present study therefore aims to contribute to the current literature in three ways. First, we build on the bottom-up model of life satisfaction (Diener, 1984) and expand it to the interpersonal context of romantic relationships. In doing so, we raise the question in what domains—if any—romantic partners' satisfaction represents an additional bottom-up source of personal life satisfaction. Second, we acknowledge that people differ in domain importance, that is, in the importance they place on their satisfaction with various domains when coming to an overall evaluation of life satisfaction. Given that couple members have been found to resemble each other in their attitudes, values, and goal priorities (Denzinger et al., 2017; Gaunt, 2006; Luo, 2009, 2017; Luo et al., 2008; Luo & Klohnen, 2005; Watson et al., 2004), we expect that romantic partners would also show commonalities with regard to their domain importance. To test this assumption, we investigate if romantic partners are more similar than randomly paired individuals in how strongly their overall satisfaction with life is linked to their satisfaction with various domains. And third, we seek to contribute to the debate surrounding the adaptiveness of couple similarity (e.g., Luo, 2017) by scrutinizing whether couples benefit from similarity in the intra- and interpersonal ties between domain satisfaction and life satisfaction. To that end, we examine whether couple similarities in domain importance and partner dependence are associated with relationship happiness. In addressing these three objectives, we seek to offer a deeper and more interdependent perspective on the co-dynamics of romantic partners' domain and life satisfaction and their implications for relational well-being.

Is the Overall Life Satisfaction of Romantic Partners Predicted by Their Own *and* Their Partner's Domain Satisfaction?

Numerous debates and studies have targeted the "anatomy of subjective well-being" (van Praag et al., 2003, p. 29) and the link between domain satisfaction and overall life satisfaction. Two theoretical approaches have received particular attention in previous research on subjective well-being: the top-down and the bottom-up model of life satisfaction (Diener, 1984). While the top-down model maintains that life satisfaction represents a stable disposition to view the world in a more positive light, the bottom-up model sees the sources of satisfaction in a favorable living environment and in an accumulation of positive experiences (Diener, 1984; Heller et al., 2004). The present study builds on a bottom-up model, which has been supported by both cross-sectional (González et al., 2010; Loewe et al., 2014; Margolis & Myrskylä, 2013; Rojas, 2007) and longitudinal (Busseri & Mise, 2019; Easterlin, 2006; McAdams et

al., 2012) studies. Evidence derived from these studies suggests that people's overall evaluations of life are constituted by their satisfaction with various domains, including health, finances, work, standard of living, leisure time, family, and relationships.

Considering that human development unfolds within meaningful interpersonal contexts (Bronfenbrenner, 1979), and that romantic partners represent an integral part of a person's immediate living environment, we think it necessary to expand the bottom-up model of life satisfaction (Diener, 1984). Specifically, we suggest integrating the partner's satisfaction with various domains as an additional bottom-up source of life satisfaction. Previous research supports this proposition, having shown that couple members' levels of satisfaction with life in general—but also their levels of domain satisfaction—are closely interrelated (Gustavson et al., 2016; Powdthavee, 2009; Schimmack & Lucas, 2010). Moreover, romantic partners were also found to be interdependent in their changes in life and domain satisfaction across time (Finn et al., 2020; Hoppmann et al., 2011; Wünsche et al., 2020).

Couple interdependence might originate from two sources: On the one hand, it might reflect shared living circumstances that influence both partners' evaluations of life in a similar way. On the other hand, couple interdependence may also result from intradyadic transmissions through which partners mutually shape each other's well-being (Orth et al., 2018). Indeed, previous longitudinal couple studies revealed significant transmission effects of life satisfaction between partners that go beyond the effects of shared environmental influences (Gustavson et al., 2016; Orth et al., 2018; Wünsche et al., 2020). That is, couple members appear to be susceptible to each other's well-being when evaluating their personal well-being. So far, however, evidence on couple interdependence in subjective well-being has been restricted to within-construct investigations, focusing on either interdependence in life satisfaction or interdependence in domain satisfaction. Hence, we know little about the interpersonal ties between domain satisfaction and overall life satisfaction in couples.

With the present study, we seek to address this gap by disentangling the domains of personal and partner satisfaction that relate to overall evaluations of life. In doing so, we expand the equation of happiness as proposed by the bottom-up model of life satisfaction (Diener, 1984) and integrate the romantic partner and their domain satisfactions as an additional environmental source of life satisfaction. We suggest that this expanded perspective enables us to gain a more fine-grained understanding of the intrapersonal and interpersonal predictors of subjective well-being in adulthood. Following evidence supporting a bottom-up model of life satisfaction (Busseri & Mise, 2019; González et al., 2010; Loewe et al., 2014; Margolis & Myrskylä, 2013; McAdams et al., 2012; Rojas, 2007) and expanding it to the interpersonal context of romantic relationships, we expect that couple members' life satisfaction would be predicted not only by their own but also by their partner's satisfaction with different life domains.

Are Couple Members Similar in Their Domain Importance?

It is a widely held notion that life satisfaction does not merely represent the sum of a person's satisfaction with different domains of life (Hsieh, 2003; Rohrer & Schmukle, 2018). Instead, it has been proposed that individuals differ in the weight they place on certain areas of life when forming a judgment of their satisfaction with life in general (Campbell et al., 1976). Known as domain importance (Campbell et al., 1976) or psychological centrality (Ryff & Essex, 1992), the two concepts share the idea that for some people certain areas of life are given more weight than others (Hsieh, 2003).

In this study, we focus on domain importance in romantic relationships and examine if couple members are more similar than randomly paired individuals in the way their satisfaction with various domains is related to their satisfaction with life in general. To the best of our knowledge, there are no studies that have addressed this question, but romantic partners have been found to be similar in a wide range of demographic and personal characteristics (for a review see Luo, 2017)—of which some have also been related to individual differences in domain importance (Hsieh, 2003, 2005; Oishi, Diener, Lucas, et al., 1999; Oishi, Diener, Suh, et al., 1999). In particular, couple members tend to be similar in age and education (George et al., 2015; Schwartz & Graf, 2009; Watson et al., 2004), their ethnic and religious background (Schwartz & Graf, 2009), and their attitudes and personal values (Gaunt, 2006; Luo et al., 2008; Luo & Klohnen, 2005) as well as in the importance they place on certain values and goals in their life (Denzinger et al., 2017; Luo, 2009; Watson et al., 2004). These commonalities seem to go back to selection effects by which people start and maintain a romantic relationship with others who are similar to themselves (Arrànz Becker, 2013; Luo, 2017).

We propose that a closer look at couple similarities in domain importance provides valuable additional insights into the range of psychological commonalities that matter for the selection of long-term romantic partners. Put differently, and borrowing from the popular proverb, an investigation of couple similarities in domain importance might inform us about novel shades of a feather that cause birds to flock together. On the basis of the described evidence suggesting that people enter relationships with someone who is similar in terms of basic attitudes, values, and goal orientations (Denzinger et al., 2017; Gaunt, 2006; Luo, 2009, 2017; Luo et al., 2008; Luo & Klohnen, 2005; Watson et al., 2004), we expect that people would also select romantic partners who are similar with regard to the importance they place on different domains of life. This should be reflected in a stronger similarity of domain importance in partners who are in a relationship with each other as opposed to randomly paired persons.

Is Couple Similarity Associated with Relationship Happiness?

Early theories proposed that attitude and value similarity are important sources of interpersonal attraction and that they open the door for rewarding interpersonal relationships (Berscheid & Hatfield Walster, 1969; Buss, 1985; Byrne, 1961). Byrne (1961) claimed that "any time that another person offers us validation by indicating that his percepts and concepts are congruent with ours, it constitutes a rewarding interaction and, hence, one element in forming a positive relationship" (p. 713). Concerning the everyday life of couples, it has further been suggested that couple similarities facilitate communication between partners, their mutual understanding, and the joint navigation of minor and major daily challenges (Anderson et al., 2003; Luo, 2009). Dissimilarity, on the other hand, may increase the chances of conflicts and dissatisfaction in the daily life of couples (Luo & Klohnen, 2005). The present study focuses on the relational implications of couple similarity in the intra- and interpersonal link between domain satisfaction and life satisfaction. In doing so, we examine the benefits of similarity in domain importance (i.e., similarity in the *intra*personal link between domain and life satisfaction) and partner dependence (i.e., similarity in the *inter*personal link between domain and life satisfaction).

Similarity in Domain Importance

Considering the theorized benefits of similarity, it can be assumed that partners who are similar in their basic orientations in life should also be more satisfied in their relationship. Previous evidence is, however, inconsistent in supporting this assumption (for a review see Luo, 2017). While some couple

studies found that romantic partners who shared similar attitudes, values, and goal orientations reported higher levels of relationship and marital satisfaction (Arrànz Becker, 2013; Gaunt, 2006; Leikas et al., 2018; Luo, 2009; Luo et al., 2008), other investigations did not find support for such a beneficial link (Luo & Klohnen, 2005; Watson et al., 2004).

This inconsistency might be due to conclusions on similarity effects being dependent on the measure of similarity (Weidmann et al., 2016). Most previous studies used between-partner difference scores (with and without controlling for the main actor and partner effects) and couple-level profile correlations to examine couple similarity and its impact on relational well-being. These approaches, however, may have been limited in how well they captured the complex interplay between couple similarity and relationship satisfaction, especially considering that the impact of similarity can vary depending on the combination of both partners' personal attributes (for a discussion of these limitations see Edwards, 2001; Griffin et al., 1999; Nestler et al., 2015). More recent studies have employed dyadic response surface analyses to overcome these limitations and to capture the implications of couple similarities on personal and relational well-being in a more nuanced way (e.g. Leikas et al., 2018; van Scheppingen et al., 2018; Weidmann et al., 2017).

We suggest that it is worthwhile to reexamine the adaptiveness of couple similarities in people's basic orientations in life in a more fine-grained manner to further understand why some relationships are happier than others. To do so, we follow up on recent methodological advances and examine the effects of couple similarity in domain importance using dyadic response surface analysis. On the basis of theoretical assumptions regarding the benefits of couple similarities for interpersonal relationships (Anderson et al., 2003; Berscheid & Hatfield Walster, 1969; Byrne, 1961), we hypothesize that couple members who are more similar in the importance they place on different domains of life when evaluating their satisfaction with life in general would be happier in their romantic relationships. This positive effect is expected to emerge because romantic partners prioritize certain areas of life in a similar way. For instance, if both partners place equal importance on the domain of health, they might share similar health habits to uphold their level of life satisfaction. Such similarities might then enable partners to enjoy smooth daily interactions and shared routines—or at least they would not need to justify or negotiate these shared priorities.

Similarity in Partner Dependence

So far, research on the implications of couple similarity has primarily focused on *intra*personal characteristics (e.g., personal values, attitudes, goal orientations, and personality traits). This is surprising, considering that the context of the romantic relationship is *inter*personal in nature and that the *inter*personal dynamics between partners and similarities therein are likely to have the strongest ramifications for relational well-being. Consequently, as an exploratory endeavor, we examine whether similarity in an *inter*personal characteristic also relates to people's happiness with their romantic relationship. To do so, we take a closer look at similarities in the degree of dependence between romantic partners. As an indicator of partner dependence, we rely on the strength of the *inter*personal association between domain satisfaction and life satisfaction in couples. In that sense, partner dependence is high if a person's life satisfaction is highly susceptible to the partner's ups and downs in satisfaction with a given life domain. Likewise, similarity in partner dependence is high if couple members resemble each other in how susceptible they are to each other's domain satisfaction.

Interdependence theory argues in favor of relational benefits of partner dependence, suggesting that "interactions with mutual dependence tend to feel 'safer' and are more stable and affectively serene" (Rusbult & Van Lange, 2008, p. 2053). Conversely, dissimilarity in partner dependence is expected to create a disbalance of power between couple members, in that the less dependent partner has control over the relationship while the more dependent partner is inclined to feel insecure and make sacrifices (Rusbult & Van Lange, 2008). Consequently, a lack of mutuality in partner dependence might contribute to dissatisfaction in daily interactions, ultimately resulting in a more negative evaluation of the relationship. To explore this possibility, we investigate whether couple members are happier in their relationship if they resemble each other in their partner dependence, that is, in their dependence on each other's satisfaction with various domains when evaluating their satisfaction with life in general.

The Present Study

In the present study, we take an interdependent perspective on romantic partners' domain satisfaction and life satisfaction and examine their dynamic interplay along three lines. First, we scrutinize the intra- and interpersonal ties between couple members' domain satisfaction and their overall satisfaction with life. In doing so, we seek to expand the bottom-up model of life satisfaction (Diener, 1984) by broadening the focus of investigation from the individual level to a more contextualized and interdependent understanding of the sources of life satisfaction within romantic relationships.

Second, we acknowledge that people differ in the composition of their life satisfaction (Hsieh, 2003) but we propose that couple members differ less from each other than randomly paired individuals. That is, we expect that romantic partners would be more similar in the importance they place on different life domains when evaluating their overall satisfaction with life. To test this assumption, we compare between-partner dissimilarities in domain importance in a sample of couples and a sample of random pairs.

Third, we build on and extend previous research to unravel the association between couple similarities and relationship functioning. To that end, we examine an *intra*personal as well as an *inter*personal similarity characteristic. Specifically, we test whether couple members who are more similar in the importance they place on different life domains and in their dependence on each other are happier in their relationship than couples who are less similar. Following recent methodological recommendations, we apply dyadic response surface analysis (Humberg et al., 2019; Schönbrodt et al., 2018) to address this question. This approach enables us to assess the adaptivity of couple similarity at all possible levels of both couple members' domain importance and partner dependence. Hence, this study provides novel fine-grained insights into the association between couple similarities and relationship happiness.

Following the outlined theoretical and empirical work on the link between domain satisfactions and overall life satisfaction as well as the presented literature on couple similarities and their implications for relational well-being, we test the following three preregistered hypotheses:

1. On occasions when individuals are more satisfied with their health, their financial situation, their life together in the household, their distribution of housework, their amount of leisure time, or their personal relationships, they will be more satisfied with their life in general (intrapersonal link) and they will also have partners who are more satisfied with their life in general (interpersonal link).

2. Couple members will be more similar in their domain importance (i.e., their intrapersonal link between domain satisfaction and life satisfaction) than randomly paired individuals.

3. Couple members who are more similar in their domain importance (i.e., their intrapersonal link between domain satisfaction and life satisfaction) will be happier with their relationships.

Furthermore, we raised the exploratory research question whether couple members who are more similar in their partner dependence (i.e., their interpersonal link between domain satisfaction and life satisfaction) are happier with their relationship.

Method

Open Science Statement

The hypotheses for the present investigation were preregistered on the Open Science Framework (OSF; https://osf.io/pw5gy/?view_only=1aebfc5ff7af405b943a3498a2f88127). The data-analysis script is also shared on the OSF and can be accessed with the following link https://osf.io/qjvzp/?view_only=b5ce8587d7b64f8f910597a76ee960cd. The analyses were based on the Swiss Household Panel (SHP) and they are available for scientific purposes on FORSbase. Researchers can register and request access to the data.

Sample

The SHP is an ongoing representative panel survey of noninstitutionalized household members in Switzerland. Starting with a stratified random sample of 5,074 households, it has been conducted on a yearly basis since 1999. Refreshment samples were added in 2004 (2,538 households) and 2013 (4,093 households). Data are primarily collected via computer-assisted telephone interviews. All household members older than 13 years were asked to participate in the SHP interview (see Voorpostel et al., 2018 for more detailed information on the study design).

Sample Selection

For the present study, we used 17 waves of the SHP (2001–2017). The first two survey years were omitted because they did not contain the complete set of variables relevant to the present study (i.e., satisfaction with personal relationships, which was introduced in 2001). Between 2001 and 2017, 21,339 individuals provided at least one personal assessment. On the basis of that initial sample, we applied seven selection criteria to identify couples that were suitable for our analyses: (1) We selected participants if they at least once reported living together with a partner (N_{ind} = 13,482). (2) If participants cohabitated with different partners during the observation period (N_{ind} = 429), we selected the latest recorded relationship, omitting observations stemming from earlier relationships. We decided on this procedure because we were interested in the association between couple similarity in domain importance and later relationship happiness. The measure of relationship happiness, however, was added to the SHP survey program only in 2016. Hence, by focusing on the latest recorded relationship episode, we increased the likelihood of including more couple members that reported on their relationship happiness. (3) Having retained the target relationships, we included individuals and their partners only if they at least once participated together as a couple in the course of the study (N_{ind} = 10,794, N_{couple} = 5,397). (4) Furthermore, we included only female–male couples (N_{ind} = 10,720, N_{couple} = 5,360) because we relied on actor–partner interdependence models for distinguishable dyads. (5) As a next step, we selected a couple only if both partners provided at least one assessment of relationship happiness; 2,702 couples fulfilled this criterion. (6) To be able to predict relationship

happiness from similarities in the association between domain satisfaction and life satisfaction, we also selected a couple only if both partners provided at least one observation of their domain satisfaction and life satisfaction prior to the first assessment of relationship happiness in 2016 (N_{ind} = 4,982, N_{couple} = 2,491). (7) Finally, we retained only couple members that provided information on the matching variables (see below). This left us with a preliminary sample of 2,485 couples (N_{ind} = 4,970). Of this sample, we randomly selected 200 couples for exploratory analyses (i.e., to test our statistical models for specification errors and convergence problems before preregistering the study). These 200 couples were excluded from our confirmatory tests, resulting in a sample of 2,285 couples to enter the matching procedure.

Matching of Random Pairs

We created a sample of randomly paired individuals to examine whether similarities in domain importance are characteristic of individuals living together in a romantic relationship or whether they can also be observed in the same—but randomly paired—sample of men and women who are in a relationship—but not with each other. We used the Matching package 4.9-3 (Sekhon, 2011) in R to ensure that randomly paired individuals revealed a comparable between-partner similarity in terms of their baseline sociodemographic characteristics. To that end, we split the original couple sample into female and male partners and aimed at finding a random male partner for each female partner who reported similar sociodemographic characteristics to those of the original male partner—without being the original partner.

We included four sociodemographic matching variables. Baseline chronological age and years of education were included as continuous matching variables. For these variables, we relied on a nearest neighbor matching procedure. For parental status, employment status, and first year of participation, we chose an exact matching procedure. Parental status was constructed as a dichotomous variable, indicating whether a person had one or more children (coded = 1) or not (coded = 0). Employment status was also constructed as a dichotomous variable that distinguished between individuals who participated in paid work (coded = 1) and those who did not (coded = 0, e.g., retired, unemployed, or on unpaid leave). We also ensured that the selected random partner and the original partner started the study in the same year (exact matching) and provided a similar number of observation points (nearest neighbor matching).

In six cases, we could not identify a suitable random partner with our matching criteria. These cases were excluded from the matched sample of random pairs and from the original couple sample, resulting in a final analysis sample of 2,279 couples and 2,279 random pairs. At their first assessment, couples included in the final analysis sample had been together for an average of 20.37 years (SD = 14.29); the majority were married (78.0%). Moreover, couple members reported an average baseline age of 47.18 years (SD = 13.84) and having completed an average of 14.00 years of education (SD = 3.06). The majority reported having at least one child (86.4%) and being in paid employment (71.6%). In total, couple members provided an average of 8.88 observations (SD = 5.33) across the study period.

Despite the matching, however, baseline between-partner differences in age remained significantly higher in the sample of random pairs (M = 5.14, SD = 5.61) than in the couple sample (M = 3.85, SD = 3.84), t(2278) = -9.11, p < .001. We also found that between-partner differences in the

number of available observations were significantly higher in the sample of random pairs (*M* = 0.94, *SD* = 1.87) than in the couple sample (*M* = 0.77, *SD* = 1.84), *t*(2278) = -3.37, *p* < .001. Regarding between-partner differences in years of education, we did not observe significant differences between the sample of random pairs (*M* = 2.61, *SD* = 2.45) and the couple sample (*M* = 2.53, *SD* = 2.42), *t*(2278) = -1.21, *p* = .227.

Measures

Life Satisfaction

Satisfaction with life in general (*M* = 8.42, *SD* = 1.24) was introduced to the SHP in the second wave of the study (i.e., in 2000) and was assessed with a single-item question, which was answered on an 11-point scale: "In general, how satisfied are you with your life if 0 means 'not at all satisfied' and 10 means 'completely satisfied'?"

Domain Satisfaction

To test the association between domain satisfaction and life satisfaction, we focused on six life domains. On an 11-point scale ranging from 0 (*not at all satisfied*) to 10 (*completely satisfied*), participants were asked to rate the extent to which they were satisfied with their health (*M* = 7.88, *SD* = 1.63), their financial situation (*M* =7.53 , *SD* = 1.85), their life together in the household (*M* = 8.77, *SD* = 1.24), the distribution of housework (*M* =8.27 , *SD* = 1.76), their amount of free time (*M* = 7.27, *SD* = 2.35), and finally, their personal, social, and family relationships (*M* = 8.34, *SD* = 1.33). Information on domain satisfaction was available for all waves included in the present study (i.e., 2001–2017), and the reported mean scores and standard deviations refer to the entire sample and study period. Zero-order correlations within and between female and male partners' domain satisfaction scores and life satisfaction are displayed in Table 1.

We refrained from including questions about satisfaction with work and education because they did not apply to the entire sample (i.e., for individuals who had already finished their educational training or retirees). In this way, we focused on satisfaction with domains that were relevant for all participants of the sample.

Relationship Happiness

Happiness with the relationship (*M* = 8.62, *SD* = 1.44) was assessed in 2016 and 2017. Participants were asked to answer the question "In general, how happy are you in your actual couple relationship, if 0 means 'very unhappy' and 10 'very happy'?" If participants reported on their relationship happiness in both survey years, we included their latest reports.

Similarity Characteristics

Domain Importance. To capture individual differences in domain importance, we followed a novel approach proposed by Rohrer and Schmukle (2018). Instead of relying on subjective importance ratings, we took advantage of the repeated measurement of domain satisfaction and life satisfaction in the SHP, and extracted each person's intrapersonal link between their domain and life satisfaction as unique indicators of domain importance. These intrapersonal links (i.e., concurrent actor effects) were obtained from the multilevel actor–partner interdependence model that is described in more detail in the following section. In essence, however, the present measure of domain importance reflects the weight that each partner placed on their satisfaction with a particular life domain when evaluating their satisfaction with life in general.

Partner Dependence. Similar to domain importance, we made use of the repeated assessment of both partners' domain and life satisfaction to create an indicator of partner dependence. Specifically, we extracted each person's interpersonal link (i.e., concurrent partner effect) between domain and life satisfaction from the multilevel actor–partner interdependence model. Hence, the present indicator of partner dependence reflects the degree to which couple members were susceptible to each other's domain satisfaction when evaluating their satisfaction with life in general.

Statistical Approach

In the following, we present the analytical approach we used to address our hypotheses and our exploratory research question. These analyses partly deviate from our preregistered analysis plan. The analytical changes were made in response to valuable feedback obtained at the 2019 Biennial Conference of the Association of Research in Personality, as well as previously received reviewer suggestions on other manuscripts. These changes involve (a) the additional inclusion of actor and partner means in domain satisfaction to predict both partners' levels of life satisfaction, (b) the performance of dyadic response surface analyses to examine the link between couple similarity and relationship happiness, and (c) the adjustment of the alpha level to .01 to account for multiple testing. We are confident that these changes have improved the quality and validity of the present findings. For the interested reader, we present the results obtained from the preregistered analyses in the supplemental materials (Tables S4–S7).

Hypothesis 1

To account for the nested structure of the couple data set and to test the intrapersonal (actor effects) and interpersonal (partner effects) associations between domain satisfaction and life satisfaction in couples, we applied multilevel actor–partner interdependence models for distinguishable dyads (Kenny, 1996; Kenny & Cook, 1999). The analyses were conducted in R version 3.6.1 (R Core Team, 2019), using the nlme (Pinheiro et al., 2019) and dyadR (Garcia & Kenny, 2017) packages. To reduce model complexity, we set up separate models for each life domain instead of specifying only one model that included satisfaction with all domains at the same time.

Equations 1.1 and 1.2 illustrate the multilevel actor-partner interdependence model for the prediction of both partners' life satisfaction (LS) based on their domain satisfaction (DS).

(1.1)

LS_{jk} = female$_j$ × β$_{F-0j}$ + male$_j$ × β$_{M-0j}$

+ female$_j$ × β$_{F-1j}$(Concurrent Actor DS$_{jk}$) + male$_j$ × β$_{M-1j}$(Concurrent Actor DS$_{jk)}$)

+ female$_j$ × β$_{F-2j}$(Concurrent Partner DS$_{jk}$) + male$_j$ × β$_{M-2j}$(Concurrent Partner DS$_{jk}$)

+ e$_{F-jk}$ + e$_{M-jk}$

(1.2)

β$_{F-0j}$ = γ$_{F00}$ + female$_j$ × γ$_{F01}$(Mean Actor DS$_j$) + female$_j$ × γ$_{F02}$(Mean Partner DS$_j$) + u_{F0j}

β$_{F-1j}$ = γ$_{F10}$ + u_{F1j}

β$_{F-2j}$ = γ$_{F20}$ + u_{F2j}

β$_{M-0j}$ = γ$_{M00}$ + male$_j$ × γ$_{M01}$(Mean Actor DS$_j$) + male$_j$ × γ$_{M02}$(Mean Partner DS$_j$) + u_{M0j}

β$_{M-1j}$ = γ$_{M10}$ + u_{M1j}

β$_{M-2j}$ = γ$_{M20}$ + u_{M2j}

At Level 1 (i.e., the within-person level; Equation 1.1), the life satisfaction of a female or male partner in couple j at a given time point k was predicted by their own and their corresponding partner's person-mean-centered domain satisfaction at the same time point. We relied on a dual-intercept approach to obtain partner-specific estimates for the intercept (β_{F-0j}, β_{M-0j}) as well as the actor (β_{F-1j}, β_{M-1j}) and partner (β_{F-2j}, β_{M-2j}) effects. Deviations from predicted levels of life satisfaction were allowed to correlate between partners (e_{F-jk}, e_{M-jk}). This between-partner residual correlation captures the extent to which couple members were interdependent in their life satisfaction as a result of shared environmental influences that were not considered in the present model.

At Level 2 (i.e., the between-couple level; Equation 1.2), partner-specific effect estimates were allowed to randomly deviate (u_{F0j} through u_{M2j}) from their sample-level average effect across couples (γ_{F00} through γ_{M20}). We included couple members' own (γ_{F01}, γ_{M01}) and their corresponding partner's average level of domain satisfaction (γ_{F02}, γ_{M02}) across all available observations as grand-mean-centered predictors of the intercept. Including both partners' domain satisfaction as a time-variant person-mean-centered predictor variable while controlling for their grand-mean-centered average levels of domain satisfaction allowed us to disentangle the effects of within-person versus between-couple variation in domain satisfaction. We also tested for gender differences in the actor and partner effects by reformulating the model to include gender (-1 = female; 1 = male) as an interaction variable. In the control sample of randomly paired individuals, we specified the same set of models.

Hypothesis 2

To address our second hypothesis, we calculated absolute between-partner difference scores in the estimated actor effects of each partner. These difference scores were computed for each life domain and they indicate the extent to which dyad members differed in their domain importance (i.e., their intrapersonal link between domain and life satisfaction; Rohrer & Schmukle, 2018). The same procedure was followed in the control sample of randomly paired individuals. We then specified six regression models (one model per life domain) to test whether between-partner differences in domain importance can be predicted by couple status (0 = random pair; 1 = couple). In these analyses, we also controlled for between-partner differences in age and years of education.

Hypothesis 3

To examine the association between similarities in domain importance and partner dependence on the one hand and relationship happiness on the other, we conducted dyadic response surface analyses (DRSA; Schönbrodt et al., 2018). We illustrate the analytical approach for similarities in domain importance. The same procedure was followed for the exploration of similarities in partner dependence.

The DRSA entails two analytical steps. In the first step, we used the lavaan package (Rosseel, 2012) and fitted the following polynomial actor–partner interdependence model:

$$Z_{Fj} = \beta_{F0} + \beta_{F1}X + \beta_{F2}Y + \beta_{F3}X^2 + \beta_{F4}XY + \beta_{F5}Y^2 + e_{Fj} \qquad (2.1)$$

$$Z_{Mj} = \beta_{M0} + \beta_{M1}X + \beta_{M2}Y + \beta_{M3}X^2 + \beta_{M4}XY + \beta_{M5}Y^2 + e_{Mj} \qquad (2.2)$$

According to this model, female (Equation 2.1) and male (Equation 2.2) couple members' relationship happiness (Z) is predicted by a linear and a quadratic effect of their own domain importance

(X; actor effects: β_{F1}, β_{F3}, β_{M1}, β_{M3}) and their partner's domain importance (Y; partner effects: β_{F2}, β_{F5}, β_{M2}, β_{M5}). Furthermore, each couple member's relationship happiness is predicted by an interaction term that captures the linear combination of actor and partner domain importance (XY; β_{F4}, β_{M4}). Both partners' levels of domain importance were pool standardized across couple members. Deviations from predicted levels of relationship happiness (e_{Fj}; e_{Mj}) were allowed to correlate between couple members. The relative fit of the polynomial model was compared against a simpler actor–partner interdependence model that did not include the higher order terms (i.e., excluding the quadratic effects as well as the interaction term). We proceeded with the DRSA only if the polynomial actor–partner interdependence model provided a better relative fit as indicated by a lower Bayesian information criterion (BIC). If this was not the case, we rejected the similarity hypothesis already at this stage and adopted the simpler linear actor-partner interdependence model.

In the second step of the DRSA, we used the estimates obtained from the polynomial actor–partner interdependence models to visualize female and male partners' response surfaces in a three-dimensional plot. In these plots, each combination of female and male partner's domain importance on the horizontal X and Y axes is assigned a predicted value of relationship happiness on the vertical Z axis. In our interpretations and conclusions regarding the presence of a similarity effect, we relied on recommendations provided by Humberg et al. (2019). Specifically, two conditions needed to be fulfilled to confirm a similarity effect. In the following, we briefly outline these conditions and the response surface characteristics that were considered to decide on the presence of a similarity effect, namely, the first principal axis, the line of congruence (LOC), and the line of incongruence (LOIC). Importantly, all of the response surface parameters that are presented below can be calculated from the polynomial regression coefficients presented in Equations 2.1 and 2.2 (see Edwards, 2007; Schönbrodt et al., 2018 for details on the corresponding formulae).

The first principal axis represents the ridge of the response surface. In the present study, it captures the combinations of female and male domain importance that are associated with the highest levels of relationship happiness. When projected to the two-dimensional XY plane, the principal axis can be described as a linear function, characterized by the intercept p_{10} and the linear slope p_{11}.

The LOC is the second important characteristic in a response surface plot. This line captures the relationship happiness scores for all congruent combinations of female and male domain importance. It is defined by the nonlinear function $Z = a_1X + a_2X^2$. When projected to the XY plane, the LOC represents a linear function that runs from the front to the back corner of the cube. The projected LOC has an intercept of 0 and a slope of 1.

Based on these definitions, the first necessary condition to support a similarity effect, is that the linear function of the projected first principal axis does not significantly differ from the LOC on the XY plane. That is, the intercept and slope parameter of the first principal axis should be $p_{10} \approx 0$ and $p_{11} \approx 1$. In other words, for a similarity effect to be present, we would expect that the highest levels of relationship happiness are observable for congruent combinations of female and male domain importance.

The second necessary condition to support a similarity effect involves the LOIC, which captures the relationship happiness scores for all opposite combinations of female and male domain importance. The LOIC can also be described as a nonlinear function $Z = a_3X + a_4X^2$. To indicate a similarity effect,

the surface above the LOIC should have an inverted-U shape and the maximum of the function (i.e., the maximum level of relationship happiness) should be observed at the point of origin (0|0) because it represents the point of congruence between partners on the LOIC. Hence, a similarity effect is supported only if $a_3 \approx 0$ and $a_4 < 0$.

The described conditions (i.e., $p_{10} \approx 0$ and $p_{11} \approx 1$ plus $a_3 \approx 0$ and $a_4 < 0$) are necessary to support a similarity effect in the broad sense. To meet the criteria for a similarity effect in the strict sense, it is further required that the surface above the LOC is constant (i.e., $a_1 \approx 0$ and $a_2 = 0$). That is, the highest levels of relationship happiness should be observed for all congruent combinations of domain importance. If, for instance, the LOC has a linear rising shape, this would indicate that both partners' domain importance has an additional positive main effect that interacts with the similarity effect. In this scenario, couple members would be the happiest in their relationship if they are congruent in reporting high levels of domain importance.

In the present study, we acknowledged the possibility that the similarity effect interacts with a main effect of actor and partner domain importance. Hence, we accept the similarity hypothesis if the conditions for a similarity effect in a broad sense are fulfilled. To plot the response surface of a significant similarity effect, we used the RSA package in R (Schönbrodt & Humberg, 2020).

Power Analysis

We conducted a post-hoc power analysis with the online tool APIMpower, which was designed to detect the power within an actor–partner interdependence framework (Ackerman & Kenny, 2016). We assumed moderate actor effects (b = .30) and small partner effects (b = .10) on a significance level of p < .01. The present study was very well powered to detect these effects. Specifically, the power to detect the expected actor and partner effects was > .99.

Results

The Link Between Domain Satisfactions and Life Satisfaction in Couples

The results of the multilevel actor–partner interdependence models to test the association between domain satisfaction and life satisfaction in the sample of couples are displayed in Table 2. At the within-person level, and in line with Hypothesis 1, we observed significant concurrent actor effects for satisfaction in all domains. That is, on occasions when female and male couple members were more satisfied (than usual for them) with their health, financial situation, life together in the household, distribution of housework, amount of leisure time, or personal relationships, they also reported higher levels of life satisfaction. The strength of these concurrent actor effects did not significantly differ between couple members. As expected, we also identified significant concurrent partner effects for the link between domain satisfaction and life satisfaction: Both female and male couple members were more satisfied with life on occasions when their partner was more satisfied (than usual for them) with their financial situation, life together in the household, distribution of housework, or personal relationships. The strength of these concurrent partner effects did not differ between couple members. For the domain of leisure time, the concurrent partner effect was not significant. With regard to health, we observed a gender-specific concurrent partner effect: Female but not male couple members were more satisfied with life in general on occasions when their partner was more satisfied (than usual for them) with their health.

At the between-couple level, we found significant actor effects on the intercept for all mean levels of domain satisfaction. Mean levels of partner domain satisfaction were also identified as significant predictors of the intercept for five of the six life domains. For the financial domain, we did not observe a significant mean-level partner effect. Adding to the described within-person associations, these findings suggest that female and male couple members were also more satisfied with life if they and their partners were generally more satisfied (than other sample members) with their health, life together in the household, distribution of housework, amount of leisure time, or personal relationships. Moreover, female and male couple members were more satisfied with life if they (but not their partners) were generally more satisfied (than other sample members) with their financial situation. The results of the same multilevel actor–partner interdependence models for the sample of random pairs are presented in the supplemental materials (Table S1).

Similarity in Domain Importance in Couples and Random Pairs

The comparison of between-partner differences in domain importance in couples and random pairs is presented in Table 3. For five of the six life domains, we did not find support for the hypothesized differences between couples and random pairs (Hypothesis 2). The only significant difference emerged for the domain of life together in the household: As compared to random pairs, couples were less dissimilar (or more similar) in how strongly their satisfaction with life together in the household was associated with their satisfaction with life in general.

In our analyses, we also controlled for between-partner differences in age and education. For five of the six life domains, we found that between-partner differences in age were positively related to between-partner differences in domain importance. More specifically, dyad members who were more dissimilar with regard to their age were also more dissimilar in how strongly their satisfaction with health, finances, distribution of housework, amount of leisure time, and personal relationships was associated with their satisfaction with life in general.[1] The only exception emerged for the domain of life together in the household. For this life domain, between-partner differences in age were not predictive of between-partner differences in domain importance.

Between-partner differences in education were associated with between-partner differences in domain importance only in the financial domain, suggesting that dyad members who were more dissimilar in their educational background were less dissimilar in how strongly their financial satisfaction was associated with their satisfaction with life in general.

Similarity and Relationship Happiness in Couples

Domain Importance

To test Hypothesis 3, we specified six models to predict both partners' relationship happiness based on their domain importance, that is, their intrapersonal link between domain satisfactions and life satisfaction.

Model Comparisons. For each life domain, we compared the relative fit of a linear actor–partner interdependence model containing both partners' domain importance against the fit of a more complex polynomial actor–partner interdependence model to predict both partners' relationship happiness. With the exception of the health domain, the polynomial model provided a better relative fit than the linear actor–partner interdependence model (see Supplemental Table S2 for model comparisons and BIC values). Consequently, we proceeded with the response surface analysis for all

but the health domain. The obtained regression coefficients and response surface characteristics are presented in Table 4.

Main Effects. With the exception of the health domain, we observed significant negative nonlinear actor effects of domain importance. Significant partner effects of domain importance were identified in all of the investigated life domains. These partner effects were mostly negative and nonlinear; only for the health domain was the partner effect of domain importance negative and linear. The obtained actor and partner effects suggest that—with the exception of the health domain—the association between actor and partner domain importance and relationship happiness is characterized by an inverted-U shape. This implies that couple members were happier in their relationship if they and their partner revealed an optimal level of domain importance. In contrast, lower levels of relationship happiness were observed among couple members whose domain importance exceeded or fell below this optimal level.

Similarity Effects. The necessary conditions to confirm the similarity hypothesis were met in only one life domain: life together in the household. Specifically, the obtained response surface parameters indicate that the ridge of the surface (i.e., first principal axis) did not significantly differ from the LOC (i.e., $p_{10} \approx 0$ and $p_{11} \approx 1$) and that the surface above the LOIC had an inverted-U shape with a maximum that did not significantly differ from the point of origin (i.e., $a_3 \approx 0$ and $a_4 < 0$). Moreover, the shape of the response surface above the LOC was stable ($a_1 \approx 0$ and $a_2 \approx 0$). Altogether, these response surface characteristics support a similarity effect in the strict sense. That is, the highest levels of relationship happiness were observed for all congruent combinations of female and male domain importance. Figure 1 illustrates the response surface for the prediction of female and male partners' relationship happiness based on both partners' importance regarding the domain of life together in the household.

For the health domain, the similarity hypothesis had to be rejected because the inclusion of the polynomial terms did not improve the relative model fit for the prediction of relationship happiness. For the remaining life domains, the obtained response surface parameters indicate that either one or both necessary conditions for a similarity effect were not fulfilled.

Partner Dependence

In exploratory analyses, we specified six models to predict couple members' relationship happiness on the basis of their partner dependence in each life domain, that is, their interpersonal link between domain and life satisfaction.

Model Comparisons. Model comparisons suggest that for the domain of health, finances, and personal relationships, the linear actor–partner interdependence model provided a better relative fit than the more complex polynomial model to predict relationship happiness. Conversely, for the domains of life together in the household, housework, and leisure time, the polynomial model yielded a better relative fit (see Supplemental Table S3 for model comparisons and BIC values). Hence, a response surface analysis was conducted for only the latter three domains. The obtained regression coefficients and response surface characteristics are presented in Table 5.

Main Effects. We observed significant negative nonlinear actor and partner effects of partner dependence for the domains of life together in the household, housework, and leisure time. This implies that couple members reported higher levels of relationship happiness if they and their partner revealed

an optimal level of partner dependence in these domains. Only for the domain of personal relationships did we observe a negative linear actor effect. This indicates that couple members and their partners were happier in their relationship if they were less dependent on their partner's satisfaction with personal relationships. For the domains of health and finances, we did not identify significant associations between partner dependence and relationship happiness.

Similarity Effects. The necessary conditions to confirm the similarity hypothesis were met for the domains of life together in the household and leisure time. For these two life domains the first principal axis did not significantly differ from the LOC (i.e., $p_{10} \approx 0$ and $p_{11} \approx 1$) and the surface above the LOIC had an inverted-U shape with a maximum that did not significantly differ from the point of origin (i.e., $a_3 \approx 0$ and $a_4 < 0$). Furthermore, the shape of the response surface above the LOC was stable ($a_1 \approx 0$ and $a_2 \approx 0$), implying a similarity effect in the strict sense. That is, for these two life domains, the highest levels of relationship happiness were observed if couple members revealed the same degree of dependence on each other—irrespective of whether this dependence unfolded on a high, low, or average level. Figure 2 illustrates the response surface for the prediction of female and male partners' relationship happiness based on their degree of dependence on each other's satisfaction with life together in the household (upper panel) and leisure time (lower panel).

For the domains of health, finances, and personal relationships, the similarity hypothesis had to be rejected because the inclusion of the polynomial terms did not improve the relative model fit for the prediction of relationship happiness. For the domain of housework, the obtained response surface parameters indicate that one of the two necessary conditions for a similarity effect was not fulfilled (i.e., $a_3 \approx 0$ and $a_4 \approx 0$).

Discussion

Earlier research has shown that life satisfaction within a romantic relationship is not a "private affair" (Gustavson et al., 2016, p. 1306). Instead, couple members were found to be interdependent in their levels and changes in subjective well-being (Bookwala & Schulz, 1996; Gustavson et al., 2016; Hoppmann et al., 2011; Schimmack & Lucas, 2010; Townsend et al., 2001) and stronger patterns of interdependence have been proposed as facilitators of relational well-being (Anderson et al., 2003; Gonzaga et al., 2007).

The current study has built on and expanded these insights by investigating the nature of couple interdependence in subjective well-being and its implications for relationship functioning from three unexplored angles. In doing so, we raised the following questions: Is the life satisfaction of romantic partners predicted by their own *and* their partner's satisfaction with different domains of life? Are couple members more similar in the importance they place on satisfaction with different domains when evaluating their overall satisfaction with life? And finally, are similarities in domain importance and partner dependence related to relationship happiness? To address these research questions, we relied on 17 years of couple observations originating from the SHP study and now provide three major insights: (1) Romantic partners' levels of life satisfaction at a given time point are associated with their own and their partners' fluctuations and average tendencies in satisfaction with various domains; (2) when evaluating their satisfaction with life in general, couple members are more similar in the importance they place on their satisfaction with life together in the household than randomly paired individuals; and (3)

similarities in domain importance and partner dependence are linked to relationship happiness, but the effect is most consistent for the domain of life together in the household. In sum, these results confirm some but not all of our preregistered hypotheses. In the following, we discuss the present findings and their implications against the background of previous theory and evidence.

Is the Life Satisfaction of Romantic Partners Predicted by Their Own *and* Their Partner's Domain Satisfaction?

This study followed a bottom-up model of life satisfaction (Diener, 1984) and expanded it to the interpersonal context of romantic relationships. Considering that romantic partners represent a fundamental part of each other's immediate living environment (Gustavson et al., 2016; Powdthavee, 2009), we expected that couple members' overall evaluations of life would be predicted not only by their own satisfaction with various domains but also by the domain satisfaction of their partner.

The present findings broadly support this expectation. Specifically, we identified significant actor effects for all of the investigated life domains, suggesting that couple members were more satisfied with life in general if they were currently and on average more satisfied with health, finances, life together in the household, the distribution of housework, the amount of leisure time, or their personal relationships. These findings are in line with earlier individual-level research that supported a bottom-up model of life satisfaction and that demonstrated significant associations between domain satisfaction and life satisfaction (Busseri & Mise, 2019; Easterlin, 2006; González et al., 2010; Loewe et al., 2014; Margolis & Myrskylä, 2013; McAdams et al., 2012; Rojas, 2007).

Most importantly, however, we found that couple members were also susceptible to their partners' fluctuations and average tendencies in domain satisfaction when evaluating their own satisfaction with life. In other words, people tended to be the most satisfied with life if they *as well as* their partners were currently more satisfied than usual for them and if they *as well as* their partners generally tended to be more satisfied than other sample members with various life domains. By accounting for residual correlations in both partners' predicted levels of life satisfaction, we are also confident that these associations cannot be explained by the influence of shared living circumstances. Instead, these interdependencies seem to evolve from intradyadic processes that unfold within the couple (Orth et al., 2018). Overall, these findings are consistent with earlier studies showing that couple members' experiences of subjective well-being are highly intertwined (Bookwala & Schulz, 1996; Gustavson et al., 2016; Hoppmann et al., 2011; Schimmack & Lucas, 2010; Townsend et al., 2001). Yet, the current study goes beyond previous investigations because it unpacks the domains as well as the sources of variation in partners' satisfaction that relate to personal evaluations of life. Along these lines, we would like to point out three particularities that emerged in the present findings.

First, for the domain of health, we observed a gender-specific pattern of interdependence: Females' but not males' satisfaction with life was linked to their partners' fluctuations in satisfaction with health. This finding complements earlier research showing that women, more often than men, manage and surveil health-promoting activities in their relationships (Lewis et al., 2004). Furthermore, women tend to be more involved with informal caregiving than men. That is, women were found to invest more time in unpaid caregiving and they started sooner in the life course to commit to such responsibilities (Klaus & Vogel, 2019). It appears that women, in fulfilling their role as primary caretakers of health

(Lewis et al., 2006; Markey et al., 2008), are also particularly sensitive to their close other's—and in particular to their romantic partner's—ups and downs in health satisfaction.

Second, couple members' satisfaction with life was unrelated to the partner's average financial satisfaction but it was susceptible to the partner's ups and downs in this domain satisfaction. That is, couple members were more satisfied with life in instances when their partner was reported to have higher (or lower) levels of financial satisfaction (than usual for them). A possible explanation of this finding might be that the satisfaction with finances itself was highly correlated between partners (see Table 1). Moreover, couple members' financial satisfaction was also identified as one of the most interdependent life domains by an earlier study (Schimmack & Lucas, 2010). This is unsurprising, considering that finances might be, at least to some extent, a shared resource within most romantic relationships. As a result, the partner's average tendency to be more or less satisfied with their financial situation might not predict a person's life satisfaction above and beyond this person's own financial satisfaction. Considering the substantial overlap between both partners' satisfaction in the financial domain, it is, however, all the more striking that partner fluctuations in financial satisfaction still explained their own part in personal life satisfaction. It thus appears that the partner's ups and downs provide supplementary cues regarding potential difficulties or upswings in the (shared) financial realm and thus act as an additional anchor for personal evaluations of life. It could also be that a susceptibility to the romantic partners' fluctuations in financial satisfaction aids the intradyadic negotiation of financial affairs. In particular, changes in financial resources might require changes in the couple's organization of everyday life (e.g., economizing, working extra hours). Such joint and coordinated actions might require that couple members are receptive to each other's current state of financial satisfaction (Anderson et al., 2003).

Third, and with respect to the domain of leisure time, we observed the opposite pattern: Partner effects emerged only with regard to average tendencies and not for fluctuations in a partner's satisfaction with leisure time. The missing effect of partner fluctuations might suggest that intraindividual variations in satisfaction with leisure time were harder to detect for the romantic partner. Alternatively, it might be sufficient to see that the partner is generally satisfied with leisure time while their ups and downs in this domain satisfaction are unrelated to personal life satisfaction. This could be because satisfaction with leisure time represents one of the more individualized domain-satisfaction measures (Schimmack & Lucas, 2010), which acts more as an intra- than an interpersonal predictor of life satisfaction.

The observed patterns of couple interdependence as well as the identified particularities in the interpersonal link between domain satisfaction and life satisfaction need to be replicated in future studies. Given the current findings, however, it seems time to expand the equation of life satisfaction by adding the romantic partner and their satisfaction with different domains as additional bottom-up sources of life satisfaction (Diener, 1984). Such an interdependent perspective appears to be a fruitful venue for gaining a more profound understanding of the predictors of life satisfaction in adulthood.

Are Couple Members More Similar in Their Domain Importance?

It has been suggested that individuals differ in the importance they place on various domains of life (Campbell et al., 1976; Ryff & Essex, 1992), which also manifests in the weight that satisfaction with certain domains receives when coming to an overall judgment of well-being (Hsieh, 2003). The present study focused on individual differences in domain importance in the context of romantic relationships.

Considering previous research that has documented couple similarities in attitudes, values, and goal priorities (Arrànz Becker, 2013; Denzinger et al., 2017; Gaunt, 2006; Leikas et al., 2018; Luo, 2009; Luo et al., 2008; Luo & Klohnen, 2005; Watson et al., 2004), we expected that romantic partners would also resemble each other in their domain importance, that is, in their intrapersonal ties between domain satisfaction and life satisfaction.

We found only limited support for this expectation. In fact, couples did not significantly differ from random pairs when considering (dis)similarities in the link between life satisfaction on the one hand, and satisfaction with health, finances, housework, leisure time, or personal relationships on the other. Only for the domain of life together in the household were we able to confirm our expectation. That is, couples, as opposed to random pairs, were more similar (or less dissimilar) in how strongly their satisfaction with life together in the household was related to their satisfaction with life in general.

We suggest that our operationalization of domain importance may explain why couple members were, for the most part, no more similar than randomly paired individuals. Specifically, we followed an approach proposed by Rohrer and Schmukle (2018) and used intrapersonal associations between domain satisfaction and life satisfaction as a person-specific and rather implicit indicator of both partners' domain importance. Implicit domain importance, as opposed to self-reported values, attitudes, and life goals, might, however, be a hard-to-detect characteristic of a potential romantic partner. When considering that assortative mating rather than convergence is the primary source for couple similarities (Luo, 2017), couple members might not have matched on this rather invisible characteristic in the first place (for a similar argumentation see Luo & Klohnen, 2005). This would also complement findings of an earlier study that showed weaker patterns of couple similarity in hidden implicit motives as opposed to visible explicit life goals (Denzinger et al., 2017).

The only exception from this pattern of null effects emerged for the domain of life together in the household: Romantic partners were more similar in the importance they placed on this life domain than randomly paired individuals. How can this particular role of life together in the household be explained?

It can be assumed that—although romantic partners might not have matched on (implicit) domain importance—at some point during the relationship they will certainly have discovered each other's tendency to place a higher or lower importance on various domains of life. Identifying incompatibilities in an area of life that is pertinent to the relationship itself might then be particularly challenging for a couple bond. It can thus be speculated that, once identified, dissimilarity in the importance of life together in the household represents a warning sign for an unbridgeable incompatibility between partners, eventually acting as a "deal-breaker" (Watson et al., 2004, p. 1064) for the continuation of a relationship. Hence, the observed commonalities in the domain of life together in the household, as evidenced in the present study, might reflect a selection effect (Arrànz Becker, 2013) by which especially those relationships stood the test of time where partners were more similar. This explanation might be all the more plausible when considering that the current study was based on a sample of cohabiting and predominantly long-term, committed couples (i.e., baseline relationship duration M = 20.37 years, SD = 14.29).

In sum, the present findings provide limited support for couple similarities in domain importance, at least when considering an implicit measure of this construct. It appears, however, that the domain of

life together in the household assumes a special role—most likely because of its close ties with relationship life.

Does Couple Similarity Associated with Relationship Happiness?

It is a widely held notion that couple similarity enhances relational well-being, in particular, by fostering interpersonal attraction and validation, by facilitating the coordination of daily life, and by minimizing the breeding ground for dissatisfaction and conflicts (Anderson et al., 2003; Berscheid & Hatfield Walster, 1969; Byrne, 1961; Luo, 2009; Luo & Klohnen, 2005). The present study examined the adaptiveness of couple similarities in an *intra-* and an *inter*personal characteristic, namely, in domain importance and partner dependence. We expected that couple members who resembled each other in the importance they placed on different domains of life would be happier with their romantic relationship. Furthermore, we raised the question of whether couple members would also report higher levels of relationship happiness if they were more similar in their dependence on each other's domain satisfaction. Following recent methodological recommendations, we tested this expectation and exploratory research question by means of dyadic response surface analysis (Humberg et al., 2019; Schönbrodt et al., 2018).

Regarding domain importance, the present findings provide limited support for a beneficial association between couple similarities and relationship happiness. Again, a similarity effect emerged only for the domain of life together in the household. Specifically, maximal levels of relationship happiness were reported if both partners were congruent in the importance they placed on life together in the household. Regarding partner dependence, we also identified a similarity effect for the domain of life together in the household. That is, couple members were happiest with their relationship if they were equally dependent on each other's satisfaction with life together in the household. An additional similarity effect of partner dependence was observed for the domain of leisure time. This effect indicates that congruent levels of dependence on the partner's satisfaction with leisure time were related to more positive evaluations of the relationship.

We suggest that these findings offer two notable insights for our understanding of couple similarities and relationship functioning. First, by disentangling couple similarities in various areas of life, it could be demonstrated that—again—the role of couple similarity is most pronounced in a life domain that is highly intertwined with relationship life itself, that is, the domain of life together in the household. This finding underpins the earlier proposition that, with regard to couple similarity, "some dimensions contribute more than others to explaining marital satisfaction" (Gaunt, 2006, p. 1402). In particular, similarities in family-related attitudes were seen as more valid predictors of relational outcomes because they more closely map onto the everyday life activities and conflicts within a marriage (Gaunt, 2006). Theoretical frameworks on attitude–behavior relations (e.g., Ajzen & Fishbein, 1977) also proposed that attitudes are the most valid predictors of behavior if both originate in the same target context. The current results fit into this broader picture: Couple similarities emerged only for the domain of life together in the household; and couple similarities in this domain importance emerged as the only significant predictor of relationship happiness. In combination, these findings lend support for the idea that a shared importance of life together in the household represents a necessary foundation for a committed and satisfied relationship. Conversely, a shared importance of other life domains (health, finances, leisure

time, etc.) does not seem to belong to the range of psychological commonalities that characterize long-term and happy romantic relationships.

Second, by expanding the focus of investigation from an intrapersonal toward an interpersonal similarity characteristic, this study shows that similarity in partner dependence relates to relational well-being—at least when considering the domains of life together in the household and leisure time. We are not aware of previous studies that have examined the mutuality of partner dependence in subjective well-being. It seems, however, that this is a promising new perspective to expand our understanding of couple interdependence and its implications for relational well-being. The present findings suggest that romantic partners tend to be happier if they are equally dependent upon one another, that is, when they resemble each other in how susceptible they are to each other's ups and downs in domain satisfaction. This beneficial link is in line with previous conceptions regarding partner dependence. According to interdependence theory (Rusbult & Van Lange, 2008), mutual dependence creates a more favorable relationship climate, in which interactions feel safer and more comfortable for both partners. Nonmutual dependence, on the other hand, is expected to foster an imbalance of power between partners and fears of abandonment among the more dependent partner (Rusbult & Van Lange, 2008). The present study was not able to test these underlying mechanisms but it provides initial support for the benefits of mutual partner dependence in the realms of subjective well-being. Nevertheless, we must emphasize that the present findings are exploratory and—although they appear plausible in the light of theoretical conceptions—they need to be replicated in future confirmatory studies with different couple data.

In sum, the present study underlines the fruitfulness of a domain-specific approach to create a more nuanced picture regarding the role of couple similarity for relational well-being. It appears that shared priorities are most meaningful for relationship functioning, if observed for domains that are closely connected to relationship life. Furthermore, it seems that congruence between partners is not only relevant for intrapersonal characteristics. Instead, the present findings suggest that it is worthwhile to also consider how similarity feeds into relationship happiness when considering interpersonal dynamics between romantic partners.

Limitations and Future Directions

The present findings need to be interpreted in view of some limitations that can offer a starting point for future investigations in this field. First, although the present findings are based on longitudinal panel data, they remain correlational and do not allow conclusions on the direction of any effects. This is particularly important to keep in mind when interpreting the link between domain satisfaction and life satisfaction. Future studies might use cross-lagged designs to capture the direction of this link more thoroughly. In the present study, however, the focus was on the intra- and interpersonal ties between domain satisfaction and life satisfaction within romantic relationships and it was not designed to disentangle the top-down versus bottom-up processes that culminate in overall evaluations of life. Similarly, it could be that that the link between similarities in domain importance and partner dependence on the one hand and relationship happiness on the other unfolds in the opposite direction. Considering that the measure of relationship happiness was included only in the last two waves of the SHP, we were unable to delve into this possibility. Hence, we suggest that this is an important direction for future investigations.

Second, we used a novel method (i.e., proposed by Rohrer & Schmukle, 2018) to capture domain importance. While this method enabled us to obtain a person-specific and implicit measure of domain importance, we could not test the convergent validity with a self-reported measure because the latter was not assessed in the SHP. Nevertheless, the plausible links that were observed between age differences and differences in domain importance (see Table 3 and Footnote 1) strengthen our confidence that the employed measure is a valid indicator of domain importance.

Third, the present study was limited in the range of matching variables that were used to create random pairs. We focused on four sociodemographic characteristics (i.e., age, years of education, parental status, and employment status) as well as two study-relevant variables (i.e., first year of participation and number of observations). Clearly, a broader use of matching variables would have improved the comparability of the sample of couples and random pairs. However, increasing the number of matching variables also comes at the cost of an increasing number of couples that need to be excluded because there is no suitable match (other than the original partner). Considering this cost–benefit ratio, we decided on the present selection of sociodemographic and study-relevant matching characteristics.

Fourth, this work provides initial evidence on the relational implications of couple similarity in domain importance and partner dependence. So far, it remains an unanswered question how these similarities translate into both partners' relationship happiness (assuming that this is the true direction of the effect, see Point 1). To address this question, future studies might take a more mechanistic perspective on the effects of similarity by, for instance, zooming in on the couple's everyday lives. Using intensive longitudinal designs, one could examine how similarity in domain importance and partner dependence shape couple members' day-to-day coordination and conflicts, their mutual understanding, and other relationship processes that have been proposed as the bridge between couple similarity and relational well-being (i.e., Anderson et al., 2003; Berscheid & Hatfield Walster, 1969; Byrne, 1961; Luo, 2009; Luo & Klohnen, 2005; Rusbult & Van Lange, 2008).

Fifth, we did not take a differential perspective on the link between domain and life satisfaction or on the relational implications of similarity in domain importance and partner dependence. There is evidence that the strength of association between domain and life satisfaction changes across the life span (Bardo, 2017; Hsieh, 2005). Specifically, the importance of life domains appears to change as people encounter changing developmental demands and contexts. Hence, a more contextualized perspective might provide a more profound understanding of the life domains that matter for life satisfaction across adulthood.

Sixth, and finally, the present findings are based on a sample of cohabiting and predominantly long-term, committed couples. Couple similarity in domain importance and partner dependence might, however, be subject to change, and potentially they are more or less adaptive at different points in life and at different stages of the romantic life cycle. Indeed, a recent study on couple similarities in Big Five personality traits suggests that couple similarity is most favorable for relational adjustment in the early stages of a relationship—when similarity fosters intimacy and attachment, as well as late in life—when partners need to restore a new rhythm as a couple when their children depart and they transition into retirement (Lampis et al., 2018). The relevance of couple similarity might also change across other significant life transitions, such as the transition into parenthood. In such times that require a particularly

smooth coordination of both partners' activities and a high amount of mutual understanding, similarity might be particularly conducive for relational well-being. Future studies might thus take a closer look at the changing role of couple similarity across the (romantic) life span to explore the differential adaptiveness of similarity in domain importance and partner dependence.

Conclusion

"Love is that condition in which the happiness of another person is essential to your own." The present study provides further support for Heinlein's reflection, showing that people are the most satisfied with their life if they *and* their partner are currently and on average more satisfied with various domains in life. Yet, when evaluating their satisfaction with life, couple members tend to be no more similar than randomly paired individuals in the importance they place on various life domains. Only the domain of life together in the household seems to have assumed a special role in the ranks of life domains—most likely because of its close ties with relationship life. The special role of life together in the household was also evident when considering the relational benefits of couple similarities in domain importance and partner dependence. In sum, the present findings underscore the necessity to employ a domain-specific approach and to take a closer look at intra- and interpersonal characteristics when examining couple similarity and its implications for relationship happiness. Future research is encouraged to pursue a more differential and mechanistic perspective on the adaptiveness of couple similarity across the (romantic) life span.

References

Ackerman, R., & Kenny, D. A. (2016). *APIMPower: An interactive tool for Actor-Partner Interdependence Model power analysis [Computer software]. Available from https://robert-a-ackerman.shinyapps.io/apimpower/*.

Ajzen, I., & Fishbein, M. (1977). Attitude-behavior relations: A theoretical analysis and review of empirical research. *Psychological Bulletin*, *84*(5), 888-918. https://doi.org/10.1037/0033-2909.84.5.888

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/10.1037/0022-3514.84.5.105

Arrànz Becker, O. (2013). Effects of similarity of life goals, values, and personality on relationship satisfaction and stability: Findings from a two-wave panel study. *Personal Relationships*, *20*(3), 443-461. https://doi.org/10.1111/j.1475-6811.2012.01417.x

Bardo, A. R. (2017). A life course model for a domains-of-life approach to happiness: Evidence from the United States. *Advances in Life Course Research*, *33*, 11-22. https://doi.org/10.1016/j.alcr.2017.06.002

Berscheid, E., & Hatfield Walster, E. (1969). Rewards others provide: Similarity. In E. Berscheid & E. Hatfield Walster (Eds.), *Interpersonal attraction*. Addison-Wesley.

Bookwala, J., & Schulz, R. (1996). Spousal similarity in subjective well-being: The Cardiovascular Health Study. *Psychology and Aging*, *11*(4), 582-590. https://doi.org/10.1037//0882-7974.11.4.582

Bronfenbrenner, U. (1979). *The Ecology of Human Development: Experiments by Nature and Design*. Harvard University Press.

Buss, D. M. (1985). Human Mate Selection: Opposites are sometimes said to attract, but in fact we are likely to marry someone who is similar to us in almost every variable. *American Scientist*, *73*(1), 47-51.

Busseri, M. A., & Mise, T.-R. (2019). Bottom-up or top-down? Examining global and domain-specific evaluations of how one's life is unfolding over time. *Journal of Personality*, *88*, 391-410. https://doi.org/10.1111/jopy.12499

Byrne, D. (1961). Interpersonal attraction and attitude similarity. *Journal of Abnormal and Social Psychology*, *62*(3), 713-715. https://doi.org/10.1037/h0044721

Campbell, A., Converse, P. E., & Rodgers, W. L. (1976). Domains of Life Experience. In A. Campbell, P. E. Converse, & W. L. Rodgers (Eds.), *The Quality of American Life: Perceptions, Evaluations, and Satisfactions* (pp. 61-96). Russell Sage Foundation.

Cheung, F., & Lucas, R. E. (2015). When does money matter most? Examining the association between income and life satisfaction over the life course. *Psychology and Aging*, *30*(1), 120-135. https://doi.org/10.1037/a0038682

Denzinger, F., Backes, S., & Brandstätter, V. (2017). Same same but different: Similarity of goals and implicit motives in intimate relationships. *Motivation Science*, *4*(1), 60-77. https://doi.org/10.1037/mot0000064

Diener, E. (1984). Subjective well-being. *Psychological Bulletin*, *95*(3), 542-575.

Easterlin, R. A. (2006). Life cycle happiness and its sources: Intersections of psychology, economics, and demography. *Journal of Economic Psychology*, *27*(4), 463-482. https://doi.org/10.1016/j.joep.2006.05.002

Edwards, J. R. (2001). Ten difference score myths. *Organizational Research Methods*, *4*(3), 265-287. https://doi.org/10.1177/109442810143005

Edwards, J. R. (2007). Polynomial regression and response surface methodology. In C. Ostroff & T. A. Judge (Eds.), *Perspectives on organizational fit* (pp. 361-372). Jossey-Bass.

Finn, C., Johnson, M. D., & Neyer, F. J. (2020). Happily (n) ever after? Codevelopment of romantic partners in continuing and dissolving unions. *Developmental Psychology*, *56*(5), 1022-1028. https://doi.org/10.1037/dev0000897

Garcia, R., & Kenny, D. A. (2017). *dyadr: Dyadic Data Analysis*. In (Version R package version 1.4-14)

Gaunt, R. (2006). Couple similarity and marital satisfaction: Are similar spouses happier? *Journal of Personality*, *74*(5), 1401-1420. https://doi.org/10.1111/j.1467-6494.2006.00414.x

George, D., Luo, S., Webb, J., Pugh, J., Martinez, A., & Foulston, J. (2015). Couple similarity on stimulus characteristics and marital satisfaction. *Personality and Individual Differences*, *86*, 126-131. https://doi.org/10.1016/j.paid.2015.06.005

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

González, M., Coenders, G., Saez, M., & Casas, F. (2010). Non-linearity, complexity and limited measurement in the relationship between satisfaction with specific life domains and satisfaction with life as a whole. *Journal of Happiness Studies*, *11*(3), 335-352. https://doi.org/10.1007/s10902-009-9143-8

Griffin, D., Murray, S., & Gonzalez, R. (1999). Difference score correlations in relationship research: A conceptual primer. *Personal Relationships*, *6*(4), 505-518. https://doi.org/10.1111/j.1475-6811.1999.tb00206.x

Gustavson, K., Røysamb, E., Borren, I., Torvik, F. A., & Karevold, E. (2016). Life satisfaction in close relationships: Findings from a longitudinal study. *Journal of Happiness Studies*, *17*(3), 1293-1311. https://doi.org/10.1007/s10902-015-9643-7

Heller, D., Watson, D., & Ilies, R. (2004). The role of person versus situation in life satisfaction: A critical examination. *Psychological Bulletin*, *130*(4), 574-600. https://doi.org/10.1037/0033-2909.130.4.574

Hoppmann, C. A., Gerstorf, D., Willis, S. L., & Schaie, K. W. (2011). Spousal interrelations in happiness in the Seattle Longitudinal Study: Considerable similarities in levels and change over time. *Developmental Psychology*, *47*(1), 1-8. https://doi.org/10.1037/a0020788

Hsieh, C. M. (2003). Counting importance: The case of life satisfaction and relative domain importance. *Social Indicators Research*, *61*(2), 227-240. https://doi.org/10.1023/A:1021354132664

Hsieh, C. M. (2005). Age and relative importance of major life domains. *Journal of Aging Studies*, *19*(4), 503-512. https://doi.org/10.1016/j.jaging.2005.07.001

Humberg, S., Nestler, S., & Back, M. D. (2019). Response surface analysis in personality and social psychology: Checklist and clarifications for the case of congruence hypotheses. *Social*

Psychological   and   Personality   Science,   *10*(3),   409-419. https://doi.org/10.1177/1948550618757600

Kenny, D. A. (1996). Models of non-independence in dyadic research. *Journal of Social and Personal Relationships*, *13*(2), 279-294. https://doi.org/10.1177/0265407596132007

Kenny, D. A., & Cook, W. (1999). Partner effects in relationship research: Conceptual issues, analytic difficulties, and illustrations. *Personal Relationships*, *6*(4), 433-448. https://doi.org/10.1111/j.1475-6811.1999.tb00202.x

Klaus, D., & Vogel, C. (2019). Unbezahlte Sorgetätigkeiten von Frauen und Männern im Verlauf der zweiten Lebenshälfte. In C. Vogel, M. Wettstein, & C. Tesch-Römer (Eds.), *Frauen und Männer in der zweiten Lebenshälfte: Älterwerden im sozialen Wandel* (pp. 91-112). Springer. https://doi.org/10.1007/978-3-658-25079-9_6

Lampis, J., Cataudella, S., Busonera, A., & Carta, S. (2018). Personality similarity and romantic relationship adjustment during the couple life cycle. *The Family Journal*, *26*(1), 31-39. https://doi.org/10.1177/1066480717741689

Leikas, S., Ilmarinen, V.-J., Verkasalo, M., Vartiainen, H.-L., & Lönnqvist, J.-E. (2018). Relationship satisfaction and similarity of personality traits, personal values, and attitudes. *Personality and Individual Differences*, *123*, 191-198. https://doi.org/10.1016/j.paid.2017.11.024

Lewis, M. A., Butterfield, R. M., Darbes, L. A., & Johnston-Brooks, C. (2004). The conceptualization and assessment of health-related social control. *Journal of Social and Personal Relationships*, *21*(5), 669-687. https://doi.org/10.1177/0265407504045893

Lewis, M. A., McBride, C. M., Pollak, K. I., Puleo, E., Butterfield, R. M., & Emmons, K. M. (2006). Understanding health behavior change among couples: An interdependence and communal coping approach. *Social Science & Medicine*, *62*(6), 1369-1380. https://doi.org/10.1016/j.socscimed.2005.08.006

Loewe, N., Bagherzadeh, M., Araya-Castillo, L., Thieme, C., & Batista-Foguet, J. M. (2014). Life domain satisfactions as predictors of overall life satisfaction among workers: Evidence from Chile. *Social Indicators Research*, *118*(1), 71-86. https://doi.org/10.1007/s11205-013-0408-6

Luo, S. (2009). Partner selection and relationship satisfaction in early dating couples: The role of couple similarity. *Personality   and   Individual   Differences*, *47*(2), 133-138. https://doi.org/10.1016/j.paid.2009.02.012

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

Luo, S., Chen, H., Yue, G., Zhang, G., Zhaoyang, R., & Xu, D. (2008). Predicting marital satisfaction from self, partner, and couple characteristics: Is it me, you, or us? *Journal of Personality*, *76*(5), 1231-1266. https://doi.org/10.1111/j.1467-6494.2008.00520.x

Luo, S., & Klohnen, E. C. (2005). Assortative mating and marital quality in newlyweds: A couple-centered approach. *Journal   of   Personality   and   Social   Psychology*, *88*(2), 304-326. https://doi.org/10.1037/0022-3514.88.2.304

Margolis, R., & Myrskylä, M. (2013). Family, money, and health: Regional differences in the determinants of life satisfaction over the life course. *Advances in Life Course Research*, *18*(2), 115-126. https://doi.org/10.1016/j.alcr.2013.01.001

Markey, C. N., Gomel, J. N., & Markey, P. M. (2008). Romantic relationships and eating regulation:An investigation of partners' attempts to control each others' eating behaviors. *Journal of Health Psychology*, *13*(3), 422-432. https://doi.org/10.1177/1359105307088145

McAdams, K. K., Lucas, R. E., & Donnellan, M. B. (2012). The role of domain satisfaction in explaining the paradoxical association between life satisfaction and age. *Social Indicators Research*, *109*(2), 295-303. https://doi.org/10.1007/s11205-011-9903-9

Nestler, S., Grimm, K. J., & Schönbrodt, F. D. (2015). The social consequences and mechanisms of personality: How to analyse longitudinal data from individual, dyadic, round-robin and network designs. *European Journal of Personality*, *29*(2), 272-295. https://doi.org/10.1002/per.1997

Oishi, S., Diener, E., Lucas, R. E., & Suh, E. K. (1999). Cross-cultural variations in predictors of life satisfaction: Perspectives from needs and values. *Personality and Social Psychology Bulletin*, *25*(8), 980-990. https://doi.org/10.1177/01461672992511006

Oishi, S., Diener, E., Suh, E., & Lucas, R. E. (1999). Value as a moderator in subjective well-being. *Journal of Personality*, *67*(1), 157-184. https://doi.org/10.1111/1467-6494.00051

Orth, U., Erol, R. Y., Ledermann, T., & Grob, A. (2018). Codevelopment of well-being and self-esteem in romantic partners: Disentangling the effects of mutual influence and shared environment. *Developmental Psychology*, *54*(1), 151. https://doi.org/10.1037/dev0000400

Pinheiro, J., Bates, D., DebRoy, S., & Sarkar, D. (2019). *Linear and nonlinear mixed effects models* https://cran.r-project.org/web/packages/nlme/nlme.pdf

Powdthavee, N. (2009). I can't smile without you: Spousal correlation in life satisfaction. *Journal of Economic Psychology*, *30*(4), 675-689. https://doi.org/10.1016/j.joep.2009.06.005

R Core Team. (2019). *R: A language and environment for statistical computing* https://www.R-project.org/

Rohrer, J. M., & Schmukle, S. C. (2018). Individual importance weighting of domain satisfaction ratings does not increase validity. *Collabra: Psychology*, *4*(1), Article 6. https://doi.org/10.1525/collabra.116

Rojas, M. (2007). The complexity of well-being: A life satisfaction conception and a domains-of-life approach. In I. Gough & J. A. McGregor (Eds.), *Researching well-being in developing countries* (pp. 259-280). Cambridge University Press.

Rosseel, Y. (2012). lavaan: An R package for structural equation modeling. *Journal of Statistical Software*, *48*(2), 1-36. https://doi.org/10.18637/jss.v048.i02

Rusbult, C. E., & Van Lange, P. A. M. (2008). Why we need interdependence theory. *Social and Personality Psychology Compass*, *2*(5), 2049-2070. https://doi.org/10.1111/j.1751-9004.2008.00147.x

Ryff, C. D., & Essex, M. J. (1992). The interpretation of life experience and well-being: The sample case of relocation. *Psychology and Aging*, *7*(4), 507-517. https://doi.org/10.1037/0882-7974.7.4.507

Schimmack, U., & Lucas, R. (2010). Environmental influences on well-being: A dyadic latent panel analysis of spousal similarity. *Social Indicators Research*, *98*(1), 1-21. https://doi.org/10.1007/s11205-009-9516-8

Schönbrodt, F. D., & Humberg, S. (2020). RSA: An R package for response surface analysis (version 0.10.0). https://cran.r-project.org/package=RSA

Schönbrodt, F. D., Humberg, S., & Nestler, S. (2018). Testing similarity effects with dyadic response surface analysis. *European Journal of Personality*, *32*(6), 627-641. https://doi.org/10.1002/per.2169

Schwartz, C. R., & Graf, N. L. (2009). Assortative matching among same-sex and different-sex couples in the United States, 1990-2000. *Demographic Research*, *21*, 843-878. https://doi.org/10.4054/demres.2009.21.28

Sekhon, J. S. (2011). Multivariate and propensity ccore matching software with automated balance optimization: The Matching package for R. *Journal of Statistical Software*, *42*(7), 1-52. https://doi.org/10.18637/jss.v042.i07

Townsend, A. L., Miller, B., & Guo, S. (2001). Depressive symptomatology in middle-aged and older married couples: A dyadic analysis. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *56*(6), S352-S364. https://doi.org/10.1093/geronb/56.6.S352

van Praag, B. M. S., Frijters, P., & Ferrer-i-Carbonell, A. (2003). The anatomy of subjective well-being. *Journal of Economic Behavior & Organization*, *51*(1), 29-49. https://doi.org/10.1016/S0167-2681(02)00140-3

van Scheppingen, M. A., Chopik, W. J., Bleidorn, W., & Denissen, J. J. (2018). Longitudinal actor, partner, and similarity effects of personality on well-being. *Journal of Personality and Social Psychology*, *117*(4), 51-70. https://doi.org/10.1037/pspp0000211

Voorpostel, M., Tillmann, R., Lebert, F., Kuhn, U., Lipps, O., Ryser, V. r.-A., Antal, E., Monsch, G.-A., Dasoki, N., & Wernli, B. (2018). *Swiss Household Panel user guide (1999 - 2017)*. https://forscenter.ch/wp-content/uploads/2019/01/shp_user-guide-w19.pdf

Watson, D., Klohnen, E. C., Casillas, A., Nus Simms, E., Haig, J., & Berry, D. S. (2004). Match makers and deal breakers: Analyses of assortative mating in newlywed couples. *Journal of Personality*, *72*(5), 1029-1068. https://doi.org/10.1111/j.0022-3506.2004.00289.x

Weidmann, R., Ledermann, T., & Grob, A. (2016). The interdependence of personality and satisfaction in couples. *European Psychologist*, *21*(4), 284-295. https://doi.org/10.1027/1016-9040/a000261

Weidmann, R., Schönbrodt, F. D., Ledermann, T., & Grob, A. (2017). Concurrent and longitudinal dyadic polynomial regression analyses of Big Five traits and relationship satisfaction: Does similarity matter? *Journal of Research in Personality*, *70*, 6-15. https://doi.org/10.1016/j.jrp.2017.04.003

Wünsche, J., Weidmann, R., & Grob, A. (2020). Until death do us part: The codevelopment of life satisfaction in couples preceding the death of one partner. *Journal of Personality and Social Psychology*, *119*(4), 881-900. https://doi.org/10.1037/pspi0000228

Footnotes

1   Because we used an absolute dissimilarity score to control for between-partner differences in age, we are unable to interpret the direction of the observed effects. Nevertheless, previous evidence also suggests that domain importance changes across the life span. In particular, the second half of life has been linked with a decreasing importance of financial resources while the family and health domains appear to gain in importance (Bardo, 2017; Cheung & Lucas, 2015).

Figure 1

Dyadic Response Surfaces for the Significant Similarity Effect of Domain Importance

Life together in the household
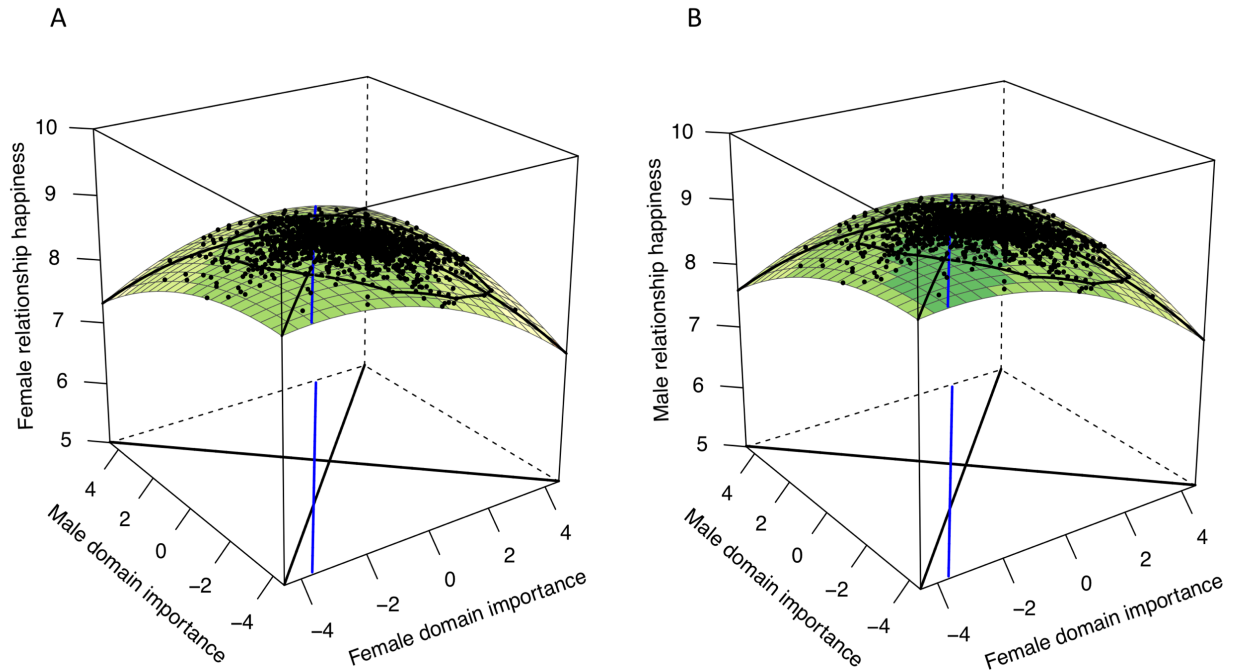
Note. We show the estimated response surfaces for the prediction of female (A) and male (B) partners' relationship happiness based on their domain importance regarding life together in the household. Black lines represent the line of congruence and the line of incongruence, respectively. Each blue line indicates the projected first principal axis. Black dots represent predicted values of relationship happiness based on each combination of female and male partners' domain importance. Couple members did not significantly differ in the shape of their estimated response surfaces but female partners showed significantly lower intercept levels.

Figure 2

Dyadic Response Surfaces for the Significant Similarity Effects of Partner Dependence
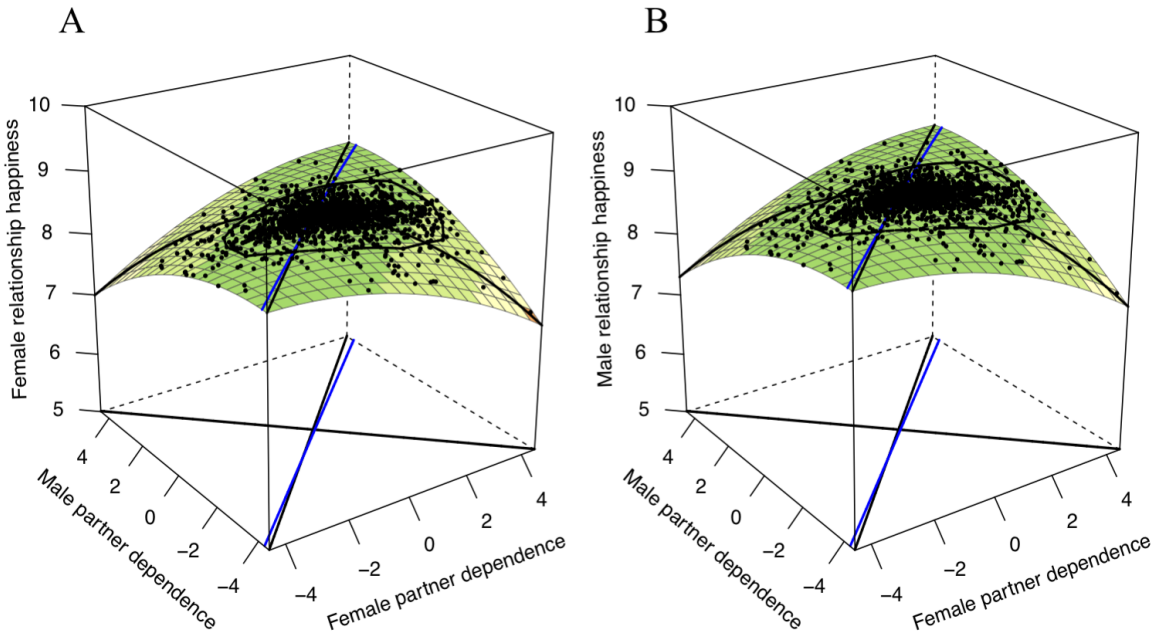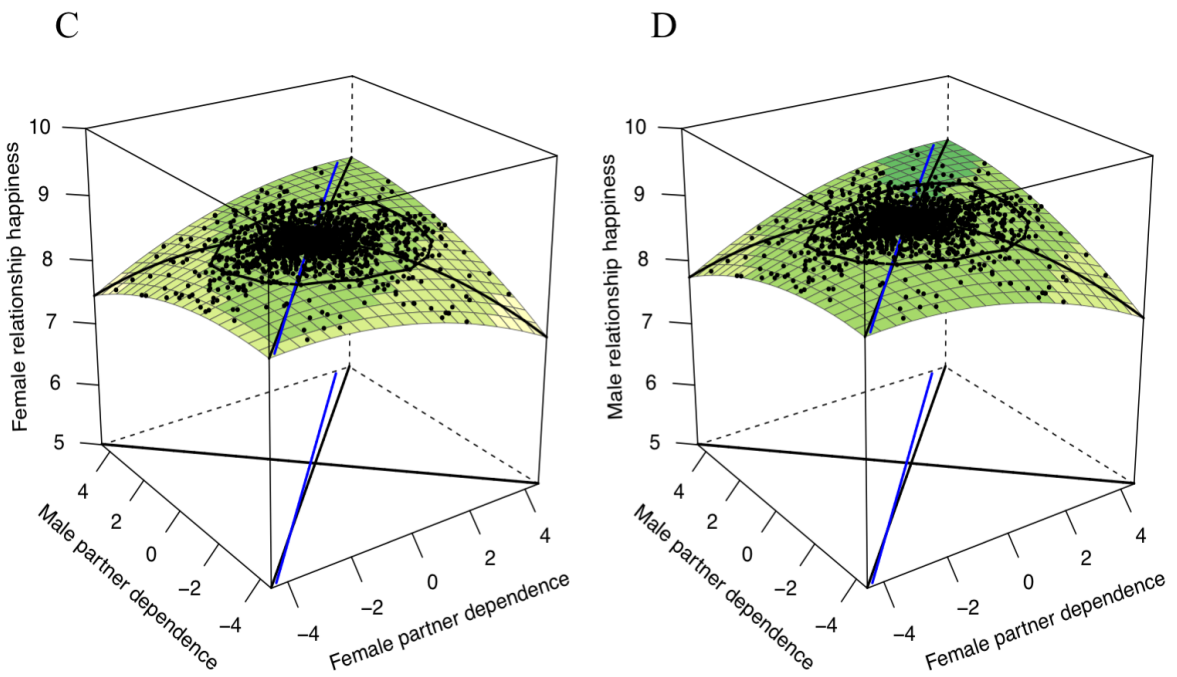
Note. We show the estimated response surfaces for the prediction of female (A, C) and male (B, D) partners' relationship happiness based on their partner dependence regarding life together in the household and leisure time. Black lines represent the line of congruence and the line of incongruence, respectively. The blue lines indicate the projected first principal axis. Black dots represent predicted values of relationship happiness based on each combination of female and male partners' partner dependence. Couple members did not significantly differ in the shape of their estimated response surfaces but female partners showed significantly lower intercept levels.

Table 1

Bivariate Correlations Between Domain Satisfaction and Life Satisfaction for Female and Male Partners

Variable	1	2	3	4	5	6	7
1. Satisfaction with health	.12	.29	.28	.16	.17	.38	.50
2. Satisfaction with finances	.29	.53	.34	.26	.39	.36	.55
3. Satisfaction with life in household	.29	.31	.47	.62	.33	.60	.62
4. Satisfaction with housework	.23	.25	.60	.29	.33	.38	.43
5. Satisfaction with leisure time	.14	.32	.37	.35	.42	.34	.40
6. Satisfaction with personal relationships	.53	.33	.67	.49	.37	.29	.62
7. Life satisfaction	.53	.57	.56	.41	.36	.50	.39

Note. We report Pearson's product-moment correlations. Correlations above the diagonal belong to female partners; correlations below the diagonal belong to male partners. Correlations on the diagonal (gray) are between-partner correlations. All correlations were significant at *p* < .01.

Table 2

Results of the Multilevel Actor–Partner Interdependence Models to Predict General Life Satisfaction From Domain Satisfactions in Couples

Model parameter	Health				Financial situation				Life in household			
	b	99% CI	p	SD	b	99% CI	p	SD	b	99% CI	p	SD
Intercept$_{female}$	**8.32**	[8.28, 8.37]	<.001	0.73	**8.31**	[8.28, 8.34]	<.001	0.71	**8.35**	[8.31, 8.39]	<.001	0.65
Intercept$_{male}$	**8.26**	[8.22, 8.3]	<.001	0.72	**8.31**	[8.26, 8.35]	<.001	0.69	**8.22**	[8.18, 8.26]	<.001	0.69
Concurrent actor$_{female}$	**0.14**	[0.12, 0.15]	<.001	0.17	**0.12**	[0.11, 0.13]	<.001	0.14	**0.19**	[0.17, 0.20]	<.001	0.19
Concurrent actor$_{male}$	**0.14**	[0.12, 0.15]	<.001	0.20	**0.12**	[0.11, 0.13]	<.001	0.16	**0.19**	[0.17, 0.20]	<.001	0.19
Concurrent partner$_{female}$	**0.03**	[0.02, 0.05]	<.001	0.10	**0.02**	[0.01, 0.03]	<.001	0.09	**0.04**	[0.02, 0.05]	<.001	0.16
Concurrent partner$_{male}$	0.01	[-0.01, 0.02]	.172	0.09	**0.02**	[0.01, 0.03]	<.001	0.08	**0.04**	[0.02, 0.05]	<.001	0.11
Mean actor$_{female}$	**0.37**	[0.35, 0.39]	<.001		**0.33**	[0.31, 0.35]	<.001		**0.54**	[0.50, 0.57]	<.001	
Mean actor$_{male}$	**0.37**	[0.35, 0.39]	<.001		**0.33**	[0.31, 0.35]	<.001		**0.54**	[0.50, 0.57]	<.001	
Mean partner$_{female}$	**0.08**	[0.06, 0.10]	<.001		0.01	[-0.01, 0.03]	.147		**0.06**	[0.03, 0.09]	<.001	
Mean partner$_{male}$	**0.08**	[0.06, 0.10]	<.001		0.01	[-0.01, 0.03]	.147		**0.06**	[0.03, 0.09]	<.001	
Gender × Intercept	**-0.03**	[-0.06, -0.002]	.006		-0.01	[-0.04, 0.02]	.539		**-0.07**	[-0.09, -0.04]	<.001	
Gender × Concurrent Actor	0.00	[-0.02, 0.01]	.565		0.00	[-0.01, 0.01]	.776		-0.02	[-0.03, 0.0004]	.012	
Gender × Concurrent Partner	**-0.01**	[-0.03, -0.002]	.003		-0.01	[-0.01, 0.02]	.180		-0.01	[-0.03, 0.005]	.070	
Gender × Mean Actor	0.02	[-0.01, 0.04]	.046		0.01	[-0.01, 0.03]	.133		-0.01	[-0.04, 0.02]	.398	
Gender × Mean Partner	0.00	[-0.02, 0.02]	.978		0.00	[-0.02, 0.02]	.854		0.01	[-0.02, 0.04]	.525	

Model parameter	Housework				Leisure time				Personal relationships			
	b	99% CI	p	SD	b	99% CI	p	SD	b	99% CI	p	SD
Intercept$_{female}$	**8.34**	[8.29, 8.39]	<.001	0.76	**8.28**	[8.24, 8.31]	<.001	0.78	**8.28**	[8.25, 8.31]	<.001	0.64
Intercept$_{male}$	**8.15**	[8.09, 8.2]	<.001	0.77	**8.28**	[8.22, 8.32]	<.001	0.80	**8.28**	[8.24, 8.32]	<.001	0.66
Concurrent actor$_{female}$	**0.08**	[0.07, 0.09]	<.001	0.14	**0.05**	[0.04, 0.06]	<.001	0.09	**0.12**	[0.11, 0.14]	<.001	0.17
Concurrent actor$_{male}$	**0.08**	[0.07, 0.09]	<.001	0.15	**0.05**	[0.04, 0.06]	<.001	0.08	**0.12**	[0.11, 0.14]	<.001	0.17
Concurrent partner$_{female}$	**0.02**	[0.01, 0.03]	<.001	0.09	0.01	[-0.001, 0.02]	.021	0.08	**0.03**	[0.01, 0.04]	<.001	0.12
Concurrent partner$_{male}$	**0.02**	[0.01, 0.03]	<.001	0.08	0.01	[-0.001, 0.02]	.021	0.07	**0.03**	[0.01, 0.04]	<.001	0.09

Model parameter	b	99% CI	p	SD	b	99% CI	p	SD	b	99% CI	p	SD
Mean actor_female	**0.22**	[0.19, 0.25]	<.001		**0.18**	[0.16, 0.20]	<.001		0.55	[0.52, 0.58]	<.001	
Mean actor_male	**0.32**	[0.28, 0.36]	<.001		**0.18**	[0.16, 0.20]	<.001		0.55	[0.52, 0.58]	<.001	
Mean partner_female	**0.16**	[0.11, 0.20]	<.001		**0.02**	[0.003, 0.04]	.002		0.11	[0.07, 0.16]	<.001	
Mean partner_male	**0.07**	[0.04, 0.09]	<.001		**0.02**	[0.003, 0.04]	.002		0.05	[0.01, 0.09]	.002	
Gender × Intercept	**-0.10**	[-0.13, -0.06]	<.001		-0.01	[-0.04, 0.03]	.622		0.00	[-0.03, 0.03]	.953	
Gender × Concurrent Actor	0.00	[-0.02, 0.01]	.340		-0.01	[-0.02, 0.003]	.094		-0.01	[-0.03, 0.004]	.062	
Gender × Concurrent Partner	0.00	[-0.01, 0.01]	.969		0.00	[-0.01, 0.01]	.797		0.00	[-0.02, 0.01]	.699	
Gender × Mean Actor	**0.05**	[0.03, 0.08]	<.001		-0.02	[-0.04, 0.001]	.014		0.00	[-0.03, 0.03]	.824	
Gender × Mean Partner	**-0.05**	[-0.07, -0.02]	<.001		0.01	[-0.01, 0.03]	.183		-0.03	[-0.06, -0.004]	.004	

Note. $N_{couples}$ = 2,279. *b* = Unstandardized fixed effect estimate. CI = Confidence interval. *SD* = random effect estimate as standard deviation. Concurrent actor and partner domain satisfaction scores were person-mean centered. Mean actor and partner domain satisfaction scores were grand-mean centered around the average of the entire analysis sample. Gender was coded as -1 (female) and 1 (male). The suffix indicates whether the outcome belonged to male or female partners. If the estimates did not significantly differ between couple members, we report the same estimate for male and female partners. We computed separate models for each life domain. Residual between-partner correlations ranged between .09 and .10. Coefficients printed in bold are significant at *p* < .01.

Table 3

Results of the Linear Regressions to Predict Between-Partner Dissimilarity in Domain Importance

Model parameters	Health			Financial situation			Life in household		
	β	99% CI	p	β	99% CI	p	β	99% CI	p
Couple status	-0.02	[-0.1, 0.05]	.458	-0.03	[-0.1, 0.05]	.390	**-0.10**	[-0.18, -0.02]	<.001
Age difference	**0.06**	[0.02, 0.10]	<.001	**0.06**	[0.02, 0.1]	<.001	0.04	[-0.002, 0.08]	.013
Educational difference	-0.01	[-0.05, 0.03]	.511	**-0.05**	[-0.09, -0.01]	.001	0.00	[-0.04, 0.04]	.994

Model parameters	Housework			Leisure time			Personal relationships		
	β	99% CI	p	β	99% CI	p	β	99% CI	p
Couple status	0.00	[-0.08, 0.07]	.918	0.00	[-0.08, 0.08]	.959	0.01	[-0.07, 0.08]	.800
Age difference	**0.07**	[0.03, 0.10]	<.001	**0.06**	[0.02, 0.09]	<.001	**0.04**	[0.001, 0.08]	.009
Educational difference	-0.01	[-0.05, 0.03]	.457	0.00	[-0.03, 0.04]	.796	0.00	[-0.04, 0.03]	.754

Note. The analyses were based on a pooled sample of $N_{couples}$ = 2,279 and $N_{random\ pairs}$ = 2,279. β = standardized regression coefficient. CI = confidence interval. Age and educational differences refer to grand-mean-centered between-partner difference scores. Couple status was coded as 0 (random pair) and 1 (real couple). We computed separate models for each life domain. Coefficients printed in bold are significant at $p < .01$.

Table 4

Results of the [Polynomial] Actor–Partner Interdependence Model to Predict Relationship Happiness From Female and Male Partners' Domain Importance

Life domains	[Polynomial] actor–partner interdependence model $Z = \beta_0 + \beta_1 X + \beta_2 Y + [\beta_3 X^2 + \beta_4 XY + \beta_5 Y^2]$						Position of first principal axis		Shape of surface along lines			
									LOC		LOIC	
	β_0	β_1	β_2	β_3	β_4	β_5	p_{10}	p_{11}	a_1	a_2	a_3	a_4
Health$_{female}$	**8.50**	-0.05	**-0.06**									
Health$_{male}$	**8.79**	-0.05	**-0.06**									
Financial situation$_{female}$	**8.55**	-0.02	-0.04	**-0.05**	**-0.06**	**-0.06**	-1.00	**-1.02**[a]	-0.07	**-0.07**	0.01	0.01
Financial situation$_{male}$	**8.84**	-0.03	-0.03	**-0.07**	**-0.07**	**-0.05**	-1.00	**-1.02**[a]	-0.07	**-0.07**	0.01	0.01
Life in household$_{female}$	**8.60**	**-0.05**	-0.03	**-0.12**	0.04	**-0.07**	0.74	**1.42**	-0.09	-0.02	-0.03	**-0.07**
Life in household$_{male}$	**8.87**	**-0.06**	-0.03	**-0.12**	-0.04	**-0.09**	0.74	**1.43**	-0.09	-0.02	-0.03	**-0.07**
Housework$_{female}$	**8.56**	-0.04	-0.03	-0.05	-0.01	**-0.11**	-1.57	-0.52	-0.08	-0.03	-0.02	-0.03
Housework$_{male}$	**8.85**	-0.05	-0.03	-0.09	-0.01	**-0.06**	-1.57	-0.52	-0.08	-0.03	-0.02	-0.03
Leisure time$_{female}$	**8.56**	0.00	-0.01	**-0.07**	0.01	**-0.06**	-0.16	1.09	-0.01	-0.03	0.01	-0.04
Leisure time$_{male}$	**8.85**	0.00	-0.01	**-0.06**	0.01	**-0.07**	-0.16	1.09	-0.01	-0.03	0.01	-0.04
Personal relationships$_{female}$	**8.64**	-0.06	**-0.07**	**-0.12**	-0.01	**-0.13**	-2.77	-2.40	**-0.14**	**-0.08**	0.00	-0.06
Personal relationships$_{male}$	**8.86**	**-0.09**	-0.06	**-0.08**	-0.01	-0.08	-2.04	-0.50	**-0.14**	-0.05	-0.02	-0.03

Note. $N_{couples}$ = 2,279. β_0 through β_5 = standardized regression coefficients. In the presented [polynomial] actor–partner interdependence model, X refers to the actor's domain importance, Y to the partner's domain importance, and Z to relationship happiness. LOC = line of congruence; LOIC = line of incongruence. [a] The 99% confidence interval of p_{11} excludes 1. We computed separate models for each life domain. We report the parameters obtained from the simpler actor–partner interdependence model if it provided a better relative fit than the more complex polynomial model. With the exception of the domain of personal relationships, the parameters β_1 through β_5 could be constrained to be equal between partners without worsening the model fit. See Supplemental Table S2 for details on model comparisons. Coefficients in bold are significant at $p < .01$.

Supplemental Material

Supplemental Table S1

Results of the Multilevel Actor–Partner Interdependence Models to Predict Life Satisfaction From Domain Satisfactions in Random Pairs

Model parameter	Health				Financial situation				Life in household			
	b	99% CI	p	SD	b	99% CI	p	SD	b	99% CI	p	SD
Intercept$_{female}$	**8.33**	[8.29, 8.37]	<.001	0.74	**8.32**	[8.29, 8.35]	<.001	0.72	**8.36**	[8.32, 8.40]	<.001	0.66
Intercept$_{male}$	**8.26**	[8.22, 8.31]	<.001	0.73	**8.32**	[8.27, 8.35]	<.001	0.70	**8.22**	[8.18, 8.26]	<.001	0.70
Concurrent actor$_{female}$	**0.14**	[0.12, 0.15]	<.001	0.18	**0.12**	[0.11, 0.14]	<.001	0.15	**0.21**	[0.19, 0.24]	<.001	0.21
Concurrent actor$_{male}$	**0.14**	[0.12, 0.15]	<.001	0.20	**0.12**	[0.11, 0.14]	<.001	0.17	**0.17**	[0.14, 0.19]	<.001	0.20
Concurrent partner$_{female}$	0.00	[-0.01, 0.01]	.930	0.04	0.00	[-0.01, 0.01]	.953	0.08	0.01	[-0.01, 0.02]	.243	0.04
Concurrent partner$_{male}$	0.00	[-0.01, 0.01]	.930	0.06	0.00	[-0.01, 0.01]	.953	0.06	0.01	[-0.01, 0.02]	.243	0.08
Mean actor$_{female}$	**0.38**	[0.35, 0.40]	<.001		**0.33**	[0.31, 0.35]	<.001		**0.56**	[0.53, 0.59]	<.001	
Mean actor$_{male}$	**0.38**	[0.35, 0.40]	<.001		**0.33**	[0.31, 0.35]	<.001		**0.56**	[0.53, 0.59]	<.001	
Mean partner$_{female}$	0.01	[-0.02, 0.03]	.505		0.01	[-0.01, 0.03]	.075		**0.04**	[0.01, 0.07]	<.001	
Mean partner$_{male}$	0.01	[-0.02, 0.03]	.505		0.01	[-0.01, 0.03]	.075		**0.04**	[0.01, 0.07]	<.001	
Gender × Intercept	**-0.03**	[-0.06, -0.002]	.006		-0.01	[-0.04, 0.02]	.591		**-0.07**	[-0.10, -0.04]	<.001	
Gender × Concurrent Actor	0.00	[-0.02, 0.01]	.479		0.00	[-0.01, 0.01]	.873		**-0.02**	[-0.04, -0.005]	.001	
Gender × Concurrent Partner	0.00	[-0.01, 0.01]	.490		0.00	[-0.01, 0.01]	.975		0.00	[-0.02, 0.01]	.713	
Gender × Mean Actor	0.02	[-0.004, 0.04]	.030		0.02	[-0.002, 0.04]	.019		-0.01	[-0.04, 0.02]	.577	
Gender × Mean Partner	-0.01	[-0.04, 0.01]	.202		-0.01	[-0.03, 0.01]	.220		0.00	[-0.03, 0.03]	.910	

	Housework				Leisure time				Personal relationships			
	b	CI	*p*	SD	*b*	CI	*p*	SD	*b*	CI	*p*	SD
Intercept_female	**8.41**	[8.35, 8.46]	<.001	0.78	**8.28**	[8.24, 8.31]	<.001	0.79	**8.28**	[8.25, 8.31]	<.001	0.65
Intercept_male	**8.12**	[8.07, 8.17]	<.001	0.79	**8.28**	[8.23, 8.33]	<.001	0.80	**8.28**	[8.24, 8.32]	<.001	0.67
Concurrent actor_female	**0.08**	[0.06, 0.09]	<.001	0.14	**0.05**	[0.04, 0.06]	<.001	0.10	**0.13**	[0.11, 0.14]	<.001	0.17
Concurrent actor_male	**0.08**	[0.06, 0.09]	<.001	0.15	**0.05**	[0.04, 0.06]	<.001	0.09	**0.13**	[0.11, 0.14]	<.001	0.17
Concurrent partner_female	0.01	[-0.01, 0.02]	.231	0.00	-0.01	[-0.01, 0.003]	.086	0.04	0.00	[-0.01, 0.01]	.852	0.06
Concurrent partner_male	0.01	[-0.01, 0.02]	.231	0.07	-0.01	[-0.01, 0.003]	.086	0.03	0.00	[-0.01, 0.01]	.852	0.08
Mean actor_female	**0.25**	[0.22, 0.28]	<.001		**0.20**	[0.18, 0.21]	<.001		**0.56**	[0.53, 0.59]	<.001	
Mean actor_male	**0.35**	[0.3, 0.39]	<.001		**0.20**	[0.18, 0.21]	<.001		**0.56**	[0.53, 0.59]	<.001	
Mean partner_female	**0.03**	[0.01, 0.06]	.001		-0.01	[-0.03, 0.004]	.041		0.02	[-0.004, 0.05]	.028	
Mean partner_male	**0.03**	[0.01, 0.06]	.001		-0.01	[-0.03, 0.004]	.041		0.02	[-0.004, 0.05]	.028	
Gender × Intercept	**-0.14**	[-0.18, -0.10]	<.001		0.00	[-0.03, 0.03]	.986		0.00	[-0.03, 0.03]	.981	
Gender × Concurrent Actor	-0.01	[-0.02, 0.01]	.208		0.00	[-0.01, 0.01]	.243		-0.02	[-0.03, 0.0005]	.012	
Gender × Concurrent Partner	0.00	[-0.01, 0.01]	.622		0.01	[-0.003, 0.01]	.101		0.00	[-0.01, 0.01]	.709	
Gender × Mean Actor	**0.05**	[0.02, 0.07]	<.001		-0.01	[-0.03, 0.01]	.096		-0.01	[-0.04, 0.02]	.447	
Gender × Mean Partner	-0.01	[-0.03, 0.02]	.385		0.00	[-0.02, 0.02]	.849		0.01	[-0.02, 0.04]	.275	

Note. $N_{couples}$ = 2,279. *b* = Unstandardized fixed effect estimate; CI = confidence interval. *SD* = random effect estimate as standard deviation. Concurrent actor and partner domain satisfaction scores were person-mean centered. Mean actor and partner domain satisfaction scores were grand-mean centered around the average of the entire sample. Gender was coded as -1 (female) and 1 (male). The suffix indicates whether the outcome belonged to male or female partners. If the estimates did not significantly differ between couple members, we report the same estimate for male and female partners. We computed separate models for each life domain. Residual between-partner correlations ranged between .01 and .02. Coefficients printed in bold are significant at *p* < .01.

Supplemental Table S2

Summary of Fit Indices of Models to Predict Relationship Happiness From Female and Male Partners'
Domain Importance

Model	χ^2	*df*	CFI	TLI	RMSEA	BIC	Comparison with unconstrained model	
							$\Delta\chi^2$	*p*
Health								
Unconstrained APIM	-	0	-	-	-	15,802		
Constrained APIM	0.05	2	1.00	1.00	0.00	15,786	0.05	.977
Unconstrained DRSA	-	0	-	-	-	15,825		
Constrained DRSA	4.45	5	1.00	1.00	0.00	15,790	4.45	.486
Finance								
Unconstrained APIM	-	0	-	-	-	15,802		
Constrained APIM	0.48	2	1.00	1.00	0.00	15,787	0.48	.786
Unconstrained DRSA	-	0	-	-	-	15,811		
Constrained DRSA	2.73	5	1.00	1.00	0.00	15,775	2.73	.742
Life in household								
Unconstrained APIM	-	0	-	-	-	15,789		
Constrained APIM	0.96	2	1.00	1.00	0.00	15,774	0.96	.618
Unconstrained DRSA	-	0	-	-	-	15,765		
Constrained DRSA	4.31	5	1.00	1.00	0.00	15,731	4.31	.506
Housework								
Unconstrained APIM	-	0	-	-	-	15,804		
Constrained APIM	1.68	2	1.00	1.00	0.00	15,790	1.68	.431
Unconstrained DRSA	-	0	-	-	-	15,801		
Constrained DRSA	8.92	5	0.99	0.99	0.02	15,772	8.92	.112
Leisure time								
Unconstrained APIM	-	0	-	-	-	15,813		
Constrained APIM	2.77	2	1.00	1.00	0.01	15,800	2.77	.250
Unconstrained DRSA	-	0	-	-	-	15,830		
Constrained DRSA	2.82	5	1.00	1.00	0.00	15,794	2.82	.727
Personal relationships								
Unconstrained APIM	-	0	-	-	-	15,776		
Constrained APIM	0.57	2	1.00	1.00	0.00	15,762	0.57	.753
Unconstrained DRSA	-	0	-	-	-	15,747		
Constrained DRSA	15.55	5	0.98	0.97	0.03	15,724	15.55	.008

Note. APIM = actor–partner interdependence model; DRSA = dyadic response surface analysis; CFI =
comparative fit index; TLI = Tucker–Lewis index; RMSEA = root mean square error of approximation;
BIC = Bayesian information criterion. In the constrained models, actor and partner effects were set to
be equal across genders. For saturated models (i.e., *df* = 0), we present only relative fit indices. Models
printed in bold are presented in the manuscript.

Supplemental Table S3

Summary of Fit Indices of Models to Predict Relationship Happiness From Female and Male Partners'
Partner Dependence

Model	χ^2	*df*	CFI	TLI	RMSEA	BIC	Comparison with unconstrained model	
							$\Delta\chi^2$	*p*
Health								
Unconstrained APIM	-	0	-	-	-	15,818		
Constrained APIM	1.74	2	1.00	1.00	0.00	15,805	1.74	.419
Unconstrained DRSA	-	0	-	-	-	15,837		
Constrained DRSA	8.84	5	0.99	0.99	0.02	15,807	8.84	.115
Finance								
Unconstrained APIM	-	0	-	-	-	15,817		
Constrained APIM	1.47	2	1.00	1.00	0.00	15,803	1.47	.479
Unconstrained DRSA	-	0	-	-	-	15,841		
Constrained DRSA	8.07	5	1.00	0.99	0.02	15,810	8.07	.153
Life in household								
Unconstrained APIM	-	0	-	-	-	15,817		
Constrained APIM	0.83	2	1.00	1.00	0.00	15,802	0.83	.660
Unconstrained DRSA	-	0	-	-	-	15,781		
Constrained DRSA	13.82	5	.99	.97	0.03	15,756	13.82	.017
Housework								
Unconstrained APIM	-	0	-	-	-	15,810		
Constrained APIM	1.81	2	1.00	1.00	0.00	15,796	1.81	.405
Unconstrained DRSA	-	0	-	-	-	15,806		
Constrained DRSA	7.01	5	1.00	1.00	0.01	15,774	7.01	.220
Leisure time								
Unconstrained APIM	-	0	-	-	-	15,809		
Constrained APIM	5.84	2	0.99	0.98	0.03	15,799	5.84	.054
Unconstrained DRSA	-	0	-	-	-	15,803		
Constrained DRSA	11.55	5	0.99	0.98	0.02	15,776	11.55	.041
Personal relationships								
Unconstrained APIM	-	0	-	-	-	15,799		
Constrained APIM	0.61	2	1.00	1.00	0.00	15,784	0.61	.736
Unconstrained DRSA	-	0	-	-	-	15,813		
Constrained DRSA	14.32	5	0.99	0.97	0.03	15,789	14.32	.014

Note. APIM = actor–partner interdependence model; DRSA = dyadic response surface analysis; CFI = comparative fit index; TLI = Tucker-Lewis index; RMSEA = root mean square error of approximation; BIC = Bayesian information criterion. In the constrained models, actor and partner effects were set to be equal across genders. We do not present fit indices for saturated models (i.e., *df* = 0). Models printed in bold are presented in the manuscript.

Supplemental Table S4

Results of the Multilevel Actor–Partner Interdependence Models to Predict Life Satisfaction From Domain Satisfaction in Couples

Model parameter	Health				Financial situation				Life in household			
	b	95% CI	p	SD	b	95% CI	p	SD	b	95% CI	p	SD
Intercept$_{male}$	**8.28**	[8.24, 8.31]	<.001	0.88	**8.28**	[8.24, 8.31]	<.001	0.88	**8.28**	[8.24, 8.31]	<.001	0.88
Intercept$_{female}$	**8.33**	[8.29, 8.36]	<.001	0.89	**8.33**	[8.29, 8.37]	<.001	0.89	**8.33**	[8.29, 8.37]	<.001	0.89
Actor$_{male}$	**0.13**	[0.12, 0.14]	<.001	0.20	**0.12**	[0.11, 0.12]	<.001	0.16	**0.16**	[0.14, 0.18]	<.001	0.19
Actor$_{female}$	**0.13**	[0.12, 0.14]	<.001	0.17	**0.12**	[0.11, 0.12]	<.001	0.14	**0.20**	[0.18, 0.22]	<.001	0.19
Partner$_{male}$	0.01	[-0.003, 0.02]	.150	0.09	**0.02**	[0.01, 0.03]	<.001	0.08	**0.04**	[0.03, 0.05]	<.001	0.11
Partner$_{female}$	**0.03**	[0.02, 0.05]	<.001	0.10	**0.02**	[0.01, 0.03]	<.001	0.09	**0.04**	[0.03, 0.05]	<.001	0.15
Gender × Intercept	**-0.02**	[-0.05, 0.003]	.022		**-0.03**	[-0.05, 0.003]	.020		**-0.03**	[-0.05, 0.003]	.020	
Gender × Actor	0.00	[-0.01, 0.01]	.570		0.00	[-0.01, 0.01]	.871		**-0.02**	[-0.03, -0.01]	.006	
Gender × Partner	**-0.01**	[-0.02, -0.00]	.005		0.01	[-0.003, 0.01]	.197		-0.01	[-0.02, 0.001]	.063	

Model parameter	Housework				Leisure time				Personal relationships			
	b	95% CI	p	SD	b	95% CI	p	SD	b	95% CI	p	SD
Intercept$_{male}$	**8.28**	[8.24, 8.31]	<.001	0.88	**8.28**	[8.25, 8.31]	<.001	0.88	**8.28**	[8.24, 8.31]	<.001	0.88
Intercept$_{female}$	**8.33**	[8.29, 8.36]	<.001	0.88	**8.28**	[8.25, 8.31]	<.001	0.88	**8.33**	[8.29, 8.37]	<.001	0.89
Actor$_{male}$	**0.08**	[0.07, 0.09]	<.001	0.15	**0.05**	[0.04, 0.06]	<.001	0.09	**0.12**	[0.11, 0.13]	<.001	0.17
Actor$_{female}$	**0.08**	[0.07, 0.09]	<.001	0.14	**0.05**	[0.04, 0.06]	<.001	0.10	**0.12**	[0.11, 0.13]	<.001	0.17
Partner$_{male}$	**0.02**	[0.01, 0.03]	<.001	0.08	**0.01**	[0.001, 0.01]	.018	0.07	**0.03**	[0.01, 0.04]	<.001	0.09
Partner$_{female}$	**0.02**	[0.01, 0.03]	<.001	0.09	**0.01**	[0.001, 0.01]	.018	0.08	**0.03**	[0.01, 0.04]	<.001	0.12
Gender × Intercept	**-0.03**	[-0.05, 0.003]	.021		-0.02	[-0.04, 0.001]	.062		**-0.02**	[-0.05, 0.003]	.022	
Gender × Actor	0.00	[-0.01, 0.01]	.536		0.00	[-0.01, 0.003]	.271		-0.01	[-0.02, 0.001]	.070	
Gender × Partner	0.00	[-0.01, 0.01]	.594		0.00	[-0.005, 0.01]	.569		0.00	[-0.01, 0.01]	.862	

Note. $N_{couples}$ = 2,279. b = Unstandardized person-mean-centered estimate for the fixed effect; CI = confidence interval. SD = random effect estimate as standard deviation. Gender was coded as -1 (female) and 1 (male). The suffix indicates whether the outcome belongs to male or female partners. If the estimates did not significantly differ between couple members, we report the same estimate for male and female partners. We computed separate models for each life domain. Coefficients printed in bold are significant at $p < .05$.

Supplemental Table S5

Results of the Multilevel Actor–Partner Interdependence Models to Predict Life Satisfaction From Domain Satisfaction in Random Pairs

Model parameter	Health				Financial situation				Life in household			
	b	95% CI	p	SD	b	95% CI	p	SD	b	95% CI	p	SD
Intercept$_{male}$	**8.30**	[8.27, 8.33]	<.001	0.88	**8.30**	[8.28, 8.33]	<.001	0.88	**8.30**	[8.28, 8.33]	<.001	0.88
Intercept$_{female}$	**8.30**	[8.27, 8.33]	<.001	0.89	**8.30**	[8.28, 8.33]	<.001	0.89	**8.30**	[8.28, 8.33]	<.001	0.89
Actor$_{male}$	**0.13**	[0.12, 0.14]	<.001	0.2	**0.12**	[0.11, 0.13]	<.001	0.16	**0.16**	[0.14, 0.18]	<.001	0.19
Actor$_{female}$	**0.13**	[0.12, 0.14]	<.001	0.17	**0.12**	[0.11,0.13]	<.001	0.14	**0.21**	[0.19, 0.23]	<.001	0.19
Partner$_{male}$	0.00	[-0.01, 0.01]	.843	0.09	0.00	[-0.01, 0.01]	.772	0.08	0.01	[-0.002, 0.02]	.106	0.11
Partner$_{female}$	0.00	[-0.01, 0.01]	.843	0.10	0.00	[-0.01, 0.01]	.772	0.09	0.01	[-0.002, 0.02]	.106	0.15
Gender × Intercept	-0.02	[-0.05, 0.003]	.076		-0.02	[-0.05, 0.002]	.072		-0.02	[-0.05, 0.002]	.070	
Gender × Actor	0.00	[-0.01, 0.01]	.606		0.00	[-0.01, 0.01]	.825		**-0.02**	[-0.04, -0.01]	.001	
Gender × Partner	0.00	[-0.01, 0.004]	.355		0.00	[-0.01, 0.01]	.828		0.00	[-0.02, 0.01]	.429	

Model parameter	Housework				Leisure time				Personal relationships			
	b	95% CI	p	SD	b	95% CI	p	SD	b	95% CI	p	SD
Intercept$_{male}$	**8.30**	[8.28, 8.33]	<.001	0.88	**8.28**	[8.25, 8.31]	<.001	0.88	**8.30**	[8.28, 8.33]	<.001	0.88
Intercept$_{female}$	**8.30**	[8.28, 8.33]	<.001	0.88	**8.28**	[8.25, 8.31]	<.001	0.88	**8.30**	[8.28, 8.33]	<.001	0.89
Actor$_{male}$	**0.08**	[0.07, 0.09]	<.001	0.15	**0.05**	[0.04, 0.06]	<.001	0.09	**0.11**	[0.09, 0.12]	<.001	0.17
Actor$_{female}$	**0.08**	[0.07, 0.09]	<.001	0.14	**0.05**	[0.04, 0.06]	<.001	0.10	**0.14**	[0.12, 0.16]	<.001	0.17
Partner$_{male}$	0.01	[-0.001, 0.02]	.095	0.08	-0.01	[-.01, 0.001]	.074	0.07	0.00	[-0.01, 0.01]	.873	0.09
Partner$_{female}$	0.01	[-0.001, 0.02]	.095	0.09	-0.01	[-.01, 0.001]	.074	0.08	0.00	[-0.01, 0.01]	.873	0.12
Gender × Intercept	-0.02	[-0.05, 0.002]	.075		-0.02	[-0.05, 0.01]	.159		-0.02	[-0.05, 0.002]	.071	
Gender × Actor	0.00	[-0.01, 0.01]	.422		0.00	[-0.01, 0.004]	.389		**-0.02**	[-0.03, -0.004]	.009	
Gender × Partner	0.00	[-0.01, 0.01]	.551		0.00	[-0.02, 0.01]	.172		0.00	[-0.01, 0.01]	.922	

Note. $N_{couples}$ =2,279. b = Unstandardized person-mean-centered estimate for the fixed effect; CI = confidence interval. SD = random effect estimate as standard deviation. Gender was coded as -1 (female) and 1 (male). The suffix indicates whether the outcome belongs to male or female partners. If the estimates did not significantly differ between couple members, we report the same estimate for male and female partners. We computed separate models for each life domain. Coefficients printed in bold are significant at p < .05.

Supplemental Table S6

Results of the Linear Regressions to Predict Between-Partner Dissimilarities in Domain Importance

Model parameter	Health			Financial situation			Life in household		
	β	95% CI	p	β	95% CI	p	β	95% CI	p
Couple status	**-0.23**	[-0.29, -0.17]	<.001	-0.02	[-0.07, 0.04]	.59	**-0.15**	[-0.2, -0.09]	<.001
Age difference	**0.07**	[0.04, 0.10]	<.001	**0.07**	[0.04, 0.10]	<.001	**0.04**	[0.01, 0.07]	.005
Educational difference	-0.01	[-0.04, 0.02]	.425	**-0.04**	[-0.07, -0.01]	.011	0.00	[-0.03, 0.02]	.735

Model parameter	Housework			Leisure time			Personal relationships		
	β	95% CI	p	β	95% CI	p	β	95% CI	p
Couple status	0.02	[-0.04, 0.08]	.574	0.05	[-0.01, 0.11]	.099	0.05	[-0.01, 0.11]	.101
Age difference	**0.07**	[0.04, 0.10]	<.001	**0.07**	[0.04, 0.09]	<.001	**0.05**	[0.02, 0.08]	<.001
Educational difference	-0.01	[-0.04, 0.02]	.399	0.00	[-0.03, 0.03]	.802	-0.01	[-0.04, 0.02]	.587

Note. The analyses were based on a pooled sample of $N_{couples}$ = 2,279 and $N_{random\ pairs}$ = 2,279. β = standardized regression coefficient; CI = confidence interval. Age and educational differences refer to grand-mean centered between-partner difference scores. Couple status was coded as 0 (random pair) and 1 (real couple). We computed separate models for each life domain. Coefficients printed in bold are significant at $p < .05$.

Supplemental Table S7

Results of the Multilevel Actor–Partner Interdependence Model to Predict Relationship Happiness From Female and Male Partners' Domain Importance and Between-Partner Dissimilarities in Domain Importance

Model parameter	Health			Financial situation			Life in household		
	β	99% CI	p	β	99% CI	p	β	99% CI	p
Actorfemale	**-0.06**	[-0.09, -0.03]	<.001	-0.11	[-0.14, -0.08]	<.001	-0.01	[-0.06, 0.04]	.671
Actormale	**-0.06**	[-0.09, -0.03]	<.001	**-0.11**	[-0.14, -0.08]	<.001	**-0.11**	[-0.15, -0.06]	<.001
Partnerfemale	-0.02	[-0.05, 0.01]	.287	**-0.08**	[-0.11, -0.05]	<.001	0.01	[-0.02, 0.05]	.452
Partnermale	-0.02	[-0.05, 0.01]	.287	**-0.08**	[-0.11, -0.05]	<.001	0.01	[-0.02, 0.05]	.452
Dissimilarityfemale	0.03	[-0.01, 0.07]	.165	**0.06**	[0.02, 0.10]	.002	**-0.07**	[-0.11, -0.03]	.002
Dissimilaritymale	0.03	[-0.01, 0.07]	.165	**0.06**	[0.02, 0.10]	.002	**-0.07**	[-0.11, -0.03]	.002
Gender × Actor	0.00	[-0.03, 0.04]	.843	-0.01	[-0.04, 0.02]	.531	**-0.05**	[-0.08, -0.01]	.009
Gender × Partner	0.00	[-0.03, 0.04]	.797	-0.02	[-0.04, 0.01]	.325	0.00	[-0.03, 0.04]	.812
Gender × Dissimilarity	0.00	[-0.03, 0.02]	.826	0.01	[-0.02, 0.03]	.608	-0.01	[-0.03, 0.02]	.578

Model parameter	Housework			Leisure time			Personal relationships		
	β	99% CI	p	β	99% CI	p	β	99% CI	p
Actorfemale	-0.01	[-0.04, 0.02]	.454	-0.02	[-0.06, 0.02]	.283	**-0.08**	[-0.12, -0.05]	<.001
Actormale	-0.01	[-0.04, 0.02]	.454	**0.09**	[0.05, 0.14]	<.001	**-0.08**	[-0.12, -0.05]	<.001
Partnerfemale	-0.03	[-0.06, -0.001]	.041	**0.10**	[0.05, 0.15]	<.001	**-0.10**	[-0.13, -0.07]	<.001
Partnermale	-0.03	[-0.06, -0.001]	.041	-0.02	[-0.05, 0.02]	.381	**-0.10**	[-0.13, -0.07]	<.001
Dissimilarityfemale	**-0.08**	[-0.13, -0.03]	.001	-0.01	[-0.05, 0.03]	.601	-0.05	[-0.1, -0.004]	.034
Dissimilaritymale	**-0.02**	[-0.06, 0.02]	.399	-0.01	[-0.05, 0.03]	.601	0.01	[-0.04, 0.05]	.809
Gender × Actor	0.02	[-0.01, 0.05]	.114	**0.06**	[0.03, 0.09]	<.001	0.00	[-0.03, 0.04]	.832
Gender × Partner	0.00	[-0.03, 0.03]	.879	**-0.06**	[-0.09, -0.03]	<.001	0.02	[-0.01, 0.05]	.169
Gender × Dissimilarity	0.03	[0.01, 0.06]	.017	-0.01	[-0.03, 0.02]	.625	0.03	[0.004, 0.06]	.024

*Note. N*couples = 2,279. β = standardized coefficients; CI = confidence interval. Gender was coded as -1 (female) and 1 (male). The dissimilarity effect refers to the effect of between-partner differences in the association between domain satisfaction and life satisfaction. The suffix indicates whether the outcome belongs to male or female partners. If the estimates did not significantly differ between couple members, we report the same estimate for male and female partners. Coefficients printed in bold are significant at *p* < .05.

APPENDIX B: Study 2

As the Sun Sets:

Interdependence in Relational and Personal Well-Being in Couples Approaching Separation

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Abstract

This study took an interdependent perspective to examine the decoupling of relational and personal well-being in couples before the dissolution of their relationship. We expected a vanishing interdependence in separating partners' relationship and life satisfaction across time. Using data of 450 separating couples of the German Family Panel (2008–2017), we employed dyadic multilevel models and compared our findings to a propensity-score-matched control sample of stable couples. To operationalize the strength of interdependence, we tested whether within-partner fluctuations in relationship and life satisfaction are longitudinally transmitted between couple members. We also accounted for average levels of partner satisfaction across waves and how they are related to couple members' relationship and life satisfaction. To explore the decoupling of well-being, we examined whether the strength of the longitudinal transmission effect decreased across time-to-separation. Our findings suggest that separating and stable couple members' reports of relationship and life satisfaction were positively related to their partners' average satisfaction across waves. However, significant longitudinal transmission effects of within-partner fluctuations in relationship and life satisfaction were only observed in separating couple members. The strength of these transmission effects appeared to remain stable across time-to-separation, suggesting that relationship dissolutions are—against existing literature and our expectations—not foreshadowed by a vanishing interdependence. Instead, the context of an impending separation appears to be characterized by stable sensitivity to romantic partners' relational and personal well-being. We discuss these findings in light of alternative explanations and provide implications for future studies.

Words: 241/250

Keywords: relationship satisfaction, life satisfaction, dyadic multilevel models, romantic relationships, co-development

As the Sun Sets: Interdependence in Relational and Personal Well-Being in Couples Approaching Separation

When you leave, weary of me, without a word I shall gently let you go.

—Kim Sowol, *Azaelas: A Book of Poems*

Separating from a romantic partner is an event most people experience in their lifetime. Especially during emerging and young adulthood, people frequently encounter the dissolution of their intimate relationships (Rhoades et al., 2011). Such separation experiences are painful and have been linked to declines in physical, mental, and economic well-being (Avellar & Smock, 2005; Liu, 2012; Rhoades et al., 2011; Waite et al., 2009).

Considering the potentially harmful impact of romantic dissolutions, a myriad of studies have sought to identify individual- and couple-level factors that may forecast relationship (in)stability (Felmlee et al., 1990; Gottman, 1994; Karney & Bradbury, 1995; Kelly & Conley, 1987; Le et al., 2010; Levinger, 1976; Solomon & Jackson, 2014). Unsurprisingly, a crucial predictor of separation is romantic partners' well-being (Karney & Bradbury, 1995; Røsand et al., 2014). A compelling body of research has demonstrated anticipatory declines in relationship and life satisfaction before partners separate or divorce (e.g., Denissen et al., 2019; Finn et al., 2020; Johnson et al., 2020; Lavner & Bradbury, 2010; van Scheppingen & Leopold, 2019). Less is known, however, about the intradyadic codynamics of well-being that foreshadow the end of a relationship (for an exception, see Finn et al., 2020).

The present study, therefore, takes a more interdependent approach to examine the path to separation. Specifically, we explore the characteristic (de-)coupling of relational and personal well-being in separating unions. To that end, we examined the patterns *and* changes in interdependence in relationship and life satisfaction in the years prior to the dissolution of a relationship. To ensure that the identified patterns of interdependence were inherent in the context of impeding separation, we compared our findings against a control sample of stable couples.

Couple Interdependence in Relationship and Life Satisfaction

Interdependence in cognitions and emotions is considered a characterizing component of a romantic relationship (Kelley et al., 1983; Sels et al., 2016). Indeed, interdependence theory suggests that a strong coupling of romantic partners' experiences is a prerequisite for a well-functioning relationship: Only if romantic partners' are attuned and susceptible to each other's experiences, they are able to make decisions with their own *and* their partner's needs in mind—thereby fostering a more favorable relationship climate in which both partners and the relationship are able to thrive (Joel et al., 2018; Rusbult & Van Lange, 2008).

In line with this proposition, evidence suggests that romantic partners are highly interdependent in their subjective well-being. As if connected by an invisible elastic band, couple members seem to share and shape each other's well-being on a short- and long-term scale (e.g., Hoppmann et al., 2011; Orth et al., 2018; Schimmack & Lucas, 2010; Sels et al., 2019). So far, couple interdependencies in subjective well-being have been studied and observed primarily for life satisfaction (Orth et al., 2018; Powdthavee, 2009; Schimmack & Lucas, 2010) and emotional well-being (Butler, 2015; Saxbe &

Repetti, 2010; Schoebi, 2008; Sels et al., 2019), but they have also been reported for relationship satisfaction (Finn et al., 2020) and other domain satisfactions (Schimmack & Lucas, 2010).

According to Orth et al. (2018), the observable interdependence of well-being between romantic partners is based on two primary sources: First, it is rooted in a shared living context (e.g., financial situation, housing situation) that has an extradyadic impact on both partners' well-being; and second, it results from intradyadic transmissions through which both partners mutually influence each other's well-being. Among other things, these intradyadic transmissions comprise less conscious processes of emotional contagion and crossover (Hatfield et al., 1993; Larson & Almeida, 1999; Thompson & Bolger, 1999) but also an active regulation (e.g., through physical touch, see Debrot et al., 2013) or an indirect alteration of partner well-being through emotionally colored communication styles and behaviors (Westman, 2001). Following the theorized benefits of being susceptible to the partner's experiences and needs (Rusbult & Van Lange, 2008), we suggest that especially the second source of couple interdependence—that is, the intradyadic transmission of well-being—matters for relationship stability. Hence, we focus on the intradyadic transmission of relationship and life satisfaction and assume that the elastic band connecting the couple becomes increasingly worn out among partners who approach the end of their relationship.

Interdependence in the Context of Separation

A number of studies have investigated couple interdependencies in well-being in different developmental contexts, suggesting, for instance, that romantic partners experience similar and interdependent changes in well-being in the years surrounding childbirth (Dyrdal & Lucas, 2013), job loss (Luhmann et al., 2014), retirement (Weber & Hülür, 2020), or partner death (Wünsche et al., 2020). To date, few studies have provided evidence on the interdependence of life and relationship satisfaction in the context of relationship breakups. Regarding relational well-being, we know of only one study that investigated the characteristic patterns of interdependence in relationship satisfaction before the dissolution of a relationship. This study of Finn et al. (2020) compared separating couples with continuing couples. The authors found weaker correlations for changes in relationship satisfaction among couples that eventually separated in the course of the study. A related line of research on life satisfaction, points into a similar direction. Wortman and Lucas (2016) examined state and trait correlations in life satisfaction across marital dissolutions and found that between-partner correlations were stronger before as compared to after divorce. These authors proposed that spouses' well-being "decouples" (Wortman & Lucas, 2016) after divorce as a result of a decreasing impact of shared environmental influences. It is likely, that this decoupling of well-being between partners does not start at the moment of separation itself, but that it is initiated long before the couple eventually breaks up. This notion is supported by two other studies that showed increases in the gaps of life satisfaction between separating couple members (Guven et al., 2012; Schade et al., 2016).

In sum, these previous studies provide evidence that the termination of a relationship is preceded by a decreasing interdependence in relational and personal well-being. As outlined earlier, this is unsurprising from a theoretical point of view, because strong couple interdependence is considered an essential characteristic of a well-functioning relationship (Kelley & Thibaut, 1978; Rusbult & Van Lange, 2008) that "help[s] coordinate the thoughts and behaviors of the relationship partners, increase[s] their mutual understanding, and foster[s] their social cohesion" (Anderson et al., 2003, p.

1054). Conversely, low interdependence is assumed to jeopardize a cooperative relationship climate in which both partners' needs are acknowledged. Specifically, if couple members are less susceptible to each other's well-being, they are also less likely to incorporate the other partner's needs and interests into their decisions. This is expected to foster behaviors that are primarily tailored toward meeting self-focused instead of relationship-focused interests (Joel et al., 2018; Rusbult & Van Lange, 2008). Hence, a weakening susceptibility to the partner's well-being experiences can be seen as an important risk factor for relationship instability.

But what are the factors that account for a vanishing interdependence between romantic partners that separate? We propose that maladaptive intradyadic processes—such as demand–withdraw patterns—might provide an explanation for a decline in interdependence in the context of impending separation. These patterns are characterized by a communication style in which one partner repeatedly complains, nags, and criticizes the other partner, who reacts by withdrawing from the relationship (Christensen & Heavey, 1990). Demand–withdraw patterns have been associated with lower levels of and decreases in relationship satisfaction (Christensen et al., 2006; Christensen & Heavey, 1990; Heavey et al., 1995; Noller et al., 1994), but they may also account for an increasing distance and decoupling between partners. Applying the image of the elastic band that connects couple members' well-being, it can be assumed that the experience of recurring dissatisfaction within the relationship (e.g., due to repeated criticism) puts the couple's band of interdependence under permanent strain, which might eventually result in an exhausted elasticity and a diminishing reactivity to the partner (e.g., withdrawal).

We propose that this process should be reflected in a declining intradyadic transmission of relational and personal well-being and it might foster an increasing alienation between romantic partners. This would also be in line with Knapp (1987), who postulated that the separation process is characterized by an increasing physical and psychological distance and disaffection between relationship partners. During this process, according to Knapp, partners increasingly return to the state of becoming the strangers they were before they met.

So far, however, there is limited evidence regarding the decoupling of romantic partners' well-being taking place before relationship separation. The current study seeks to fill this gap by investigating the characteristic patterns *and* changes in interdependence in relational and personal well-being in separating couples. In doing so, we captured the context of impending separation by relying on time-to-event as an objective indicator of this relationship context, and we expected continuous decreases in the intradyadic transmission of relationship and life satisfaction as couples approached the dissolution of their relationship.

The Present Study

In the present study, we took an interdependent approach to explore the intradyadic decoupling of well-being in separating compared to stable couples. To that end, we investigated the longitudinal intradyadic transmission of both partners' relationship and life satisfaction in the context of impending separation. Taking into account theoretical conceptions on the adaptivity of interdependence between romantic partners (Kelley & Thibaut, 1978; Rusbult & Van Lange, 2008) as well as previous evidence suggesting that the decoupling of well-being starts prior to separation (Finn et al., 2020; Guven et al., 2012; Schade et al., 2016), we expected that the strength of interdependence in relationship and life

satisfaction would continuously decrease as partners approached the end of their relationship. In stable couples, we did not expect to find changes in interdependence across time.

The present study extends previous research on interdependencies in relational and personal well-being in the context of separation in three important ways: First, this study is the first to acknowledge that the decoupling of separating partners' well-being is likely a continuous process, unfolding across time. We therefore examine how the intradyadic transmission of relationship and life satisfaction changes as couples approach the dissolution of their relationship.

Second, this study carefully disentangles the sources of interdependence in separating partners' relational and well-being. That is, instead of investigating between-partner level differences (Guven et al., 2012; Schade et al., 2016) or correlated changes (Finn et al., 2020) in relationship and life satisfaction as indicators of interdependence, we examine how romantic partners mutually influence each other's well-being on a longitudinal scale. Specifically, we explore how within-person fluctuations in one partner's well-being feed into the other partner's well-being across time—and most importantly— how this transmission process evolves in the proximity of separation. Considering that partner experiences of relational and personal well-being are not stable but likely fluctuate around a personal average, we suggest that it is particularly informative to focus on these within-person fluctuations and how they are caught up by the romantic partner. We maintain that this approach, as opposed to difference scores or correlated change analyses, provides a stronger test of the tenets of interdependence theory which sees a susceptibility to the partners' (changing) experiences and needs as a facilitator of relationship functioning (Kelley et al., 1983; Rusbult & Van Lange, 2008).

Finally, we compared our findings to a propensity-score-matched sample of couples that revealed comparable sociodemographic characteristics at baseline but that did not separate in the course of the study. Propensity-score matching has already been employed in individual-level studies on divorce (e.g., van Scheppingen & Leopold, 2019) and couple-level studies on widowhood (Wünsche et al., 2020). But so far, it has not been applied in dyadic studies that investigated patterns of interdependence in the context of separation or divorce. Employing a case-control design at the couple level enabled us to draw more valid conclusions about whether observable changes in interdependence are related to the context of impending separation or represent developments occurring in romantic relationships in general.

Method

To investigate the characteristic patterns of interdependence in relationship and life satisfaction in partners approaching separation, we used 10 waves of observation of couple members participating in the German Family Panel (pairfam), release 10.0 (Brüderl et al., 2019). We compared these findings with those in a propensity-score-matched control sample of couples that did not separate in the course of the study.

Sample

The pairfam study is a nationwide multi-actor panel survey from Germany that has been conducted on a yearly basis since 2008. Anchor persons were randomly selected from national registers and three birth cohorts (ages 15–17, 25–27, and 35–37 years), creating a representative sample of persons living in private households in Germany that were born in these cohorts. Upon annual consent, partners, parents, and children are also invited to take part in the study. Around 50% of all anchor

persons' partners regularly participate in the study. Attrition rates for the entire pairfam panel have stabilized at roughly 7% by wave 10. The pairfam panel covers a wide range of topics related to the formation and development of intimate relationships, which are assessed via computer-assisted interviews (i.e., for anchor persons) or paper-and-pencil questionnaires (i.e., for partners)[1]. A more detailed description of the pairfam framework and design is provided by Huinink et al. (2011). The potential of the pairfam data has been valued by previous individual- and couple-level studies that investigated the (co-)developmental trajectories of relationship and life satisfaction in separating romantic unions (i.e., Finn et al., 2020; Johnson et al., 2020). The present study, however, focuses on the continuous decoupling of romantic partners' relationship and life satisfaction before separation and thereby uses the pairfam data in a unique way.

Between 2008 and 2017, a total sample of 13,642 anchor persons participated in the pairfam study. Of this sample, 10,845 respondents at least once reported having a partner. From these couple members, we drew an event sample and a control sample.

Event Sample

For the event sample, we selected anchor persons if they had experienced a separation in the course of the study that was not due to partner death ($N_{anchors}$ = 3,242). If anchor persons reported having experienced multiple separation events, we focused on the first event and omitted observations that belonged to additional separation episodes. We decided on this procedure to control for potential habituation effects. Further, we selected anchor persons and their corresponding partners if they both reported on their relationship and life satisfaction in at least two consecutive waves before separating ($N_{couples}$ = 520). This enabled us to examine the intradyadic transmission of relationship and life satisfaction in the context of impending separation. We excluded six same-gender couples because we employed dyadic multilevel models for distinguishable dyads. Finally, we retained couples only if they provided information on the variables that were included in the propensity-score matching (i.e., age, education, labor force status, [previous] divorce, marital union, parental status, cohabitation, binationality of the couple, relationship duration). This procedure resulted in a preliminary event sample of 483 couples.

Control Sample

For the control sample, we selected anchor persons that stayed in the same relationship during the entire study period, that is, that experienced neither a separation nor a break from their relationship ($N_{anchors}$ = 6,933). Moreover, we included anchor persons and their partners only if they had reported on their relationship and life satisfaction in at least two consecutive waves ($N_{anchors}$ = 2,730). Finally, we selected only male–female couples (excluding 24 same–gender couples) that provided information on the matching variables. Following this procedure, we retained a preliminary control sample of 2,610 couples.

Propensity-Score Matching

To ensure that the obtained findings were characteristic of the context of impending separation and did not represent a more general pattern of relationship development, we created a propensity-score-matched control sample of couples that showed a similar initial propensity to separate but that stayed together in the course of the study. We used the MatchIt package (Ho et al., 2007) in R version 3.6.1 (R Core Team, 2019) to estimate propensity scores for couples in the event of separation. That is,

we predicted the outcome of separation with a selection of baseline partner-specific and couple-specific characteristics. The choice of the matching variables was based on their documented link with divorce or relationship (in)stability (for an overview, see Amato, 2010).[2]

For the matching procedure, we relied on the first observation in which both partners participated together as a couple. We refer to this observation as the baseline observation although it does not necessarily reflect a person's baseline score within the study (e.g., when a person participated as single in earlier waves of the pairfam study). Regarding the partner-specific matching characteristics, we included age as chronological age and education as the number of completed years of education. Moreover, the variables labor force status and divorce were included as dummy-coded variables indicating whether a participant reported being active in the labor force (0 = inactive, 1 = active [including part-time employment and vocational training]) or reported having been divorced (0 = not divorced, 1 = divorced).

For the couple-specific matching characteristics, we relied on the dummy-coded variables marital union (0 = unmarried couple, 1 = married couple), parental status (0 = no living child[ren] with partner, 1 = at least one living child with partner), cohabitation (0 = living apart, 1 = living together), and binationality (0 = partners have the same nationality, 1 = partners have different nationalities). We also included relationship duration in years, as reported by the anchor person, as a couple-specific matching variable. We found that the variables years of education, cohabitation, and relationship duration emerged as the only significant predictors of separation, which is why the remaining matching variables were excluded from the final propensity-score model.

Having identified the relevant partner- and couple-specific predictors of separation, we matched couples in the preliminary control sample to couples in the preliminary event sample according to their estimated propensity to separate. For the matching, we relied on a one-to-one nearest neighbor algorithm and used a caliper width of 0.15. This caliper width specifies the tolerance limit for the distance of two matches and amounts to a fifth of the standard deviations of the log-transformed propensity scores (Austin, 2011). Following this procedure, we identified 450 matches. Hence, we had to exclude 32 couples from the event sample for whom there was no suitable match in the control sample.

Table 1 illustrates the means, standard deviations, and standardized difference scores (Cohen's *d*) of the partner- and couple-specific characteristics before and after the matching procedure. As can be seen, the propensity-score matching substantially improved the comparability of the samples. Before the matching, the standardized mean difference scores of the matching variables ranged between -0.80 and 0.11; after the matching, they were reduced to a range of -0.10 to 0.08.

Measures

Relationship Satisfaction

In each survey year, participants rated their relationship satisfaction on a single-item question: "All in all, how satisfied are you with your relationship?" Respondents provided answers on an 11-point scale ranging from 0 (*very dissatisfied*) to 10 (*very satisfied*). In a recent study (Fülöp et al., 2020), a similar single-item question was found to compare well with the more extensive seven-item Relationship Assessment Scale (RAS, Hendrick, 1988). The reports of relationship satisfaction were transformed into a *T* metric relying on the mean (*M* = 8.26) and the standard deviation (*SD* = 2.19) of the relationship satisfaction scores of the entire pairfam sample in 2012 (i.e., midpoint of the pairfam study).

Life Satisfaction

The single-item question "All in all, how satisfied are you with your life at the moment?" was used to assess life satisfaction. This question was also included in each wave of the pairfam study and was rated on an 11-point scale ranging from 0 (*very dissatisfied*) to 10 (*very satisfied*). A single-item question was found to be a valid and parsimonious instrument to assess life satisfaction (Beierlein et al., 2014; Cheung & Lucas, 2014). Life satisfaction scores were also *T* transformed by using the mean (*M* = 7.62) and standard deviation (*SD* = 1.75) of life satisfaction in the entire pairfam sample of 2012.

Time-to-Event

We created a monthly time-to-event variable to identify characteristic changes in the interdependence of relationship and life satisfaction as a function of time. In the event sample, the time-to-event variable captured the monthly distance between a given measurement occasion and the event of separation. For the control sample, we created an artificial time-to-event variable for each couple in the control sample by imputing the baseline distance-to-event score of their corresponding match from the event sample (for a similar approach, see van Scheppingen & Leopold, 2019). As a result, matched couples revealed the same time-to-event score at baseline. This procedure has the advantage that the potential changes in interdependence were measured on a comparable time scale in both samples (van Scheppingen & Leopold, 2019).

On average, couples in the event sample provided 3.52 observations (*SD* = 1.74; range: 2–9) before the event of separation, while couples in the control sample participated 5.63 times before the artificial event (*SD* = 1.74; range: 2–10). Across time-to-event, correlations between relationship and life satisfaction ranged between .31 and .49 in the event sample; and between .25 and .54 in the control sample.

Statistical Approach

To address our hypotheses, we analyzed two sets of dyadic multilevel models for distinguishable dyads using the MIXED procedure in SAS and with the assumption that incomplete data were missing at random (Littell et al., 2006). Following recommendations by Bolger and Laurenceau (2013), the data were treated to have a two-level structure that allowed for within-person variability of male and female partners across time (Level 1) and for random between-couple variation (Level 2). The analysis code is available on the Open Science Framework (https://osf.io/8z2nj/?view_only=1bbbf66c4a4746e49a3acb52275acb7b).

In a first step, we employed a longitudinal version of the actor–partner interdependence model (APIM; Cook & Kenny, 2005) to identify the characteristic patterns of interdependence in relationship and life satisfaction in separating and stable couples. Using a two-intercept approach, this model estimates separate effects for males and females and captures the intradyadic transmission effects of relationship and life satisfaction, while accounting for their respective autoregressive effects (see Figure 1). Equations 1 and 2 illustrate the Level-1 and Level-2 models for the prediction of relationship satisfaction.

(1)

$$RS_{jk} = male_j \times \beta_{M\text{-}0j} + female_j \times \beta_{F\text{-}0j}$$
$$+ male_j \times \beta_{M\text{-}1j}(Lagged\ Actor\ RS_{j(k\text{-}1)}) + female_j \times \beta_{F\text{-}1j}(Lagged\ Actor\ RS_{j(k\text{-}1)})$$
$$+ male_j \times \beta_{M\text{-}2j}(Lagged\ Partner\ RS_{j(k\text{-}1)}) + female_j \times \beta_{F\text{-}2j}(Lagged\ Partner\ RS_{j(k\text{-}1)})$$
$$+ e_{M\text{-}jk} + e_{F\text{-}jk}$$

(2)

$$\beta_{M\text{-}0j} = \gamma_{M00} + male_j \times \gamma_{M01}(Age_j) + male_j \times \gamma_{M02}(Relationship\ Duration_j)$$
$$+ male_j \times \gamma_{M03}(Mean\ Partner\ RS_j) + u_{M0j}$$
$$\beta_{M\text{-}1j} = \gamma_{M10}$$
$$\beta_{M\text{-}2j} = \gamma_{M20} + u_{M2j}$$
$$\beta_{F\text{-}0j} = \gamma_{F00} + female_j \times \gamma_{F01}(Age_j) + female_j \times \gamma_{F02}(Relationship\ Duration_j)$$
$$+ female_j \times \gamma_{F03}(Mean\ Partner\ RS_j) + u_{F0j}$$
$$\beta_{F\text{-}1j} = \gamma_{F10}$$
$$\beta_{F\text{-}2j} = \gamma_{F20} + u_{F2j}$$

At Level 1 (i.e., the within-person level), the relationship satisfaction of a male and a female partner in couple j at a given time point k is predicted by a partner-specific intercept parameter ($\beta_{M\text{-}0j}$, $\beta_{F\text{-}0j}$) as well as by this person's own (i.e., the lagged actor effect; $\beta_{M\text{-}1j}$, $\beta_{F\text{-}1j}$) and their corresponding partner's relationship satisfaction at the previous time point (i.e., the lagged partner effect; $\beta_{M\text{-}2j}$, $\beta_{F\text{-}2j}$). The lagged actor effect accounts for intrapersonal autoregressive effects, while the lagged partner effect captures the intradyadic transmission effects of relationship satisfaction between partners. Actor and partner levels of relationship satisfaction were included as person-mean-centered predictor variables. Deviations from predicted levels of relationship satisfaction are captured by the partner-specific error terms $e_{M\text{-}jk}$ and $e_{F\text{-}jk}$ and they were allowed to correlate between couple members.

At Level 2 (i.e., the between-couple level), we allowed for random variation in the intercept parameter (u_{M0j}, u_{F0j}) and the lagged partner effects (u_{M2j}, u_{F2j}).[3] Parallel to the first set of analyses, we included baseline age (γ_{M01}, γ_{F01}) and relationship duration (γ_{M02}, γ_{F02}) as grand-mean-centered predictors of between-couple variation in both partners' intercepts. As an extension, we also included the corresponding partner's mean level of relationship satisfaction across all available observations as a grand-mean-centered predictor of the intercept (i.e., mean partner effect; γ_{M03}, γ_{F03}). Including the partner's relationship satisfaction as a time-variant person-mean-centered predictor variable while controlling for mean levels of partner relationship satisfaction enabled us to disentangle the sources of couple interdependence more thoroughly because it unties the effects of within-person and between-couple variation. To test for potential gender differences in the parameter estimates, we used the interaction approach that includes gender (-1 = female; 1 = male) as a moderating variable. We report only one parameter estimate for both couple members (obtained from the interaction model), if the interaction effect of gender was not significant. We report separate parameter estimates for male and female partners (obtained from the two-intercept model), if the interaction effect of gender was significant. The same models were applied for the prediction of life satisfaction as the dependent variable.

In a second step, we examined whether the transmission of relationship and life satisfaction changes as a function of time-to-event. Equations 3 and 4 illustrate the model for the prediction of relationship satisfaction as the dependent variable. This model was chosen if it revealed a lower BIC than the simpler models described in Equations 1 and 2.

(3)

$$RS_{jk} = \quad male_j \times \beta_{M\text{-}0j} + female_j \times \beta_{F\text{-}0j}$$
$$+ male_j \times \beta_{M\text{-}1j}(Lagged\ Actor\ RS_{j(k\text{-}1)}) + female_j \times \beta_{F\text{-}1j}(Lagged\ Actor\ RS_{j(k\text{-}1)})$$
$$+ male_j \times \beta_{M\text{-}2j}(Lagged\ Partner\ RS_{j(k\text{-}1)}) + female_j \times \beta_{F\text{-}2j}(Lagged\ Partner\ RS_{j(k\text{-}1)})$$
$$+ male_j \times \beta_{M\text{-}3j}(Time\text{-}to\text{-}Event_{jk}) + female_j \times \beta_{F\text{-}3j}(Time\text{-}to\text{-}Event_{jk})$$
$$+ male_j \times \beta_{M\text{-}4j}(Time\text{-}to\text{-}Event_{jk} \times Lagged\ Partner\ RS_{j(k\text{-}1)})$$
$$+ female_j \times \beta_{F\text{-}4j}(Time\text{-}to\text{-}Event_{jk} \times Lagged\ Partner\ RS_{j(k\text{-}1)}) + e_{M\text{-}jk} + e_{F\text{-}jk}$$

(4)

$$\beta_{M\text{-}0j} = \gamma_{M00} + male_j \times \gamma_{M01}(Age_j) + male_j \times \gamma_{M02}(Relationship\ Duration_j)$$
$$+ male_j \times \gamma_{M03}(Mean\ Partner\ RS_j) + u_{M0j}$$
$$\beta_{M\text{-}1j} = \gamma_{M10}$$
$$\beta_{M\text{-}2j} = \gamma_{M20} + u_{M2j}$$
$$\beta_{M\text{-}3j} = \gamma_{M30}$$
$$\beta_{M\text{-}4j} = \gamma_{M40}$$
$$\beta_{F\text{-}0j} = \gamma_{F00} + female_j \times \gamma_{F01}(Age_j) + female_j \times \gamma_{F02}(Relationship\ Duration_j)$$
$$+ female_j \times \gamma_{F03}(Mean\ Partner\ RS_j) + u_{F0j}$$
$$\beta_{F\text{-}1j} = \gamma_{F10j}$$
$$\beta_{F\text{-}2j} = \gamma_{F20} + u_{F2j}$$
$$\beta_{F\text{-}3j} = \gamma_{F30}$$
$$\beta_{F\text{-}4j} = \gamma_{F40}$$

This two-intercept model is an extension of the longitudinal APIM described in Step 1. Hence, the interpretation of the parameters $\beta_{M\text{-}0j}$ through $\beta_{F\text{-}2j}$ can be derived from the first analytical step. As an extension, this model includes a time-to-event variable ($\beta_{M\text{-}3j}$, $\beta_{F\text{-}3j}$) which captures linear changes in male and female partners' relationship satisfaction as they approach the event of separation. Most importantly, however, this model includes a Level 1 interaction effect ($\beta_{M\text{-}4j}$, $\beta_{F\text{-}4j}$) which allows us to qualify the degree to which the strength of the lagged partner effect is shaped by the time-to-event variable.

The same models were applied for life satisfaction as the dependent variable.

Power Analysis

We used the online tool APIMpower (Ackerman & Kenny, 2016) to conduct a post-hoc power analysis for the hypothesized effects. Assuming moderate actor effects (standardized estimate = 0.30), small partner effects (standardized estimate = 0.10; e.g., Orth et al., 2018), a moderate correlation among the predictor variables, and a moderate correlation among the residuals in the prediction of relationship and life satisfaction, the present study had a power above 99% to detect actor effects and a power of 89% to detect partner effects.

Results

The results are presented separately for the event sample of separating couples and the control sample of stable couples. For both samples, we first report the results of the longitudinal APIMs, which provide evidence regarding the intradyadic transmission of relationship and life satisfaction between couple members. In a second step, we present findings regarding temporal changes in the strength of the intradyadic transmission effects of relationship and life satisfaction. At the end of the Results section, we provide a summarizing comparison of findings obtained from the sample of separating and stable couples. We refer to the online materials for supplemental analyses replicating the characteristic well-being declines in separating couples that were also described by previous pairfam-based investigations (Supplemental Tables S1-S2; Finn et al., 2020; Johnson et al., 2020).

Event Sample

Intradyadic Transmission of Relationship and Life Satisfaction in Separating Couples

The results of the longitudinal APIMs for predicting both partners' relationship and life satisfaction in the sample of separating couples are shown in Tables 2 and 3.

Relationship Satisfaction. At the within-person level, we observed a significant negative lagged actor effect (i.e., autoregressive effect) on relationship satisfaction.[4] This effect was more pronounced among female partners. We also observed a significant positive lagged partner effect (i.e., intradyadic transmission effect) in the prediction of female partners' relationship satisfaction. No such effect emerged from females' to males' relationship satisfaction. At the between-couple level, gender and the mean level of partner relationship satisfaction emerged as significant predictors of the intercept in both couple members (see Table 2).

With regard to interdependencies in relationship satisfaction in separating couples, these findings suggest that female *but not* male couple members were more satisfied with their relationship if their partner had reported higher than (personal) average levels of relationship satisfaction in the previous year. Conversely, *both* couple members were more satisfied with their relationship if their partner's average relationship satisfaction across waves was higher than (sample) average.

Life Satisfaction. At the within-person level, we found a significant negative lagged actor effect on life satisfaction, which did not significantly differ by gender. We also observed a positive significant lagged partner effect from females to males. No such effect emerged from males' to females' life satisfaction. At the between-couple level, gender and the mean level of partner life satisfaction emerged as significant predictors of the intercept (see Table 3).

Regarding interdependencies in life satisfaction in separating couples, these findings suggest that male *but not* female couple members were more satisfied with life if their partner had reported higher than (personal) average levels of life satisfaction in the previous year. In contrast, *both* couple members were more satisfied with their life if they had a partner who's average life satisfaction across waves was higher than (sample) average.

Changes in the Intradyadic Transmission of Relationship and Life Satisfaction in Separating Couples

We compared the relative fit of the previously described longitudinal APIM against a more complex model that additionally included a linear effect of time-to-event as well as an interaction effect

between the lagged partner effect and time-to-event to qualify temporal changes in the intradyadic transmission of relationship and life satisfaction.

This comparison showed that for relationship satisfaction the more complex model ($BIC_{RS\_APIM \times Time}$ = 15,012) revealed a better relative fit than the simpler model (BIC_{RS_APIM} = 15,122) in separating couples. However, we did not identify a significant interaction effect between the time-to-event variable and the lagged partner effect, γ_{40} = 0.001, t(356) = 1.03, p = .305. Thus, an improvement in the relative model fit was most likely due to the inclusion of the time-to-event variable, which had a significant negative effect on both partners' relationship satisfaction, γ_{30} = -0.12, t(934) = -12.33, p = <.001. This indicates that both partners showed decreases in relationship satisfaction but not in the intradyadic transmission of relationship satisfaction when approaching the end of their relationship (see Supplemental Tables S1-S2 for more details on anticipatory changes in relationship and life satisfaction prior to separation).

For life satisfaction, the more complex model did not improve the relative model fit ($BIC_{LS\_APIM \times Time}$ = 15,152; BIC_{LS_APIM} = 15,152). Hence, we chose the simpler model and assume stability in the intradyadic transmission of life satisfaction in separating partners.

Control Sample

Intradyadic Transmission of Relationship and Life Satisfaction in Stable Couples

The results of the longitudinal APIMs for predicting both partners' relationship and life satisfaction in the sample of stable couples are presented in Tables 2 and 3.

Relationship Satisfaction. At the within-person level, we observed a significant negative lagged actor effect, which did not significantly differ by gender. However, we did not identify a significant lagged partner effect in the longitudinal prediction of relationship satisfaction in stable couple members. At the between-couple level, the mean level of partner relationship satisfaction emerged as a significant predictor of both couple members' intercept levels (see Table 2).

With regard to interdependencies in relationship satisfaction in stable couples, these results suggest that it did not matter for couple members' reports of relationship satisfaction if their partner had been more or less satisfied with the relationship than (personal) average in the previous year. Nevertheless, both couple members were more satisfied with their relationship if their partner's average relationship satisfaction across waves was higher than (sample) average.

Life Satisfaction. At the within-person level, we found a significant negative lagged actor effect, which did not significantly differ by gender. The lagged partner effect was not significant. At the between-couple level, the mean level of partner life satisfaction emerged as a significant predictor of the intercept (see Table 3).

Regarding interdependencies in life satisfaction in stable couples, the results suggest that it did not play a role for couple members' reports of life satisfaction if their partner had been more or less satisfied with life than (personal) average in the previous year. Yet, stable couple members were more satisfied with life if they had a partner who's average life satisfaction across waves was higher than (sample) average.

Changes in the Intradyadic Transmission of Relationship and Life Satisfaction in Stable Couples

As for the event sample of separating couples, we compared the relative fit of the previously described longitudinal APIM against a more complex model that additionally included a linear effect of

time-to-event as well as an interaction effect to qualify temporal changes in the transmission of relationship and life satisfaction. This comparison showed that the more complex models ($BIC_{RS\_APIM \times Time}$ = 12,936, $BIC_{LS\_APIM \times Time}$ = 13,015) revealed worse relative fits than the simpler models (BIC_{RS_APIM} = 12,906, BIC_{LS_APIM} = 12,990) for the prediction of both relationship and life satisfaction in stable couples. We therefore refrain from interpreting the results of these more complex models and favor the model assuming stability in the intradyadic transmission of relationship and life satisfaction in couples who are in a stable relationship.

Summarizing Comparison of the Event and Control Samples

With regard to interdependencies in relationship satisfaction, significant lagged partner effects were only evident among female partners in separating couples, whereas significant mean partner effects were observed for males and females in both samples. The confidence intervals around the estimated mean partner effect for separating couples (95% $CI_{\gamma 03}$ = [0.80, 0.91]) and stable couples (95% $CI_{\gamma 03}$ = [0.84, 0.95]) overlapped by 63% in their estimated error margin, suggesting that the strength of the mean partner effect did not significantly differ between the samples (Cumming & Finch, 2005). That is, the relationship satisfaction of separating and stable couple members was higher if they had a partner who's average relationship satisfaction across waves was higher than (sample) average and—most importantly—this effect was comparable in size across the samples. However, only females in separating couples revealed lower levels of relationship satisfaction if their partner had reported lower than (personal) average levels of relationship satisfaction in the previous year. Neither in the event nor in the control sample did we find support for changes in the intradyadic transmission of relationship satisfaction across time.

In terms of interdependencies in life satisfaction, a significant lagged partner effect emerged only among male partners in the event sample. The mean partner effect of life satisfaction was significant in both samples and equally strong for male and female partners. Yet, the mean partner effect of life satisfaction significantly differed in strength between separating (95% $CI_{\gamma 03}$ = [0.87, 0.96]) and stable (95% $CI_{\gamma 03}$ = [0.81, 0.90]) couples, as indicated by an overlap of less than 50% in the estimated average error margin (i.e., 33%; Cumming & Finch, 2005). That is, separating and stable couple members reported higher levels of life satisfaction if they had a partner who's average life satisfaction across waves was higher than (sample) average, but this effect was more pronounced among couples that separated. At the same time, only males in separating couples revealed lower levels of life satisfaction if their partner had reported lower than (personal) average levels of life satisfaction in the previous year. Finally, we did not find support for changes in the transmission of life satisfaction in separating and stable couples across time.

Discussion

The dissolution of a romantic relationship is an experience that most people encounter in their life. The present study zoomed in on the last years before romantic couples separated and explored whether the well-being of partners decouples before the dissolution of their relationship. To do so, we examined the characteristic patterns and changes in interdependence in relationship and life satisfaction prior to separation. We found that separating couples as well as stable couples were interdependent in their relationship and life satisfaction. Surprisingly, the current findings provide initial evidence for a stronger interdependence in the relationship and life satisfaction of couples that approach separation.

Most importantly, however, we did not find support for our expectation that the context of impending separation is accompanied by a vanishing interdependence in the well-being of romantic partners. Instead, the strength of partner interdependence in relationship and life satisfaction appeared to remain stable until the end of the relationship. In the following, we discuss these findings against the background of previous theoretical and empirical work and deduce implications for future research.

Patterns of Interdependence Before Separation

The present study aimed to explore whether romantic partners' well-being decouples in the context of impending separation. We assumed that maladaptive intradyadic processes, such as demand–withdraw patterns (Heavey et al., 1995) as well as physical and psychological distancing processes (Knapp, 1987), culminate in a decoupling of romantic partners' well-being—and finally—in a dissolution of the relationship. To grasp the continuous decoupling among separating couples, we investigated the characteristic patterns and changes in interdependence in both partners' relationship and life satisfaction as they approached the end of their relationship. In doing so, we expected that the intradyadic transmission of well-being would decline in strength and that the invisible elastic band connecting the couple would wear out in the final season of their relationship.

The present findings do not support our hypotheses. The positive effects of mean levels of partner relationship and life satisfaction were significant for couples that approached separation and for those that were in a stable relationship. Interestingly, mean levels of partner life satisfaction even had a stronger effect in couples that separated. Regarding intradyadic transmission effects, the identified patterns of partner interdependence also did not suggest weaker ties among separating couples. On the contrary, significant intradyadic transmission effects of relationship and life satisfaction were exclusively observed among separating couple members. Most importantly, however, we did not identify significant changes in the strength of partner interdependence across time—neither for relationship satisfaction nor for life satisfaction.

On a broader level, these results complement earlier research that reported significant interdependencies in relationship and life satisfaction in romantic couples in general but also in the context of impending separation (Finn et al., 2020; Gustavson et al., 2016; Orth et al., 2018). Yet, by acknowledging the between- and within-level sources of partner interdependence and by taking a dynamic perspective on changes in partner interdependence until the event of separation, the present work moved beyond previous research in the field. Based on the current findings we can conclude that couple members in dissolving relationships remained susceptible to each other's variations and average levels of satisfaction *until* the event of separation. Conversely, for couple members in stable relationships, partner fluctuations in relationship and life satisfaction appeared to be less important for personal levels of satisfaction. Instead, partner interdependence in stable couples' well-being exclusively unfolded at the between-level. That is, couple members' satisfaction with the relationship and life in general was only related to their partner's average level of satisfaction.

Explanations for the Unexpected Findings

The lack of support for a diminishing interdependence in couples approaching separation and the antithetical finding of stronger ties in the relational and personal well-being of separating partners was unexpected given theoretical (e.g., Kelley & Thibaut, 1978; Van Lange & Balliet, 2015) and empirical (e.g., Finn et al., 2020; Guven et al., 2012; Schade et al., 2016) work on partner interdependence and

relationship instability. One possible explanation for a lack of support regarding the expected decoupling of well-being might be rooted in the role that romantic partners have in the separation process. That is, the decoupling of well-being may differ between the partner who initiates the separation and the partner who is about to be abandoned. It could be imagined that the initiator of separation indeed distances themselves from the relationship and becomes increasingly immune to the partners experiences of well-being. In contrast, and following the risk regulation model (Murray et al., 2006), the to-be-abandoned partner may become increasingly sensitive to the partner's ups and downs in well-being as these fluctuations provide meaningful warning signs for an impending separation. In the pairfam study, however, only anchor persons report on who initiated the separation.[5] Because these anchor reports only acknowledge one side of the medal, we refrained from including this information in the present analyses. Nevertheless, a closer look at both partners' role in the separation processes, would provide a more nuanced picture of the intradyadic decoupling that occurs before a couple separates.

While it is possible that the above mentioned and other methodological and conceptual issues have prevented us from detecting the hypothesized changes in interdependence (for details see the section on Limitations and Future Directions below), we would also like to acknowledge the possibility that a vanishing interdependence in partner well-being might not typically occur in the context of an impending separation, or at least that it does not seem to exist in the present sample. Moreover, we raise the question whether a stronger susceptibility to partner experiences in well-being might not be universally beneficial for the longevity of a romantic relationship.

Specifically, it could be imagined that a higher sensitivity to partner fluctuations in relationship and life satisfaction is not necessarily a characterizing feature of a well-functioning relationship. Potentially, a healthy relationship is one in which partners benefit from each other's general satisfaction level (which is usually high when considering relationship and life satisfaction) but, at the same time, remain more or less immune against the highs and lows of their partner's well-being. In fact, the maintenance of a stable susceptibility to partner variations in relational and personal well-being might be particularly maladaptive in a phase of dissatisfaction. Considering that separating partners were found to experience significant declines in their relationship and life satisfaction (see Supplemental Tables S1-S2 as well as Denissen et al., 2019; Finn et al., 2020; Johnson et al., 2020; Lavner & Bradbury, 2010; van Scheppingen & Leopold, 2019), a continuing transmission of well-being between partners may have aggravated the relationship climate and created a transactional downward spiral toward separation. In line with this idea, Butner and colleagues (2007) investigated affective covariations in romantic couples and suggested that "the most ideal scenario would be one in which partners only covary in a positive direction…while remaining stable in the face of one another's declines in positive affect" (p. 450). Interestingly, the observed intradyadic transmission effects in separating couples were gender-specific, suggesting a transmission of relationship satisfaction from males to females and a transmission of life satisfaction from females to males. Gender differences in couple interdependence have also been observed in earlier studies that investigated emotional transmission effects (e.g., Schoebi, 2008), but they have not yet been documented for cognitive dimensions of subjective well-being or for the context of impending separation.

As an alternative way to interpret the stable and more pronounced patterns of interdependence among separating partners, it can also be speculated that a continuing partner interdependence serves

to solidify one's decision to end the relationship. According to the stage model of relationship dissolutions proposed by Lee (1984), couple members first discover dissatisfactions (Stage 1) and share these dissatisfactions with their partner (Stage 2). They then negotiate with their partner how these dissatisfactions could be coped with (Stage 3) and decide on their involvement in their relationship (Stage 4), which eventually initializes the relationship transition, that is, separation (Stage 5). This stage model illustrates that across almost all stages, both partners are highly involved in the separation process, which may suggest that partner interdependence needs to remain high in important aspects, such as satisfaction, until the termination of the relationship. Put differently, partners might postpone the decoupling until after the actual event of separation (Wortman & Lucas, 2016) and they might be more sensitive to each other's well-being (than stable couples) because they need to navigate their path to separation in a joint and coordinated way.

In sum, the present findings suggest that the elastic band connecting couples did not wear out as partners approached the event of separation. Instead, separating partners stayed in tune in their evaluations of the relationship and life in general, until the end of their *shared* romantic life. Hence, the proposed onset of estrangement in separating unions (Knapp, 1987) does not seem to occur until separation, but it unfolds in the post-separation-era (Wortman & Lucas, 2016). Moreover, the present findings provide initial evidence that it might be fruitful to take a more differential perspective on the adaptivity of partner interdependence in well-being. Conclusions pertaining the role of partner interdependence for relationship functioning might depend on at least two factors: (1) the level at which we investigate partner interdependence (i.e., within vs. between-level partner effects) and (2) the current relationship context (e.g., times of distress and dissatisfaction vs. quiet times of stability). Future research is needed, however, to replicate these findings and to investigate the adaptivity of partner interdependence across other challenging relationship contexts (e.g., childbirth, partner illness, job loss).

Limitations and Future Directions

In the present study we provided novel insights into the characteristic patterns and changes in interdependence in the relational and personal well-being of separating partners. In doing so, we took a dynamic perspective on the process of separation and compared our findings against a propensity-score-matched control sample of couples that did not break up in the course of the study. Nevertheless, the present results need to be interpreted in view of some limitations that might provide an impetus for future research.

First, the applied matching procedure resulted in the selection of a control sample that was different from the general population of partners that live in a stable relationship. More precisely, the control sample was matched to the event sample on various sociodemographic variables that would put them at a similar risk for experiencing a separation (see Table 1 for the baseline sociodemographic characteristics of the matched and unmatched control sample). While this procedure was essential to get closer to a causal interpretation of the observed patterns of difference between separating and stable couples, it also results in a limited generalizability of findings obtained from the control sample of stable couples. On a related note, we also had to exclude 32 separating couples from our analyses because we could not identify a suitable match in the control sample. Thus, it could be argued that we equalized

the two samples to an extent that impedes the identification of characteristic separation-related differences.

Second, the current study relied on annual reports of couple members' relationship and life satisfaction. As a result, we investigated the intradyadic transmission of relational and personal well-being across long time periods. It is possible, however, that the expected decoupling of well-being might occur on the micro-longitudinal level, that is, in the couples' daily lives. Future studies might consider examining the interdependence among separating and stable partners based on their day-to-day satisfaction. In particular, it would be interesting to examine how couple members' highs and lows in satisfaction translate into daily relationship variables (e.g., conflicts, partner-perceptions, closeness) and thereby impact the partner's level of satisfaction (or not). Along these lines, a closer look at the intensity and persistence of partner (dis)satisfaction might be particularly informative to gain insights into the boundary conditions under which well-being is transmitted between couple members in separating and stable unions. With the time frame of the present study, we could not capture such mechanism or threshold models. Measurement burst designs that combine macro- and micro-longitudinal data would allow for a more fine-grained understanding of the characteristic short- and long-term patterns of interdependence that precede a romantic dissolution.

Third, by investigating relationship and life satisfaction, we focused on partner interdependence in two cognitive dimensions of subjective well-being (Diener, 1984). Past research has shown, however, that the emotional experiences of romantic partners (e.g. Butner et al., 2007; Saxbe & Repetti, 2010; Schoebi, 2008) as well as their objective indicators of health (Hoppmann & Gerstorf, 2009; Monin et al., 2020) are also highly intertwined. Thus, future research might also consider both partners' emotional and physical well-being and compare separation-related patterns of interdependence between different dimensions of well-being. Alternatively, it could also be an important direction for future research to move beyond the investigation of the decoupling in both partners' well-being and to examine how separating partners drift apart with regard to their general plans and goals for life. Along these lines, earlier research suggests that couple members are also interdependent in their goal orientations (Fitzsimons et al., 2015; LaBuda et al., 2020) and that dissimilarities in personal values and attitudes are detrimental for relationship functioning (e.g. Gaunt, 2006; Luo, 2009). Thus, it would be worthwhile to inspect separation-related decoupling at the level of both partners' goals, values, and attitudes. Potentially, divergent developments in these fundamental orientations might emerge as a more suitable predictor of romantic dissolution.

Fourth, the present study only informs about typical patterns of interdependence in the context of separation. We did, however, identify a significant amount of between-couple variability—in particular, around the estimated trajectories of relationship and life satisfaction—suggesting that the path to separation may vary for different romantic couples. Upcoming studies may therefore take a more differential perspective and investigate the partner-specific and couple-level characteristics that buffer or accelerate well-being transmissions in the context of relationship dissolutions. As outlined earlier, the role within the separation process, but also personality characteristics (e.g., attachment representations, neuroticism, trait anger), the timing of separation events within the adult life span, as well as both partners' relationship history and earlier separation experiences might elucidate the heterogeneous

nature of the separation process (Lavner & Bradbury, 2010; Luhmann & Eid, 2009; Sbarra & Hazan, 2008).

Fifth, the present findings suggest that both couple members' levels of relationship and life satisfaction are significantly associated with their partners' mean levels of relationship and life satisfaction. It remains unclear, however, whether this association reflects an ongoing relationship process or if, in reality, it is an artifact of assortative mating by which more satisfied people started a relationship with each other in the first place (Buss, 1985; Luo, 2017). To untangle these possibilities, it might be an interesting endeavor for future research to track couple interdependencies in well-being, starting at the very beginning of a relationship.

Finally, we exclusively focused on patterns and change in interdependence in the years before the end of a romantic relationship. Yet, life continues—even after the most painful separation. Considering that previous research has also identified a large heterogeneity in adjustments to separation experiences (Doré & Bolger, 2018; Lucas et al., 2003), it would be an intriguing question for future studies to examine how pre-event patterns of partner interdependence affect post-event recoveries in well-being and new partnerships.

Conclusion

Inspired by the words of Kim Sowol in the epigraph, the present study was designed to test the assumption that the elastic band of interdependence wears out as romantic partners approach the dissolution of their relationship. We found no evidence for a vanishing interdependence between separating partners. Instead, the elastic band connecting both partners' relational and personal well-being appeared to remain tight until the end of their shared romantic life. Future research is needed to investigate patterns of partner interdependence and their underlying mechanisms in the daily life of separating and stable couples and to reconsider the adaptivity of partner interdependence in challenging relationship contexts.

References

Amato, P. R. (2010). Research on Divorce: Continuing Trends and New Developments. *Journal of Marriage and Family*, *72*(3), 650-666. https://doi.org/10.1111/j.1741-3737.2010.00723.x

Anderson, C., Keltner, D., & John, O. P. (2003). Emotional convergence between people over time [Peer Reviewed]. *Journal of Personality and Social Psychology*, *84*, 1054-1068. https://doi.org/10.1037/0022-3514.84.5.1054 12757148

Austin, P. C. (2011). Optimal caliper widths for propensity-score matching when estimating differences in means and differences in proportions in observational studies. *Pharmaceutical Statistics*, *10*(2), 150-161. https://doi.org/10.1002/pst.433

Avellar, S., & Smock, P. J. (2005). The economic consequences of the dissolution of cohabiting unions. *Journal of Marriage and Family*, *67*, 315-327. https://doi.org/10.1111/j.0022-2445.2005.00118.x

Beierlein, C., Kovaleva, A., Lászlo, Z., Kemper, C. J., & Rammstedt, B. (2014). *Eine Single-Item-Skala zur Erfassung der Allgemeinen Lebenszufriedenheit: Die Kurzskala Lebenszufriedenheit-1 (L-1)* (Vol. GESIS-Working Papers 2014/33). GESIS - Leibniz-Institut für Sozialwissenschaften. https://nbn-resolving.org/urn:nbn:de:0168-ssoar-426681

Bolger, N., & Laurenceau, J.-P. (2013). Design and Analysis of Intensive Longitudinal Studies of Distinguishable Dyads. In N. Bolger & J.-P. Laurenceau (Eds.), *Intensive Longitudinal Methods: An Introduction to Diary and Experience Sampling Research* (pp. 143-176). The Guilford Press.

Brüderl, J., Drobnič, S., Hank, K., Nauck, B., Neyer, F. J., Walper, S., Alt, P., Bozoyan, C., Buhr, P., Finn, C., Garrett, M., Greischel, H., Gröpler, N., Hajek, K., Herzig, M., Huyer-May, B., Lenke, R., Minkus, L., Müller, B., Peter, T., Schmiedeberg, C., Schütze, P., Schumann, N., Thönnissen, C., Wetze, M., & Wilhelm, B. (2019). *The German Family Panel (pairfam), GESIS Data Archive, Cologne, ZA5678 Data file Version 10.0.0, 10.4232/pairfam.5678.10.0.0.*

Buss, D. M. (1985). Human Mate Selection: Opposites are sometimes said to attract, but in fact we are likely to marry someone who is similar to us in almost every variable. *American Scientist*, *73*(1), 47-51.

Butler, E. A. (2015). Interpersonal affect dynamics: It takes two (and time) to tango [Peer Reviewed]. *Emotion Review*, *7*, 336-341. https://doi.org/10.1177/1754073915590622

Butner, J., Diamond, L. M., & Hicks, A. M. (2007). Attachment style and two forms of affect coregulation between romantic partners. *Personal Relationships*, *14*(3), 431-455. https://doi.org/10.1111/j.1475-6811.2007.00164.x

Cheung, F., & Lucas, R. E. (2014). Assessing the validity of single-item life satisfaction measures: Results from three large samples [Peer Reviewed]. *Quality of Life Research: An International Journal of Quality of Life Aspects of Treatment, Care & Rehabilitation*, *23*, 2809–2818. https://doi.org/10.1007/s11136-014-0726-4 24890827

Christensen, A., Eldridge, K., Catta-Preta, A. B., Lim, V. R., & Santagata, R. (2006). Cross-Cultural Consistency of the Demand/Withdraw Interaction Pattern in Couples [Peer Reviewed]. *Journal of Marriage and Family*, *68*, 1029-1044. https://doi.org/10.1111/j.1741-3737.2006.00311.x

Christensen, A., & Heavey, C. L. (1990). Gender and social-structure in the demand withdraw pattern of marital conflict. *Journal of Personality and Social Psychology*, *59*, 73-81. https://doi.org/10.1037//0022-3514.59.1.73

Cook, W. L., & Kenny, D. A. (2005). The Actor–Partner Interdependence Model: A model of bidirectional effects in developmental studies. *International Journal of Behavioral Development*, *29*(2), 101-109. https://doi.org/10.1080/01650250444000405

Cumming, G., & Finch, S. (2005). Inference by eye: Confidence intervals and how to read pictures of data. *American Psychologist*, *60*(2), 170-180. https://doi.org/10.1037/0003-066X.60.2.170

Debrot, A., Schoebi, D., Perrez, M., & Horn, A. B. (2013). Touch as an interpersonal emotion regulation process in couples' daily lives: The mediating role of psychological intimacy [Peer Reviewed]. *Personality and Social Psychology Bulletin*, *39*, 1373-1385. https://doi.org/10.1177/0146167213497592 23885034

Denissen, J. J. A., Luhmann, M., Chung, J. M., & Bleidorn, W. (2019). Transactions between life events and personality traits across the adult lifespan [Peer Reviewed]. *Journal of Personality and Social Psychology*, *116*, 612–633. https://doi.org/10.1037/pspp0000196

Diener, E. (1984). Subjective well-being. *Psychological Bulletin*, *95*(3), 542-575.

Doré, B., & Bolger, N. (2018). Population- and individual-level changes in life satisfaction surrounding major life stressors. *Social Psychological and Personality Science*, *9*, 875-884. https://doi.org/10.1177/1948550617727589

Dyrdal, G. M., & Lucas, R. E. (2013). Reaction and adaptation to the birth of a child: A couple-level analysis. *Developmental Psychology*, *49*(4), 749-761.

Felmlee, D., Sprecher, S., & Bassin, E. (1990). The dissolution of intimate relationships: A hazard model [Peer Reviewed]. *Social Psychology Quarterly*, *53*, 13-30. https://doi.org/10.2307/2786866

Finn, C., Johnson, M. D., & Neyer, F. J. (2020). Happily (n) ever after? Codevelopment of romantic partners in continuing and dissolving unions. *Developmental Psychology*, *56*(5), 1022-1028. https://doi.org/10.1037/dev0000897

Fitzsimons, G. M., Finkel, E. J., & Vandellen, M. R. (2015). Transactive goal dynamics. *Psychological Review*, *122*(4), 648-673. https://doi.org/10.1037/a0039654

Fülöp, F., Bőthe, B., Gál, É., Cachia, J. Y. A., Demetrovics, Z., & Orosz, G. (2020). A two-study validation of a single-item measure of relationship satisfaction: RAS-1. *Current Psychology*, Advance online publication. https://doi.org/10.1007/s12144-020-00727-y

Gaunt, R. (2006). Couple similarity and marital satisfaction: Are similar spouses happier? *Journal of Personality*, *74*(5), 1401-1420. https://doi.org/10.1111/j.1467-6494.2006.00414.x

Gottman, J. M. (1994). *What predicts divorce? The relationship between marital processes and marital outcomes*. Lawrence Erlbaum Associates, Inc; US.

Gustavson, K., Røysamb, E., Borren, I., Torvik, F. A., & Karevold, E. (2016). Life satisfaction in close relationships: Findings from a longitudinal study. *Journal of Happiness Studies*, *17*(3), 1293-1311. https://doi.org/10.1007/s10902-015-9643-7

Guven, C., Senik, C., & Stichnoth, H. (2012). You can't be happier than your wife. Happiness gaps and divorce. *Journal of Economic Behavior & Organization*, *82*(1), 110-130. https://doi.org/10.1016/j.jebo.2012.01.003

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

Heavey, C. L., Christensen, A., & Malamuth, N. M. (1995). The longitudinal impact of demand and withdrawal during marital conflict [Peer Reviewed]. *Journal of Consulting and Clinical Psychology*, *63*, 797-801. https://doi.org/10.1037/0022-006X.63.5.797 7593873

Hendrick, S. S. (1988). A Generic Measure of Relationship Satisfaction. *Journal of Marriage and Family*, *50*(1), 93-98. https://doi.org/10.2307/352430

Ho, D., Imai, K., King, G., & Stuart, E. (2007). Matching as nonparametric preprocessing for reducing model dependence in parametric causal inference. *Political Analysis*, *15*(3). https://doi.org/10.1093/pan/mpl013

Hoppmann, C. A., & Gerstorf, D. (2009). Spousal Interrelations in Old Age – A Mini-Review. *Gerontology*, *55*(4), 449-459. https://doi.org/10.1159/000211948

Hoppmann, C. A., Gerstorf, D., Willis, S. L., & Schaie, K. W. (2011). Spousal interrelations in happiness in the Seattle Longitudinal Study: Considerable similarities in levels and change over time. *Developmental Psychology*, *47*, 1-8. https://doi.org/10.1037/a0020788

Huinink, J., Brüderl, J., Nauck, B., Walper, S., Castiglioni, L., & Feldhaus, M. (2011). Panel Analysis of Intimate Relationships and Family Dynamics (pairfam): Conceptual framework and design. *Zeitschrift für Familienforschung*, *23*(1), 77-101.

Joel, S., Impett, E. A., Spielmann, S. S., & MacDonald, G. (2018). How interdependent are stay/leave decisions? On staying in the relationship for the sake of the romantic partner [Peer Reviewed]. *Journal of Personality and Social Psychology*, *115*, 805-824. https://doi.org/10.1037/pspi0000139

Johnson, M. D., Neyer, F. J., & Finn, C. (2020). Subjective well-being across partnerships. *Journal of Family Psychology*. https://doi.org/10.1037/fam0000793

Karney, B. R., & Bradbury, T. N. (1995). The longitudinal course of marital quality and stability: A review of theory, methods, and research [Peer Reviewed]. *Psychological Bulletin*, *118*, 3-34. https://doi.org/10.1037/0033-2909.118.1.3

Kelley, H. H., Berscheid, E., Christensen, A., Harvey, J. H., Huston, T. L., Levinger, G., McClintock, E., Peplau, L. A., & Peterson, D. R. (1983). Analyzing close relationships. In H. H. Kelley, E. Berscheid, A. Christensen, J. H. Harvey, T. L. Huston, G. Levinger, & E. McClintock (Eds.), *Close Relationships*. W. H. Freeman.

Kelley, H. H., & Thibaut, J. W. (1978). *Interpersonal relations: A theory of interdependence*. Wiley-Interscience.

Kelly, E. L., & Conley, J. J. (1987). Personality and compatibility: A prospective analysis of marital stability and marital satisfaction [Peer Reviewed]. *Journal of Personality and Social Psychology*, *52*, 27-40. https://doi.org/10.1037/0022-3514.52.1.27 3820076

Knapp, M. L. (1987). *Social intercourse: from greeting to goodbye*. Allyn and Bacon.

LaBuda, J. E., Gere, J., & Impett, E. A. (2020). Perceptions of a romantic partner's approach and avoidance motives: Accuracy, bias, and emotional cues. *Journal of Personality and Social Psychology*. https://doi.org/10.1037/pspp0000256

Larson, R. W., & Almeida, D. M. (1999). Emotional transmission in the daily lives of families: A new paradigm for studying family process [Peer Reviewed]. *Journal of Marriage and the Family*, *61*, 5-20. https://doi.org/10.2307/353879

Lavner, J. A., & Bradbury, T. N. (2010). Patterns of change in marital satisfaction over the newlywed years [Peer Reviewed]. *Journal of Marriage and Family*, *72*, 1171-1187. https://doi.org/10.1111/j.1741-3737.2010.00757.x 21116452

Le, B., Dove, N. L., Agnew, C. R., Korn, M. S., & Mutso, A. A. (2010). Predicting nonmarital romantic relationship dissolution: A meta-analytic synthesis. *Personal Relationships*, *17*, 377-390. https://doi.org/10.1111/j.1475-6811.2010.01285.x

Lee, L. (1984). Sequences in separation: A framework for investigating endings of the personal (romantic) relationship. *Journal of Social and Personal Relationships*, *1*, 49-73. https://doi.org/10.1177/0265407584011004

Levinger, G. (1976). A social psychological perspective on marital dissolution [Peer Reviewed]. *Journal of Social Issues*, *32*, 21-47. https://doi.org/10.1111/j.1540-4560.1976.tb02478.x

Littell, R. C., Milliken, G. A., Stroup, W. W., Wolfinger, R. D., & Schabenberger, O. (2006). *SAS for Mixed Models* (S. Edition, Ed.). SAS Institute Inc.

Liu, H. (2012). Marital dissolution and self-rated health: Age trajectories and birth cohort variations [Peer Reviewed]. *Social Science & Medicine*, *74*, 1107-1116. https://doi.org/10.1016/j.socscimed.2011.11.037 22341805

Lucas, R. E., Clark, A. E., Georgellis, Y., & Diener, E. (2003). Reexamining adaptation and the set point model of happiness: Reactions to changes in marital status. *Journal of Personality and Social Psychology*, *84*(3), 527-539. https://doi.org/10.1037/0022-3514.84.3.527

Luciano, E. C., & Orth, U. (2017). Transitions in romantic relationships and development of self-esteem. *Journal of Personality and Social Psychology*, *112*(2), 307-328. https://doi.org/10.1037/pspp0000109

Luhmann, M., & Eid, M. (2009). Does it really feel the same? Changes in life satisfaction following repeated life events. *Journal of Personality and Social Psychology*, *97*(2), 363-381. https://doi.org/10.1037/a0015809

Luhmann, M., Weiss, P., Hosoya, G., & Eid, M. (2014). Honey, I got fired! A longitudinal dyadic analysis of the effect of unemployment on life satisfaction in couples. *Journal of Personality and Social Psychology*, *107*(1), 163-180. https://doi.org/10.1037/a0036394

Luo, S. (2009). Partner selection and relationship satisfaction in early dating couples: The role of couple similarity. *Personality and Individual Differences*, *47*(2), 133-138. https://doi.org/10.1016/j.paid.2009.02.012

Luo, S. (2017). Assortative mating and couple similarity: Patterns, mechanisms, and consequences. *Social and Personality Psychology Compass*, *11*, 1-14. https://doi.org/10.1111/spc3.12337

Monin, J. K., Laws, H., Gahbauer, E., Murphy, T. E., & Gill, T. M. (2020). Spousal Influences on Monthly Disability in Late-Life Marriage in the Precipitating Events Project. *Journals of Gerontology: Psychological Sciences*. https://doi.org/10.1093/geronb/gbaa006

Murray, S. L., Holmes, J. G., & Collins, N. L. (2006). Optimizing assurance: The risk regulation system in relationships [Peer Reviewed]. *Psychological Bulletin*, *132*, 641-666. https://doi.org/10.1037/0033-2909.132.5.641 16910746

Noller, P., Feeney, J. A., Bonnell, D., & Callan, V. J. (1994). A longitudinal study of conflict in early marriage [Peer Reviewed]. *Journal of Social and Personal Relationships*, *11*, 233-252. https://doi.org/10.1177/0265407594112005

Orth, U., Erol, R. Y., Ledermann, T., & Grob, A. (2018). Codevelopment of well-being and self-esteem in romantic partners: Disentangling the effects of mutual influence and shared environment. *Developmental Psychology*, *54*(1), 151. https://doi.org/10.1037/dev0000400

Powdthavee, N. (2009). I can't smile without you: Spousal correlation in life satisfaction. *Journal of Economic Psychology*, *30*, 675-689. https://doi.org/10.1016/j.joep.2009.06.005

R Core Team. (2019). *R: A language and environment for statistical computing* https://www.R-project.org/

Rhoades, G. K., Kamp Dush, C. M., Atkins, D. C., Stanley, S. M., & Markman, H. J. (2011). Breaking up is hard to do: The impact of unmarried relationship dissolution on mental health and life satisfaction [Peer Reviewed]. *Journal of Family Psychology*, *25*, 366-374. https://doi.org/10.1037/a0023627 21517174

Røsand, G. M. B., Slinning, K., Røysamb, E., & Tambs, K. (2014). Relationship dissatisfaction and other risk factors for future relationship dissolution: a population-based study of 18,523 couples. *Social Psychiatry and Psychiatric Epidemiology*, *49*, 109-119. https://doi.org/10.1007/s00127-013-0681-3

Rusbult, C. E., & Van Lange, P. A. M. (2008). Why we need interdependence theory. *Social and Personality Psychology Compass*, *2*(5), 2049-2070. https://doi.org/10.1111/j.1751-9004.2008.00147.x

Saxbe, D., & Repetti, R. L. (2010). For better or worse? Coregulation of couples' cortisol levels and mood states. *Journal of Personality and Social Psychology*, *98*(1), 92-103. https://doi.org/10.1037/a0016959

Sbarra, D. A., & Hazan, C. (2008). Coregulation, dysregulation, self-regulation: An integrative analysis and empirical agenda for understanding adult attachment, separation, loss, and recovery [Peer Reviewed]. *Personality and Social Psychology Review*, *12*, 141-167. https://doi.org/10.1177/1088868308315702 18453476

Schade, H. M., Hülür, G., Infurna, F. J., Hoppmann, C. A., & Gerstorf, D. (2016). Partner dissimilarity in life satisfaction: Stability and change, correlates, and outcomes. *Psychology and Aging*, *31*(4), 327-339. https://doi.org/10.1037/pag0000096

Schimmack, U., & Lucas, R. E. (2010). Environmental influences on well-being: A dyadic latent panel analysis of spousal similarity [Peer Reviewed]. *Social Indicators Research*, *98*, 1-21. https://doi.org/10.1007/s11205-009-9516-8

Schoebi, D. (2008). The coregulation of daily affect in marital relationships. *Journal of Family Psychology*, *22*(4), 595. https://doi.org/10.1037/0893-3200.22.3.595

Sels, L., Cabrieto, J., Butler, E., Reis, H., Ceulemans, E., & Kuppens, P. (2019). The occurrence and correlates of emotional interdependence in romantic relationships. *Journal of Personality and Social Psychology*. 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

Solomon, B. C., & Jackson, J. J. (2014). Why do personality traits predict divorce? Multiple pathways through satisfaction [Peer Reviewed]. *Journal of Personality and Social Psychology*, *106*, 978-996. https://doi.org/10.1037/a0036190

Thompson, A., & Bolger, N. (1999). Emotional transmission in couples under stress [Peer Reviewed]. *Journal of Marriage and the Family*, *61*, 38-48. https://doi.org/10.2307/353881

Van Lange, P. A. M., & Balliet, D. (2015). Interdependence theory. In M. Mikulincer & P. Shaver (Eds.), *APA handbook of personality and social psychology* (Vol. 3: Interpersonal Relationships, pp. 65-92). American Psychological Association; US. https://doi.org/10.1037/14344-003

van Scheppingen, M. A., & Leopold, T. (2019). Trajectories of life satisfaction before, upon, and after divorce: Evidence from a new matching approach. *Journal of Personality and Social Psychology*. https://doi.org/10.1037/pspp0000270

Waite, L. J., Luo, Y., & Lewin, A. C. (2009). Marital happiness and marital stability: Consequences for psychological well-being [Peer Reviewed]. *Social Science Research*, *38*, 201-212. https://doi.org/10.1016/j.ssresearch.2008.07.001

Weber, E., & Hülür, G. (2020). Co-development of couples' life satisfaction in transition to retirement: A longitudinal dyadic perspective. *The Journals of Gerontology: Series B*. https://doi.org/10.1093/geronb/gbaa067

Westman, M. (2001). Stress and strain crossover. *Human Relations*, *54*, 717-751. https://doi.org/10.1177/0018726701546002

Wortman, J., & Lucas, R. E. (2016). Spousal similarity in life satisfaction before and after divorce. *Journal of Personality and Social Psychology*, *110*(4), 625-633. https://doi.org/10.1037/pspp0000065

Wünsche, J., Weidmann, R., & Grob, A. (2020). Until death do us part: The codevelopment of life satisfaction in couples preceding the death of one partner. *Journal of Personality and Social Psychology*, *119*(4), 881-900. https://doi.org/10.1037/pspi0000228

Footnotes

1   In the actor interviews, the pairfam study mostly relies on computer-assisted personal interviewing (CAPI). However, sensitive questions, including the question on relationship satisfaction, are assessed via computer-assisted self-administered interviewing (CASI). In the CASI sections, the interviewer's laptop is handed over to the respondent to fill in the questions autonomously.

2   Earlier studies that applied propensity-score matching when investigating the trajectories of life satisfaction or self-esteem across relationship events also matched for baseline scores in the respective outcome variables to account for potential selection effects (i.e., Luciano & Orth, 2017; van Scheppingen & Leopold, 2019). We refrained from including relationship and life satisfaction as matching variables because it was not possible for us to match partners at the very beginning of their relationship. Hence, matching for relationship and life satisfaction would likely have eliminated separation-related anticipatory differences that this study aimed to capture. Consequently, we decided to include only matching variables that are more likely to have preceded the separation process (i.e., sociodemographic characteristics).

3   We attempted to allow for random variation within all of the included parameters (i.e., including the lagged actor effect). Due to convergence problems, we were, however, unable to follow this approach with all of the applied models. To be able to compare the parameter estimates between the event and control samples as well as between relationship and life satisfaction, we chose a model that converged across both samples and outcome variables. This resulted in the omission of a random effect for the lagged actor effect.

4   The negative actor effect needs to be interpreted in view of the employed person-mean-centering approach and it suggests that individuals oscillated around their personal average of life and relationship satisfaction across time.

5   We thank an anonymous reviewer of an earlier version of this manuscript for bringing up this valuable alternative interpretation of the current findings.

Table 1

Baseline Means, Standard Deviations, and Standardized Differences of the Matching Variables for Couples in the Event and Control Samples Before and After Propensity-Score Matching

| | Before matching | | | | | After matching | | | | |
| | Event sample ($N_{couples} = 483$) | | Control sample ($N_{couples} = 2,610$) | | | Event sample ($N_{couples} = 450$) | | Control sample ($N_{couples} = 450$) | | |
Matching variable	M	SD	M	SD	Cohen's d	M	SD	M	SD	Cohen's d
Partner characteristics										
Years of education$_{male}$[a]	11.48	4.63	13.20	3.27	-0.43	12.07	3.98	11.88	3.85	0.05
Years of education$_{female}$[a]	11.01	5.17	13.10	3.27	-0.48	11.74	4.50	11.39	4.30	0.08
Labor force status$_{male}$	0.71	0.45	0.88	0.33	-0.43	0.75	0.43	0.79	0.41	-0.10
Labor force status$_{female}$	0.57	0.50	0.66	0.47	-0.19	0.61	0.49	0.60	0.49	0.02
Age$_{male}$	29.15	8.44	33.75	6.83	-0.60	29.97	8.14	29.80	7.59	0.02
Age$_{female}$	26.39	7.56	31.08	6.23	-0.68	27.13	7.30	27.42	6.98	-0.04
Divorce$_{male}$	0.05	0.21	0.03	0.16	0.11	0.05	0.22	0.05	0.22	0.00
Divorce$_{female}$	0.05	0.22	0.03	0.16	0.10	0.05	0.22	0.04	0.20	0.05
Couple characteristics										
Marital union	0.31	0.46	0.62	0.49	-0.65	0.33	0.47	0.38	0.49	-0.10
Cohabitation[a]	0.61	0.49	0.88	0.33	-0.65	0.65	0.48	0.68	0.47	-0.06
Binationality of the couple	0.05	0.22	0.07	0.26	-0.08	0.05	0.22	0.06	0.25	-0.04
Relationship duration[a]	4.66	4.94	9.13	6.18	-0.80	4.95	4.99	5.23	5.05	-0.06
Parental status	0.31	0.46	0.58	0.49	-0.57	0.33	0.47	0.36	0.48	-0.06

Note. The presented values refer to the first observation in which a couple participated together. The variable labor force status was coded as 0 (inactive) or 1 (active [including part-time employment and vocational training]); divorce (i.e., previously) was coded as 0 (not divorced) or 1 (divorced); marital union was coded as 0 (unmarried couple) or 1 (married couple); cohabitation was coded as 0 (living apart) or 1 (living together); binationality of the couple was coded as 0 (partners have the same nationality) or 1 (partners have different nationalities); and parental status was coded as 0 (no living child[ren] with partner) or 1 (at least one living child with partner). Relationship duration refers to the anchor person's report in years. Variables that emerged as significant predictors of separation are highlighted with the superscript a; only these variables were included in the final matching procedure.

Table 2

Estimated Parameters for the Longitudinal Actor-Partner Interdependence Models to Predict Both Partners' Relationship Satisfaction in the Event and Control Samples

Model parameter	Event Sample			Control Sample		
	Estimate	*SE*	*p*	Estimate	*SE*	*p*
Fixed effects						
Intercept$_{male}$	**47.65**	0.42	<.001	**51.50**	0.16	<.001
Intercept$_{female}$	**46.08**	0.40	<.001	**51.50**	0.16	<.001
Lagged actor RS$_{male}$	**-0.11**	0.04	.012	**-0.31**	0.03	<.001
Lagged actor RS$_{female}$	**-0.22**	0.04	<.001	**-0.31**	0.03	<.001
Lagged partner RS$_{male}$	0.06	0.04	.141	0.06	0.03	.087
Lagged partner RS$_{female}$	**0.16**	0.05	.003	0.06	0.03	.087
Mean partner RS	**0.86**	0.03	<.001	**0.90**	0.03	<.001
Age	-0.02	0.03	.584	-0.02	0.03	.549
Relationship duration	0.002	0.004	.650	0.002	0.003	.421
Gender × Intercept	**1.03**	0.40	.010	-0.12	0.38	.762
Gender × Lagged Actor RS	**0.06**	0.03	.033	0.04	0.03	.174
Gender × Lagged Partner RS	**-0.07**	0.03	.032	-0.03	0.03	.376
Gender × Mean Partner RS	-0.03	0.04	.415	0.002	0.04	.962
Gender × Age	0.003	0.05	.953	0.02	0.05	.718
Gender × Relationship Duration	0.001	0.01	.899	0.002	0.01	.765
Random effects						
Intercept$_{male}$	**6.20**	4.88	<.001	**4.69**	3.43	<.001
Intercept$_{female}$	**5.11**	4.79	<.001	**5.00**	4.28	<.001
Lagged partner RS$_{male}$	**0.20**	0.03	.049	0.11	0.02	.292
Lagged partner RS$_{female}$	0.27	0.05	.082	0.23	0.04	.092
Correlation of residuals$_{male-female}$	**0.35**	0.04	<.001	-0.02	0.05	.677

Note. $N_{couples}$ = 450. We report unstandardized estimates for the fixed effects. RS = Relationship satisfaction. Estimates in bold are significant (p < .05). Random effect estimates are presented as standard deviations. Relationship satisfaction scores were transformed into a *T* metric, relying on the mean and the standard deviation of relationship satisfaction scores in the entire pairfam 2012 sample. Lagged actor and partner relationship satisfaction scores were person-mean centered. Mean partner relationship satisfaction scores as well as age and relationship duration were centered around the sample mean. Gender was coded as -1 (female) and 1 (male). We report only one fixed effect estimate for both couple members (obtained from the interaction model), if the interaction effect of gender was not significant. We report separate fixed effect estimates for male and female partners (obtained from the two-intercept model), if the interaction effect of gender was significant.

Table 3

Estimated Parameters for the Longitudinal Actor-Partner Interdependence Models to Predict Both Partners' Life Satisfaction in the Event and Control Samples

Model parameter	Event sample			Control sample		
	Estimate	*SE*	*p*	Estimate	*SE*	*p*
Fixed effects						
Intercept	**48.28**	0.18	<.001	**51.68**	0.15	<.001
Lagged actor LS	**-0.17**	0.03	<.001	**-0.26**	0.03	<.001
Lagged partner LS$_{male}$	**0.13**	0.05	.006	-0.01	0.03	.827
Lagged partner LS$_{female}$	0.001	0.04	.982	-0.01	0.03	.827
Mean partner LS	**0.91**	0.02	<.001	**0.85**	0.02	<.001
Age	-0.02	0.03	.454	-0.04	0.03	.153
Relationship duration	0.004	0.003	.159	0.003	0.003	.248
Gender × Intercept	0.14	0.48	.776	-0.23	0.42	.581
Gender × Lagged Actor LS	0.05	0.02	.059	-0.02	0.03	.341
Gender × Lagged Partner LS	**0.07**	0.03	.025	-0.01	0.03	.832
Gender × Mean Partner LS	-0.05	0.03	.080	-0.01	0.03	.728
Gender × Age	-0.07	0.05	.135	-0.06	0.05	.245
Gender × Relationship Duration	-0.003	0.01	.755	-0.01	0.01	.187
Random effects						
Intercept$_{male}$	**7.50**	5.85	<.001	**5.87**	4.38	<.001
Intercept$_{male}$	**6.40**	5.29	<.001	**5.79**	4.40	<.001
Lagged partner LS$_{male}$	**0.35**	0.04	.001	0.13	0.03	.306
Lagged partner LS$_{female}$	0.17	0.02	.112	0.23	0.05	.124
Correlation of residuals$_{male-female}$	**0.11**	0.05	.018	0.001	0.05	.990

Note. $N_{couples}$ = 450. We report unstandardized estimates for the fixed effects. LS = Life satisfaction. Estimates in bold are significant (*p* < .05). Random effect estimates are presented as standard deviations. Life satisfaction scores were transformed into a *T* metric, relying on the mean and the standard deviation of life satisfaction scores in the entire pairfam 2012 sample. Lagged actor and partner life satisfaction scores were person-mean centered. Mean partner life satisfaction scores as well as age and relationship duration were centered around the sample mean. Gender was coded as -1 (female) and 1 (male). We report only one fixed effect estimate for both couple members (obtained from the interaction model), if the interaction effect of gender was not significant. We report separate fixed effect estimates for male and female partners (obtained from the two-intercept model), if the interaction effect of gender was significant.

Figure 1

Illustration of the Intradyadic Transmission Effects to Capture Interdependence in Relationship and Life Satisfaction in Couple Members Approaching a Separation
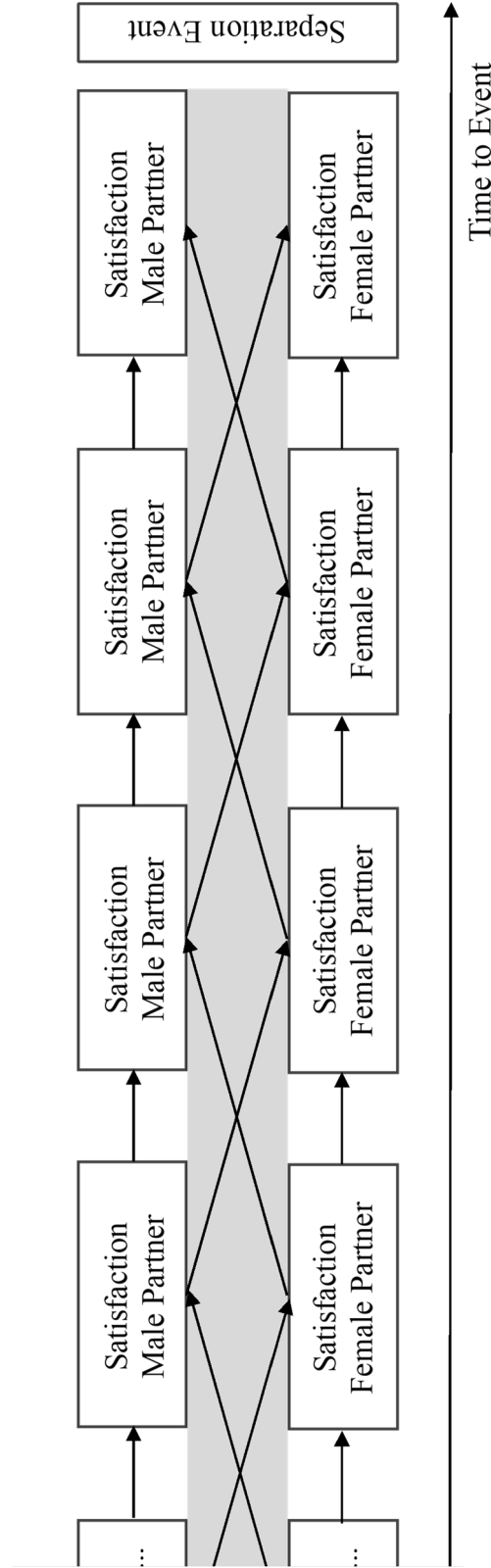
Note. The figure exemplarily depicts the last four measurement occasions of a couple approaching separation. The partner effects in gray reflect intradyadic transmission effects in person-mean-centered relationship or life satisfaction across time to event.

Supplemental Materials

In the following, we present the results of the multilevel analyses to investigate changes in relationship and life satisfaction in separating and stable couples. Comparable patterns of anticipatory change were also reported by earlier studies using pairfam data to examine relationship and life satisfaction in separating unions (i.e., Finn et al., 2020; Johnson et al., 2020)

Event Sample

For the prediction of separating partners' relationship and life satisfaction (RS and LS, respectively, in the following subscripts), we compared the BIC values of an intercept-only model that included baseline age and relationship duration as covariates ($BIC_{RS\_Intercept} = 23,466$, $BIC_{LS\_Intercept} = 23,436$) against a model that additionally included a linear effect of time-to-event ($BIC_{RS\_Linear} = 23,208$, $BIC_{LS\_Linear} = 23,383$), as well as a model that included a linear and a quadratic effect of time-to-event ($BIC_{RS\_Quadratic} = 23,192$, $BIC_{LS\_Quadratic} = 23,409$). This comparison revealed that for relationship a model including a non-linear effect of time-to-event provided the best relative fit to describe the trajectories in separating couples, whereas for life satisfaction a linear effect model yielded the best relative fit. The results of the dyadic multilevel models for predicting both partners' relationship and life satisfaction by time-to-event are presented in Supplemental Tables S1 and S2.

Control Sample

In stable couples the same comparisons revealed that for both outcome variables the intercept-only model including age and relationship duration as covariates ($BIC_{RS\_Intercept} = 20,754$, $BIC_{LS\_Intercept} = 20,807$) provided a better relative fit than the more complex models including a linear effect of time ($BIC_{RS\_Linear} = 20,799$, $BIC_{LS\_Linear} = 20,851$ or a linear and quadratic effect of time ($BIC_{RS\_Quadratic} = 20,823$, $BIC_{LS\_Quadratic} = 20,877$). Hence, we chose the intercept-only model and assume stable trajectories of relationship and life satisfaction in stable couples (see Supplemental Tables S1 and S2).

Supplemental Table S1

Estimated Parameters for the Prediction of Changes in Both Partners' Relationship Satisfaction in the Event and Control Samples

Model parameter	Event sample			Control sample		
	Estimate	*SE*	*p*	Estimate	*SE*	*p*
Fixed effects						
Intercept$_{male}$	**43.72**	0.64	<.001	**52.02**	0.27	<.001
Intercept$_{female}$	**41.56**	0.65	<.001	**52.02**	0.27	<.001
Linear slope	**-0.28**	0.02	<.001			
Quadratic slope	**-0.002**	0.00	<.001			
Age	**-0.18**	0.04	<.001	**-0.09**	0.04	.029
Relationship duration	**-0.02**	0.01	.001	-0.002	0.01	.640
Gender × Intercept	**1.08**	0.36	.003	0.01	0.19	.954
Gender × Linear Slope	0.03	0.02	.140			
Gender × Quadratic Slope	0.00	0.00	.200			
Gender × Age	0.04	0.03	.259	0.01	0.03	.757
Gender × Relationship Duration	-0.001	0.004	.728	0.001	0.004	.793
Random effects						
Intercept$_{male}$	**9.27**	8.91	<.001	**4.80**	2.96	<.001
Intercept$_{female}$	**7.85**	8.47	<.001	**5.47**	3.47	<.001
Linear slope$_{male}$	**0.14**	0.004	<.001			
Linear slope$_{female}$	**0.14**	0.01	<.001			
Correlation of residuals$_{male-female}$	**0.20**	0.03	<.001	**0.09**	0.03	.003

Note. $N_{couples}$ = 450. We report unstandardized estimates for the fixed effects. Estimates in bold are significant (*p* < .05). Random effect estimates are presented as standard deviations. Relationship satisfaction scores were transformed into a *T* metric, relying on the mean and the standard deviation of relationship satisfaction in the entire pairfam 2012 sample. Intercepts were centered around the month before separation. Linear slope effects are scaled in *T* units per month. Gender was coded as -1 (female) and 1 (male). We report only one fixed effect estimate for both partners if no significant interaction effect of gender emerged.

Supplemental Table S2

Estimated Parameters for the Prediction of Changes in Both Partners' Life Satisfaction in the Event and Control Samples

Model parameter	Event sample			Control sample		
	Estimate	*SE*	*p*	Estimate	*SE*	*p*
Fixed effects						
Intercept	46.95	0.40	<.001	51.53	0.31	<.001
Linear slope	-0.06	0.01	<.001			
Age	-0.30	0.05	<.001	-0.16	0.05	.001
Relationship duration	0.004	0.01	.488	0.003	0.01	.562
Gender × Intercept	0.46	0.35	.190	0.01	0.22	.957
Gender × Linear Slope	0.00	0.01	.956			
Gender × Age	-0.06	0.04	.116	-0.04	0.04	.316
Gender × Relationship Duration	-0.002	0.005	.684	-0.004	0.004	.354
Random effects						
Intercept$_{male}$	8.44	8.48	<.001			
Intercept$_{female}$	7.32	7.97	<.001			
Linear slope$_{male}$	0.12	0.004	<.001			
Linear slope$_{female}$	0.10	0.004	.003			
Correlation of residuals$_{male-female}$	0.14	0.03	<.001			

Note. $N_{couples}$ = 450. We report unstandardized estimates for the fixed effects. Estimates in bold are significant (*p* < .05). Random effect estimates are presented as standard deviations. Life satisfaction scores were transformed into a *T* metric, relying on the mean and the standard deviation of life satisfaction scores in the entire pairfam 2012 sample. Intercepts were centered around the month before separation. Linear slope effects are scaled in *T* units per month. Gender was coded as -1 (female) and 1 (male). We report only one fixed effect estimate for both couple members if no significant interaction effect of gender emerged.

References

Finn, C., Johnson, M. D., & Neyer, F. J. (2020). Happily (n) ever after? Codevelopment of romantic partners in continuing and dissolving unions. *Developmental Psychology*. https://doi.org/10.1037/dev0000897

Johnson, M. D., Neyer, F. J., & Finn, C. (2020). Subjective well-being across partnerships. *Journal of Family Psychology*. https://doi.org/10.1037/fam0000793

APPENDIX C: Study 3

Until Death Do Us Part:

The Codevelopment of Life Satisfaction in Couples Preceding the Death of One Partner

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Abstract

This work aims to integrate previous research perspectives on terminal well-being decline and partner bereavement by investigating the codevelopment of life satisfaction in the years preceding the death of one partner. We analyzed longitudinal data from the German Socio-Economic Panel Study ($N = 1,450$ couples) and applied dyadic multilevel models to estimate both partners' trajectories of life satisfaction and to reveal the pathways of well-being transmission in couple members approaching [partner] death. Findings were compared to a propensity-score-matched control sample of couples in which neither partner died during the study. We found that to-be-deceased and to-be-bereaved partners experienced increasing disparities in their trajectories of life satisfaction in the years before [partner] death: Although both partners exhibited significant and accelerated declines in life satisfaction, these declines were more pronounced in to-be-deceased individuals. In the control sample, we also identified significant and accelerated declines in life satisfaction but these declines were less intense and they did not differ between partners. Regarding between-partner correlations, we observed that couples approaching [partner] death experienced weaker interdependencies in their declines of life satisfaction. Finally, and concerning the pathways of well-being transmission, we found that life satisfaction was significantly transmitted between partners and the strength of this effect did not differ between the samples. These findings suggest that the years before [partner] death are characterized by distinctive patterns of change and interdependence in life satisfaction. Future studies may explore the sources of increasing between-partner disparities in life satisfaction in an end-of-life relationship context.

Keywords: life satisfaction, couples, codevelopment, end-of-life, bereavement, SOEP

Until Death Do Us Part:

Codevelopments of Life Satisfaction in Couples Preceding the Death of a Partner

… for better, for worse, for richer, for poorer, in sickness and in health, until death do us part.

Rite of Marriage (#25)

This well-known wedding vow captures the widely-held expectation that partners will share each other's ups and downs to the end of their days and it is supported by an increasing number of studies that have identified longitudinal interdependencies in subjective well-being among romantic partners (e.g. Hoppmann, Gerstorf, Willis, & Schaie, 2011; Orth, Erol, Ledermann, & Grob, 2018; Schimmack & Lucas, 2010; Wortman & Lucas, 2016). So far, however, it remains unclear how these interdependencies evolve until the end of the [romantic] lifespan. Therefore, the current study zooms into the last years of a romantic relationship to investigate the codevelopment of life satisfaction in couple members approaching the death of one partner. Combining previous lines of well-being research on terminal decline and spousal bereavement, we aim to shed light on the dyadic nature of life satisfaction in to-be-deceased and to-be-bereaved partners and we seek to reveal whether couple interdependencies in subjective well-being persist "until death do us part".

Codevelopment of Life Satisfaction in Couples

Life satisfaction, or, our "liking or disliking" of life in general (Heller, Watson, & Ilies, 2004, p. 1), has been subject to a myriad of studies that have aimed to explain individual differences and long-term changes in this cognitive dimension of subjective well-being (Diener, Oishi, & Lucas, 2003). More recently, studies have taken an interpersonal perspective when investigating the sources of within- and between-person variability in life satisfaction (e.g. Hoppmann et al., 2011; Orth et al., 2018; Schimmack & Lucas, 2010; Wortman & Lucas, 2016). These approaches are worthwhile as they acknowledge the contextualized nature of human development (Baltes, 1987; Bronfenbrenner, 1979) and how it is embedded in meaningful social environments, which shape individual behaviors and experiences through dynamic, continuous, and reciprocal processes of transaction (Magnusson, 1990). Given that romantic relationships could be thought of as the closest and most meaningful relationships that individuals encounter in adulthood, it is unsurprising that the developmental unit of the couple has received increasing attention in research on life satisfaction.

Kelley et al. (1983) state that "the close relationship is one of strong, frequent, and diverse interdependence that lasts over a considerable period of time" (p.38). Hence, experiencing interdependence in emotions and cognitions is considered almost a characterizing component of close relationships (Sels, Ceulemans, Bulteel, & Kuppens, 2016). In fact, both cross-sectional (Bookwala & Schulz, 1996; Goodman & Shippy, 2002; Townsend, Miller, & Guo, 2001) and longitudinal studies (e.g. Hoppmann et al., 2011; Orth et al., 2018; Schimmack & Lucas, 2010; Wortman & Lucas, 2016) have shown that happiness is not a "private affair" (Gustavson, Røysamb, Borren, Torvik, & Karevold, 2016, p. 1306), but is closely related to the well-being of a person's loved ones. Spouses participating in the German Socioeconomic Panel Study, for instance, exhibited substantial similarities in trait and state life satisfaction across two decades (Schimmack & Lucas, 2010). Similar patterns of partner codevelopments were also found for couples in the Seattle Longitudinal Study (Hoppmann et al., 2011):

Spouses not only reported similar levels of happiness (level correlation of r = .51) but their longitudinal changes in happiness was also highly interdependent (slope correlation of *r* = .77). Another recent study aggregated findings from five samples of couples and provided support for substantial longitudinal transmission effects of life satisfaction and emotional well-being between partners (Orth et al., 2018).

In addition, couple members who experience major transitions in their life also tend to report similar changes in life satisfaction. These interdependencies were observed along the transition into parenthood (Dyrdal & Lucas, 2013) but also for the experience of job loss (Luhmann, Weiss, Hosoya, & Eid, 2014), suggesting that both partners' satisfaction with life is susceptible to changes in their shared environment. Similarly, spousal similarities in life satisfaction were found to fade after spouses divorced (Wortman & Lucas, 2016), illustrating the role of interpersonal co-dynamics and shared life circumstances as sources of couple interdependencies in well-being.

The above findings underline the importance of considering the couple as a developmental unit so as to gain a more profound understanding of inter-individual differences in intra-individual development—what has been described as one of the central objectives of research in lifespan psychology (Baltes & Nesselrode, 1979). In the current study, we expand upon previous research on codevelopments of subjective well-being in couples by exploring the changes and between-partner interdependencies in life satisfaction in the uniquely stressful context of impending [partner] death.

Subjective Well-Being in the Context of Impending [Partner] Death

A considerable amount of literature suggests that subjective well-being remains stable or increases in old age despite age-related physical, cognitive, and social losses (Blanchflower & Oswald, 2008; Carstensen et al., 2011; Diener & Suh, 1997; Gana, Bailly, Saada, Joulain, & Alaphilippe, 2012; Hamarat, Thompson, Steele, Matheny, & Simons, 2002; Stone, Schwartz, Broderick, & Deaton, 2010). This developmental trend has been referred to as the well-being paradox of old age and has been associated with a more proficient use of self-regulatory strategies in late adulthood (Brandtstädter & Greve, 1994; Kunzmann, Little, & Smith, 2000). Socio-emotional selectivity theory (Carstensen, Fung, & Charles, 2003) provides a prominent explanation for age-related gains in well-being in an end-of-life context. According to this theory, a limited future time perspective leads to an increased motivational focus on positive and emotionally meaningful experiences. As a result, older adults tend to rely on a repertoire of emotion regulation strategies that helps to "selectively construct a social and cognitive world that maximizes emotional payoffs" (Carstensen et al., 2003, p. 119), for example through a selective prioritization of positive information and emotionally close interaction partners. Recent work on life satisfaction in the context of impending [partner] death has, however, challenged the notion that old age is characterized by stable or enhancing experiences of well-being (e.g. Gerlach et al., 2017; Gerstorf et al., 2010; Infurna et al., 2016). These studies have investigated late-life changes in subjective well-being from two individual level perspectives, either focusing on end-of-life trajectories of subjective well-being in to-be-deceased individuals or tracking changes in subjective well-being in individuals approaching the death of their partner. We will first summarize evidence from both lines of research and will then argue for a combined—or dyadic—investigation of the changes and interdependencies in subjective well-being in the years leading up to the death of one partner.

To-be-deceased perspective. Relying on large longitudinal datasets and following an end-of life approach to subjective well-being, studies have shown that the trajectories of life satisfaction are

relatively stable up until late in life. Nevertheless, as individuals approach the year of their death, they tend to enter a phase of rapid deterioration in life satisfaction (Gerstorf, Ram, Estabrook, et al., 2008; Gerstorf et al., 2010; Gerstorf, Ram, Röcke, Lindenberger, & Smith, 2008; Mroczek & Spiro III, 2005). This process has been referred to as terminal decline—"the change that accrues as time runs out" (Gerstorf & Ram, 2015, p. 211). Terminal decline begins, on average, at around three to five years before death (Gerstorf et al., 2010), suggesting that in these last years of life, individuals experience developmental losses and challenges that outweigh the regulatory capacities that had been effective in earlier phases of life (Mueller, Wagner, Wagner, Ram, & Gerstorf, 2018).

Considering the well-documented link between health and well-being (Diener & Chan, 2011; Hudson, Lucas, & Donnellan, 2019; Kööts-Ausmees & Realo, 2015; Steptoe, Deaton, & Stone, 2015), these patterns of terminal well-being decline are most likely related to rapid deteriorations in other domains of functioning. Previous studies have, for instance, documented terminal decline in the cognitive, physical, and emotional domain (for a review see Cohen-Mansfield, Skornick-Bouchbinder, & Brill, 2017). Chochinov et al. (2009) captured the more subjective "landscape of distress" (p. 641) as experienced by individuals facing the end of their life. According to self-reports of terminally-ill patients, this phase of life is most frequently characterized by unrelieved physical symptoms and functional limitations (i.e. a reduced capacity to carry out routines, activities of daily living and important roles), as well as existential issues that involve feelings of no longer being the same person one used to be, a lack of perceived control, and a fear of being a burden to others. Experiencing a lack of control and a limited functional capacity was experienced as particularly stressful by patients who had a partner or by those who lived with someone else. It was, therefore, concluded that the burden of physical limitations may be intensified by the everyday presence of close others who witness the experienced limitations (Chochinov et al., 2009). These results reinforce the necessity of accounting for the interpersonal living context (i.e. the couple relationship) when investigating end-of-life developments.

In fact, a considerable proportion of individuals enters old age and the terminal phase of their lives as a member of a romantic relationship. According to microcensus data (Destatis, 2018), 40% of older adults in Germany (65+ years) live together with their married partner. That is, when investigating terminal well-being decline, it is crucial to also take into account the complementary caregiving perspective of partners approaching bereavement as well as the co-dynamics resulting from the shared experience of impending [partner] death.

To-be-bereaved perspective. Despite its normative character (Havighurst, 1972; Hutteman, Hennecke, Orth, Reitz, & Specht, 2014), the death of a partner is considered one of the most stressful life events experienced in adulthood (Dohrenwend, Askenasy, Krasnoff, & Dohrenwend, 1978; Holmes & Rahe, 1967; Paykel, Prusoff, & Uhlenhuth, 1971), with important implications for physical and mental health (Stroebe, Schut, & Stroebe, 2007) and well-being (Anusic & Lucas, 2014; Infurna et al., 2016; Lucas, Clark, Georgellis, & Diener, 2003). The transition into partner bereavement has been divided into three developmental stages, each posing different challenges to adjustment: (1) an anticipation phase, describing the years leading up to bereavement; (2) a reaction phase, describing the time around the event of partner death; and (3) an adaptation phase, describing the years after the death of a partner (Infurna et al., 2016).

Some prospective longitudinal studies have explored changes in subjective well-being across all phases of the experience of bereavement, including the anticipation phase. These studies reported that life satisfaction rapidly declines as individuals approach the death of a partner. That is, subjective well-being begins to deteriorate some years before partner death (Anusic & Lucas, 2014; Infurna et al., 2016; Lucas et al., 2003; Yap, Anusic, & Lucas, 2012), suggesting a foreshadowing effect of bereavement. Infurna et al. (2016) identified anticipation effects from around 2.5 years before partner death. Other studies also observed higher levels of depressive symptoms, decreased functional and cognitive health, as well as lower levels of quality of life among to-be-bereaved persons when compared to their continuously married counterparts (Bourassa, Knowles, Sbarra, & O'Connor, 2016; Vable, Subramanian, Rist, & Glymour, 2015).

This pre-bereavement deterioration of health and well-being most likely reflects a reaction to a multitude of challenges and losses that are faced by spouses who accompany their increasingly weakened partner. Along with the physically and mentally burdensome experience of caregiving (Kaschowitz & Brandt, 2017; Schulz & Sherwood, 2008), these challenges involve an increased feeling of insecurity, worries about the partner and about the couple's limited remaining time together, a decreased sense of control, a loss of mobility, and a sense of overwhelming responsibility, i.e. for managing the partner's treatment plan (Evans, 1994; Gardner, 2008; Nielsen, Neergaard, Jensen, Bro, & Guldin, 2016; Schulz & Sherwood, 2008). An interview participant living with a terminally ill partner described his situation as follows, providing a powerful illustration of the experienced uncertainty and distress from a caregiver perspective: "You know, when you have a wife or a spouse with cancer, every day is torture. And I walk out of the house in the morning and I wonder what things are going to be like when I get home at night. And it's a constant worry because I know that eventually she's going to die of this. And the question is, will she die in ten years or will she die in one year? That's a big thing to carry around [...]." (Gardner, 2008, p. 148). The context of caregiving and impending [partner] death, therefore, needs to be understood as a chronic stress experience that can be harmful to the physical, mental and subjective well-being of to-be-bereaved partners (Schulz & Sherwood, 2008).

Merging the perspectives. In sum, individual-level evidence challenges the well-being paradox of old age and suggests that the context of impending [partner] death represents a chronically stressful experience that appears to exceed the otherwise effective regulatory capacities of older adults. In fact, previous studies have demonstrated that to-be-deceased and to-be-bereaved individuals experience very similar changes in life satisfaction in the years before [partner] death. According to theoretical notions and empirical evidence on couple attunements as well as end-of-life well-being, there are at least three different sources of observable similarities in life satisfaction in couples approaching [partner] death.

First, and as outlined above in the discussion of individual-level research perspectives, both partners' well-being is challenged by their unique personal experiences (i.e. mortality-related declines of functioning, the burden of caregiving), which are inherent to the experience of impending [partner] death, and which can lead to similar—but not necessarily interdependent—declines in well-being.

Second, and widely neglected so far by prospective longitudinal studies, the years preceding [partner] death are experienced and embedded within the developmental unit of the couple. Following an interdependence theoretical perspective (Rusbult & Van Lange, 2008), similar end-of-life changes in

well-being can thus be explained by interpersonal processes that take place between to-be-deceased and to-be-bereaved individuals. Partners may shape each other's patterns of well-being in different ways (Butler, 2015; Schoebi, 2008): directly, through less conscious processes of emotional contagion and transmission (Hatfield, Cacioppo, & Rapson, 1993; Larson & Almeida, 1999); or indirectly, through emotionally-charged behaviors and interactions with the partner that result in interpersonal cross-overs of affective states (e.g. through hostile communication styles, Westman, 2001) but also through more active and controlled attempts to regulate the partner's emotional state (e.g. through physical touch, Debrot, Schoebi, Perrez, & Horn, 2013). In addition to these emotional co-dynamics, couple members may also affect each other's subjective well-being on a cognitive level. That is, partner well-being can serve as an important source of information and as an anchor when judging one's personal satisfaction with life (Gustavson et al., 2016; Powdthavee, 2009). Consequently, the life satisfaction of to-be-deceased and to-be-bereaved individuals is, at least to some extent, shaped by their partner's state of well-being.

Third, and lastly, similar and interdependent trajectories of life satisfaction in couples facing [partner] death do not necessarily reflect the sole outcome of both partners influencing each other. Following a shared resources perspective (Orth et al., 2018; Schimmack & Lucas, 2010), to-be-deceased and to-be-bereaved partners may also "wax and wane together" (Hoppmann et al., 2011, p. 2) because they experience similar changes in their life circumstances (e.g. through reduced financial resources and opportunities for social participation) that affect both couple members in similar but independent ways.

It should be emphasized that the described sources of similar changes in life satisfaction are not mutually exclusive but that they are themselves highly intertwined and may also apply to other challenging life transitions that can be experienced within a couple. These dynamics may, however, unfold with a unique intensity in an end-of-life relationship context, resulting in characteristic patterns of interdependence between partners. The uniqueness of this stage of life is likely to be grounded in a novel and ongoing quality of physical and emotional suffering that is experienced and witnessed by both partners; a perceived threat of discontinuity; an unclear future time perspective regarding the self and the romantic relationship; as well as an intensified pattern of support and care provision (Carstensen et al., 2003; McLean & Jones, 2007). We argue that these chronic stress factors challenge the regulatory capacities of both partners as much as they amplify the salience of partner well-being in this phase of life, ultimately resulting in an increased permeability for partner well-being in an end-of-life context. Following this line of argumentation, we expect stronger between-partner correlations in the levels and changes of life satisfaction as well as stronger between-partner transmission effects of life satisfaction in couple members facing [partner] death as opposed to couples who are not experiencing this developmental challenge.

The Present Study

So far, the experience of impending death and terminal decline has been investigated from the perspective of the dying person, while the perspective of the surviving partner has been addressed by a second but independent line of research on bereavement. The present study integrates these two individual-level research perspectives, acknowledging the contextualized nature of development until the end of [partner] life and capturing the intertwined experiences of romantic partners. To that end, we

examine the trajectories of life satisfaction in to-be-deceased and to-be-bereaved individuals at the couple level. We rely on representative household data from Germany and employ a dyadic multilevel approach to investigate the codevelopment of life satisfaction in couple members approaching [partner] death, while comparing them against a sample of couples in which neither partner died during the study. Incorporating couple-level data allows us to capture the interdependent nature of life satisfaction in this developmental context more thoroughly. Following this approach, we predict that couple members facing [partner] death experience declines in life satisfaction that will not be observed among couple members who do not find themselves in this phase of life. Moreover, we expect strong between-partner interdependence in life satisfaction, as indicated by strong correlations in the estimated growth parameters and significant transmission effects of life satisfaction between partners in both samples of couples. Finally, we hypothesize that the strength of between-partner interdependence (i.e. between-partner correlations and transmission effects) is stronger in couples approaching [partner] death.

Methods

The current study uses 32 years of observation of household members participating in the German Socio-Economic Panel Study (SOEP) to model changes and interdependencies in life satisfaction in couples approaching the death of one partner. To be able to draw conclusions about whether these developmental patterns are characteristic of couple members approaching [partner] death, we performed the same set of analyses for a propensity-score-matched control group of couples in which neither partner died during the study period.

Sample

The SOEP is an ongoing representative panel survey of Germany's resident population that has been conducted since 1984. The initial sample of households (N = 5,921) and subsequent enlargement samples were selected in a multi-stage random sampling procedure. Currently, the SOEP panel comprises 30,000 individuals belonging to 15,000 households. Data are collected on a yearly basis, via computer-assisted personal interviews that are conducted with all household members aged 16 years or older. For long-term participants, it is also possible to provide information via self-administered paper-pencil questionnaires. Information regarding the situation of the entire household are provided by the head of each household. On a general level, the SOEP aims to capture a broad set of objective and subjective indicators of well-being and it is suitable for exploring life course developments within household contexts and across large time spans (Goebel et al., 2019). The richness of the SOEP data has been valued by previous studies that investigated couple interdependencies in life satisfaction as well as terminal and anticipatory well-being declines in the years before death and conjugal bereavement (see supplemental material for the list of studies). So far, however, no study has used the SOEP data to explore the codevelopment and transmission of life satisfaction in the shared and uniquely stressful context of impending [partner] death.

For the present analyses, participants were selected from all available SOEP waves (1984 – 2015) if they met the selection criteria for the event sample (male/female couples in which one partner died in the course of the study) and the control sample (male/female couples in which no partner died).

Event sample. According to SOEP records, 6,119 participants died between 1984 and 2015. Based on this sample of deceased participants, we applied the following five selection criteria to identify couples for our event sample.

First, as mentioned before, previous evidence suggests that terminal declines in to-be-deceased individuals and anticipatory declines in to-be-bereaved individuals begin at around three to five years prior to death (Gerstorf et al., 2010) and at 2.5 years prior to partner death (Infurna et al., 2016). To capture changes and interdependencies in life satisfaction in these critical years leading up to [partner] death, we only included deceased individuals if they had a partner and if they had reported they were in a relationship with each other for at least three years before [partner] death. Of the 6,119 participants who had died during the study 2,172 couples (i.e. 2,172 deceased individuals and their partners) met this criterion.

Second, we only included couples in which one couple member died in the course of the study ($N_{couples}$ = 2,072), excluding couples in which both partners died at some point while participating. We made this selection to control for the possibility that both partners simultaneously experience mortality-related and bereavement-related processes in the years leading up to the death of one partner. Since this study aims to reveal mortality-related and bereavement-related changes in life satisfaction within couple members and their interdependencies across couple members it is important to keep the potential for confounding experiences at the lowest (possible) level.

Third, we only included couples in which neither partner had lost another partner in any of the previous or following waves ($N_{couples}$ = 2,058), excluding participants and their respective partners, if they experienced more than one partner death in the course of the study. We decided upon this criterion to control for potential habituation effects with regard to the experience of partner death among to-be-bereaved partners and to rule out the possibility that participants appear in more than one dyad (in the same or in different roles).

Fourth, to be capable of accurately estimating changes and interdependencies in life satisfaction in the critical years leading up to [partner] death, we only included couples in which both partners provided information on life satisfaction in (at least) the three years leading up to [partner] death ($N_{couples}$ = 1,609).

Finally, we only included couples in which both partners provided information on the variables relevant for the propensity score matching (age, education, disability status, employment status, parental status), leaving a final sample of 1,450 male/female couples[1].

Control sample. We selected a control sample so as to compare the trajectories of life satisfaction in couples approaching and not approaching [partner] death. For the control sample, we set the following five selection criteria: First, we selected individuals who neither died nor experienced partner death while participating ($N_{individuals}$ = 104,540) and second, who had been in a relationship with the same partner for at least three years before they last participated in the survey ($N_{individuals}$ = 27,882). Third, we selected participants and their respective partners ($N_{individuals}$ = 27,194) if they participated as part of only one dyad. Fourth, we only selected couples in which both partners provided at least three consecutive measurement points for life satisfaction in the years leading to their last survey participation. We relied on these rather strict selection criteria with regard to the three last measurement points, to increase comparability with the event group and to guarantee identical preconditions to detect a potential quadratic effect of time in the later years of their participation. 11,080 couples fulfilled these criteria. Finally, we could only retain male/female couples in which both partners provided information on the matching variables, leaving us with a control sample of 9,255 for the propensity score matching.

Propensity score matching. To ensure that couples in the event sample and the control sample were similar with regard to characteristics that may be associated with experiencing [partner] death at a later point in the study, we employed a propensity score matching procedure. We used the MatchIt package (Ho, Imai, King, & Stuart, 2007) in R (R Core Team, 2016) to estimate couple-level propensity scores for the experience of [partner] death and relied on both partners' age, education, disability status, marital status, employment status, and parental status at the first wave in which both partners participated as a couple. The choice of the current matching variables was based on their empirical link with mortality (e.g. Grundy & Kravdal, 2007; Lundin, Lundberg, Hallsten, Ottosson, & Hemmingsson, 2010; Park, Oh, Roh, & Moon, 2017) but was also contingent upon their availability throughout the entire study period. Relying on a broader set of mortality-related factors, including but not limited to medical conditions, doctor visits, and social participation, would likely have optimized the prediction of [partner] death within the study. These variables were, however, not continuously assessed throughout the entire SOEP study, resulting in a lack of baseline information on these characteristics for some participants. To limit further reductions in sample size, we decided to rely on the current selection of mortality-related matching variables (i.e., age, education, disability status, marital status, employment status and parental status) to predict [partner] death within the study.

Couples in the event sample ($N_{couples}$ = 1,450) were then matched to couples in the preliminary control sample ($N_{couples}$ = 9,255) based on their estimated propensity to experience the death of one partner[2].

Measures

Life satisfaction. In each wave, participants were asked to rate the single-item question "All things considered, how satisfied are you with your life?" on a scale ranging from 0 (*totally dissatisfied*) to 10 (*totally satisfied*). To increase comparability with previous research on terminal well-being declines (e.g. Gerstorf et al., 2014), life satisfaction scores were transformed into a T-metric, relying on life satisfaction scores of the entire SOEP 2002 sample as a reference (*M* = 6.90, *SD* = 1.81). Participants in the event sample reported a mean life satisfaction of 45.41 (*SD* = 12.80) in the year before [partner] death; participants in the matched control sample reported a mean life satisfaction of 50.48 (*SD* = 10.40) in the year before they last participated in the survey.

Years-to-event. The trajectories of life satisfaction were modeled as a function of years-to-[partner] death in the event sample and as a function of years-to-last survey participation in the control sample. Information on mortality status was provided by remaining household members and neighbors or retrieved from official registers. Both years-to-event indicators were defined as the time in years from a given survey year to the year of event or the year of last survey participation, respectively. The maximum time-to-event was 32 years in both samples. For the statistical analyses, years-to-[partner] death as well as the years-to-last survey participation variable were centered at one year before the event. This allowed us to interpret the retained intercept parameters as levels of life satisfaction in the year before [partner] death or in the year before last survey participation. We decided against centering the time-to-event variables around the actual year of event because couple observations were extremely rare for the actual year of [partner] death (*N* = 30).

On average, couple members in the event sample participated 11.73 (*SD* = 6.94) times before the year of [partner] death. Couples in the control sample participated 10.90 (*SD* = 6.97) times.

Matching variables. *Age* was included as chronological age. As an indicator of *education*, we relied on both partners' completed years of education. *Disability status* (0 = *no certified disability status*, 1 = *certified disability status*) has been measured with the question "Are you legally classified as disabled or having a reduced ability to work for medical reasons?". *Employment status* was coded as (0 = *not employed*, 1 = *employed*). Male parental status has only been assessed since 2001, while female parental status has been assessed since the beginning of the study. Consequently, there was a lack information on male partners' parental status if the event of [partner] death occurred before 2001 (or if they withdrew from the study before this point in case of the control sample). To still consider this mortality-related matching variable and to be consistent across couples participating in different survey years, we decided to rely on female *parental status* (0 = *no natural or adopted child*, 1 = *at least one natural or adopted child*) as a couple-level matching variable.

Table 1 shows the characteristics of the event sample and the matched control sample, both at first couple assessment and in the year before [partner] death or last survey participation.

Statistical Approach

We employed multilevel dyadic growth models (Kashy & Donnellan, 2008) and incorporated a longitudinal actor-partner interdependence approach (Kenny, 1996; Kenny & Cook, 1999) "to examine how change over time is coordinated across the two individuals" (Kashy, Donnellan, Burt, & McGue, 2008, p. 317). In these models, person observations at a given time point were treated as level-one units and couples were treated as level-two units. We refrained from employing an alternative three-level hierarchical approach (i.e. observations at a given time point nested in persons nested in dyads) for two main reasons. First, because, in our dataset, couple members were commonly assessed at the same occasion. Consequently, the level of time points is cross-qualified with the person level (Garcia & Kenny, 2018). Second, in the current study, there would be no probabilistic variability at the person level (Laurenceau & Bolger, 2005), because we assign each dyad member to one of two fixed roles (i.e. to-be-deceased partner and to-be-bereaved partner). Table 2 provides a randomly created example of a couple data set from the event sample that illustrates the nested structure of the current data.

To capture the coordinated trajectories of life satisfaction, we used the MIXED procedure in SAS (Littell, Milliken, Stroup, Wolfinger, & Schabenberger, 2006) and the underlying missing-at-random assumptions. The analysis code is available on OSF (https://osf.io/yeh7v/?view_only=9cbf09b07ef34639b0745fe1a53c9d49). To address our research questions, we conducted two sets of analyses.

Multilevel dyadic growth models. In a first set of analyses, we modeled the dyadic trajectories of life satisfaction as a function of time (i.e. years-to-event). We estimated intercept parameters, linear slopes, and quadratic slopes for couple members in both samples. The quadratic change parameter was included to capture potential accelerations in the decline in life satisfaction that have been observed in previous studies of to-be-bereaved and to-be-deceased individuals (e.g. Anusic, Yap, & Lucas, 2014; Gerstorf et al., 2010). Note that we also estimated alternative linear models of time in both samples and compared them against the quadratic models. We then proceeded with the model that provided a better relative fit (i.e. a lower Akaike information criterion).

We controlled for disability status as a time-variant indicator of health to ensure that the observable event-related changes in life satisfaction can be interpreted above and beyond the effects of a changing health status[3].

The following equation describes the dyadic growth of life satisfaction in couple members approaching [partner] death:

(1.1)

$LS_{jk} = \beta_{D-0j}(\text{To-Be-Deceased}_{jk}) + \beta_{B-0j}(\text{To-Be-Bereaved}_{jk})$

$+ \beta_{D-1j}(\text{To-Be-Deceased}_{jk}*\text{Years-to-Event}_{jk}) + \beta_{B-1j}(\text{To-Be-Bereaved}_{jk}*\text{Years-to-Event}_{jk})$

$+ \beta_{D-2j}(\text{To-Be-Deceased}_{jk}*\text{Years-to-Event}_{jk}^2) + \beta_{B-2j}(\text{To-Be-Bereaved}*\text{Years-to-Event}_{jk}^2)$

$+ \beta_{D-3j}(\text{To-Be-Deceased}_{jk}*\text{Disability}_{jk}) + \beta_{B-3j}(\text{To-Be-Bereaved}_{jk}*\text{Disability}_{jk}) + e_{D-jk} + e_{B-jk}$

where

$\beta_{D-0j} = \gamma_{D00} + u_{D0j}$	$\beta_{B-1j} = \gamma_{B10} + u_{B1j}$	$\beta_{D-3j} = \gamma_{D30}$
$\beta_{B-0j} = \gamma_{B00} + u_{B0j}$	$\beta_{B-2j} = \gamma_{D20} + u_{D2j}$	$\beta_{B-3j} = \gamma_{B30}$
$\beta_{D-1j} = \gamma_{D10} + u_{D1j}$	$\beta_{B-2j} = \gamma_{B20} + u_{B2j}$	

In our analyses, we followed a dual-intercept approach to estimate both partners' trajectories of life satisfaction in a combined model. That is, we included two dummy-coded variables which indicated whether an observation belonged to the to-be-deceased partner or to the to-be-bereaved partner (see Table 2). This allowed us to obtain separate intercept, linear slope, and quadratic slope estimates for partners approaching death and partners approaching bereavement (Kashy & Donnellan, 2008, for details see code). The index D describes estimates for to-be-deceased partners, while the index B describes estimates for to-be-bereaved partners. According to this model, levels of life satisfaction of a to-be-deceased or a to-be-bereaved partner in couple j at a given time point k can be partitioned into their estimated level of life satisfaction in the year before [partner] death (i.e. β_{D-0j}, β_{B-0j}), their estimated linear (i.e. β_{D-1j}, β_{B-1j}) and quadratic changes (i.e. β_{D-2j}, β_{B-2j}) in life satisfaction approaching the year of [partner] death, the time-lagged effect of disability status (i.e. β_{D-3j}, β_{B-3j}), and a time-specific error term (i.e. e_{D-jk}, e_{B-jk}). This error term represents deviations of observed levels of life satisfaction from levels of life satisfaction predicted for the to-be-deceased or the to-be-bereaved partner in couple j at the given time point k.

We allowed for random between-couple variation in the parameters of the dyadic growth model. Consequently, the estimated intercepts, linear slopes, and quadratic slopes of a to-be-deceased and a to-be-bereaved partner can further be broken down into their respective fixed effect; that is, the average sample-level intercept (i.e. γ_{D00}, γ_{B00}), linear slope (i.e. γ_{D10}, γ_{B10}), and quadratic slope (i.e. γ_{D20}, γ_{B20}) and a partner-specific deviation from these sample-level fixed effects. Deviations of partner-specific estimates from the average sample-level intercept are represented by the parameters u_{D0j} and u_{B0j}, while the parameters u_{D1j}, u_{B1j} and u_{D2j}, u_{B2j} represent deviations of partner-specific estimates from average sample-level linear and quadratic slopes.

Following recommendations by Kashy and Donnellan (2008), we also tested for between-partner differences in the estimated growth parameters. To that end, we included the variable partner role as an interaction term and reformulated the model in the following way:

(1.2)

$LS_{jk} = \beta_{0j} + \beta_{1j}(\text{Years-to-Event}_{jk}) + \beta_{2j}(\text{Years-to-Event}_{jk}^2) + \beta_{3j}(\text{Disability}_{jk})$

$+ \beta_{4j}(\text{Partner Role}_{jk}) + \beta_{5j}(\text{Partner Role}_{jk}*\text{Years-to-Event}_{jk})$

$+ \beta_{6j}(\text{Partner Role}_{jk}*\text{Years-to-Event}_{jk}^2) + \beta_{7j}(\text{Partner Role}_{jk}*\text{Disability}_{jk}) + e_{D\text{-}jk} + e_{B\text{-}jk}$

where

$\beta_{0j} = \gamma_{00} + u_{0j}$	$\beta_{3j} = \gamma_{30}$	$\beta_{6j} = \gamma_{60}$
$\beta_{1j} = \gamma_{10} + u_{1j}$	$\beta_{4j} = \gamma_{40}$	$\beta_{7j} = \gamma_{70}$
$\beta_{2j} = \gamma_{20} + u_{2j}$	$\beta_{5j} = \gamma_{50}$	

This interaction approach provided us with only one intercept (i.e. β_{0j}), linear slope (i.e. β_{1j}) and quadratic slope (i.e. β_{2j}) estimate as well as one estimate for the effect of disability status (i.e. β_{3j}) for both couple members. Between-partner differences in these growth parameters were qualified as additional interaction effects (i.e. β_{4j}, $\beta_{5j,}$ β_{6j} and β_{7j}).

Note that if partners did not significantly differ in their estimated growth parameters, we report only one effect for both partners (obtained from the interaction model). If there was a significant interaction effect, we report separate estimates for both partners (obtained from the dual-intercept model).

Longitudinal actor-partner interdependence approach. In a second set of analyses, we moved beyond the description of dyadic changes in life satisfaction in the years preceding [partner] death and additionally examined the interpersonal pathways of well-being transmission in this phase of life.

To that end, we expanded the models described in Equation 1.1 and 1.2 by adding the time-lagged actor and partner effects of both partners' levels of life satisfaction into the model. This allowed us to test the interpersonal effects (i.e. partner effects or transmission effects) that both couple members exerted on each other's life satisfaction at a later time point, while accounting for intrapersonal stability effects (i.e. actor effects).

In these models, we also controlled for the time-lagged effect of disability status. As an extension, the effect of disability status was not only included as an intrapersonal but also as an interpersonal control variable. This way, the observable transmission effects of life satisfaction between partners can be interpreted above and beyond the effect of one partner's health status on the other partner's life satisfaction[3]. The extended multilevel dyadic growth model that incorporates a longitudinal actor-partner interdependence approach to predict life satisfaction in couple members approaching [partner] death is presented in Equation 2.1:

(2.1)

$LS_{jk} = \beta_{D\text{-}0j}(\text{To-Be-Deceased}_{jk}) + \beta_{B\text{-}0j}(\text{To-Be-Bereaved}_{jk})$

$+ \beta_{D\text{-}1j}(\text{To-Be-Deceased}_{jk}*\text{Years-to-Event}_{jk}) + \beta_{B\text{-}1j}(\text{To-Be-Bereaved}_{jk}*\text{Years-to-Event}_{jk})$

$+ \beta_{D\text{-}2j}(\text{To-Be-Deceased}_{jk}*\text{Years-to-Event}_{jk}^2) + \beta_{B\text{-}2j}(\text{To-Be-Bereaved}_{jk}*\text{Years-to-Event}_{jk}^2)$

$+ \beta_{A\_D\text{-}3j}(\text{To-Be-Deceased}_{jk}*\text{Disability}_{jk}) + \beta_{A\_B\text{-}3j}(\text{To-Be-Bereaved}_{jk}*\text{Disability}_{jk})$

$+ \beta_{P\_D\text{-}3j}(\text{To-Be-Deceased}_{jk}*\text{Partner Disability}_{jk})$

$+ \beta_{P\_B\text{-}3j}(\text{To-Be-Bereaved}_{jk}*\text{Partner Disability}_{jk})$

$+ \beta_{A\_D\text{-}4j}(\text{To-Be-Deceased}_{jk}*LS_{jk}) + \beta_{A\_B\text{-}4j}(\text{To-Be-Bereaved}_{jk}*LS_{jk})$

+ β_{P_D-4j} (To-Be-Deceased$_{jk}$*Partner LS$_{jk}$)

+ β_{P_B-4j} (To-Be-Bereaved$_{jk}$*Partner LS$_{jk}$) + e_{D-jk} + e_{B-jk}

where

$\beta_{D-0j} = \gamma_{D00} + u_{D0j}$ $\beta_{B-2j} = \gamma_{B20} + u_{B2j}$ $\beta_{A\_D-4j} = \gamma_{A\_D40}$

$\beta_{B-0j} = \gamma_{B00} + u_{B0j}$ $\beta_{A\_D-3j} = \gamma_{A\_D30}$ $\beta_{A\_B-4j} = \gamma_{A\_B40}$

$\beta_{D-1j} = \gamma_{D10} + u_{D1j}$ $\beta_{A\_B-3j} = \gamma_{A\_B30}$ $\beta_{P\_D-4j} = \gamma_{P\_D40}$

$\beta_{B-1j} = \gamma_{B10} + u_{B1j}$ $\beta_{P\_D-3j} = \gamma_{P\_D30}$ $\beta_{P\_B-4j} = \gamma_{P\_B40}$

$\beta_{D-2j} = \gamma_{D20} + u_{D2j}$ $\beta_{P\_B-3j} = \gamma_{P\_B30}$

Again, we ran a dual-intercept model to capture the effects of time as well as the actor and partner effects of to-be-deceased and to-be-bereaved partners in a combined model. According to Equation 2.1 and parallel to the model described in Equation 1.1, levels of life satisfaction of a to-be-deceased or a to-be-bereaved partner in couple j at a given time point k can be predicted by a partner-specific intercept (i.e. β_{D-0j}, β_{B-0j}) as well as a linear (i.e. β_{D-1j}, β_{B-1j}) and a quadratic effect (i.e. β_{D-2j}, β_{B-2j}) of time-to-event. Further to the first set of analyses, the life satisfaction of a to-be-deceased or a to-be-bereaved partner is also predicted by a time-lagged intrapersonal effect of this person's disability status (i.e. β_{A_D-3j}, β_{A_B-3j}) and life satisfaction (i.e. β_{A_D-4j}, β_{A_B-4j}), representing the longitudinal actor effects of disability status and life satisfaction, as well as by the time-lagged interpersonal effects of disability status (i.e. β_{P_D-3j}, β_{P_B-3j}) and life satisfaction (i.e. β_{P_D-4j}, β_{P_B-4j}) originating from the corresponding partner (i.e. longitudinal partner effects of disability status and life satisfaction).

In these analyses, actor and partner life satisfaction were entered as person-mean centered predictor variables to facilitate the interpretability of the obtained intercept parameters across the different models. For the person-mean centering and to be consistent with the first set of analyses, we relied on T-units (based on life satisfaction scores of the entire SOEP 2002). That is, we created two new variables, in which we subtracted the average T-score of life satisfaction per person from their observed level of life satisfaction (in T-units) in a given survey year. Finally, the error term (i.e. e_{D-jk}, e_{B-jk}) represents deviations of observed levels of life satisfaction from levels of life satisfaction predicted for the to-be-deceased or to-be-bereaved partner in couple j at the given time point k.

Note that the time lag was specified as a lag of one, so levels of life satisfaction at time point k were longitudinally predicted by both partners' disability status and their reported levels of life satisfaction in their last survey participation ($k-1$). For the dyadic variables (i.e. disability status and life satisfaction), we introduced the suffixes A and P into the terms of the equation to distinguish actor effects that unfold on an intrapersonal level and partner effects that act on an interpersonal scale. As in the first set of analyses, we allowed for between-couple variation in the estimated growth parameters[4] and tested for significant between-partner differences in the fixed effects by including the variable partner role as an interaction term (Kashy & Donnellan, 2008). Equation 2.2 illustrated the interaction model:

(2.2)

$LS_{jk} = \beta_{0j} + \beta_{1j}$(Years-to-Event$_{jk}$) + β_{2j}(Years-to-Event$_{jk}^2$)

+β_{A_3j}(Disability$_{jk}$) + β_{P_3j}(Partner Disability$_{jk}$) + β_{A_4j}(LS) + β_{P_4j}(Partner LS$_{jk}$)

+ β_{5j}(Partner Role$_{jk}$) + β_{6j}(Partner Role$_{jk}$*Years-to-Event$_{jk}$)

+ β_{7j}(Partner Role$_{jk}$*Years-to-Event$_{jk}^2$) + $\beta_{A\,8j}$(Partner Role$_{jk}$*Disability$_{jk}$)

$+ \beta_{P\,8j}(\textit{Partner Role}_{jk}\text{*}\textit{Partner Disability}_{jk}) + \beta_{A\,9j}(\textit{Partner Role}_{jk}\text{*}LS_{jk})$

$+ \beta_{P\,9j}(\textit{Partner Role}_{jk}\text{*}\textit{Partner LS}_{jk}) + e_{D\text{-}jk} + e_{B\text{-}jk}$

where

$\beta_{0j} = \gamma_{00} + u_{0j}$	$\beta_{A\_4j} = \gamma_{A\_40}$	$\beta_{A\,8j} = \gamma_{A\,80}$
$\beta_{1j} = \gamma_{10} + u_{1j}$	$\beta_{P\_4j} = \gamma_{P\_40}$	$\beta_{P\_8j} = \gamma_{P\,80}$
$\beta_{2j} = \gamma_{20} + u_{2j}$	$\beta_{5j} = \gamma_{50}$	$\beta_{A\,9j} = \gamma_{A\,90}$
$\beta_{A\_3j} = \gamma_{A\_30}$	$\beta_{6j} = \gamma_{60}$	$\beta_{P\_9j} = \gamma_{P\,90}$
$\beta_{P\_3j} = \gamma_{P\_30}$	$\beta_{7j} = \gamma_{70}$	

For the control sample, we specified the same set of models and followed the same analytic procedure to be able to compare event-related changes and patterns of interdependence in life satisfaction with couples that were not approaching death or bereavement. In this group, the trajectories and transmission effects of life satisfaction were modeled for all years that a couple participated. Because partners in the control sample could not be distinguished based on their role in the experience of impending [partner] death, we randomly assigned members of a dyad to be partner A or partner B. In doing so, we ensured that men and women were allocated to the partner A and partner B groups in the same proportions as the to-be-deceased and the to-be-bereaved groups (partner A: 72% male, partner B: 28% male). We also ran an alternative set of models in which we distinguished between male and female partners and these models yielded very similar results (see Supplemental Table 1 and 2). However, we considered it important that the conclusions derived from the control group were not confounded by gender, which is why we report findings based on the gender-balanced random assignment of partner role.

Results

We present the results separately for the event sample and the control sample. For each sample, we start with the simpler multilevel dyadic growth models and compare the relative model fit of a linear model of time against a model including an additional quadratic effect of time. Having identified the more suitable model of time for our data, we present findings on both partners' trajectories of life satisfaction as well as between-partner correlations in the estimated growth parameters and residuals. Afterwards, we report the results of the extended multilevel models that incorporate a longitudinal actor-partner interdependence approach. These models reveal the dyadic pathways of well-being transmission in the years before [partner] death or last survey participation. In a final step, we summarize and compare the findings derived from the event sample and the control sample.

Event Sample

Multilevel dyadic growth models. Comparing the Akaike information criterion (AIC) of the model including the quadratic effect of time ($AIC_{\text{Quadratic}} = 214{,}661$) against the simpler linear model of time ($AIC_{\text{Linear}} = 215{,}242$) revealed that the quadratic model yields a better relative fit. Consequently, a model allowing for non-linear declines in life satisfaction fit the developmental trajectories of couple members approaching [partner] death better than a model that assumed steadily deteriorating life satisfaction in the years leading up to [partner] death.

Dyadic trajectories of life satisfaction. The results obtained from the dyadic multilevel model including a quadratic effect of time are shown in Table 3.

In to-be-bereaved and to-be-deceased partners, we observed significant negative effects of time for the linear and the quadratic slopes, suggesting that both partners experienced significant declines in life satisfaction in the years before [partner] death and that these declines were characterized by a significant degree of acceleration. The significant negative interaction effects of partner role signify that linear and quadratic declines were more pronounced in to-be-deceased couple members compared to their to-be-bereaved partners. Across the final ten years before [partner] death, the estimated declines in life satisfaction amounted to a drop of 6.5 T-units in to-be-deceased partners and of 3.7 T-units in to-be-bereaved partners. Finally, these differential rates of change between couple members also resulted in significant differences in their estimated levels of life satisfaction in the year prior to [partner] death. Couple members facing the year of their own death had estimated levels of life satisfaction that were around 0.45 standard deviations below the observed mean level of life satisfaction in the entire SOEP sample of 2002. In to-be-bereaved couple members, pre-event levels were only around 0.14 standard deviations below the SOEP reference sample of 2002. The analyses were controlled for disability status, which revealed a significant negative effect on life satisfaction that did not differ in strength between partners.

The average partner-specific trajectories of life satisfaction in couples approaching [partner] death are illustrated in Figure 1. It should be noted that we observed significant inter-individual variability in the estimated growth parameters of to-be-deceased and to-be-bereaved partners.

Between-partner correlation in the dyadic growth parameters. Intercept correlations as well as linear and quadratic slope correlations were high between partners ($r_{DB\_Intercept}$ = .71, $r_{DB\_Linear\ Slope}$ = .68, $r_{DB\_Quadratic\ Slope}$ = .67), indicating a strong degree of interdependence in the trajectories of life satisfaction in to-be-deceased and to-be-bereaved couple members in the years approaching [partner] death. The residual correlation between partners was moderate ($r_{DB\_Residuals}$ = .39), suggesting that couples in the event sample are exposed to shared environmental influences that affect both partners' life satisfaction above and beyond their disability status and their proximity to [partner] death.

Longitudinal actor-partner interdependence approach. The results of the incorporated longitudinal actor-partner interdependence approach for the event sample are presented in Table 4.

In line with the simpler multilevel dyadic growth models, we observed significant linear and quadratic declines in life satisfaction, which were more pronounced in to-be-deceased partners as compared to their to-be-bereaved counterparts. The estimated intercept parameters also differed between couple members, with lower estimates among to-be-deceased partners. Note that due to the person-mean centering and the coding of the predictor variables, the intercepts must be interpreted as the estimated pre-event level of life satisfaction among to-be-deceased and to-be-bereaved couple members who had reported an average level of life satisfaction in the previous survey year (with reference to their personal average); whose partner had also reported an average level of life satisfaction in the previous survey year (with reference to their personal average); and who had neither reported a disability themselves nor had a partner who had reported a disability in the previous year.

We did not identify a significant time-lagged actor effect of life satisfaction in couples approaching [partner] death. That is, deviations from average levels of life satisfaction in one survey year were not associated with levels of life satisfaction that were reported in the following survey year. We did, however, observe a significant time-lagged partner effect of life satisfaction; the strength of this

partner effect did not differ between to-be-deceased and to-be-bereaved partners. That is, in years when couple members reported higher levels of life satisfaction (i.e. higher with reference to their personal average), their partners also reported higher levels of life satisfaction in the following survey year. These effects were robust against the inclusion of disability status as a time-lagged control variable. We found that disability status had a negative actor effect and, surprisingly, a positive partner effect on later life satisfaction. These effects did not differ in strength between partners.

To sum up, in couples approaching [partner] death, we observed higher levels of life satisfaction on occasions when couple members were further away from the year of [partner] death; when their partners had reported higher (than personal average) levels of life satisfaction in the previous survey year; and when, in the previous survey year, they had not reported a disability but such a report was made by their partner.

Control Sample

Multilevel dyadic growth models. Comparing the linear model of time (AIC_{Linear} = 193,388) against the model including a quadratic effect of time ($AIC_{Quadratic}$ = 193,025) revealed that the quadratic model produced a better relative fit. As with the event sample, we therefore present findings derived from the quadratic model of time.

Dyadic trajectories of life satisfaction. The results of the dyadic multilevel model for the control sample are presented in Table 5.

Parallel to the event sample, we observed significant negative effects of time for the linear and the quadratic slope. In contrast to the event sample, however, these effects did not significantly differ between partners as indicated by non-significant interaction effects of partner role. Consequently, we report only one parameter for both partners. The estimated overall 10-year drop in life satisfaction amounts to a difference of 2 T-units. In the control sample, the final estimated level of life satisfaction was 0.1 standard deviations above the observed mean level of life satisfaction in the entire SOEP sample of 2002. The analyses were controlled for disability status, which had a significant negative effect on life satisfaction that did not differ in strength between partners.

The trajectories of life satisfaction in couples approaching the year of last survey participation are also illustrated in Figure 1. Similarly to the event sample, we observed significant inter-individual variability within the estimated intra-individual growth parameters of both couple members.

Between-partner correlation in the dyadic growth parameters. Intercept and slope correlations were high between couple members who did not experience [partner] death. Between-partner correlations ranged from $r_{AB\_Intercept}$ = .72 for the intercept, over $r_{AB\_LinearSlope}$ = .78 for the linear slope to $r_{AB\_QuadraticSlope}$ = .85 for the quadratic slope. As in the event sample, residual correlations between partners were moderate ($r_{AB\_Residuals}$ = .34), indicating a considerable effect of shared environmental influences that were not accounted for by our models.

Longitudinal actor-partner interdependence approach. The results of the incorporated longitudinal actor-partner interdependence approach for the control sample are presented in Table 6.

In line with the simpler multilevel dyadic growth models, we observed significant linear and quadratic declines in life satisfaction. These declines as well as the estimated intercept parameters did not differ between partners.

As in the event sample, we did not identify a significant time-lagged actor effect of life satisfaction in control couples. That is, deviations from average levels of life satisfaction in one survey year were not predictive of levels of life satisfaction that were reported in a subsequent survey year. We did, however, observe a significant time-lagged partner effect of life satisfaction and—similarly to the event sample—this partner effect did not differ in strength between couple members. Put differently, in years when couple members reported higher levels of life satisfaction (i.e. higher with reference to their personal average), their partners reported higher levels of life satisfaction in the following survey year. These effects were robust against the inclusion of disability status as a control variable, which had a negative time-lagged actor effect but no partner effect on life satisfaction. The strength of the actor effect of disability status did not vary between partners.

To sum up, in couples approaching the year of last survey participation, we observed higher levels of life satisfaction on occasions when couple members were further away from their last survey participation, when their partners had reported higher (than personal average) levels of life satisfaction in the previous survey year, and when they had not reported a disability in the previous survey year.

Comparison of the event and control sample

With regard to the trajectories of life satisfaction, the confidence intervals for the estimated linear slopes (95% CI γ_{D10} = [-1.12, -0.89], 95% CI γ_{B10} = [-0.68, -0.49]), quadratic slopes (95% CI γ_{D20} = [-0.042, -0.030], 95% CI γ_{B20} = [-0.027, -0.017]), and intercept parameters (95% CI γ_{D00} = [44.89, 46.10], 95% CI γ_{B00} = [48.11, 49.13]) of couple members in the event sample did not overlap with the estimated growth parameters of couples in the control sample (95% CI γ_{AB10} = [-0.39, -0.24], 95% CI γ_{AB20} = [-0.016, -0.007], 95% CI γ_{AB00} = [50.59, 51.37]). This suggests that control couples, when compared to couple members approaching [partner] death, experienced flatter and less accelerated declines that resulted in higher final levels of life satisfaction.

In terms of between-partner correlations, a normal approximation procedure was used to calculate the confidence intervals for the Fisher's z-transformed correlations coefficients (Irimata & Li, 2018)[5]. We found that between-partner correlations of the intercept (95% CI$r_{DB\_Intercept}$ = [0.84, 0.94], 95% CI$r_{AB\_Intercept}$ = [0.86, 0.96]) did not differ between event and control couples. We did, however, observe significant differences for the between-partner correlations of the linear slope (95% CI$r_{DB\_Linear Slope}$ = [0.78, 0.88], 95% CI$r_{AB\_Linear Slope}$ = [0.99, 1.10]) and the quadratic slope (95% CI$r_{DB\_Quadratic Slope}$ = [0.60, 0.70], 95% CI$r_{AB\_Quadratic Slope}$ = [1.00, 1.10]). The residual correlations between partners did not significantly differ between the samples (95% CI$r_{DB\_Residuals}$ = [0.36, 0.46], 95% CI$r_{AB\_Residuals}$ = [0.30, 0.41]). Consequently, linear and quadratic changes in life satisfaction were more strongly linked between partners in the control sample as compared to couples approaching [partner] death, while pre-event level correlations of life satisfaction and residual correlations (i.e. the effect of shared environmental influences that were not accounted for by our models) were comparable between event and control couples.

Finally, and regarding the transmission effects of life satisfaction between partners, we did not observe significant differences between couple members approaching [partner] death (95% CIγ_{P_DB40}= [0.02, 0.04]) and couple members in the control sample (95% CIγ_{P_AB40}= [0.03, 0.05]). That is, the strength of the time-lagged effect that both partners had on each other's levels of life satisfaction was comparable between event and control couples.

Discussion

Until the end of life, individual development unfolds within contexts (Baltes, 1987; Bronfenbrenner, 1979) and these contexts shape personal experiences and behavior through transactional processes (Magnusson, 1990). Considering that romantic relationships are among the closest and most meaningful social contexts humans experience during adulthood, the developmental unit of the couple should be particularly informative when studying inter-individual differences in life satisfaction across the lifespan. In the current study, we focused on the lifespan of a romantic relationship and zoomed into the last years of life shared by couple members approaching the death of one partner. In doing so, we integrated research perspectives on terminal well-being decline and partner bereavement and took a codevelopmental approach to the examination of life satisfaction in the experience of impending [partner] death.

Changes in Life Satisfaction in the Context of Impending [Partner] Death

Our findings are in line with our expectations and with the results of previous studies that investigated changes in life satisfaction in the context of impending [partner] death from separate individual-level perspectives (Anusic et al., 2014; Gerstorf, Ram, Estabrook, et al., 2008; Gerstorf et al., 2010; Gerstorf, Ram, Röcke, et al., 2008; Infurna et al., 2016; Mroczek & Spiro III, 2005; Yap et al., 2012): To-be-deceased and to-be-bereaved individuals experienced significant declines in life satisfaction as they approached the year of death or partner loss, respectively, and these declines were characterized by some degree of acceleration. This implies that for many couples, [partner] death was foreshadowed by a phase of mortality- and loss-related challenges that outweighed both partners' regulatory capacities.

But are these trajectories of life satisfaction really characteristic of couple members approaching [partner] death or can they also be observed in couples who find themselves in a different phase of life?

We found that couple members in both samples experienced accelerating declines in life satisfaction across the observation period. Yet, in partners who were neither approaching their own nor their partner's death, these declines were less pronounced, as indicated by flatter slopes and higher final levels of life satisfaction. In fact, we observed long-lasting level differences in life satisfaction between couples in the event and control samples that were exacerbated in the years immediately preceding [partner] death. These findings suggest that romantic partners who approached the death of one couple member, and those who found themselves in a different stage of their romantic lifespan (control sample), experienced comparable patterns of well-being decline, but these patterns unfolded with an added intensity among to-be-bereaved and to-be-deceased partners. Considering, however, that couple members in the control sample were also going to experience death or the death of the partner at some point (unless they separated before this event), we suggest that their mild declines in life satisfaction might be representative of an earlier stage of the developmental pathway toward [partner] death.

Our findings once again challenge the well-being paradox of old age (Brandtstädter & Greve, 1994; Kunzmann et al., 2000) and the premises of socio-emotional selectivity theory (Carstensen et al., 2003), suggesting that those emotion regulation strategies that were found to be emphasized by older adults (e.g. the selective prioritization of positive information and emotionally close interaction partners) might be insufficient or less effective to manage the health-related and social losses in this late phase

of life. Hence, we conclude that the present results highlight the utility of investigating the dyadic trajectories of life satisfaction in different developmental contexts. This line of research might lead to a deeper understanding of the limits and contextual boundaries of age-related proficiencies in emotion regulation (Kunzmann & Isaacowitz, 2017) and it might help us to identify the critical time frames of terminal well-being decline in the shared relationship context of impending [partner] death.

Couple interdependencies in the context of impending [partner] death

Previous research suggests that subjective well-being is interdependent and develops in similar ways within couple members (Hoppmann et al., 2011; Orth et al., 2018; Schimmack & Lucas, 2010). So far, however, no study has addressed the question of how these co-dynamics evolve in an end-of-life context and whether they persist until the death of one partner.

We found that the developmental trajectories of life satisfaction are highly intertwined in couples approaching [partner] death, as indicated by strong between-partner correlations for the intercept, the linear slope, and the quadratic slope, which ranged from $r = .67$ to $r = .71$. Taking a closer look at the pathways of well-being transmission, we further identified significant longitudinal partner effects between couple members approaching [partner] death: On average, to-be-deceased and to-be-bereaved individuals showed higher levels of life satisfaction if their partners also reported higher (than personal average) levels of life satisfaction at an earlier time point. Interestingly, we did not identify significant differences in the strength of the transmission effects of life satisfaction between couple members. This suggests that the contagion of life satisfaction between partners is not dominated by the to-be-deceased or the to-be-bereaved partner. This finding is noteworthy, considering asymmetrical patterns of support and care provision associated with an end-of-life relationship context (McLean & Jones, 2007). Moreover, the observed transmission effects of life satisfaction were robust against the inclusion of both partners' disability status, which leads to the conclusion that the transmission of life satisfaction goes beyond a changing state of health in the partner[3]. In fact, we observed that disability status had a positive partner effect on later levels of life satisfaction in the event sample but not in the control sample. This finding requires further replication but it might point to a buffering effect of acquiring a legal disability status and of receiving official benefits from the health care system (e.g. nursing services). Such benefits and forms of support might be experienced as particularly relieving.

In the control sample, we also observed strong patterns of interdependence and significant transmission effects of life satisfaction between partners. On a general level, these findings are in line with previous evidence on couple interdependencies in subjective well-being and they emphasize that life satisfaction does not become "a private affair" (Gustavson et al., 2016, p. 1306) in an end-of-life context. Instead, personal well-being appears to remain susceptible to the well-being states of the partner. Hence, couple interdependence in subjective well-being may be understood as an interpersonal phenomenon that is not restricted to certain stages of the romantic lifespan.

We went a step further and hypothesized that couple members approaching the death of one partner would be more susceptible to their partner's life satisfaction and that they would reveal stronger patterns of interdependence in their trajectories of life satisfaction than couples who were not approaching death or partner bereavement. The present study does not provide support for this hypothesis. On the contrary, we identified stronger between-partner correlations in the declines of life satisfaction among couple members in the control sample, suggesting that their changes in life

satisfaction were more attuned when compared to those of couple members approaching [partner] death. On a related note, we observed that the trajectories of life satisfaction differed between partners in the event but not the control sample. That is, life satisfaction deteriorated more intensely in partners preceding their own death when compared to partners approaching bereavement, eventually resulting in a growing disparity between to-be-bereaved and to-be-deceased partners in the years leading up to [partner] death. This is in line with findings of an earlier study that relied on a within-couple approach and observed slightly increasing dissimilarities in life satisfaction within couple members across time (Schade, Hülür, Infurna, Hoppmann, & Gerstorf, 2016). How can these findings be explained, taking into account theoretical approaches to couple similarities in well-being as well as the unique context of impending [partner] death?

We suggested earlier that interdependencies in life satisfaction in couples may result from interpersonal processes of mutual well-being transmission as well as shared environmental influences that impact both partners' well-being in similar ways (Orth et al., 2018). Our results do not imply that the changes in life satisfaction in to-be-deceased and to-be-bereaved partners were less attuned because couple members became increasingly immune to the well-being states of their partner. In both samples, couple members longitudinally affected each other's levels of well-being and the strength of these transmission effects did not differ between event and control couples. In fact, additional exploratory analyses provided further support for this conclusion in showing that the between-partner transmission effects of life satisfaction did not change across time (i.e. distance-to-event did not emerge as a significant moderator of partner effects[6]). Moreover, the effect of shared environmental influences that were not accounted for by our models (i.e. between-partner residual correlations) was also comparable between couples approaching [partner] death and those approaching their last survey participation. Consequently, weaker attunements of life satisfaction among couple members in the event sample neither resulted from a declining well-being permeability between partners nor did they reflect a diminishing importance of shared environmental influences. We see three alternative explanations for weaker between-partner correlations in the estimated slopes and a growing disparity in the trajectories of life satisfaction in couples approaching partner death.

First and foremost, our findings suggest that the sources for less attuned trajectories of life satisfaction in the context of impending [partner] death are rooted in the unique, *unshared* individual-level experiences associated with the experience of impending death and partner bereavement. In fact, it appears that mortality-related deficiencies in physical, cognitive, emotional, and social functioning as well as existential issues related to the terminal stage of life are more challenging to the adaptive capacities of an individual than are the experiences of distress, insecurity, and caregiving of to-be-bereaved partners.

Second, the observed disparity may also be caused by the relationship-focused coping strategy of protective buffering (Coyne & Smith, 1991; Thompson & Bolger, 1999). It is possible that to-be-bereaved partners actively downregulated their own worries and distress so as to remain supportive and to reduce the burdens on their dying partner. Although this was not mirrored in a declining strength of well-being transmission from to-be-bereaved to to-be-deceased partners, such intrapersonal regulatory efforts might explain why to-be-bereaved partners maintained higher levels of life satisfaction in the years before partner death.

A final explanation is methodological in nature: We only included survey years in which both partners were still alive and we excluded life satisfaction observations that were obtained after the death of one partner. Considering that the low point of subjective well-being is generally expected to be achieved in the actual year of bereavement (Anusic & Lucas, 2014; Anusic et al., 2014; Yap et al., 2012), we may have underestimated the strength of the experienced linear and non-linear declines in to-be-bereaved individuals. Nevertheless, our primary interest was to examine *anticipatory* changes in life satisfaction in the *shared* experience of approaching [partner] death. Findings derived from our current method suggest that the harmful consequences of bereavement are foreshadowed in the years before partner death, but they may unfold to their fullest potential only after the actual event of loss—when widows and widowers are adapting to a life without their partner.

In sum, life satisfaction seems to be highly intertwined and it remains contagious between partners in good times and in bad, until death parts the couple. Yet, couples approaching [partner] death experience a widening gap in their levels of life satisfaction and their changes in life satisfaction are less attuned when compared to a sample of couples that are not facing the death of one partner. The sources for weaker couple attunements of life satisfaction in the context of impending [partner] death appear to be rooted in the unique individual-level challenges faced by both partners, and they do not seem to result from an increasing immunity to the well-being states of the partner or from a diminishing role of shared environmental influences.

Limitations and Future Directions

The present study is the first to take a couple-level approach to investigate changes and interdependencies in life satisfaction in an end-of-life context. In doing so, we integrated previous research perspectives on partner bereavement and terminal well-being decline and acknowledged the interdependent nature of life satisfaction in the shared experience of impending [partner] death. Nevertheless, the current findings should be interpreted in view of some limitations that may be addressed in future research.

First, we focused on couples in which both partners reported on their life satisfaction in at least the three years before the death of one partner. Although the excluded sample of couples did not significantly differ from the final analysis sample with regard to their baseline levels of life satisfaction, their age, education, disability status, and employment status, it is still possible that they experienced more pronounced declines in health and well-being later on. That is, to-be-deceased partners who were still able to take part in the SOEP interview in the years before death may have been particularly healthy when compared to the general population. Consequently, both partners' pre-event declines may have been underestimated. Yet, this restriction was necessary to accurately estimate codevelopments of life satisfaction in the last years before [partner] death, especially since these years have been revealed as critical with regard to well-being decline (Gerstorf, Ram, Estabrook, et al., 2008; Gerstorf et al., 2010; Gerstorf, Ram, Röcke, et al., 2008; Infurna et al., 2016).

Second, we relied on disability status as the sole time-variant control variable because it is the only indicator of health that was assessed throughout the entire study period (1984-2015). A legal classification of disability status may, however, imperfectly capture the complex health-related situation of couple members approaching [partner] death. We conducted a parallel set of analyses, in which we included both partners' functional limitations (i.e. difficulties with getting out of bed, shopping, and doing

housework) as an additional indicator of health. These analyses are based on a shorter observation period—as the assessment of functional limitations was only introduced in 1985—but they yielded very similar results[3] (for details see Supplemental Tables 3-6). These parallel findings further support the idea that the transmission of life satisfaction between partners is not merely accounted for by a changing state of partner health. Yet, the substantial between-couple variability in the estimated growth parameters suggests that our sample's experiences leading up to the year of [partner] death were diverse. In some couples, [partner] death may have been sudden and unexpected. In other cases, [partner] death may have been experienced as the end of a long illness. A broader consideration of other health indicators (i.e. medical conditions, cognitive functioning, need for care) and information on cause of death would have been highly useful in accounting for some of these unexplored differences—especially since a recent study found that unexpected death was associated with flatter proxy-reported terminal well-being declines (Gerlach et al., 2017). The SOEP has conducted EXIT interviews since 2009. In these interviews, participants who lost a close relative are asked about the last months of the deceased person's life and also about the cause of death. However, EXIT interviews were only available for a small group of deceased partners, which is why we chose not to include this information in our analyses. As the SOEP continues, more EXIT interviews will be conducted and it will become increasingly feasible to combine lifetime and post-mortem proxy reports in the study of late-life well-being.

Future research may also investigate other intra- and interpersonal risk and protective factors for subjective well-being in the context of impending [partner] death. Amongst other factors, the timing of partner death within the "social clock" (Neugarten, 1979; Rook, Catalano, & Dooley, 1989), relationship quality (Carr et al., 2000), and afterlife beliefs (Carr & Sharp, 2013) have been explored but, so far, not through a dyadic lens that acknowledges their impact on both partners' development. Also, and with regard to terminal decline research, recent studies have provided novel insights on the predictive power of personality traits (i.e. neuroticism, extraversion, and perceived control) for end-of-life well-being (Gerstorf et al., 2014; Mueller et al., 2018). Expanding on this research by examining the beneficial and harmful consequences of both partners' personality characteristics in the shared experience of impending [partner] death may provide a deeper and more contextualized understanding of how the "power of personality" (Mueller et al., 2018; Roberts, Kuncel, Shiner, Caspi, & Goldberg, 2007) unfolds at the end of life.

Third, we cannot entirely rule out the possibility that couple members of the control sample had already entered a phase of terminal or pre-bereavement decline. Findings from the control sample suggested that we may have captured an earlier phase of the developmental pathway toward [partner] death. One way of avoiding this would be to omit from analysis the couples' last available years of observation. However, an undesirable consequence of this method would be systematic differences with regard to age and the amount of available observation points when compared to the event sample. We therefore decided not to follow this approach. Due to withdrawal or lack of information on mortality status, the same issue also applies to to-be-bereaved partners. In fact, previous research has documented an increased mortality rate among bereaved spouses (Moon, Kondo, Glymour, & Subramanian, 2011) and this widowhood effect was found to be foreshadowed in the years before partner death (Vable et al., 2015). By excluding dyads in which both partners died during the assessment

phases, we sought to eliminate this possibility. Nevertheless, future studies may include couples in which both partners died and directly address mortality-related codevelopments through dyadic survival models.

Fourth, we note that the current findings are primarily based on couple members that have been married for a long time before experiencing the death of one partner. Taking into account the timing of [partner] death within the romantic lifespan could offer a deeper and more differential understanding regarding the patterns of codevelopment in the years preceding [partner] death.

Fifth, the current study took a first step in not only investigating the correlational interdependencies in the trajectories of life satisfaction in the years before [partner] death but also in exploring the pathways of well-being transmission in this phase of life. Yet, we could not test the mechanisms by which subjective well-being is shared between partners. What are the channels of well-being transmission in the context of impending [partner] death? And do they differ from between-partner processes that promote well-being transmission in another phase of the romantic lifespan? Dyadic measurement burst designs that combine longitudinal assessments on a larger time scale (i.e. years or months) with more proximal everyday-life measurements (e.g. ambulatory assessments) could provide answers to these questions. Such data would allow for scrutinizing the socio-emotional pathways through which subjective well-being becomes contagious between partners in different developmental contexts. Nevertheless, assessing the everyday-life experiences, needs, and burdens of individuals who find themselves approaching the end of life, represents a major challenge (Gerstorf & Ram, 2015, p. 217). Innovative sensory assessment methods that are able to collect physiological, audio-visual, and geographical data without requiring effort of the participants could be a promising—yet ethically challenging—venue for future research (Allemand & Mehl, 2017; Gerstorf & Ram, 2015; Wrzus & Mehl, 2015).

Sixth, we exclusively focused on the pre-event trajectories of life satisfaction. It may be an important direction for future research to investigate pre- and post-bereavement changes in life satisfaction in a unified framework and to test the impact of couple interdependencies in the years before loss on later adjustment to partner death. This could offer a deeper understanding of the impact the partners have on each other's development—even after their shared romantic lifespan.

Finally, we acknowledge that the impending death of a beloved person may not only challenge the well-being of their romantic partner but it may also have a negative impact on other members of their social network. According to nationally representative data from Germany, a fifth of the support and caregiving population aged between 40 and 85 years supports non-kin, while 80% provide support to relatives other than the partner (e.g. parents [in law], Klaus & Tesch-Römer, 2017). Considering the scope of informal support and embracing a contextualized as well as transactional understanding of development (Baltes, 1987; Bronfenbrenner, 1979; Magnusson, 1990), future research may explore end-of life developments within a broader social context.

Conclusion

"…for better, for worse, for richer, for poorer, in sickness and in health, until death do us part." (Rite of Marriage, #25). The findings of the current study underpin expectations raised by this wedding-vow: The developmental trajectories of life satisfaction were highly intertwined between couple members until they were parted by death. Yet, when compared to couples that were not approaching the death of

one partner, our findings suggest weaker between-partner attunements of life satisfaction in an end-of-life context. The sources for an increasing disparity in life satisfaction appear to be rooted in the unique individual-level experiences and challenges faced by to-be-deceased and to-be-bereaved partners rather than in a declining susceptibility to the well-being states of the partner or a diminishing role of shared environmental influences. Future research should investigate the mechanisms underlying the pathways of well-being transmission in couples in an end-of-life context.

References

Allemand, M., & Mehl, M. R. (2017). Personality assessment in daily life: A roadmap for future personality development research. In J. Specht (Ed.), *Personality Development Across the Lifespan* (pp. 437-454): Academic Press.

Anusic, I., & Lucas, R. E. (2014). Do social relationships buffer the effects of widowhood? A prospective study of adaptation to the loss of a spouse. *Journal of Personality, 82*(5), 367-378. doi:10.1111/jopy.12067

Anusic, I., Yap, S. C. Y., & Lucas, R. E. (2014). Does personality moderate reaction and adaptation to major life events? Analysis of life satisfaction and affect in an Australian national sample. *Journal of Research in Personality, 51*, 69-77. doi:10.1016/j.jrp.2014.04.009

Baltes, P. (1987). Theoretical propositions of life-span developmental psychology: On the dynamics between growth and decline. *Developmental Psychology, 23*(5), 611-626.

Baltes, P., & Nesselrode, J. (1979). History and rationale of longitudinal research. In P. Baltes & J. Nesselrode (Eds.), *Longitudinal research in the study of behavior and development* (pp. 1-39). San Diego, USA: Academic Press.

Blanchflower, D. G., & Oswald, A. J. (2008). Is well-being U-shaped over the life cycle? *Social Science & Medicine, 66*(8), 1733-1749. doi:10.1016/j.socscimed.2008.01.030

Bookwala, J., & Schulz, R. (1996). Spousal similarity in subjective well-being: The Cardiovascular Health Study. *Psychology and Aging, 11*(4), 582-590.

Bourassa, K. J., Knowles, L. M., Sbarra, D. A., & O'Connor, M.-F. (2016). Absent but not gone: Interdependence in couples' quality of life persists after a partner's death. *Psychological Science, 27*(2), 270-281. doi:10.1177/0956797615618968

Brandtstädter, J., & Greve, W. (1994). The aging self: Stabilizing and protective processes. *Developmental Review, 14*(1), 52-80. doi:10.1006/drev.1994.1003

Bronfenbrenner, U. (1979). *The Ecology of Human Development: Experiments by Nature and Design*. Cambridge: Harvard University Press.

Butler, E. A. (2015). Interpersonal affect dynamics: It takes two (and time) to tango. *Emotion Review, 7*(4), 336-341. doi:10.1177/1754073915590622

Carr, D., House, J. S., Kessler, R. C., Nesse, R. M., Sonnega, J., & Wortman, C. (2000). Marital quality and psychological adjustment to widowhood among older adults: A longitudinal analysis. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 55*(4), 197-207.

Carr, D., & Sharp, S. (2013). Do afterlife beliefs affect psychological adjustment to late-life spousal loss? *Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 69*(1), 103-112. doi:10.1093/geronb/gbt063

Carstensen, L. L., Fung, H. H., & Charles, S. T. (2003). Socioemotional selectivity theory and the regulation of emotion in the second half of life. *Motivation and Emotion, 27*(2), 103-123. doi:10.1023/a:1024569803230

Carstensen, L. L., Turan, B., Scheibe, S., Ram, N., Ersner-Hershfield, H., Samanez-Larkin, G. R., . . . Nesselroade, J. R. (2011). Emotional experience improves with age: Evidence based on over 10 years of experience sampling. *Psychology and Aging, 26*(1), 21-33. doi:10.1037/a0021285

Chochinov, H. M., Hassard, T., McClement, S., Hack, T., Kristjanson, L. J., Harlos, M., . . . Murray, A. (2009). The landscape of distress in the terminally ill. *Journal of Pain and Symptom Management, 38*(5), 641-649. doi:10.1016/j.jpainsymman.2009.04.021

Cohen-Mansfield, J., Skornick-Bouchbinder, M., & Brill, S. (2017). Trajectories of end of life: A systematic review. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 73*(4), 564-572. doi:10.1093/geronb/gbx093

Coyne, J. C., & Smith, D. A. (1991). Couples coping with a myocardial infarction: A contextual perspective on wives' distress. *Journal of Personality and Social Psychology, 61*(3), 404-412.

Debrot, A., Schoebi, D., Perrez, M., & Horn, A. B. (2013). Touch as an interpersonal emotion regulation process in couples' daily lives:The mediating role of psychological intimacy. *Personality and Social Psychology Bulletin, 39*(10), 1373-1385. doi:10.1177/0146167213497592

Destatis. (2018) Bevölkerung und Erwerbstätigkeit: Haushalte und Familien Ergebnisse des Mikrozensus. In: Statistisches Bundesamt.

Diener, E., & Chan, M. Y. (2011). Happy people live longer: Subjective well-being contributes to health and longevity. *Applied Psychology: Health and Well-Being, 3*(1), 1-43. doi:10.1111/j.1758-0854.2010.01045.x

Diener, E., Oishi, S., & Lucas, R. E. (2003). Personality, culture, and subjective well-being: Emotional and cognitive evaluations of life. *Annual Review of Psychology, 54*(1), 403-425.

Diener, E., & Suh, E. (1997). Age and subjective well–being: An international analysis. *Annual Review of Gerontology and Geriatrics, 17*(304-324).

Dohrenwend, B. S., Askenasy, A. R., Krasnoff, L., & Dohrenwend, B. P. (1978). Exemplification of a method for scaling life events: The PERI Life Events Scale. *Journal of Health and Social Behavior, 19*(2), 205-229. doi:10.2307/2136536

Dyrdal, G. M., & Lucas, R. E. (2013). Reaction and adaptation to the birth of a child: A couple-level analysis. *Developmental Psychology, 49*(4), 749-761.

Dyrenforth, P. S., Kashy, D. A., Donnellan, M. B., & Lucas, R. E. (2010). Predicting relationship and life satisfaction from personality in nationally representative samples from three countries: The relative importance of actor, partner, and similarity effects. *Journal of Personality and Social Psychology, 99*(4), 690-702. doi:10.1037/a0020385

Evans, A. J. (1994). Anticipatory grief: A theoretical challenge. *Palliative Medicine, 8*(2), 159-165. doi:10.1177/026921639400800211

Gana, K., Bailly, N., Saada, Y., Joulain, M., & Alaphilippe, D. (2012). Does life satisfaction change in old age: Results from an 8-year longitudinal study. *The Journals of Gerontology: Series B, 68*(4), 540-552. doi:10.1093/geronb/gbs093

Garcia, R., & Kenny, D. A. (2018). DATIC: Dyadic Data Analysis 2018 Workshop. Retrieved from https://randilgarcia.github.io/week-dyad-workshop/Over%20Time_Intro.pdf

Gardner, D. S. (2008). Cancer in a dyadic context: Older couples' negotiation of ambiguity and search for meaning at the end of life. *Journal of Social Work in End-of-Life & Palliative Care, 4*(2), 135-159. doi:10.1080/15524250802353959

Gerlach, K., Ram, N., Infurna, F. J., Vogel, N., Wagner, G. G., & Gerstorf, D. (2017). The role of morbidity for proxy-reported well-being in the last year of life. *Developmental Psychology, 53*(9), 1795-1809. doi:10.1037/dev0000368

Gerstorf, D., Heckhausen, J., Ram, N., Infurna, F. J., Schupp, J., & Wagner, G. G. (2014). Perceived personal control buffers terminal decline in well-being. *Psychology and Aging, 29*(3), 612-625. doi:10.1037/a0037227

Gerstorf, D., & Ram, N. (2015). A framework for studying mechanisms underlying terminal decline in well-being. *International Journal of Behavioral Development, 39*(3), 210-220. doi:10.1177/0165025414565408

Gerstorf, D., Ram, N., Estabrook, R., Schupp, J., Wagner, G. G., & Lindenberger, U. (2008). Life satisfaction shows terminal decline in old age: Longitudinal evidence from the German Socio-Economic Panel Study (SOEP). *Developmental Psychology, 44*(4), 1148-1159. doi:10.1037/0012-1649.44.4.1148

Gerstorf, D., Ram, N., Mayraz, G., Hidajat, M., Lindenberger, U., Wagner, G. G., & Schupp, J. (2010). Late-life decline in well-being across adulthood in Germany, the United Kingdom, and the United States: Something is seriously wrong at the end of life. *Psychology and Aging, 25*(2), 477-485. doi:10.1037/a0017543

Gerstorf, D., Ram, N., Röcke, C., Lindenberger, U., & Smith, J. (2008). Decline in life satisfaction in old age: Longitudinal evidence for links to distance-to-death. *Psychology and Aging, 23*(1), 154-168. doi:10.1037/0882-7974.23.1.154

Goebel, J., Grabka Markus, M., Liebig, S., Kroh, M., Richter, D., Schröder, C., & Schupp, J. (2019). The German Socio-Economic Panel (SOEP). In *Jahrbücher für Nationalökonomie und Statistik* (Vol. 239, pp. 345-360).

Goodman, C. R., & Shippy, R. A. (2002). Is it contagious? Affect similarity among spouses. *Aging & Mental health, 6*(3), 266-274.

Grundy, E., & Kravdal, Ø. (2007). Reproductive history and mortality in late middle age among Norwegian men and women. *American Journal of Epidemiology, 167*(3), 271-279. doi:10.1093/aje/kwm295

Gustavson, K., Røysamb, E., Borren, I., Torvik, F. A., & Karevold, E. (2016). Life satisfaction in close relationships: Findings from a longitudinal study. *Journal of Happiness Studies, 17*(3), 1293-1311. doi:10.1007/s10902-015-9643-7

Hamarat, E., Thompson, D., Steele, D., Matheny, K., & Simons, C. (2002). Age differences in coping resources and satisfaction with life among middle-aged, young-old, and oldest-old adults. *The Journal of Genetic Psychology, 163*(3), 360-367. doi:10.1080/00221320209598689

Hatfield, E., Cacioppo, J. T., & Rapson, R. L. (1993). Emotional contagion. *Current Directions in Psychological Science, 2*(3), 96-100. doi:10.1111/1467-8721.ep10770953

Havighurst, J. H. (1972). *Developmental Tasks and Education*. New York: Longman Inc.

Heller, D., Watson, D., & Ilies, R. (2004). The role of person versus situation in life satisfaction: A critical examination. *Psychological Bulletin, 130*(4), 574-600. doi:10.1037/0033-2909.130.4.574

Ho, D., Imai, K., King, G., & Stuart, E. (2007). Matching as nonparametric preprocessing for reducing model dependence in parametric causal inference. *Political Analysis, 15*(3). doi:10.1093/pan/mpl013

Holmes, T. H., & Rahe, R. H. (1967). The social readjustment rating scale. *Journal of Psychosomatic Research, 11*(2), 213-218. doi:10.1016/0022-3999(67)90010-4

Hoppmann, C. A., Gerstorf, D., Willis, S. L., & Schaie, K. W. (2011). Spousal interrelations in happiness in the Seattle Longitudinal Study: Considerable similarities in levels and change over time. *Developmental Psychology, 47*(1), 1.

Hudson, N. W., Lucas, R. E., & Donnellan, M. B. (2019). Healthier and happier? A 3-year longitudinal investigation of the prospective associations and concurrent changes in health and experiential well-being. *Personality and Social Psychology Bulletin*. doi:10.1177/0146167219838547

Hutteman, R., Hennecke, M., Orth, U., Reitz, A. K., & Specht, J. (2014). Developmental tasks as a framework to study personality development in adulthood and old age. *European Journal of Personality, 28*(3), 267-278. doi:10.1002/per.1959

Infurna, F. J., Wiest, M., Gerstorf, D., Ram, N., Schupp, J., Wagner, G. G., & Heckhausen, J. (2016). Changes in life satisfaction when losing one's spouse: Individual differences in anticipation, reaction, adaptation and longevity in the German Socio-economic Panel Study (SOEP). *Ageing and Society, 37*(5), 899-934. doi:10.1017/S0144686X15001543

Irimata, K., & Li, X. (2018). Estimation of correlation coefficient in data with repeated measures. *SAS Global Forum Proceedings.* Retrieved from https://www.sas.com/content/dam/SAS/support/en/sas-global-forum-proceedings/2018/2424-2018.pdf

Kaschowitz, J., & Brandt, M. (2017). Health effects of informal caregiving across Europe: A longitudinal approach. *Social Science & Medicine, 173*, 72-80. doi:10.1016/j.socscimed.2016.11.036

Kashy, D. A., & Donnellan, M. B. (2008). Comparing MLM and SEM approaches to analyzing developmental dyadic data: Growth curve models of hostility in families. In N. A. Card, J. P. Selig, & T. D. Little (Eds.), *Modeling dyadic and interdependent data in the developmental and behavioral sciences* (pp. 165-190). New York: Routledge.

Kashy, D. A., Donnellan, M. B., Burt, S. A., & McGue, M. (2008). Growth curve models for indistinguishable dyads using multilevel modeling and structural equation modeling: The case of adolescent twins' conflict with their mothers. *Developmental Psychology, 44*(2), 316. doi:10.1037/0012-1649.44.2.316

Kelley, H. H., Berscheid, E., Christensen, A., Harvey, J. H., Huston, T. L., Levinger, G., . . . Peterson, D. R. (1983). Analyzing close relationships. In H. H. Kelley, E. Berscheid, A. Christensen, J. H. Harvey, T. L. Huston, G. Levinger, & E. McClintock (Eds.), *Close Relationships*. New York: W. H. Freeman.

Kenny, D. A. (1996). Models of non-independence in dyadic research. *Journal of Social and Personal Relationships, 13*(2), 279-294. doi:10.1177/0265407596132007

Kenny, D. A., & Cook, W. (1999). Partner effects in relationship research: Conceptual issues, analytic difficulties, and illustrations. *Personal Relationships, 6*(4), 433-448. doi:10.1111/j.1475-6811.1999.tb00202.x

Klaus, D., & Tesch-Römer, C. (2017). Pflege und Unterstützung bei gesundheitlichen Enschränkungen: Welchen Beitrag leisten Personen in der zweiten Lebenshälfte für andere? In K. Mahne, J. K. Wolff, J. Simonson, & C. Tesch-Römer (Eds.), *Altern im Wandel: Zwei Jahrzehnte Deutscher Alterssurvey (DEAS)* (pp. 185-200). Wiesbaden: Springer.

Kööts-Ausmees, L., & Realo, A. (2015). The Association between life satisfaction and self-reported health status in Europe. *European Journal of Personality, 29*(6), 647-657. doi:10.1002/per.2037

Kunzmann, U., & Isaacowitz, D. (2017). Emotional aging: Taking the immediate context seriously. *Research in Human Development, 14*(3), 182-199. doi:10.1080/15427609.2017.1340048

Kunzmann, U., Little, T. D., & Smith, J. (2000). Is age-related stability of subjective well-being a paradox? Cross-sectional and longitudinal evidence from the Berlin Aging Study. *Psychology and Aging, 15*(3), 511.

Larson, R. W., & Almeida, D. M. (1999). Emotional transmission in the daily lives of families: A new paradigm for studying family process. *Journal of Marriage and Family, 61*(1), 5-20. doi:10.2307/353879

Laurenceau, J.-P., & Bolger, N. (2005). Using diary methods to study marital and family processes. *Journal of Family Psychology, 19*(1), 86-97. doi:10.1037/0893-3200.19.1.86

Littell, R. C., Milliken, G. A., Stroup, W. W., Wolfinger, R. D., & Schabenberger, O. (2006). *SAS for Mixed Models* (S. Edition Ed.). Cary, NC, USA: SAS Institute Inc.

Lucas, R. E., Clark, A. E., Georgellis, Y., & Diener, E. (2003). Reexamining adaptation and the set point model of happiness: Reactions to changes in marital status. *Journal of Personality and Social Psychology, 84*(3), 527-539. doi:10.1037/0022-3514.84.3.527

Luhmann, M., Weiss, P., Hosoya, G., & Eid, M. (2014). Honey, I got fired! A longitudinal dyadic analysis of the effect of unemployment on life satisfaction in couples. *Journal of Personality and Social Psychology, 107*(1), 163-180. doi:10.1037/a0036394

Lundin, A., Lundberg, I., Hallsten, L., Ottosson, J., & Hemmingsson, T. (2010). Unemployment and mortality—A longitudinal prospective study on selection and causation in 49321 Swedish middle-aged men. *Journal of Epidemiology and Community Health, 64*(1), 22-28. doi:10.1136/jech.2008.079269

Magnusson, D. (1990). Personality development from an interactional perspective. In L. Pervin (Ed.), *Handbook of personality: Theory and research* (pp. 193-222).

McLean, L. M., & Jones, J. M. (2007). A review of distress and its management in couples facing end-of-life cancer. *Psycho-Oncology, 16*(7), 603-616. doi:10.1002/pon.1196

Moon, J. R., Kondo, N., Glymour, M. M., & Subramanian, S. V. (2011). Widowhood and mortality: A meta-analysis. *PLOS ONE, 6*(8). doi:10.1371/journal.pone.0023465

Mroczek, D. K., & Spiro III, A. (2005). Change in life satisfaction during adulthood: Findings from the Veterans Affairs Normative Aging Study. *Journal of Personality and Social Psychology, 88*(1), 189-202. doi:10.1037/0022-3514.88.1.189

Mueller, S., Wagner, J., Wagner, G. G., Ram, N., & Gerstorf, D. (2018). How far reaches the power of personality? Personality predictors of terminal decline in well-being. *Journal of Personality and Social Psychology, 115*(5). doi:10.1037/pspp0000184

Neugarten, B. L. (1979). Time, age, and the life cycle. *American Journal of Psychiatry, 136*(7), 887-894. doi:10.1176/ajp.136.7.887

Nielsen, M. K., Neergaard, M. A., Jensen, A. B., Bro, F., & Guldin, M.-B. (2016). Do we need to change our understanding of anticipatory grief in caregivers? A systematic review of caregiver studies during end-of-life caregiving and bereavement. *Clinical Psychology Review, 44*, 75-93. doi:10.1016/j.cpr.2016.01.002

Orth, U., Erol, R. Y., Ledermann, T., & Grob, A. (2018). Codevelopment of well-being and self-esteem in romantic partners: Disentangling the effects of mutual influence and shared environment. *Developmental Psychology, 54*(1), 151. doi:10.1037/dev0000400

Park, J. M., Oh, U., Roh, B.-R., & Moon, Y. (2017). Disparities in mortality by disability: An 11-year follow-up study of 1 million individuals. *International Journal of Public Health, 62*(9), 989-996. doi:10.1007/s00038-017-0966-5

Paykel, E. S., Prusoff, B. A., & Uhlenhuth, E. H. (1971). Scaling of life events. *Archives of General Psychiatry, 25*(4), 340-347. doi:10.1001/archpsyc.1971.01750160052010

Powdthavee, N. (2009). I can't smile without you: Spousal correlation in life satisfaction. *Journal of Economic Psychology, 30*(4), 675-689. doi:10.1016/j.joep.2009.06.005

R Core Team. (2016). *R: A Language and Environment for Statistical Computing*. R Foundation for Statistical Computing.

Roberts, B. W., Kuncel, N. R., Shiner, R., Caspi, A., & Goldberg, L. R. (2007). The power of personality: The comparative validity of personality traits, socioeconomic status, and cognitive ability for predicting important life outcomes. *Perspectives on Psychological Science, 2*(4), 313-345. doi:10.1111/j.1745-6916.2007.00047.x

Rook, K. S., Catalano, R., & Dooley, D. (1989). The timing of major life events: Effects of departing from the social clock. *American Journal of Community Psychology, 17*(2), 233-258. doi:10.1007/bf00931009

Rusbult, C. E., & Van Lange, P. A. M. (2008). Why we need interdependence theory. *Social and Personality Psychology Compass, 2*(5), 2049-2070. doi:10.1111/j.1751-9004.2008.00147.x

Schade, H. M., Hülür, G., Infurna, F. J., Hoppmann, C. A., & Gerstorf, D. (2016). Partner dissimilarity in life satisfaction: Stability and change, correlates, and outcomes. *Psychology and Aging, 31*(4), 327-339. doi:10.1037/pag0000096

Schimmack, U., & Lucas, R. (2010). Environmental influences on well-being: A dyadic latent panel analysis of spousal similarity. *Social Indicators Research, 98*(1), 1-21. doi:10.1007/s11205-009-9516-8

Schoebi, D. (2008). The coregulation of daily affect in marital relationships. *Journal of Family Psychology, 22*(4), 595. doi:10.1037/0893-3200.22.3.595

Schulz, R., & Sherwood, P. R. (2008). Physical and mental health effects of family caregiving. *Journal of Social Work Education, 44*(sup3), 105-113. doi:10.5175/JSWE.2008.773247702

Sels, L., Ceulemans, E., Bulteel, K., & Kuppens, P. (2016). Emotional interdependence and well-being in close relationships. *Frontiers in Psychology, 7*(283). doi:10.3389/fpsyg.2016.00283

Steptoe, A., Deaton, A., & Stone, A. A. (2015). Subjective wellbeing, health, and ageing. *Lancet, 385*(9968), 640-648. doi:10.1016/S0140-6736(13)61489-0

Stone, A. A., Schwartz, J. E., Broderick, J. E., & Deaton, A. (2010). A snapshot of the age distribution of psychological well-being in the United States. *Proceedings of the National Academy of Sciences of the United States of America, 107*(22), 9985-9990. Retrieved from http://www.jstor.org/stable/25681717

Stroebe, M., Schut, H., & Stroebe, W. (2007). Health outcomes of bereavement. *Lancet, 370*(9603), 1960-1973. doi:10.1016/S0140-6736(07)61816-9

Thompson, A., & Bolger, N. (1999). Emotional transmission in couples under stress. *Journal of Marriage and Family, 61*(1), 38-48. doi:10.2307/353881

Townsend, A. L., Miller, B., & Guo, S. (2001). Depressive symptomatology in middle-aged and older married couples: A dyadic analysis. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 56*(6), 352-364.

Vable, A. M., Subramanian, S. V., Rist, P. M., & Glymour, M. M. (2015). Does the "widowhood effect" precede spousal bereavement? Results from a nationally representative sample of older adults. *The American Journal of Geriatric Psychiatry, 23*(3), 283-292. doi:10.1016/j.jagp.2014.05.004

Westman, M. (2001). Stress and Strain Crossover. *Human Relations, 54*(6), 717-751. doi:10.1177/0018726701546002

Wortman, J., & Lucas, R. E. (2016). Spousal similarity in life satisfaction before and after divorce. *Journal of Personality and Social Psychology, 110*(4), 625-633. doi:10.1037/pspp0000065

Wrzus, C., & Mehl, M. R. (2015). Lab and/or field? Measuring personality processes and their social consequences. *European Journal of Personality, 29*(2), 250-271. doi:10.1002/per.1986

Yap, S. C. Y., Anusic, I., & Lucas, R. E. (2012). Does personality moderate reaction and adaptation to major life events? Evidence from the British Household Panel Survey. *Journal of Research in Personality, 46*(5), 477-488. doi:10.1016/j.jrp.2012.05.005

Footnotes

1   We compared the final analysis sample ($N_{couples}$ = 1,450) against the excluded sample of couples that experienced [partner] death but was omitted from the present analyses because they did not meet our selection criteria ($N_{couples}$ = 722). At baseline, the final analysis sample did not significantly differ from the excluded sample in terms of age ($t(2413)$ = -0.51, p = .609), education ($t(2241)$ = 1.79, p = .073), disability status, ² = 0.63 (1, N = 4,336), p = .426, employment status, ²= 0.98 (1, N = 4,336), p = .32, and life satisfaction ($t(2350)$ = 1.77, p=.076). With regard to marital status and the frequency of participation, we found that couple members in the final analysis sample were more likely to be married ² = 91.32 (1, N = 4,336), p = <.001, and they also provided more observation points ($t(2769)$ = -4.69, p = <.001).

2   Marital status did not emerge as a significant predictor of [partner] death. Consequently, we excluded marital status from the final matching procedure.

3   We conducted a parallel set of analyses in which we included both partners' functional limitations as an additional indicator of health. Findings were widely robust against the inclusion of this additional indicator of health, (i.e. we observed the same pattern of linear and non-linear decline, between-partner transmission effects, and between-partner differences in the estimated trajectories of life satisfaction). We did, however, identify a deviating finding with regard to the between-partner correlation of couples in the event sample and in the control sample: When including functional limitations as an additional indicator of health, weaker between-partner correlations among event couples only emerged for the quadratic slope but not for the linear slope. For a detailed description of these findings, see Supplemental Tables 3-6.

4   We also sought to introduce random effects for the time-lagged actor and partner effects of life satisfaction but the models did not converge when we included the additional random terms.

5   We report confidence intervals obtained from the simpler multilevel dyadic growth models of life satisfaction. The same pattern of differences was evident when relying on the confidence intervals of the Fisher's z-transformed between-partner correlations of the intercept (95% CI $r_{DB\_Intercept}$ = [0.84, 0.94], 95% CI $r_{AB\_Intercept}$ = [0.84, 0.94]), linear slope (95% CI $r_{DB\_Linear\ slope}$ = [0.66, 0.76], 95% CI $r_{AB\_Linear\ Slope}$ = [0.84, 0.94]), quadratic slope (95% CI $r_{DB\_Quadratic\ slope}$ = [0.60, 0.70], 95% CI $r_{AB\_Quadratic\ slope}$ = [0.99, 1.10]), and residuals (95% CI $r_{DB\_Residuals}$ = [0.37, 0.48], 95% CI $r_{AB\_Residuals}$ = [0.31, 0.42]) obtained from the longitudinal actor-partner-interdependence models.

6   In an exploratory set of analyses, we tested time-to-event as a moderator of the longitudinal actor and partner effects of life satisfaction. In both samples, the strength of the partner effect neither increased nor decreased with an increasing proximity to the year of event ($\gamma_{Event\_Partner\ x\ Time}$ = -0.0003, $t(22,000)$ = -0.26, p = .794; $\gamma_{Control\_Partner\ x\ Time}$ = -0.0004, $t(22,000)$ = -0.41, p = .680). The strength of the actor effect decreased across time in both samples ($\gamma_{Event\_Actor\ x\ Time}$ = -0.006, $t(24,000)$ = -6.48, p = <.001; $\gamma_{Control\_Actor\ x\ Time}$ = -0.009, $t(22,000)$ = -10.49, p = <.001).

Table 1

Characteristics of the Event Sample and the Matched Control Sample

	Event sample				Control sample		
	M or %	*SD*	Range		*M* or %	*SD*	Range
First assessment							
Age	57.58	12.60	19-91		57.53	12.95	19-89
Married	95				94		
Years of marriage	30.64	13.24	0-64		31.28	14.27	0-64
Disability status(yes)	17				16		
Years of education	10.96	2.22	7-18		10.97	2.16	7-18
Employment (yes)	35				35		
Children (yes)	89				88		
Year before event							
Age	68.35	11.71	25-100		67.47	12.83	26-94
Married	95				94		
Years of marriage	40.95	13.40	1-69		40.75	15.06	1-68
Disability status (yes)	32				24		
Years of education	10.85	2.49	7-18		10.71	2.91	7-18
Employment (yes)	19				26		
Children (yes)	89				88		

Note. $N_{couples}$ = 1,450 in both samples. With regard to the baseline values in the displayed variables, t-tests and chi-square tests revealed no significant differences between couple members in the event sample and couple members in the matched control sample.

Table 2

Hypothetical Couple Data and Variable Coding in the Event Sample

Couple ID	Person ID	To-be-deceased	To-be-bereaved	Partner role	LS	Partner LS	Disability	Partner Disability
10	101	1	0	1	8	9	0	0
10	101	1	0	1	7	8	0	0
10	101	1	0	1	8	8	0	0
10	101	1	0	1	8	9	0	0
10	101	1	0	1	7	7	0	0
10	101	1	0	1	7	8	1	0
10	101	1	0	1	7	7	1	0
10	102	0	1	-1	9	8	0	0
10	102	0	1	-1	8	7	0	0
10	102	0	1	-1	8	8	0	0
10	102	0	1	-1	9	8	0	0
10	102	0	1	-1	7	7	0	0
10	102	0	1	-1	8	7	0	1
10	102	0	1	-1	7	7	0	1

Note. The variables to-be-deceased (1 = *yes*, 0 = *no*) and to-be-bereaved (1 = *yes*, 0 = *no*) are dummy-coded variables that were included in the dual-intercept models so that we could obtain separate estimates for both partners. These variables indicate whether an observation belongs to the to-be-deceased or to-be-bereaved partner. The effect-coded variable partner role also distinguishes between couple members (1 = *to-be-deceased partner*, -1 = *to-be-bereaved partner*) and it was used to test for interaction effects. Years-to-event represent the years to [partner] death. LS = raw scores of life satisfaction. The variable disability is coded as 0 (*no certified disability status*) versus 1 (*certified disability status*).

Table 3

Estimated Parameters for the Dyadic Growth Model in the Event Sample

Effect	To-be-deceased partner			Both partners			To-be-bereaved partner		
	Estimate	SE	p	Estimate	SE	p	Estimate	SE	p
Fixed effects									
Disability				-1.29	0.17	<.001			
Linear slope	-1.01	0.06	<.001				-0.59	0.05	<.001
Quadratic slope	-0.04	0.003	<.001				-0.02	0.003	<.001
Intercept	45.50	0.31	<.001				48.62	0.26	<.001
Disability × partner role				-0.28	0.15	.071			
Linear slope × partner role				-0.21	0.03	<.001			
Quadratic slope × partner role				-0.01	0.001	<.001			
Intercept × partner role				-1.56	0.13	<.001			
Random effects (within-partner)									
Variance linear slope	2.32 (1.52)	0.21	<.001				1.21 (1.1)	0.12	<.001
Variance quadratic slope	0.004 (0.06)	0.001	<.001				0.002 (0.05)	0.0003	<.001
Variance intercept	103.40 (10.17)	4.82	<.001				75.52 (8.69)	3.54	<.001
Covariance intercept, linear slope	8.22 (0.53)	0.80	<.001				3.74 (0.39)	0.52	<.001
Covariance intercept, quadratic slope	0.22 (0.33)	0.04	<.001				0.05 (0.14)	0.03	.031
Covariance linear slope, quadratic slope	0.09 (0.94)	0.01	<.001				0.05 (0.62)	0.01	<.001
Random effects (between-partner)									
Covariance intercept$_D$, intercept$_B$				62.94 (0.71)	3.47	<.001			
Covariance linear slope$_D$, linear slope$_B$				1.14 (0.68)	.13	<.001			
Covariance quadratic slope$_D$, quadratic slope$_B$				0.05 (0.67)	0.0004	<.001			
Covariance intercept$_D$, linear slope$_B$				3.36 (0.53)	0.80	<.001			

Effect	To-be-deceased partner			Both partners			To-be-bereaved partner		
	Estimate	SE	p	Estimate	SE	p	Estimate	SE	p
Covariance intercept-D, quadratic slope-B				0.06 (0.12)	0.03	.066			
Covariance linear slope-D, quadratic slope-B				0.04 (0.62)	0.01	<.001			
Covariance intercept-B, linear slope-D				3.00 (0.23)	0.61	<.001			
Covariance intercept-B, quadratic slope-D				0.04 (0.07)	0.03	.182			
Covariance linear slope-B, quadratic slope-D				0.04 (0.62)	0.01	<.001			
Residual variance	56.84 (7.54)	0.73	<.001				44.35 (6.66)	0.57	<.001
Between-partner covariance of residuals				19.58 (0.39)	0.01	<.001			

Notes. $N_{couples}$ = 1,450. We report unstandardized estimates and standard errors for the fixed effects. Standard deviations and correlations are reported in brackets behind the variance and covariance estimates. Life satisfaction scores were transformed into a T-metric, relying on life satisfaction scores of the entire SOEP 2002 sample (M = 6.90, SD = 1.81). Intercepts were centered around the year before [partner] death. Linear and quadratic slope effects are scaled in T-units per year. The variable disability was included as a time lagged variable (k-1) and is coded as 0 (*no certified disability status*) versus 1 (*certified disability status*). The variable partner role is coded as 1 (*to-be-deceased*) and -1 (*to-be-bereaved*). We report only one fixed effect estimate for both couple members if there was no significant interaction effect of partner role.

Table 4

Estimated Parameters for the Longitudinal Actor-Partner Interdependence Model in the Event Sample

Effect	To-be-deceased partner			Both partners			To-be-bereaved partner		
	Estimate	SE	p	Estimate	SE	p	Estimate	SE	p
Fixed effects									
Actor disability status				-1.04	0.19	<.001			
Partner disability status				0.53	0.19	.006			
Actor life satisfaction				0.01	0.01	.141			
Partner life satisfaction				0.03	0.01	<.001			
Linear slope	-0.98	0.06	<.001				-0.57	0.05	<.001
Quadratic slope	-0.03	0.003	<.001				-0.02	0.002	<.001
Intercept	45.35	0.32	<.001				48.45	0.27	<.001
Actor disability status × Partner role				-0.27	0.20	.168			
Partner disability status × Partner role				0.06	0.20	.769			
Actor life satisfaction × Partner role				0.01	0.01	.055			
Partner life satisfaction × Partner role				-0.01	0.01	.458			
Linear slope × Partner role				-0.20	0.03	<.001			
Quadratic slope × Partner role				-0.01	0.001	<.001			
Intercept × Partner role				-1.55	0.13	<.001			
Random effects (within-partner)									
Variance linear slope	2.02 (1.42)	0.20	<.001				1.08 (1.04)	0.12	<.001
Variance quadratic slope	0.004 (0.06)	0.001	<.001				0.002 (0.04)	0.0003	<.001
Variance intercept	101.46 (10.07)	4.81	<.001				75.27 (8.68)	3.57	<.001
Covariance intercept, linear slope	7.51 (0.52)	0.79	<.001				3.50 (0.39)	0.52	<.001
Covariance intercept, quadratic slope	0.19 (0.32)	0.04	<.001				0.05 (0.12)	0.02	.066
Covariance linear slope, quadratic slope	0.08 (0.94)	0.01	<.001				0.04 (0.89)	0.01	<.001

Effect	To-be-deceased partner			Both partners			To-be-bereaved partner		
	Estimate	SE	p	Estimate	SE	p	Estimate	SE	p
Random effects (between-partner)									
Covariance intercept-$_D$, intercept-$_B$				61.68 (0.71)	3.48	<.001			
Covariance linear slope-$_D$, linear slope-$_B$				0.90 (0.61)	0.12	<.001			
Covariance quadratic slope-$_D$, quadratic slope-$_B$				0.001 (0.57)	0.0003	<.001			
Covariance intercept-$_D$, linear slope-$_B$				2.78 (0.26)	0.57	<.001			
Covariance intercept-$_D$, quadratic slope-$_B$				0.03 (0.08)	0.03	.246			
Covariance linear slope-$_D$, quadratic slope-$_B$				0.03 (0.53)	0.01	<.001			
Covariance intercept-$_B$, linear slope-$_D$				2.46 (0.20)	0.59	<.001			
Covariance intercept-$_B$, quadratic slope-$_D$				0.02 (0.04)	0.03	.467			
Covariance linear slope-$_B$, quadratic slope-$_D$				0.03 (0.53)	0.01	<.001			
Residual variance	57.26 (7.57)	0.75	<.001				44.39 (6.66)	0.58	<.001
Between-partner covariance of residuals				20.17 (0.40)	0.01	<.001			

Notes. $N_{couples}$ = 1,450. We report unstandardized estimates and standard errors for the fixed effects. Standard deviations and correlations are reported in brackets behind the variance and covariance estimates. Life satisfaction scores were transformed into a T-metric, relying on life satisfaction scores of the entire SOEP 2002 sample (*M* = 6.90, *SD* = 1.81). Intercepts were centered around the year before [partner] death. Linear and quadratic slope effects are scaled in T-units per year. Actor and partner disability status were included as time lagged predictor variables (*k*-1) and coded as 0 (*no certified disability status*) versus 1 (*certified disability status*). Actor and partner life satisfaction were included as time-lagged (*k*-1), person-mean-centered predictor variables. Partner role is coded as 1 (*to-be-deceased*) versus -1 (*to-be-bereaved*). We report only one fixed effect estimate for both couple members if there was no significant interaction effect of partner role.

Table 5

Estimated Parameters for the Dyadic Growth Model in the Matched Control Sample

Effect	Partner A			Both partners			Partner B		
	Estimate	SE	p	Estimate	SE	p	Estimate	SE	p
Fixed effects									
Disability status				-1.38	0.17	<.001			
Linear slope				-0.32	0.04	<.001			
Quadratic slope				-0.01	0.002	<.001			
Intercept				50.98	0.20	<.001			
Disability status × Partner role				0.30	0.16	.059			
Linear slope × Partner role				-0.01	0.02	.434			
Quadratic slope × Partner role				-0.001	0.001	.339			
Intercept × Partner role				0.09	0.10	.374			
Random effects (within-partner)									
Variance linear slope	0.88 (0.94)	0.09	<.001				0.81 (0.90)	0.08	<.001
Variance quadratic slope	0.002 (0.04)	0.0003	<.001				0.002 (0.04)	0.0003	<.001
Variance intercept	58.53 (7.65)	2.60	<.001				54.14 (7.36)	2.46	<.001
Covariance intercept, linear slope	3.11 (0.43)	0.38	<.001				2.46 (0.37)	0.36	<.001
Covariance intercept, quadratic slope	0.07 (0.23)	0.02	.0004				0.04 (0.15)	0.02	.030
Covariance linear slope, quadratic slope	0.04 (0.90)	0.004	<.001				0.03 (0.87)	0.004	<.001
Random effects (between-partner)									
Covariance intercept$_A$, intercept$_B$				40.43 (0.72)	2.13	<.001			
Covariance linear slope$_A$, linear slope$_B$				0.66 (0.78)	0.07	<.001			
Covariance quadratic slope$_A$, quadratic slope$_B$				0.001 (0.85)	0.0002	<.001			
Covariance intercept$_A$, linear slope$_B$				1.73 (0.25)	0.36	<.001			
Covariance intercept$_A$, quadratic slope$_B$				0.04 (0.12)	0.02	.089			

Effect	Partner A			Both partners			Partner B		
	Estimate	SE	p	Estimate	SE	p	Estimate	SE	p
Covariance linear slope$_{-A}$, quadratic slope$_{-B}$				0.03 (0.73)	0.004	<.001			
Covariance intercept$_{-B}$, linear slope$_{-A}$				1.60 (0.23)	0.34	<.001			
Covariance intercept$_{-B}$, quadratic slope$_{-A}$				0.03 (0.08)	0.02	.196			
Covariance linear slope$_{-B}$, quadratic slope$_{-A}$				0.03 (0.70)	0.004	<.001			
Residual variance	40.47 (6.36)	0.54	<.001				43.68 (6.61)	0.58	<.001
Between-partner covariance of residuals				14.29 (0.34)	0.01	<.001			

Notes. $N_{couples}$ = 1,450. We report unstandardized estimates and standard errors for the fixed effects. Standard deviations and correlations are reported in brackets behind the variance and covariance estimates. Life satisfaction scores were transformed into a T-metric, relying on life satisfaction scores of the entire SOEP 2002 sample (*M* = 6.90, *SD* = 1.81). Intercepts were centered around the year before last survey participation. Linear and quadratic slope effects are scaled in T-units per year. The variable disability was included as a time lagged predictor variable (*k-1*) and is coded as 0 (*no certified disability status*) versus 1 (*certified disability status*). The variable partner role is coded as 1 (*partner A*) and -1 (*partner B*). We report only one fixed effect estimate for both couple members if there was no significant interaction effect of partner role.

Table 6

Estimated Parameters for the Longitudinal Actor-Partner Interdependence Model in the Matched Control Sample

Effect	Partner A			Both partners			Partner B		
	Estimate	SE	p	Estimate	SE	p	Estimate	SE	p
Fixed effects									
Actor disability status				-1.33	0.19	<.001			
Partner disability status				0.16	0.19	.407			
Actor life satisfaction				-0.01	0.01	.053			
Partner life satisfaction				0.04	0.01	<.001			
Linear slope				-0.31	0.04	<.001			
Quadratic slope				-0.01	0.002	<.001			
Intercept				50.94	0.21	<.001			
Actor disability status × Partner role				0.36	0.20	.070			
Partner disability status × Partner role				-0.08	0.20	.675			
Actor life satisfaction × Partner role				0.01	0.01	.470			
Partner life satisfaction × Partner role				-0.01	0.01	.397			
Linear slope × Partner role				-0.02	0.02	.386			
Quadratic slope × Partner role				-0.001	0.001	.300			
Intercept × Partner role				0.11	0.10	.281			
Random effects (within-partner)									
Variance linear slope	0.83 (0.91)	0.09	<.001				0.77 (0.88)	0.09	<.001
Variance quadratic slope	0.002 (0.04)	0.0002	<.001				0.001 (0.03)	0.0003	<.001
Variance intercept	58.67 (7.66)	2.63	<.001				53.58 (7.32)	2.47	<.001
Covariance intercept, linear slope	3.13 (0.45)	0.39	<.001				2.44 (0.38)	0.36	<.001
Covariance intercept, quadratic slope	0.08 (0.25)	0.02	.0003				0.05 (0.16)	0.02	.023
Covariance linear slope, quadratic slope	0.03 (0.90)	0.004	<.001				0.03 (0.87)	0.005	<.001

Effect	Partner A			Both partners			Partner B		
	Estimate	SE	p	Estimate	SE	p	Estimate	SE	p
Random effects (between-partner)									
Covariance intercept$_A$, intercept$_B$				39.70 (0.71)	2.14	<.001			
Covariance linear slope$_A$, linear slope$_B$				0.56 (0.71)	0.07	<.001			
Covariance quadratic slope$_A$, quadratic slope$_B$				0.001 (0.78)	0.0002	<.001			
Covariance intercept$_A$, linear slope$_B$				1.55 (0.23)	0.37	<.001			
Covariance intercept$_A$, quadratic slope$_B$				0.08 (0.11)	0.02	.127			
Covariance linear slope$_A$, quadratic slope$_B$				0.02 (0.66)	0.004	<.001			
Covariance intercept$_B$, linear slope$_A$				1.42 (0.21)	0.34	<.001			
Covariance intercept$_B$, quadratic slope$_A$				0.02 (0.07)	0.02	.255			
Covariance linear slope$_B$, quadratic slope$_A$				0.02 (0.64)	0.004	<.001			
Residual variance	40.34 (6.35)	0.55	<.001				43.68 (6.61)	0.60	<.001
Between-partner covariance of residuals				14.69 (0.35)	0.01	<.001			

Notes. $N_{couples}$ = 1,450. We report unstandardized estimates and standard errors for the fixed effects. Standard deviations and correlations are reported in brackets behind the variance and covariance estimates. Life satisfaction scores were transformed into a T-metric, relying on life satisfaction scores of the entire SOEP 2002 sample (M = 6.90, SD = 1.81). Intercepts were centered around the year before last survey participation. Linear and quadratic slope effects are scaled in T-units per year. Actor and partner disability status were included as time lagged predictor variables (k-1) and coded as 0 (*no certified disability status*) versus 1 (*certified disability status*). Actor and partner life satisfaction were included as time-lagged (k-1), person-mean-centered predictor variables. Partner role is coded as 1 (*partner A*) versus -1 (*partner B*). We report only one fixed effect estimate for both couple members if there was no significant interaction effect of partner role.
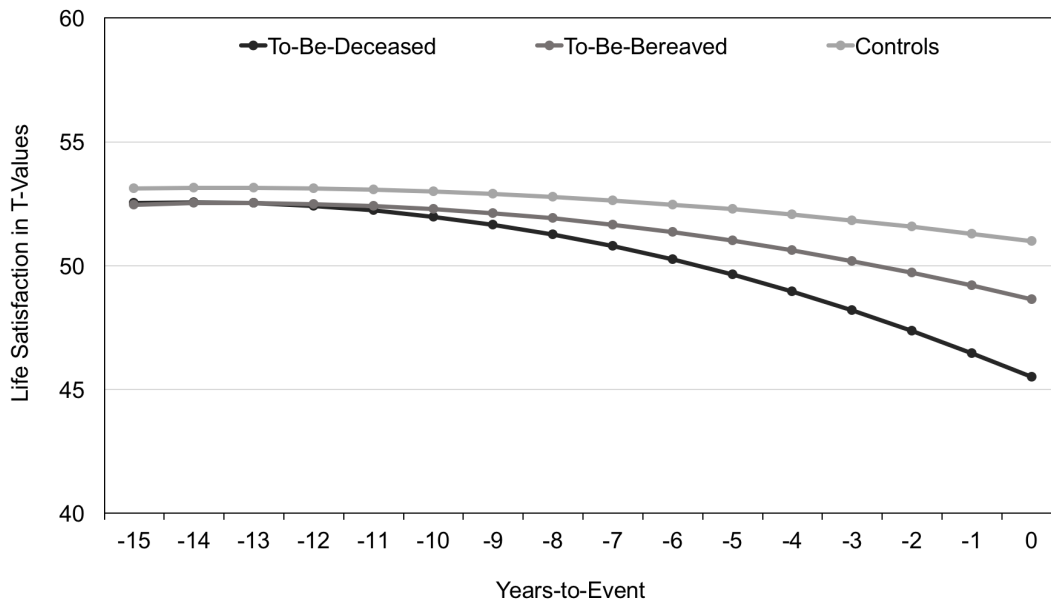
Figure 1. Estimated trajectories of life satisfaction in couple members approaching the year of [partner] death and in couple members approaching the year of last survey participation. Life satisfaction scores were transformed into a T-metric, relying on life satisfaction scores of the entire SOEP 2002 sample (*M* = 6.90, *SD* = 1.81). Years-to-event were centered around the year before [partner] death or the year before last survey participation, respectively. For couple members in the control sample, we present only one line as the trajectories did not significantly differ between partners.

Supplemental Material

Supplemental Table 1

Estimated Parameters for the Dyadic Growth Model for Male and Female Partners in the Matched Control Sample

	Male partners			Both partners			Female partners		
	Estimate	SE	p	Estimate	SE	p	Estimate	SE	p
Fixed effects									
Disability	-1.01	0.21	<.001				-1.97	.27	<.001
Linear slope				-0.32	0.04	<.001			
Quadratic slope				-0.01	0.00	<.001			
Intercept				50.99	0.20	<.001			
Disability × gender				0.48	0.16	.003			
Linear slope × gender				-0.02	0.02	.26			
Quadratic slope × gender				0.001	0.001	.43			
Intercept × gender				0.004	0.10	.97			
Random effects (within-partner)									
Variance linear slope	0.81 (.09)	0.08	<.001				0.87 (.93)	0.09	<.001
Variance quadratic slope	0.002 (.04)	0.0003	<.001				0.002 (.04)	0.0003	<.001
Variance intercept	55.77 (7.47)	2.49	<.001				56.60 (7.46)	2.55	<.001
Covariance intercept, linear slope	2.86 (.43)	0.37	<.001				2.71 (.39)	0.38	<.001
Covariance intercept, quadratic slope	0.06 (.20)	0.02	.003				0.06 (.19)	0.02	.005
Covariance linear slope, quadratic slope	0.03 (.88)	0.004	<.001				0.03 (.88)	0.005	<.001
Random effects (between-partner)									
Covariance intercept$_M$, intercept$_W$				40.42 (.72)	2.12	<.001			
Covariance linear slope$_M$, linear slope$_W$				0.65 (.78)	0.07	<.001			
Covariance quadratic slope$_M$, quadratic slope$_W$				0.001 (.84)	0.0002	<.001			

	Male partners			Both partners			Female partners		
	Estimate	SE	p	Estimate	SE	p	Estimate	SE	p
Covariance intercept$_M$, linear slope$_W$				1.54 (.22)	0.36	<.001			
Covariance intercept$_M$, quadratic slope$_W$				0.03 (.09)	0.02	.176			
Covariance linear slope$_M$, quadratic slope$_W$				0.03 (.71)	0.004	<.001			
Covariance intercept$_W$, linear slope$_M$				1.78 (.26)	0.35	<.001			
Covariance intercept$_W$, quadratic slope$_M$				0.03 (.11)	0.02	.099			
Covariance linear slope$_W$, quadratic slope$_M$				0.03 (.71)	0.004	<.001			
Residual variance	40.78 (6.39)	0.54	<.001	14.30 (.34)	0.01	<.001	43.38 (6.59)	0.58	<.001
Between-partner covariance of residuals									

Notes. $N_{couples}$ = 1,450. We report unstandardized estimates and standard errors for the fixed effects. Standard deviations and correlations are reported in brackets behind the variance and covariance estimates. Life satisfaction scores were transformed into a T-metric, relying on life satisfaction scores of the entire SOEP 2002 sample (*M* = 6.90, *SD* = 1.81). Intercepts were centered around the year before last survey participation. Linear and quadratic slope effects are scaled in T-units per year. The variable disability was included as a time lagged variable (*t*-1) and is coded as 0 (*no certified disability status*) versus 1 (*certified disability status*). Gender is coded as 1 (*men*) and -1 (*women*). We report only one fixed effect estimate for both couple members if there was no significant interaction effect of partner role.

**Supplemental Table 2**

Estimated Parameters for the Longitudinal Actor-Partner Interdependence Model for Male and Female Partners in the Matched Control Sample

	Male partners			Both partners			Female partners		
	Estimate	SE	p	Estimate	SE	p	Estimate	SE	p
Fixed effects									
Actor disability status	-0.92	0.24	.0002				-1.97	0.32	<.001
Partner disability status				0.16	0.19	.40			
Actor life satisfaction				-0.01	0.01	.054			
Partner life satisfaction				0.04	0.01	<.001			
Linear slope				-0.31	0.04	<.001			
Quadratic slope				-0.01	0.002	<.001			
Intercept				50.95	0.21	<.001			
Actor disability status × gender				0.52	0.21	.01			
Partner disability status × gender				-0.05	0.20	.80			
Actor life satisfaction × gender				0.01	0.01	.43			
Partner life satisfaction × gender				0.001	0.01	.93			
Linear slope × gender				-0.02	0.02	.23			
Quadratic slope × gender				-0.001	0.001	.35			
Intercept × gender				0.04	0.10	.71			
Random effects (within-partner)									
Variance linear slope	0.77 (.88)	0.09	<.001				0.83 (.91)	0.09	<.001
Variance quadratic slope	0.001 (.03)	0.0002	<.001				0.002 (.04)	0.0003	<.001
Variance intercept	55.59 (7.46)	2.51	<.001				56.35 (7.51)	2.58	<.001
Covariance intercept, linear slope	2.88 (.44)	2.51	<.001				2.69 (.39)	0.38	<.001
Covariance intercept, quadratic slope	0.06 (.22)	0.02	.002				0.06 (.20)	0.02	.004
Covariance linear slope, quadratic slope	0.03 (.88)	0.004	<.001				0.03 (.88)	0.005	<.001

	Male partners			Both partners			Female partners		
	Estimate	SE	p	Estimate	SE	p	Estimate	SE	p
Random effects (between-partner)									
Covariance intercept-M, intercept-W				39.70 (.71)	2.51	<.001			
Covariance linear slope-M, linear slope-W				0.56 (.70)	0.07	<.001			
Covariance quadratic slope-M, quadratic slope-W				0.001 (.88)	0.005	<.001			
Covariance intercept-M, linear slope-W				1.39 (.20)	0.36	.0001			
Covariance intercept-M, quadratic slope-W				0.03 (.09)	0.02	.20			
Covariance linear slope-M, quadratic slope-W				0.02 (.65)	0.004	<.001			
Covariance intercept-W, linear slope-M				1.59 (.24)	0.35	<.001			
Covariance intercept-W, quadratic slope-M				0.03 (.10)	0.02	.160			
Covariance linear slope-W, quadratic slope-M				0.02 (.65)	0.004	<.001			
Residual variance	40.63 (6.37)	0.55	<.001				43.41 (6.59)	0.59	<.001
Between-partner covariance of residuals				14.70 (.35)	0.01	<.001			

Notes. $N_{couples}$ = 1,450. We report unstandardized estimates and standard errors for the fixed effects. Standard deviations and correlations are reported in brackets behind the variance and covariance estimates. Life satisfaction scores were transformed into a T-metric, relying on life satisfaction scores of the entire SOEP 2002 sample (M = 6.90, SD = 1.81). Intercepts were centered around the year before last survey participation. Linear and quadratic slope effects are scaled in T-units per year. Actor and partner disability status were included as time lagged predictor variables (t-1) and coded as 0 (*no certified disability status*) versus 1 (*certified disability status*). Actor and partner life satisfaction were included as time-lagged (t-1), person-mean-centered predictor variables. Gender is coded as 1 (*men*) and -1 (*women*). We report only one fixed effect estimate for both couple members if there was no significant interaction effect of partner role.

Parallel Analyses Including Both Partners' Functional Limitations

We conducted a parallel set of analyses in which we accounted for both partners' functional limitations as additional health-related control variables. Information on functional limitations were introduced in the second wave of the SOEP study. Since 1985, participants reported on a yearly basis whether or not they had difficulties or needed help (a) with getting out of bed, (b) with shopping and (c) with doing their housework alone. We combined answers to these three items and created a dichotomous variable that contrasts individuals reporting at least one functional limitation (coded = 1) with those who did not report any functional limitation (coded = 0).

Since functional limitations were not assessed in the first wave of the SOEP study, findings of the parallel analyses are based on the observation period of 1985-2015. Moreover, we had to exclude one couple from the analysis sample because they did not fulfill our selection criteria.

We followed the same analytical procedure as described in the analysis section of the manuscript but expanded this approach in two ways: First, we added both partners' functional limitations into the propensity score matching and second, we added both partners' functional limitations as additional time-lagged and time-variant control variables into the prediction of life satisfaction. The results of the additional set of analyses can be found in Supplemental Table 3-6 and they largely point into the same direction as those presented in the manuscript.

Event Sample

Multilevel dyadic growth models. Comparing the Akaike information criterion (AIC) of the model including quadratic effect of time ($AIC_{Quadratic}$ = 209,686) against the simpler linear model of time (AIC_{Linear} = 210,229) revealed that the quadratic model yielded a better relative fit. Consequently, we proceeded with a model allowing for non-linear declines in life satisfaction in the years leading up to [partner] death.

Dyadic trajectories of life satisfaction. In to-be-bereaved and to-be-deceased partners, we observed significant negative effects of time for the linear and the quadratic slopes. The significant negative interaction effects of partner role signify that linear and quadratic declines were more pronounced in to-be-deceased couple members when compared to their to-be-bereaved partners. The analyses were controlled for disability status and functional limitations, which revealed significant negative effects on life satisfaction that did not differ in strength between partners.

Between-partner correlation in the dyadic growth parameters. Intercept correlations as well as linear and quadratic slope correlations were high between partners ($r_{DB\_Intercept}$ = .72, $r_{DB\_Linear\ Slope}$ = .69, $r_{DB\_Quadratic\ Slope}$ = .71). Residual correlations between partners were moderate ($r_{DB\_Residuals}$ = .41).

Longitudinal actor-partner interdependence approach. In line with the simpler multilevel dyadic growth models, we observed significant linear and quadratic declines in life satisfaction, which were more pronounced in to-be-deceased partners as compared to their to-be-bereaved counterparts. The estimated intercept parameters also differed between couple members, with lower estimates among to-be-deceased partners.

We did not identify a significant time-lagged actor effect of life satisfaction in couples approaching [partner] death. We did, however, observe a significant time-lagged partner effect of life satisfaction and the strength of this partner effect did not differ between to-be-deceased and to-be-

bereaved partners. These effects were robust against the inclusion of disability status and functional limitations as time-lagged control variables. We found that disability status had a negative actor effect and, surprisingly, a positive partner effect on later life satisfaction. These effects did not differ in strength between partners. For functional limitations, a negative actor effect emerged, which was more pronounced in to-be-deceased partners. As for the partner effect of functional limitations, we observed a negative effect among to-bereaved couple members but not in their to-deceased partners.

Control Sample

Multilevel dyadic growth models. Comparing the linear model of time (AIC_{Linear} = 190,095) against the model including a quadratic effect of time ($AIC_{Quadratic}$ = 189,874) revealed that the quadratic model produced a better relative fit. We, therefore, present findings derived from the quadratic model of time.

Dyadic trajectories of life satisfaction. We observed significant negative effects of time for the linear and the quadratic slope. These effects did not significantly differ between partners as indicated by non-significant interaction effects of partner role. The analyses were controlled for disability status and functional limitations, which revealed significant negative effects on life satisfaction that did not differ in strength between partners.

Between-partner correlation in the dyadic growth parameters. Intercept and slope correlations were high between couple members who did not experience [partner] death. Between-partner correlations ranged from $r_{AB\_Intercept}$ = .72 for the intercept, over $r_{AB\_Linear\ Slope}$ = .71 for the linear slope to $r_{AB\_Quadratic\ Slope}$ = .80 for the quadratic slope. Residual correlations between partners were moderate ($r_{AB\_Residuals}$ = .33).

Longitudinal actor-partner interdependence approach. In line with the simpler multilevel dyadic growth models, we observed significant linear and quadratic declines in life satisfaction. These declines as well as the estimated intercept parameters did not differ between partners.

We identified a significant negative actor effect and a significant positive partner effect of life satisfaction. These effects did not differ in strength between couple members and they were robust against the inclusion of disability status and functional limitations as a control variables. Disability status and functional limitations had significant negative actor effects but no partner effects on life satisfaction. The strength of these effects did not vary between partners.

Comparison of the event and control sample

With regard to the developmental trajectories of life satisfaction, the confidence intervals for the estimated linear slopes (CI γ_{D10} = [-1.11, -0.87], CI γ_{B10} = [-0.70, -0.51]), quadratic slopes (CI γ_{D20} = [-0.044, -0.031], CI γ_{B20} = [-0.030, -0.019]) and intercept parameters (CI γ_{D00} = [45.06, 46.25], CI γ_{B00} = [47.96, 48.97]) of couple members in the event sample did not overlap with the estimated growth parameters of couples in the control sample (CI γ_{AB10} = [-0.32, -0.18], CI γ_{AB20} = [-0.011, -0.003], CI γ_{AB00} = [50.72, 51.52]).

We found that between-partner correlations of the intercept (CI $r_{DB\_Intercept}$ = [0.86, 0.96], CI $r_{AB\_Intercept}$ = [0.90, 1.00]) and the linear slope (CI $r_{DB\_Linear\ Slope}$ = [0.80, 0.90], CI $r_{AB\_Linear\ Slope}$ = [0.84, 0.94]) did not differ between event and control couples. We did, however, observe significant differences for the between-partner correlations of the quadratic slope (CI $r_{DB\_Quadratic\ Slope}$ = [0.84, 0.94], CI $r_{AB\_Quadratic\ Slope}$ = [1.05, 1.15]). The residual correlations between partners did not significantly differ between the

samples (CI $r_{DB\_Residuals}$ = [0.36, 0.46], CI $r_{AB\_Residuals}$ = [0.29, 0.39]).

Finally, and regarding the transmission effects of life satisfaction between partners, we did not observe significant differences between couple members approaching [partner] death (CI γ_{P_DB40}= [0.02, 0.05]) and couple members in the control sample (CI γ_{P_AB40}= [0.02, 0.04]).

Supplemental Table 3

Estimated Parameters for the Dyadic Growth Model Including Functional Limitations in the Event Sample

	To-be-deceased			Both partners			To-be-bereaved		
	Estimate	SE	p	Estimate	SE	p	Estimate	SE	p
Fixed effects									
Disability status				-1.11	0.17	<.001			
Functional limitation				-2.76	0.34	<.001			
Linear slope	-0.99	0.06	<.001				-0.60	0.05	<.001
Quadratic slope	-0.04	0.003	<.001				-0.02	0.003	<.001
Intercept	45.66	0.30	<.001				48.47	0.26	<.001
Disability status × partner role				-0.27	0.16	0.088			
Functional limitation × partner role				-0.63	0.34	0.065			
Linear slope × partner role				-0.19	0.03	<.001			
Quadratic slope × partner role				-0.01	0.001	<.001			
Intercept × partner role				-1.40	0.12	<.001			
Random effects (within-partner)									
Variance linear slope	2.46 (1.57)	0.23	<.001				1.28 (1.13)	0.13	<.001
Variance quadratic slope	0.005 (0.07)	0.001	<.001				0.002 (0.05)	0.0004	<.001
Variance intercept	96.91 (9.84)	4.63	<.001				73.43 (8.57)	3.46	<.001
Covariance intercept, linear slope	7.98 (0.52)	0.82	<.001				3.67 (0.38)	0.53	<.001
Covariance intercept, quadratic slope	0.23 (0.33)	0.04	<.001				0.06 (0.14)	0.03	0.028
Covariance linear slope, quadratic slope	0.11 (0.94)	0.01	<.001				0.05 (0.90)	0.01	<.001
Random effects (between-partner)									
Covariance intercept-D, intercept-B				60.59 (0.72)	3.36	<.001			
Covariance linear slope-D, linear slope-B				1.22 (0.69)	0.14	<.001			
Covariance quadratic slope-D, quadratic slope-B				0.003 (0.71)	0.0004	<.001			

	To-be-deceased			Both partners			To-be-bereaved		
	Estimate	SE	p	Estimate	SE	p	Estimate	SE	p
Covariance intercept-$_D$, linear slope-$_B$				3.38 (0.3)	0.58	<.001			
Covariance intercept-$_D$, quadratic slope-$_B$				0.07 (0.14)	0.03	0.029			
Covariance linear slope-$_D$, quadratic slope-$_B$				0.05 (0.66)	0.01	<.001			
Covariance intercept-$_B$, linear slope-$_D$				2.91 (0.22)	0.62	<.001			
Covariance intercept-$_B$, quadratic slope-$_D$				0.05 (0.07)	0.03	0.160			
Covariance linear slope-$_B$, quadratic slope-$_D$				0.05 (0.62)	0.01	<.001			
Residual variance	55.04 (7.42)	0.72	<.001				43.37 (6.59)	0.56	<.001
Between-partner correlation of residuals				0.39 (18.81)	0.01	<.001			

Notes. $N_{couples}$ = 1,449. We report unstandardized estimates and standard errors. Standard deviations and correlations are reported in brackets behind the variance and covariance estimates. Life satisfaction scores were transformed into a T-metric, relying on life satisfaction scores of the entire SOEP 2002 sample (M = 6.90, SD = 1.81). Intercepts were centered around the year before [partner] death. Linear and quadratic slope effects are scaled in T-units per year. Disability status and functional limitations were included as time lagged predictor variables (t-1). Disability status was coded as 0 (*no certified disability status*) versus 1 (*certified disability status*) and functional limitation was coded as 0 (*no functional limitation*) versus 1 (*at least one functional limitation*). The variable partner role is coded as 1 (*to-be-deceased*) and -1 (*to-be-bereaved*). We report only one fixed effect estimate for both couple members if there was no significant interaction effect of partner role.

Supplemental Table 4

Estimated Parameters for the Longitudinal Actor-Partner Interdependence Model Including Functional Limitations in the Event Sample

	To-be-deceased			Both partners			To-be-bereaved		
	Estimate	SE	p	Estimate	SE	p	Estimate	SE	p
Fixed effects									
Actor disability status				-0.86	0.19	<.001			
Partner disability status				0.58	0.19	.003			
Actor functional limitation	-4.38	0.42	<.001				-1.88	0.65	.004
Partner functional limitation	0.53	0.74	.474				-1.72	0.37	<.001
Actor life satisfaction				-0.004	0.01	.556			
Partner life satisfaction				0.03	0.01	<.001			
Linear slope	-0.95	0.06	<.001				-0.55	0.05	<.001
Quadratic slope	-0.03	0.003	<.001				-0.02	0.003	<.001
Intercept	45.60	0.31	<.001				48.45	0.27	<.001
Actor disability status × partner role				-0.20	0.20	.315			
Partner disability status × partner role				-0.07	0.20	.746			
Actor functional limitation × partner role				-1.25	0.39	.001			
Partner functional limitation × partner role				1.13	0.41	.006			
Actor life satisfaction × partner role				0.004	0.01	.562			
Partner life satisfaction × partner role				0.002	0.01	.732			
Linear slope × partner role				-0.20	0.03	<.001			
Quadratic slope × partner role				-0.01	0.001	<.001			
Intercept × partner role				-1.43	0.13	<.001			
Random effects (within-partner)									
Variance linear slope	2.17 (1.47)	0.22	<.001				1.11 (1.06)	0.13	<.001
Variance quadratic slope	0.004 (.07)	0.001	<.001				0.002 (.05)	0.0004	<.001

	To-be-deceased			Both partners			To-be-bereaved		
	Estimate	SE	p	Estimate	SE	p	Estimate	SE	p
Variance intercept	94.02 (9.7)	4.60	<.001				71.24 (8.44)	3.43	<.001
Covariance intercept, linear slope	7.23 (.51)	0.81	<.001				3.19 (.36)	0.52	<.001
Covariance intercept, quadratic slope	0.21 (.32)	0.04	<.001				0.04 (.11)	0.03	.102
Covariance linear slope, quadratic slope	0.09 (.94)	0.01	<.001				0.04 (.90)	0.01	<.001
Random effects (between-partner)									
Covariance intercept-D, intercept-B				57.24 (.70)	3.32	<.001			
Covariance linear slope-D, linear slope-B				0.90 (.58)	0.14	<.001			
Covariance quadratic slope-D, quadratic slope-B				0.002 (.58)	0.0004	<.001			
Covariance intercept-D, linear slope-B				2.43 (.24)	0.57	<.001			
Covariance intercept-D, quadratic slope-B				0.03 (.07)	0.03	.289			
Covariance linear slope-D, quadratic slope-B				0.04 (.54)	0.01	<.001			
Covariance intercept-B, linear slope-D				2.10 (.17)	0.60	.0004			
Covariance intercept-B, quadratic slope-D				0.02 (.03)	0.03	.590			
Covariance linear slope-B, quadratic slope-D				0.04 (.50)	0.01	<.001			
Residual variance	55.39 (7.44)	0.74	<.001	19.13 (.39)	0.01	<.001	43.43 (6.59)	0.57	<.001
Between-partner covariance of residuals				19.13 (.39)	0.01	<.001			

Notes. $N_{couples}$ = 1,449. We report unstandardized estimates and standard errors for the fixed effects. Standard deviations and correlations are reported in brackets behind the variance and covariance estimates. Life satisfaction scores were transformed into a T-metric, relying on life satisfaction scores of the entire SOEP 2002 sample (M = 6.90, SD = 1.81). Intercepts were centered around the year before last survey participation. Linear and quadratic slope effects are scaled in T-units per year. Actor and partner disability status and functional limitation were included as time lagged predictor variables (t-1). Disability status was coded as 0 (*no certified disability status*) versus 1 (*certified disability status*) and functional limitation was coded as 0 (*no functional limitation*) versus 1 (*at least one functional limitation*). Actor and partner life satisfaction were included as time-lagged (t-1), person-mean-centered predictor variables. Partner role is coded as 1 (*to-be-deceased*) versus −1 (*to-be-bereaved*). We report only one fixed effect estimate for both couple members if there was no significant interaction effect of partner role.

Supplemental Table 5

Estimated Parameters for the Dyadic Growth Model Including Functional Limitations in the Matched Control Sample

	Partner A			Both partners			Partner B		
	Estimate	SE	p	Estimate	SE	p	Estimate	SE	p
Fixed effects									
Disability status				-1.06	0.17	<.001			
Functional limitation				-3.22	0.42	<.001			
Linear slope				-0.25	0.04	<.001			
Quadratic slope				-0.01	0.002	0.002			
Intercept				51.12	0.20	<.001			
Disability status × partner role				-0.12	0.16	0.45			
Functional limitation × partner role				0.16	0.43	0.72			
Linear slope × partner role				-0.02	0.02	0.27			
Quadratic slope × partner role				-0.001	0.001	0.21			
Intercept × partner role				0.03	0.10	0.79			
Random effects (within-partner)									
Variance linear slope	0.78 (0.88)	0.08	<.001				0.68 (0.83)	0.08	<.001
Variance quadratic slope	0.002 (0.04)	0.0003	<.001				0.001 (0.04)	0.0002	<.001
Variance intercept	57.71 (7.6)	2.59	<.001				58.93 (7.68)	2.63	<.001
Covariance intercept, linear slope	2.55 (0.38)	0.37	<.001				2.46 (0.39)	0.36	<.001
Covariance intercept, quadratic slope	0.05 (0.18)	0.02	0.008				0.04 (0.15)	0.02	0.034
Covariance linear slope, quadratic slope	0.03 (0.91)	0.005	<.001				0.03 (0.88)	0.004	<.001
Random effects (between-partner)									
Covariance intercept-A, intercept-B				43.07 (0.74)	2.21	<.001			
Covariance linear slope-A, linear slope-B				0.52 (0.71)	0.07	<.001			
Covariance quadratic slope-A, quadratic slope-B				0.001 (0.80)	0.0002	<.001			

	Partner A			Both partners			Partner B		
	Estimate	SE	p	Estimate	SE	p	Estimate	SE	p
Covariance intercept$_A$, linear slope$_B$				1.38 (0.22)	0.34	<.001			
Covariance intercept$_A$, quadratic slope$_B$				0.03 (0.11)	0.02	0.134			
Covariance linear slope$_A$, quadratic slope$_B$				0.02 (0.71)	0.004	<.001			
Covariance intercept$_B$, linear slope$_A$				1.89 (0.28)	0.35	<.001			
Covariance intercept$_B$, quadratic slope$_A$				0.04 (0.13)	0.02	0.054			
Covariance linear slope$_B$, quadratic slope$_A$				0.02 (0.64)	0.004	<.001			
Residual variance	41.42 (6.44)	0.55	<.001				41.86 (6.47)	0.56	<.001
Between-partner correlation of residuals				0.33 (13.81)	0.01	<.001			

Notes. $N_{couples}$ = 1,449. We report unstandardized estimates and standard errors. Standard deviations and correlations are reported in brackets behind the variance and covariance estimates. Life satisfaction scores were transformed into a T-metric, relying on life satisfaction scores of the entire SOEP 2002 sample (*M* = 6.90, *SD* = 1.81). Intercepts were centered around the year beforelast survey participation. Linear and quadratic slope effects are scaled in T-units per year. Disability status and functional limitations were included as time lagged predictor variables (*t*-1). Disability status was coded as 0 (*no certified disability status*) versus 1 (*certified disability status*) and functional limitation was coded as 0 (*no functional limitation*) versus 1 (*at least one functional limitation*). The variable partner role is coded as 1 (*partner A*) and -1 (*partner B*). We report only one fixed effect estimate for both couple members if there was no significant interaction effect of partner role.

Supplemental Table 6

Estimated Parameters for the Longitudinal Actor–Partner Interdependence Model Including Functional Limitations in the Matched Control Sample

	Partner A			Both partners			Partner B		
	Estimate	SE	p	Estimate	SE	p	Estimate	SE	p
Fixed effects									
Actor disability status				-1.18	0.19	<.001			
Partner disability status				-0.33	0.19	.083			
Actor functional limitation				-3.66	0.49	<.001			
Partner functional limitation				-0.82	0.49	.092			
Actor life satisfaction				-0.01	0.01	.032			
Partner life satisfaction				0.03	0.01	<.001			
Linear slope				-0.23	0.04	<.001			
Quadratic slope				-0.01	0.00	.005			
Intercept				51.27	0.21	<.001			
Actor disability status × partner role				-0.26	0.20	.186			
Partner disability status × partner role				0.17	0.20	.384			
Actor functional limitation × partner role				0.39	0.48	.426			
Partner functional limitation × partner role				-0.11	0.48	.826			
Actor life satisfaction × partner role				-0.01	0.01	.338			
Partner life satisfaction × partner role				0.01	0.01	.230			
Linear slope × partner role				-0.02	0.02	.221			
Quadratic slope × partner role				-0.001	0.001	.149			
Intercept × partner role				0.02	0.10	.823			
Random effects (within-partner)									
Variance linear slope	0.78 (.89)	0.09	<.001				0.64 (.8)	0.08	<.001
Variance quadratic slope	0.002 (.04)	0.0003	<.001				0.01 (.03)	0.0002	<.001

	Partner A			Both partners			Partner B		
	Estimate	SE	p	Estimate	SE	p	Estimate	SE	p
Variance intercept	57.14 (7.56)	2.60	<.001				57.94 (7.61)	2.62	<.001
Covariance intercept, linear slope	2.61 (.39)	0.38	<.001				2.33 (.38)	0.36	<.001
Covariance intercept, quadratic slope	0.06 (.19)	0.02	.004				0.04 (.14)	0.02	.052
Covariance linear slope, quadratic slope	0.03 (.91)	0.005	<.001				0.02 (.88)	0.004	<.001
Random effects (between-partner)									
Covariance intercept$_A$, intercept$_B$				41.65 (.72)	2.21	<.001			
Covariance linear slope$_A$, linear slope$_B$				0.46 (.64)	0.07	<.001			
Covariance quadratic slope$_A$, quadratic slope$_B$				0.001 (.74)	0.0002	<.001			
Covariance intercept$_A$, linear slope$_B$				1.20 (.20)	0.34	.0004			
Covariance intercept$_A$, quadratic slope$_B$				0.03 (.10)	0.02	.182			
Covariance linear slope$_A$, quadratic slope$_B$				0.02 (.65)	0.004	<.001			
Covariance intercept$_B$, linear slope$_A$				1.67 (.25)	0.36	<.001			
Covariance intercept$_B$, quadratic slope$_A$				0.03 (.11)	0.02	.104			
Covariance linear slope$_B$, quadratic slope$_A$				0.02 (.58)	0.004	<.001			
Residual variance	41.26 (6.42)	0.57	<.001				41.93 (6.48)	0.58	<.001
Between-partner Covariance of residuals				14.14 (.34)	0.01	<.001			

Notes. $N_{couples}$ = 1,449. We report unstandardized estimates and standard errors for the fixed effects. Standard deviations and correlations are reported in brackets behind the variance and covariance estimates. Life satisfaction scores were transformed into a T-metric, relying on life satisfaction scores of the entire SOEP 2002 sample (M = 6.90, SD = 1.81). Intercepts were centered around the year before last survey participation. Linear and quadratic slope effects are scaled in T-units per year. Actor and partner disability status and functional limitation were included as time lagged predictor variables (t-1). Disability status was coded as 0 (*no certified disability status*) versus 1 (*certified disability status*) and functional limitation was coded as 0 (*no functional limitation*) versus 1 (*at least one functional limitation*). Actor and partner life satisfaction were included as time-lagged (t-1), person-mean-centered predictor variables. The variable partner role is coded as 1 (*partner A*) and -1 (*partner B*). We report only one fixed effect estimate for both couple members if there was no significant interaction effect of partner role.

Reference List of Prior Related Uses of the SOEP Data

Anusic, I., & Lucas, R. E. (2014). Do social relationships buffer the effects of widowhood? A prospective study of adaptation to the loss of a spouse. *Journal of Personality, 82*(5), 367-378. doi:10.1111/jopy.12067

Brandmaier, A. M., Ram, N., Wagner, G. G., & Gerstorf, D. (2017). Terminal decline in well-being: The role of multi-indicator constellations of physical health and psychosocial correlates. *Developmental Psychology, 53*(5), 996-1012. doi: 10.1037/dev0000274

Clark, A. E., Diener, E., Georgellis, Y., & Lucas, R. E. (2008). Lags and leads in life satisfaction: A test of the baseline hypothesis. *The Economic Journal, 118*(529), 222-243. doi:10.1111/j.1468-0297.2008.02150.x

Dyrdal, G. M., & Lucas, R. E. (2013). Reaction and adaptation to the birth of a child: A couple-level analysis. *Developmental Psychology, 49*(4), 749-761. doi: 10.1037/a0028335

Gerstorf, D., Ram, N., Estabrook, R., Schupp, J., Wagner, G. G., & Lindenberger, U. (2008). Life satisfaction shows terminal decline in old age: Longitudinal evidence from the German Socio-Economic Panel Study (SOEP). *Developmental Psychology, 44*(4), 1148-1159. doi:10.1037/0012-1649.44.4.1148

Gerstorf, D., Ram, N., Röcke, C., Lindenberger, U., & Smith, J. (2008). Decline in life satisfaction in old age: Longitudinal evidence for links to distance-to-death. *Psychology and aging, 23*(1), 154-168. doi:10.1037/0882-7974.23.1.154

Gerstorf, D., Ram, N., Mayraz, G., Hidajat, M., Lindenberger, U., Wagner, G. G., & Schupp, J. (2010). Late-life decline in well-being across adulthood in Germany, the United Kingdom, and the United States: Something is seriously wrong at the end of life. *Psychology and Aging, 25*(2), 477-485. doi:10.1037/a001754

Gerstorf, D., Heckhausen, J., Ram, N., Infurna, F. J., Schupp, J., & Wagner, G. G. (2014). Perceived Personal Control Buffers Terminal Decline in Well-Being. *Psychology and aging, 29*(3), 612-625. doi:10.1037/a0037227

Gerstorf, D., Hoppmann, C. A., Löckenhoff, C. E., Infurna, F. J., Schupp, J., Wagner, G. G., & Ram, N. (2016). Terminal decline in well-being: The role of social orientation. *Psychology and aging, 31*(2), 149-165. doi:10.1037/pag0000072

Infurna, F. J., Wiest, M., Gerstorf, D., Ram, N., Schupp, J., Wagner, G. G., & Heckhausen, J. (2016). Changes in life satisfaction when losing one's spouse: Individual differences in anticipation, reaction, adaptation and longevity in the German Socio-economic Panel Study (SOEP). *Ageing and Society, 37*(5), 899-934. doi:10.1017/S0144686X15001543

Lucas, R. E., Clark, A. E., Georgellis, Y., & Diener, E. (2003). Reexamining adaptation and the set point model of happiness: Reactions to changes in marital status. *Journal of Personality and Social Psychology, 84*(3), 527-539. doi:10.1037/0022-3514.84.3.527

Luhmann, M., Weiss, P., Hosoya, G., & Eid, M. (2014). Honey, I got fired! A longitudinal dyadic analysis of the effect of unemployment on life satisfaction in couples. *Journal of Personality and Social Psychology, 107*(1), 163-180. doi:10.1037/a0036394

Mueller, S., Wagner, J., Wagner, G. G., Ram, N., & Gerstorf, D. (2018). How far reaches the power of

personality? Personality predictors of terminal decline in well-being. *Journal of Personality and Social Psychology, 115*(5). doi:10.1037/pspp0000184

Schade, H. M., Hülür, G., Infurna, F. J., Hoppmann, C. A., & Gerstorf, D. (2016). Partner dissimilarity in life satisfaction: Stability and change, correlates, and outcomes. *Psychology and aging, 31*(4), 327-339. doi:10.1037/pag0000096

Schimmack, U., & Lucas, R. (2010). Environmental Influences on Well-Being: A Dyadic Latent Panel Analysis of Spousal Similarity. *Social Indicators Research, 98*(1), 1-21. doi:10.1007/s11205-009-9516-8

Uglanova, E. A., & Staudinger, U. M. (2013). Zooming in on Life Events: Is Hedonic Adaptation Sensitive to the Temporal Distance from the Event? *Social Indicators Research, 111*(1), 265-286. doi:10.1007/s11205-012-0004-1

Vogel, N., Gerstorf, D., Ram, N., Goebel, J., & Wagner, G. G. (2017). Terminal decline in well-being differs between residents in East Germany and West Germany. *International Journal of Behavioral Development, 41*(1), 115-126. doi:10.1177/0165025415602561

Vogel, N., Ram, N., Goebel, J., Wagner, G. G., & Gerstorf, D. (2018). How does availability of county-level healthcare services shape terminal decline in well-being? *European Journal of Ageing, 15*(2), 111-122. doi:10.1007/s10433-017-0425-4

Wortman, J., & Lucas, R. E. (2016). Spousal similarity in life satisfaction before and after divorce. *Journal of Personality and Social Psychology, 110*(4), 625-633. doi:10.1037/pspp0000065

APPENDIX D: Erklärung zur wissenschaftlichen Lauterkeit

Ich erkläre hiermit, dass die vorliegende Arbeit ohne die Hilfe Dritter und ohne Benutzung anderer als der angegebenen Hilfsmittel selbstständig verfasst habe. Zu Hilfe genommene Quellen sind als solche gekennzeichnet. Die veröffentlichten oder zur Veröffentlichung in Zeitschriften eingereichten Manuskripte wurden in Zusammenarbeit mit den Koautoren erstellt und von keinem der Beteiligten an anderer Stelle publiziert, zur Publikation eingereicht, oder einer anderen Prüfungsbehörde als Qualifikationsarbeit vorgelegt. Es handelt sich dabei um folgende Manuskripte:

- **Wünsche, J.,** Weidmann, R., & Grob, A. (2020a). Happy in the same way? The link between domain satisfaction and overall life satisfaction in romantic couples. *Manuscript submitted for publication.*
- **Wünsche, J.**, Weidmann, R., Ledermann, T., Schröder, J., Rammstedt, B., & Grob, A. (2020). As the sun sets: Interdependence of relational and personal well-being in couples approaching separation. *Manuscript submitted for publication.*
- **Wünsche, J.**, Weidmann, R., & Grob, A. (2020b). Until death do us part: The codevelopment of life satisfaction in couples preceding the death of one partner. *Journal of Personality and Social Psychology*, 119(4), 881-900. https://doi.org/10.1037/pspi0000228

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