What Do Short-Term and Long-Term Relationships Look Like? Building the Relationship Coordination and Strategic Timing (ReCAST) Model

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Close relationships research has examined committed couples (e.g., dating relationships, marriages) using intensive methods that plot relationship development over time. But a substantial proportion of people's real-life sexual experiences take place (a) before committed relationships become "official" and (b) in short-term relationships; methods that document the time course of relationships have rarely been applied to these contexts. We adapted a classic relationship trajectory-plotting technique to generate the first empirical comparisons between the features of people's real-life short-term and long-term relationships across their entire timespan. Five studies compared long-term and short-term relationships in terms of the timing of relationship milestones (e.g., flirting, first sexual intercourse) and the occurrence/intensity of important relationship experiences (e.g., romantic interest, strong sexual desire, attachment). As romantic interest was rising and partners were becoming acquainted, long-term and short-term relationships were indistinguishable. Eventually, romantic interest in short-term relationships plateaued and declined while romantic interest in long-term relationships continued to rise, ultimately reaching a higher peak. As relationships progressed, participants evidenced more features characteristic of the attachment-behavioral system (e.g., attachment, caregiving) in long-term than short-term relationships but similar levels of other features (e.g., sexual desire, self-promotion, intrasexual competition). These data inform a new synthesis of close relationships and evolutionary psychological perspectives called the Relationship Coordination and Strategic Timing (ReCAST) model. ReCAST depicts short-term and long-term relationships as partially overlapping trajectories (rather than relationships initiated with distinct strategies) that differ in their progression along a normative relationship development sequence.

Keywords: relationship development, close relationships, attraction, relationship events, evolutionary psychology

Supplemental materials: http://dx.doi.org/10.1037/xge0000428.supp

Relationships evolve. Sometimes, the experience of romantic chemistry is immediate, only later followed by the discovery of insurmountable incompatibilities. At other times, two people might know each other for years before feeling a romantic spark and beginning a steady climb toward a fulfilling relationship. These trajectories are often complex and variable, and the fate of a given partnership may seem as predestined as a Disney ending or as unpredictable as the Dow Jones.

Whether romantic relationships last for months, years, or decades is of fundamental importance to two scientific literatures. First, the close relationships literature addresses why romantic partnerships persist or end, and one of the most commonly used indicators of persistence is whether a relationship lasts throughout the duration of a given study (Bradbury & Karney, 2013; Karney & Bradbury, 1995; Le, Dove, Agnew, Korn, & Mutso, 2010; Lee & Sbarra, 2013; Murray, Holmes, & Griffin, 1996). In this liter-

ature, commitment and motivated relationship maintenance strategies lead to lasting relationships—that is, long rather than short relationship length outcomes (Agnew & VanderDrift, 2015; Rusbult, Martz, & Agnew, 1998; Rusbult, Olsen, Davis, & Hannon, 2001). Second, the evolutionary psychological literature conceptualizes relationships of different lengths as goals that entail the use of different sexual strategies (Buss & Schmitt, 1993; Gangestad & Simpson, 2000; Gildersleeve, Haselton, & Fales, 2014). In this literature, people have short-term relationship goals and long-term relationship goals, and their desires and mating behaviors shift depending on which goal is activated.

Although close relationships research and evolutionary psychology have seen increasing integration in recent years (Durante, Eastwick, Finkel, Gangestad, & Simpson, 2016; Fletcher, Simpson, Campbell, & Overall, 2013, 2015), on this point—the role of relationship length—they do not intersect cleanly. In this article, we attempt to bridge this divide. We do so by applying one of the methodological strengths of the close relationships literature (i.e., the use of paradigms in which people report on specific real-life relationships that they have had over time; Huston, Surra, Fitzgerald, & Cate, 1981) to the evolutionary psychological distinction between short-term and long-term relationships. Thus, the present studies are the first to empirically compare people's real-life short-term and long-term relationships across their entire span: What features do they share, what makes each distinct, what desires do they each elicit, and how do they change over time? Across five studies (three in the main text and two in the supplemental materials), we assess the features of people's actual short-term and long-term relationships both within- and between-subjects, and we use these data to inform a model called the Relationship Coordination and Strategic Timing (ReCAST) model. We describe how ReCAST conceptualizes short-term and long-term relationships as a distinction between two relationship trajectories that rise together but plateau and decline at different time points. In so doing, the ReCAST model works to incorporate concepts from evolutionary psychology (e.g., short-term relationships, mating effort) into close relationships perspectives and generates new predictions and questions about human mating.

Close Relationships Perspectives on Relationship Length

The close relationships literature examines the psychological processes that characterize adult romantic relationships[1] and the individual, dyadic, and external forces that predict relationship satisfaction and stability (Berscheid & Reis, 1998; Bradbury & Karney, 2013; Finkel, Simpson, & Eastwick, 2017; Miller, 2015). According to perspectives in this scholarly tradition, two individuals form a relationship gradually as they navigate increases in dyadic interdependence (Braiker & Kelley, 1979; Finkel, Eastwick, Karney, Reis, & Sprecher, 2012; Karney & Bradbury, 1995; Kelley et al., 2003; Levinger, 1980, 1983; Mund, Finn, Hagemeyer, & Neyer, 2016; Murray & Holmes, 2009). Although the process of becoming dependent on another person entails the risks of exploitation and rejection (Holmes & Rempel, 1989; Murray, Holmes, & Collins, 2006), couples who manage to establish and maintain a successful interdependent relationship accumulate substantial belonging and health benefits (Baumeister & Leary, 1995;

Holt-Lunstad, Smith, & Layton, 2010; Sbarra, Law, & Portley, 2011).

Relationship length, therefore, is important to theories of close relationships because establishing interdependence is a time-consuming developmental process; long-term relationships do not emerge out of nowhere. Models of relationship development sometimes depict this process as a stage model, wherein dyads must successfully pass through sequential courtship phases (e.g., small talk, followed by intimate disclosures, followed by a merging of social circles; Knapp, 1978; Levinger & Snoek, 1972; Levinger, 1980). Other models identify a series of turning points or choice points (e.g., first sex, meeting the parents) when the trajectory of the relationship may change for the better or for the worse (Baxter & Bullis, 1986; Gagné & Lydon, 2004; Huston et al., 1981). Still other models describe a set of psychological processes that wax and wane over time; some processes dominate early in the relationship (e.g., sexual desire, impression management) and others prove especially relevant after months or years have passed (e.g., caregiving, role assignments, parenting; Braiker & Kelley, 1979; Clark & Beck, 2011; Fisher, Aron, Mashek, Li, & Brown, 2002; Hazan & Shaver, 1994; Murstein, 1970). All of these models share an emphasis on coordination between partners over time: The length of a mating relationship is a function of how well two people achieve synchrony in their romantic lives and how well they execute relationship maintenance strategies (e.g., sacrificing for the relationship, derogating alternative partners) that sustain enduring interdependence (Rusbult et al., 2001).

Close relationships researchers empirically address relationship length in a number of different ways. Many studies track actual couples longitudinally, examining the factors that predict whether trajectories of satisfaction or commitment change over time and identifying precursors of breakup and divorce (e.g., Finkel, Slotter, Luchies, Walton, & Gross, 2013; Huston, Caughlin, Houts, Smith, & George, 2001; Lavner, Karney, & Bradbury, 2014; McNulty & Russell, 2010; Murray et al., 1996; Neff & Karney, 2005; Rusbult, 1983). In these investigations, lifelong relationships are typically characterized as successes, and relationships that end are those in which couple members encountered too many risk factors and too few protective factors (Halford, Markman, Kline, & Stanley, 2003). Relationship length is also sometimes examined as a moderator in cross-sectional studies, for example, as an indicator of the degree to which a given relationship has progressed along a normative developmental pathway (e.g., Fletcher & Kerr, 2010). But most commonly, close relationships researchers conceptualize relationship length as an outcome—arguably the most important relational outcome—that follows from happy, healthy relationship functioning.

Nevertheless, a criterion for participation in most close relationships studies is that, at a minimum, participants must have settled into the subjective judgment that they are, in fact, part of an "official" couple (as indicated by responding "yes" to items like "do you have a romantic partner?"). Yet, many of people's sexual experiences take place in the context of casual relationships (e.g.,

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[1] Throughout this article, we use the term "romantic relationship" to refer to a broad inclusive category of adult and young-adult human mating relationships that includes everything from long-term, deeply committed marriages to short-term, primarily sexual liaisons.

with friends or acquaintances; Guerrero & Mongeau, 2008; Lehmiller, VanderDrift, & Kelly, 2014; Walsh, Fielder, Carey, & Carey, 2014), and even for well-established relationships, many important events in the relationship precede its official formation (Hunt, Eastwick, & Finkel, 2015). Studies of romantic attraction between unacquainted individuals are frequently informative about initial impression contexts (Berscheid & Walster, 1978) but rarely examine people's real-life relationships beyond a single interaction (for exceptions, see Asendorpf, Penke, & Back, 2011; Eastwick & Finkel, 2008; Sprecher & Duck, 1994). Lost in between the attraction and close relationships literatures is a vast swath of understudied, early stage romantic relationships (for discussions, see Campbell & Stanton, 2014; Eastwick, Finkel, & Simpson, 2017; Graziano & Bruce, 2008; Sunnafrank & Ramirez, 2004). Indeed, well-cited models of this time period (e.g., the post-first-impression, prerelationship-maintenance stages of Knapp's, 1978 model) are nonetheless built on a very small empirical knowledge base (Fox, Warber, & Makstaller, 2013; for exceptions, see Baxter & Wilmot, 1984; Dunleavy & Booth-Butterfield, 2009; Guerrero & Chavez, 2005). Some of these relationships include fledgling liaisons that will eventually grow into stable long-term relationships; others may be sexual relationships that never become official.

In summary, close relationships researchers do an excellent job of explaining why relationships last for shorter or longer amounts of time among the populations they study (i.e., established couples). But their approach is not commonly applied to mating relationships that never yield official couples. As explained in the next section, evolutionary psychologists have done an excellent job of establishing a broader focus on mating relationships beyond long-term romantic couples, but this literature contains other limitations.

The Evolutionary Psychological Short-Term Versus Long-Term Relationship Distinction

The evolutionary psychological literature has long emphasized the distinction between short-term and long-term mating processes. According to classic evolutionary psychological theories (e.g., parental investment theory, Trivers, 1972; sexual strategies theory, Buss & Schmitt, 1993; strategic pluralism theory, Gangestad & Simpson, 2000), people pursue short-term and long-term mates, and they do so by drawing from a menu of short-term and long-term mating strategies that have been honed over the course of human evolutionary history. The term *strategy* is used to connote the goal-directed nature of mating behaviors; that is, theories grounded in the strategy concept suggest that mate-seeking and mate-retention motivations and behaviors will be guided by different psychological adaptations depending on whether people are pursuing the goal of obtaining a short-term or a long-term partner (Buss & Schmitt, 1993; Schmitt & Buss, 1996). These evolutionary models do not require that people are able to consciously verbalize these strategies, merely that the behavior serves a mating goal that varies along a dimension ranging from short-term to long-term.[2]

In this theoretical tradition, the long-term relationship is clearly analogous to the phenomenon that close relationship researchers study. But what exactly is the construct of a short-term relationship? In the opening paragraphs of their influential theoretical

treatise that first introduced the short-term versus long-term mating dimension, Buss and Schmitt (1993) used units of time to establish this distinction and provided illustrative short-term exemplars. They wrote: "Mating relationships can last for a few months, a few days, a few hours, or even a few minutes. Matings of short duration have been given many names—brief affairs, one-night stands, or temporary liaisons" (Buss & Schmitt, 1993, p. 204). Thus, the short-term versus long-term mating dimension is unambiguously grounded in relationship length, but it does not require that the two people had officially recognized themselves as a couple at any point.

In the evolutionary psychological literature, operationalizations of short-term and long-term relationships have followed from this original theoretical articulation. Typically, researchers present simple, brief short-term and long-term relationship descriptions to participants, along with other associated short-term synonyms (e.g., one-night-stands, sexual affairs, flings) and long-term synonyms (e.g., steady dating, committed relationships, marriages; for examples see Fletcher, Tither, O'Loughlin, Friesen, & Overall, 2004; Gildersleeve et al., 2014; Haselton & Gangestad, 2006; Kenrick, Groth, Trost, & Sadalla, 1993; Kenrick, Sadalla, Groth, & Trost, 1990; Li & Kenrick, 2006; Regan, 1998; Schmitt et al., 2004; Schmitt & Buss, 1996). In one common design, participants are asked to evaluate a specific target person (either a stranger or a description of a person) for the purposes of a short-term or long-term relationship. Illustrating this design with respect to short-term relationships specifically, Table 1 catalogs all of the "short-term relationship context" operationalizations in Gildersleeve et al.'s (2014) ovulatory shift meta-analysis. As this table indicates, these operationalizations frequently reference the concepts of time (i.e., relationship length) and sexuality, and terms such as "relationship," "partner," "one-night-stand," and "affair" are common. Despite these (somewhat) diverse operationalizations, these 15 published articles were nevertheless meta-analytically aggregated to form a single short-term relationship construct, consistent with the theory that they share a common conceptual core encapsulated by the phrase "short-term."

The literature on sexual strategies unambiguously suggests that people possess distinct short-term and long-term mating schemas: Participants respond differently to short-term and long-term prompts when asked to imagine an ideal short-term versus long-term partner (e.g., Li & Kenrick, 2006; Regan, 1998; Regan, Levin, Sprecher, Christopher, & Cate, 2000; Stewart, Stinnett, & Rosenfeld, 2000), to identify the strategies they would want to use to initiate a short-term versus long-term relationship (e.g., Schmitt & Buss, 1996), or to report their initial attraction to a partner in the context of a short-term or long-term relationship (Fletcher et al., 2004; Gildersleeve et al., 2014). But we actually know very little about how people's real-life short-term experiences map onto their short-term sche-

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[2] Presumably, short-term strategies should (probabilistically) produce relationships that are shorter than those produced by long-term strategies. But critically, in this article, we do not assess strategies (i.e., behaviors used to acquire a short-term or long-term relationship), nor do we examine individual differences in people's strategic intention to form a short-term or a long-term relationship. Rather, we assess the posited end products of those strategies (i.e., the short-term and long-term relationships themselves) to better understand how these two constructs differ.

Table 1
Common Operationalizations of the Short-Term Construct

Article	Concepts mentioned			Target clarification terms			Exemplar terms		
	Time	Commitment/investment	Sexuality	"Relationship"	"Partner"	"Mate"	"One-night-stand"	"Affair"	"Date"
Cardenas and Harris (2007)	x	x		x					
Gangestad, Simpson, Cousins, Garver-Apgar, and Christensen (2004, 2007)			x		x	x		x	
Haselton and Miller (2006)			x		x		x	x	
Koehler, Rhodes, and Simmons (2002)			x		x				
Little, Jones, and Burriss (2007)	x			x			x	x	x
Little, Jones, et al. (2007)				x					
Lukaszewski and Roney (2009)	x		x		x			x	
Morrison, Clark, Gralewski, Campbell, and Penton-Voak (2010)	x			x			x	x	x
Oinonen, Klemencic, and Mazmanian (2008)							x		
Pawlowski and Jasienska (2005)				x	x				
Penton-Voak et al. (1999)			x	x					
Peters, Rhodes, and Simmons (2008)			x		x				
Peters, Simmons, and Rhodes (2009)			x		x				
Prokosch, Coss, Scheib, and Blozis (2009)	x		x			x			
Puts (2005)			x	x			x		

Note. All 15 articles were aggregated in the Gildersleeve, Haselton, and Fales (2014) meta-analysis as a single "short-term relationship context" construct. xs indicate that the operationalization of "short-term" in that study contained the associated concept, term clarifying the target of attraction, or exemplar term. Time column includes references to time other than the word "short-term."

mas in the first place. Studies in the evolutionary psychological tradition, unlike the close relationships tradition, rarely assess features of people's real-life short-term and long-term relationships; that is, they do not measure short-term versus long-term outcomes at the end of a (real) relationship. This methodological gap raises the possibility that the short-term versus long-term nature of a relationship is knowable in hindsight but not easily knowable as the relationship is evolving.

How might people's real-life short-term experiences and long-term experiences differ exactly? One study in the evolutionary psychological literature has compared real-life one-night-stands and long-term relationships; it found that sexual behaviors in one-night-stands lack the emotional closeness of sexual behaviors in long-term relationships (Jonason, Li, & Richardson, 2010). Other hints come from the sexuality literature on casual sexual relationships (e.g., hook-ups, "friends with benefits;" Paul, Wenzel, & Harvey, 2008; Wesche, Claxton, Lefkowitz, & van Dulmen, 2017), which may be analogous to short-term relationships. Studies that have directly compared these relationships with long-term, committed romantic relationships on psychological constructs have found that participants in long-term relationships communicate more about sex (Lehmiller et al., 2014), report more satisfying and loving sexual experiences (Higgins, Trussell, Moore, & Davidson, 2010; Smiler, Ward, Caruthers, & Merriwether, 2005), and are less likely to experience guilt after sex (Lefkowitz, Vasilenko, & Leavitt, 2016) than in casual relationships (see also Calzo, 2013; Fielder, Carey, & Carey, 2013; Harden, 2014). Importantly, this literature also suggests that casual relationships may not conform to a simple schema whereby people meet a stranger, have a sexual encounter, and then never see him or her again (Bisson & Levine, 2009; Manning, Giordano, & Longmore, 2006). For example, one study assessed participants' recent casual sexual experiences and found that these encounters were much more likely to occur with friends (59%), acquaintances (18%), and exes (18%), than with

strangers (4%; Walsh et al., 2014). In other words, people have casual sex with people they already know, and thus short-term relationships might be longer than what many scholars intuitively believe.

Nevertheless, sexuality studies do not typically examine the time course of people's psychological evaluations of their partners or relationships, so many questions remain about the sequence of meaningful events and the rise and fall of meaningful psychological constructs (e.g., romantic interest, sexual desire, feelings of attachment, the desire to compete for a partner, the desire to carefully evaluate a partner; Clark & Beck, 2011; Hazan & Shaver, 1994; Schmitt & Buss, 1996). One possibility (as depicted by the ReCAST model; see the General Discussion) is that short-term and long-term relationships have to unfold over time before they become differentiated. That is, they are not appreciably distinct in the beginning, as two (eventual) partners become acquainted—romantic interest rises in tandem, but plateaus and declines sooner in short-term than long-term relationships. In essence, ReCAST is consistent with evolutionary models of human mating in positing that short-term and long-term relationships are distinct concepts. But ReCAST differs from these models by depicting short-term and long-term mating processes not as independent strategies but rather as trajectories that differ in their progression along a normative sequence in which sexual desire precedes emotional closeness and pair-bonding. Thus, to fully understand the nature of similarities and differences between short-term and long-term mating relationships, we need to develop a way to study people's actual long-term and short-term relationships with a single method over time. This article pioneers such a method.

The Current Research

This article presents descriptive data on real relationships—data derived from the same short-term and long-term descriptive terms

devised by researchers and used extensively in hundreds of empirical and theoretical articles. Such data is critical in order to determine how the terms "short-term" and "long-term" map onto the actual life experiences that inform participants' judgments when they encounter these terms in a psychological study. This article contains five studies (three in the main text and two in the supplemental materials), all of which contributed to the development of the ReCAST model.[3] We begin with a simple, uncontroversial social–cognitive assumption: People's social memories inform their social judgments (Smith & Zarate, 1990, 1992). In other words, in studies that ask people to consider their ideal short-term or long-term partner or to rate someone's desirability for a short-term or long-term relationship, participants draw from memories of the real-life experiences that they (and perhaps their peers) have had with these different kinds of partners and relationships. Thus, by aggregating these experiences, we take a step closer to understanding the psychological mechanisms that underlie people's judgments and desires with respect to short-term and long-term relationships.

Our methods draw inspiration from classic assessment techniques in the close relationships literature—originally developed by Huston, Surra, Fitzgerald, and Cate (1981)—that chart relationship trajectories (e.g., Loving, Gleason, & Pope, 2009; Surra, 1985). These studies used a procedure that documented changes in participants' commitment to their relationships by asking them to (retrospectively) indicate the dates of important events in their relationship (beginning with the moment they began dating) and to graph the likelihood (on a 0–100 scale) that they would get married to their partner at each of those time points.

The current set of studies expands this procedure to encompass a wider variety of relationships. The major procedural difference is that the "beginning of time" in the current studies is not "official dating" but rather the initial encounter—the moment the two individuals first met (see also Baxter & Bullis, 1986). After shifting the beginning of time backward in this manner, Huston et al.'s (1981) method becomes ideal for the present research question: It continues in the close relationships tradition of documenting people's real-life relationships while also enabling us to capture both (a) the many relationship events that precede the formation of an official couple, and (b) relationships that never become official in the first place (e.g., many short-term relationships). This method is also ideal because we can use it to acquire large samples, enabling well powered tests of the long-term versus short-term relationship differences that are core to evolutionary psychological theorizing.

One potential drawback of retrospective reports is that they can be biased by people's current emotional states (Levine, 1997; Levine & Pizarro, 2004). In the current context, however, there are two reasons why this potential drawback is not as severe as it superficially appears. The first is that memory biases have been demonstrated most commonly when people report on routine or random events (e.g., McFarland, Ross, & DeCourville, 1989); yet Huston et al.'s (1981) method has the advantage of assessing memories of emotional responses to personally significant events, which typically have considerably stronger validity than memories about mundane ones (Brewer, 1988; Levine, 1997).[4] The second is that the basic ingredients of this approach (e.g., participants first reconstruct a timeline of events, and they then recall details about those events) are currently in widespread use in state-of-the-art methods that were specifically designed to reduce recall biases in

the well-being literature (Kahneman, Krueger, Schkade, Schwarz, & Stone, 2004). Given our goal of collecting data on the full time course of a relationship from beginning to end, detailed retrospective accounts are perhaps a better use of resources than asking single participants to report over time on the tens (or even hundreds) of potential partners that they meet in the hopes that one develops into a romantic relationship (see also Metts, Sprecher, & Cupach, 1991).

Study 1

In this first study, we asked a sample of undergraduate students to plot both a short-term and long-term relationship that they had actually experienced (or were currently experiencing; i.e., both short-term and long-term relationships were measured within-subjects). Once again, our procedure plotted the *entire* timeline of the relationship, which typically began with an in-person meeting (or, occasionally, by meeting members of the future partner's social network). Also, we asked our participants to report not on their likelihood of marriage (as in the Huston et al., 1981 procedures) but rather on their level of *romantic interest*, a broad term that refers to positive romantic evaluations experienced by one person with respect to another person of his or her preferred sex (Eastwick & Finkel, 2008). This construct is especially useful because it maintains a similar meaning across the entire time course of a relationship, short or long. Alternative terms that are common in the relationships literature (e.g., relationship satisfaction, commitment) have awkward or unclear meanings at some early stages of relationships.

Method

Participants. We asked 86 undergraduate students (70 female; M_{age} = 20.1 years, SD = 2.1) to complete a 1-hr study for course credit. In terms of race/ethnicity, 6% reported that they were "Black, African American, Caribbean American," 17% were "Asian-American, Asian, Pacific Islander," 33% were "European-American, Anglo, Caucasian," 43% were "Hispanic-American, Latino(a), Chicano(a)," and 1% were "Biracial; Multiracial." Participants' data contributed to analyses regardless of sexual orientation, which they reported by answering the item "I am exclusively attracted to members of the opposite-sex" (M = 8.35, SD = 1.61) on a scale from 1 (*very strongly disagree*) to 9 (*very strongly agree*; Eastwick, Finkel, & Eagly, 2011).

One of the 86 participants was able to report on a short-term but not a long-term relationship because she had never had a long-term

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[3] Our initial (unpublished) sketch of the short-term and long-term trajectories of the ReCAST model (Eastwick et al., 2013) informed the design and analysis plan for Study 1. Our decision to plot trajectories of romantic interest separately by short-term and long-term relationship status was a (successful) confirmatory test of this early iteration of the model, in the sense that these results can be viewed as supporting *a priori* predictions derived from the model. Through the subsequent replications and extensions of the Study 1 data (which were, in order, Study S2, S3, 2a, and 2b), we honed the model into its current form as presented in the General Discussion (see also Eastwick et al., 2017).

[4] Indeed, even in the close relationships domain specifically, memory biases coexist with large amounts of accuracy in memory (e.g., memories about relationship satisfaction correlate at $r = \sim$.70 with actual satisfaction reported several years earlier; Karney & Frye, 2002).

relationship; only her short-term relationship report was retained in the analyses reported below. Eight of the 86 participants were able to report on a long-term but not a short-term relationship because they had never had a short-term relationship ($n = 5$) or because they incorrectly reported on their long-term partner a second time as a short-term partner ($n = 3$); only their long-term relationship reports were retained in the analyses reported below. Above and beyond the $N = 86$, an additional $n = 2$ participants reported that they had never had a short-term or a long-term relationship, $n = 4$ participants began but did not complete the study, and $n = 2$ participants did not follow study directions; these participants were excluded from all analyses.

Procedure and materials. All studies reported in this article were reviewed and approved by the IRB at the University of Texas (Studies 1, S2, S3, and 2a) or the University of California, Davis (Study 2b). The instructions for Study 1 asked participants to reflect on both a short-term and a long-term relationship; order was counterbalanced across participants. These descriptions were taken from the prior evolutionary literature on long-term and short-term mating (e.g., Fletcher et al., 2004; Gildersleeve et al., 2014; Haselton & Gangestad, 2006; Li & Kenrick, 2006; Schmitt & Buss, 1996; see also Table 1), and consistent with this literature, we gave participants little additional information about what these terms meant. Specifically, the instructions for the long-term condition read:

> In this study, you will be asked to reflect on a **long-term, committed romantic relationship**. If you are *currently* involved in a long-term romantic relationship, please think of this person now. If you are *not currently* involved in a long-term romantic relationship, please think of the person with whom you **most recently** had a long-term relationship.

The instructions for the short-term condition read:

> In this study, you will be asked to reflect on a **short-term romantic relationship (e.g., a fling, one-night-stand, or brief affair)**. If you are *currently* involved in a short-term romantic relationship, please think of this person now. If you are *not currently* involved in a short-term romantic relationship, please think of the person with whom you **most recently** had a short-term relationship.

Thus, all participants were reporting on both a real short-term and a real long-term relationship. Participants were instructed to enter the initials of the person about whom they were thinking to reinforce that we wanted them to report on their relationship with one specific partner. If participants had never had a short-term or long-term relationship, the instructions indicated that they should tell the experimenter, who instructed them to report instead on a "crush." These cases are among the excluded reports described earlier.

First, participants were presented with a list of 48 common relationship events (see Table 2) in a macroenabled Excel file. (Copies of Excel files for all studies are available at https://osf.io/ynrwa.) These events were drawn from a pilot study in which participants listed (a) events that they had experienced in their own relationships, (b) events that they believed to be common in relationships, and (c) events that bode well and bode poorly for the future of a relationship (Keneski, 2016). For each event that had occurred in each type of relationship, they were asked to provide the approximate date on which the event occurred (Surra &

Hughes, 1997). Participants could also write in additional events if they wished, although few of them did. The instructions gave participants tips for approximating dates (e.g., how to use one event as a point of reference to approximate a later event), and they were given a paper calendar that spanned several years for assistance. When multiple events occurred on a single day, participants subsequently reported the order in which the events occurred on that day.

Second, participants were presented with a list of the events they had selected and the dates they had indicated for each event, sorted from earliest to most recent. For each event, participants reported their level of *romantic interest* in the partner on a scale from 0 (*you were completely uninterested in this person*) to 100 (*you could not be more interested in this person*).

Third, participants viewed their romantic interest data in graphical form, with dates plotted on the *x*-axis and romantic interest plotted on the *y*-axis (see Figure 1). Participants were asked to inspect their graphs and ensure that they accurately represented how their level of romantic interest had changed over the course of their relationships. If participants wished, they could return to the second step and edit their romantic interest values until they felt that the graph was accurate.

Fourth, participants indicated for each event whether they did or did not experience the desire to engage in 10 different relationship formation and maintenance behaviors. The 10 behaviors (and the associated descriptions presented to participants) were as follows: *strong sexual desire* (that is, you might strongly desire some form of sexual contact [e.g., kissing, making-out, and other sexual contact] with him/her, and/or you might have frequent sexual fantasies about him/her); *strong desire to care* (that is, you might want to help the person feel better when he/she is upset); *strong psychological attachment* (that is, you might want to be around the person frequently, and you might feel distressed when you are separated from them); *strong desire to make a favorable impression* (that is, you might do things to convey that you have positive qualities to another person); *strong desire to carefully evaluate* (that is, you might want to try to figure out what another person is really like and whether you feel positively or negatively about him/her); *strong desire to self-protect* (that is, you might do things to try to minimize the likelihood that another person would reject you or hurt you emotionally); *strong desire to compete* (that is, you might try to intimidate or outdo other individuals of your same gender who are trying to compete with you for the attention of the person you're romantically interested in); *strong desire to self-promote* (that is, you might try to exaggerate the extent to which you have qualities that will make you desirable to him/her); *strong desire to self-disclose* (that is, you might feel as though you want to tell the other person close, intimate details about you and your personal life); and *strong desire to receive self-disclosure* (that is, you might feel as though you want the other person to tell you close, intimate details about him/her and his/her personal life).

These behaviors are core to theoretical models common in the close relationships and evolutionary psychological literatures: Sexual desire, attachment, and caregiving are three central constructs in the Hazan and Shaver (1994) model of the pair-bond; impression management, evaluation, and self-protection are three central constructs in the Clark and Beck (2011) model of relationship deliberation/implementation; competition and self-promotion are two central constructs in Schmitt and Buss (1996; inspired by

Table 2

Incidence (Percentage), Order, and Romantic Interest Corresponding to 48 Relationship Events—Study 1

Event	Percentage			Order			Romantic interest		
	LT	ST	z	LT	ST	t	LT	ST	t
Early events									
First met the person	100.0%	100.0%	.00	1.3	1.5	−1.01	34.2	41.0	−1.47
First spent time together one-on-one	100.0%	97.4%	1.49	5.4	5.7	−.56	61.7	63.6	−.44
First went out together in a group (e.g., a party)	96.5%	84.6%	2.62**	6.2	5.3	.99	57.1	52.6	.96
First went out on a short date (e.g., coffee/drinks)	89.4%	70.5%	3.03**	8.4	8.6	−.22	69.8	66.4	.75
First went out on a long date (e.g., dinner, dancing, movie)	96.5%	61.5%	5.54***	11.5	10.9	.76	77.9	74.7	.80
First flirted	97.6%	97.4%	.09	4.0	4.3	−1.07	53.4	59.8	−1.55
First told the person you were romantically interested	95.3%	73.1%	3.93***	9.3	9.1	.24	76.9	76.6	.08
Sexual behaviors									
First held hands/touched	97.6%	88.5%	2.34*	9.3	8.3	1.82	73.7	70.6	.84
First kiss	95.3%	92.3%	.79	10.5	9.4	1.73	78.2	75.0	.81
First make-out	94.1%	88.5%	1.29	13.1	11.3	2.58*	82.1	77.4	1.27
First oral sex	63.5%	39.7%	3.04**	20.4	14.3	4.45***	82.6	69.8	2.26*
First sexual intercourse	67.1%	41.0%	3.33***	21.3	16.4	3.20**	92.0	73.5	4.40***
First spent the night together (i.e., one of you spent the night)	75.3%	55.1%	2.71**	21.0	13.3	5.57***	86.7	76.8	2.48*
Social networks									
First told friend(s) about the new relationship	95.3%	79.5%	3.07**	12.4	10.4	2.55*	78.6	69.3	2.35*
First told parent(s) about the new relationship	77.6%	35.9%	5.39***	16.1	13.3	2.21*	82.8	75.8	1.42
You first met his/her friend(s)	91.8%	83.3%	1.64	8.4	6.3	1.83	54.5	48.5	1.09
He/she first met your friend(s)	91.8%	75.6%	2.81**	8.8	7.1	1.46	58.8	52.3	1.19
You first met his/her parent(s)	82.4%	35.9%	6.05***	15.9	14.3	.98	75.4	62.2	2.01*
He/she first met your parent(s)	76.5%	26.9%	6.33***	16.5	12.5	2.20*	77.7	66.7	1.49
Escalating/deescalating relationship									
I first said "I love you"	80.0%	21.8%	7.43***	21.7	22.8	−.86	91.6	91.4	.05
He/she first said "I love you"	82.4%	21.8%	7.74***	21.0	22.5	−1.02	89.7	90.5	−.15
Became exclusive (i.e., not dating other people)	90.6%	41.0%	6.72***	14.7	13.8	.80	86.5	85.5	.26
First called him/her my "boyfriend/girlfriend"	90.6%	38.5%	7.00***	15.8	14.8	.82	86.8	82.1	1.25
Found out he/she was dating other people	29.4%	28.2%	.17	28.3	19.5	3.31**	38.5	35.5	.34
I told him/her I was dating other people	11.8%	20.5%	−1.52	33.8	20.3	4.29***	33.5	25.5	.90
Broke-up	63.5%	50.0%	1.74	28.0	22.8	3.94***	48.9	28.9	3.28**
Got back together	27.1%	10.3%	2.73**	28.7	25.0	1.71	81.1	71.0	1.64
Moved in together	5.9%	.0%		22.4			86.3		
Got engaged	2.4%	1.3%		11.5	24.0		99.0	98.0	
Got married	.0%	.0%							
Future plans									
First planned a future activity together more than 1 month in advance (e.g., vacation, concert)	68.2%	21.8%	5.94***	23.9	19.1	3.06**	88.3	80.8	1.38
First took an overnight trip together	54.1%	7.7%	6.35***	26.6	17.2	3.37***	90.0	83.0	1.16
First made a major purchase together (e.g., pet, car, house, cell phone plan)	9.4%	1.3%		29.8	14.0		90.0	.0	
First discussed the possibility of marriage	41.2%	10.3%	4.47***	28.7	20.4	3.54**	90.9	97.5	−.98
First tried a novel activity together (i.e., something one or both of you had never done before)	56.5%	16.7%	5.25***	23.6	18.4	2.34*	87.4	79.5	1.37

(table continues)

Table 2 (continued)

Event	Percentage			Order			Romantic interest		
	LT	ST	z	LT	ST	t	LT	ST	t
Negative events									
First major disagreement/fight	87.1%	48.7%	5.27***	23.4	19.1	3.80***	61.8	49.1	2.42*
First lied to him/her	60.0%	32.1%	3.57***	22.1	17.0	2.96**	59.1	52.2	.96
First caught him/her in a lie	57.6%	33.3%	3.11**	23.7	18.6	3.01**	56.6	40.0	2.59*
He/she was jealous for the first time	65.9%	42.3%	3.02**	21.1	19.7	.93	67.8	60.1	1.32
I was jealous for the first time	71.8%	42.3%	3.80***	21.6	18.5	2.05*	69.5	59.8	1.75
I was first annoyed with him/her	75.3%	53.8%	2.87**	22.4	16.7	4.84***	62.6	46.1	3.20**
He/she first cancelled plans without justification	32.9%	26.9%	.84	23.6	17.2	2.92**	65.9	43.1	2.99**
I first cancelled plans because I did not want to spend time with him/her	25.9%	24.4%	.22	23.8	18.1	2.40*	54.2	40.6	1.43
He/she was too pushy sexually	25.9%	19.2%	1.01	24.9	17.1	2.71*	63.1	47.7	1.99
He/she became clingy	32.9%	21.8%	1.59	24.6	19.1	2.42*	56.3	41.6	1.94
He/she first tried to control me	22.4%	12.8%	1.59	28.7	17.6	4.16***	54.5	22.6	2.91**
Additional events (write-in events)									
Event #1	3.5%	2.6%		33.0	19.5		51.7	50.0	
Event #2	.0%	1.3%			20.0			.0	
Today									
IF this romantic relationship HAS ENDED, please enter the date that you BROKE UP FOR THE LAST TIME:	50.6%	55.1%	−.58	30.3	20.7	6.13***	44.0	29.0	2.27*
Please enter TODAY'S DATE (REQUIRED):	85.9%	74.4%	1.85	31.8	21.9	8.41***	40.8	36.5	.42

Note. Percentage columns indicate the percentage of participants reporting that the event occurred at some point during their current or most recent long-term (LT) and short-term (ST) relationships. Order columns indicate the order in which the event occurred (i.e., 3 = the third event) on average if the event was selected. Romantic interest columns indicate the average level of romantic interest (on a 0–100 scale) experienced by participants at the event if the event was selected. Z and t tests indicate the significance of the LT vs. ST difference within each of the three sets of columns. No hypothesis test is reported in cases where LT and ST combined $n < 20$.
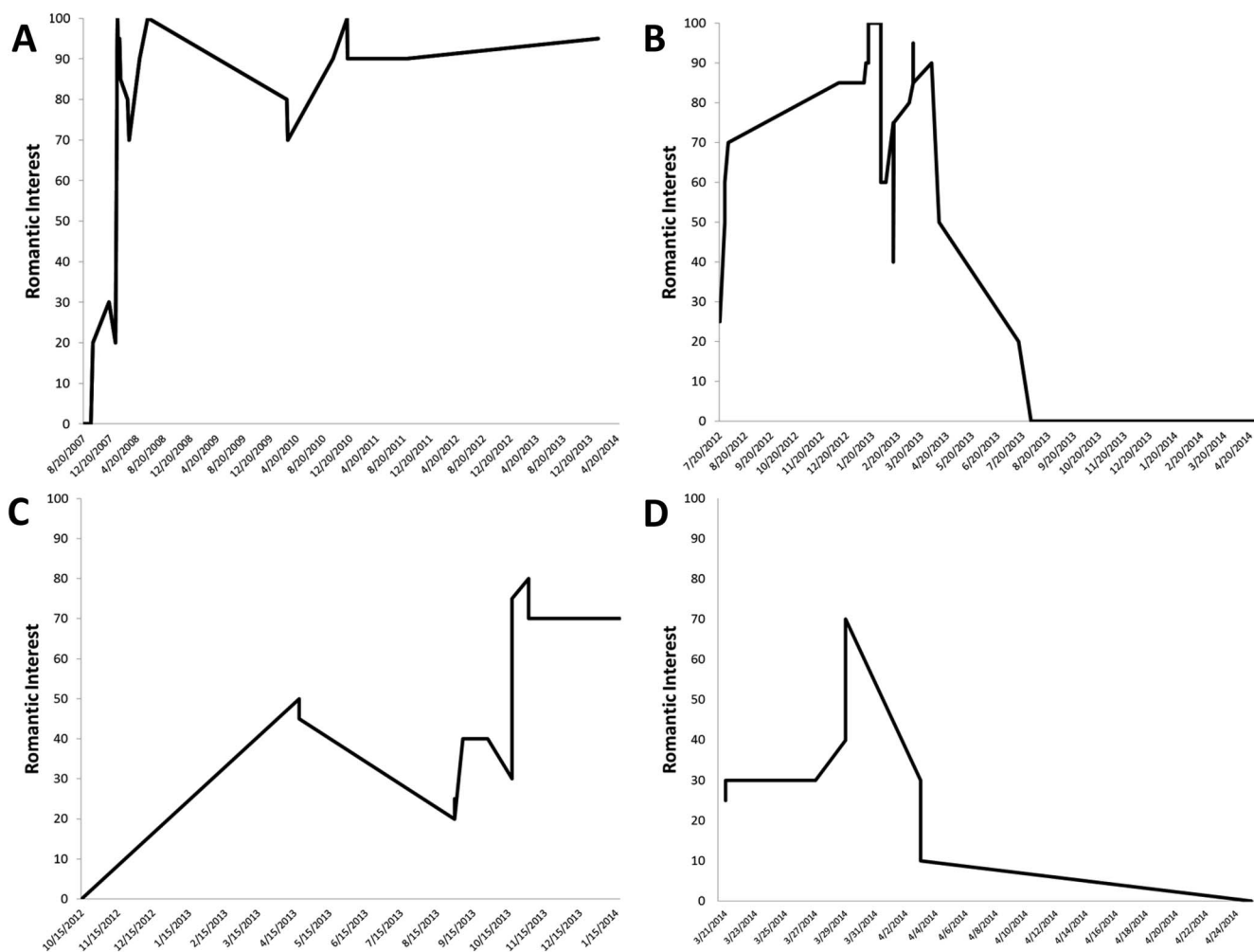* $p < .05$.   ** $p < .01$.   *** $p < .001$.

Figure 1. Study 1 actual participant data. Panel A depicts Participant 135's report of a current long-term relationship. Panel B depicts Participant 522's report of an ended long-term relationship. Panel C depicts Participant 127's report of a current short-term relationship. Panel D depicts Participant 128's report of an ended short-term relationship.

sexual strategies theory, Buss & Schmitt, 1993); and the desire to self-disclose and receive self-disclosure are two central constructs in Sprecher, Treger, and Wondra (2013; inspired by social penetration theory, Altman & Taylor, 1973). Participants responded whether they did or did not (using a binary yes or no indicator) experience strong sexual desire for each the events they selected, followed by strong desire to care, and so forth until they had reported on all 10 constructs. We used this binary variable instead of a continuous scale because pilot testing suggested that asking participants to make fine-grained distinctions on so many constructs increased the likelihood that they would become fatigued and disengage. This step concluded the Excel file.

Fifth and finally, participants completed a set of individual difference measures on Qualtrics. Included among these measures was an indicator of whether the long-term and short-term relationships for which the participant had provided the graphical data were *ongoing* (n = 40 for long-term, 18 for short-term) or had *ended* (n = 45 for long-term, 60 for short-term). (A third response

option to this question was "I have never had a long-term (short-term) relationship," and all cases where participants selected this option are among the excluded reports described earlier.) Given the possibility that people might exhibit positive biases when rating their current partner relative to expartners, we split all analyses on evaluative measures (e.g., romantic interest, the 10 relationship initiation and maintenance behaviors) by ongoing versus ended relationship status.

Results

In this section, we first review the timing of long-term and short-term relationships; do long-term relationships last longer than short-term relationships, and is the association between days and events consistent across long-term and short-term relationships (i.e., do events occur at approximately the same "pace" in days for both types of relationships)? Second, we report the incidence, timing, and romantic interest levels corresponding to the 48

relationship events separately for long-term and short-term relationships. Third, we examine romantic interest trajectories over time (using event number as the measure of time) separately for long-term and short-term relationships. Fourth, we calculate the extent to which desires to engage in the 10 relationship initiation and maintenance behaviors differed between long-term and short-term relationships, on average. All the Results sections in this article share this organizational structure because we initially conducted these analyses on the Study 1 dataset and replicated the analytic strategy across the subsequently collected data sets. Throughout all Results sections, we present effect size d calculated using the formula $2t/\sqrt{(N-2)}$, unless otherwise noted. All studies report all data collected on the Excel files; we also collected other individual differences measures that varied from study-to-study and have not been analyzed.

To maximize clarity and statistical power, we aggregated data across all studies in the article for five subsidiary analyses. First, we present the primary romantic interest findings with literal time (in days) instead of event number on the x-axis; second, we examine how men and women differ in terms of romantic interest trajectories and relationship initiation and maintenance behaviors; third, we calculate how different relationship subtypes differ from each other (e.g., one-night-stands vs. flings; with strangers vs. with friends); fourth, we describe how the relationship initiation and maintenance behaviors change over time; and fifth, we explore the locations where people originally met these partners. These aggregated analyses are presented at the end of the Study 2 Discussion section.

Timing of long-term and short-term relationships. First, we calculated the average duration (in days) of long-term and short-term relationships in an attempt to verify that short-term relationships were indeed shorter than long-term relationships (i.e., a manipulation check). For ongoing relationships, when duration was calculated from the first event to the current date, long-term relationships ($M = 1{,}464$ days, $SD = 1{,}515$, $Mdn = 966$) were longer than short-term relationships ($M = 760$ days, $SD = 1{,}270$, $Mdn = 254$), $z = 3.20$, $p = .001$, $r = .42$. (Given the substantial skew in values measured in days in this article, all hypothesis tests on them were conducted with the Mann–Whitney U test, and effect sizes are calculated as $r = z/\sqrt{N}$; Pallant, 2007). When duration was calculated from the first event that unmistakably indicates dyadic romantic interest—the first kiss—to the current date, long-term relationships ($M = 845$ days, $SD = 715$, $Mdn = 677$) were again longer than short-term relationships ($M = 316$ days, $SD = 604$, $Mdn = 50$), $z = 3.88$, $p < .001$, $r = .52$.

For relationships that had ended, when duration was calculated from the first event to the date the couple broke up for the last time, long-term relationships were again longer ($M = 1{,}007$ days, $SD = 780$, $Mdn = 888$) than short-term relationships ($M = 699$ days, $SD = 1{,}017$, $Mdn = 329$), $z = 3.17$, $p = .002$, $r = .34$. When duration was calculated from the first kiss to the final breakup date, long-term relationships ($M = 582$ days, $SD = 454$, $Mdn = 539$) were longer than short-term relationships ($M = 140$ days, $SD = 209$, $Mdn = 65$), $z = 5.54$, $p < .001$, $r = .63$.

The variability in these time estimates was substantial, with large SDs emerging for all of the means calculated above and all of the distributions exhibiting right skew (e.g., for six out of the eight means reported above, 1 SD below the mean would be a negative value in days). In principle, one could correct against this skew by log transforming the values, but that would defeat the purpose of using an intuitive metric of time (i.e., days). Fortunately, these data contain an alternative and still intuitive metric of time: the number of events that the participant indicated had occurred. For relationships that were ongoing, long-term relationships ($M = 29.7$ events, $SD = 6.4$) included more events than short-term relationships ($M = 17.6$ events, $SD = 7.3$), $t(56) = 6.36$, $p < .001$, $d = 1.70$, and for relationships that had ended, long-term relationships ($M = 32.1$ events, $SD = 7.0$) included more events than short-term relationships ($M = 22.2$ events, $SD = 7.6$), $t(103) = 5.53$, $p < .001$, $d = 1.35$.

Also, we conducted a survival analysis predicting breakup from event number (coded continuously in order from 1—the first event from the list of 48 that the participant had experienced in that relationship—to the last event each participant experienced) and relationship type (long-term or short-term). The effect of relationship type was significant and large, $\beta = .83$, Wald's chi-square $= 48.57$, $p < .001$ (see Figure 2). According to this model, most relationships would still be ongoing at the 15th event (i.e., 97% of long-term relationships and 85% of short-term relationships). This gap widens substantially by the 25th event, at which point 85% of long-term relationships remain ongoing but only 42% of short-term relationships remain. By the 35th event, just under half of the long-term relationships remain, whereas almost all of the short-term relationships would have ended.

In summary, participants' long-term from short-term relationships could be differentiated on the basis of time measured in days and measured in number of events. Given the better distributional properties of the events (vs. days) time metric, and given that the events data exhibited equivalence across participants (e.g., nearly all participants have a seventh event, but only a handful of participants have an event on Day 46), we use event number as a metric of time in the analyses that follow. Nevertheless, if the association between events and days differed systematically between short-term and long-term relationships, any comparisons between short-term and long-term relationships using the events metric would
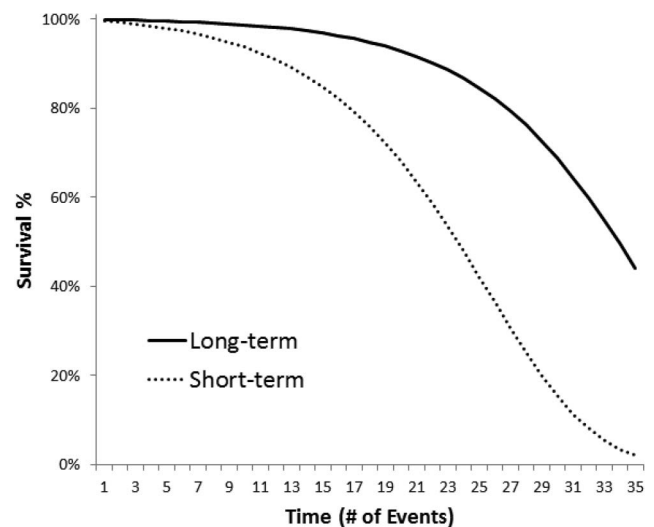

Figure 2. Study 1 model-predicted breakup timing for long-term (solid line) and short-term (dotted line) relationships.

potentially be invalid or misleading. We present evidence that the mapping between days and events is similar for short-term and long-term relationships across all studies in the Appendix. We also present results for romantic interest that depict days in the *x*-axis in the Aggregated Results Across Studies section.

Event types. Table 2 displays the percentage of long-term and short-term relationships in which each event occurred, the order that the event appeared in time, and the average level of romantic interest that participants reported for the event. (Participants only contributed data to the latter two variables if the event in question was selected.) Given that long-term relationships included approximately 50% more events than short-term relationships overall, it comes as little surprise that nearly all events occurred more often in long-term than short-term relationships (percentage columns), often significantly so. Thus, it also comes as little surprise that, when a given event did occur, it tended to occur later (order columns) in long-term than short-term relationships (i.e., because long-term relationships contain more events than short-term relationships, long-term event order values must be higher, on average).

Early events tended not to differ between long-term and short-term relationships in terms of the order in which the events occurred and the level of romantic interest (romantic interest columns) that participants experienced. The first significant long-term versus short-term relationship difference in romantic interest emerged at approximately the 11th event ("first told friend(s) about the new relationship"). This trend suggests that it may be quite difficult for individuals to differentiate between a long-term and a short-term relationship until many early events (e.g., flirting, spending time together one-on-one, disclosing one's romantic interest, making out) have taken place. This pattern is explored in greater detail in the following section.

Table S1 presents the romantic interest levels for each event separately for ongoing and ended relationships.

Romantic interest over time. Figure 3 depicts the average romantic interest trajectories for long-term and short-term relationships for relationships that were ongoing (Panel A) and had ended (Panel B). For these trajectories, event is numbered idiosyncratically for each participant (e.g., Participant 101's fourth long-term event was "first flirted," whereas Participant 105's fourth long-term event was "first went out together in a group [e.g., a party]"). In both panels, the long-term and short-term trajectories initially overlap considerably; significant differences do not emerge until the 16th event for ongoing relationships and the 14th event for relationships that had ended. For the first 15 events ($M = 530$ days in real time, $Mdn = 190$), the average effect size difference between long-term and short-term current relationships was $d = 0.00$, and for relationships that had ended, the average effect size difference was $d = 0.21$. Individuals may not initially differentiate between partners that turn out to be long-term or short-term on the basis of how romantically interested they are in those partners.

Differences between the short-term and long-term romantic interest trajectories depicted in Figure 3 emerged with time: From Event 16 until the half-life of the short-term relationships (i.e., Event 17 for ongoing relationships and 21 for ended relationships), participants experienced more romantic interest in long-term than in short-term relationships by $d = .60$ for ongoing relationships and $d = .73$ for ended relationships. Also, the peak level of romantic interest for ongoing relationships was higher for long-
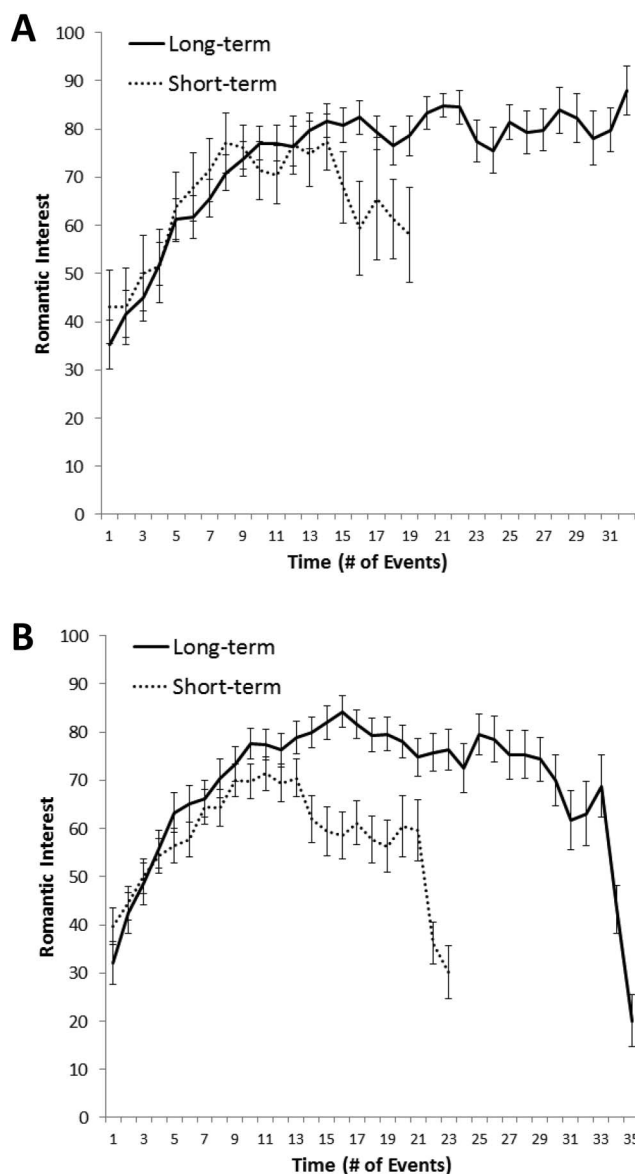
Figure 3. Study 1 means of romantic interest are plotted for each event in long-term (solid line) and short-term (dotted line) relationships that are current (panel A) or have ended (panel B) for all participants who reached that event (e.g., the value 70.5 corresponding to the 13th event in the short-term trajectory in panel B is the average of the romantic interest values at the 13th event provided by all participants who reported on an ended short-term relationship that lasted until the 13th event). The number of events reported varied across participants, so the trajectories depicted here (and in all subsequent figures) were calculated up until the point that less than half of the original N remained (e.g., $n = 60$ participants contributed to the first event of short-term relationships in panel B, and the trajectory was calculated up to and including event 21, $n = 30$, because by Event 22 only $n = 27$ participants remained). To provide a comprehensive picture of the most recent events in these relationships, the second-to-last and last means depicted for each trajectory correspond to the second-to-last and last (generally "today's date") events reported by all participants who contributed to the trajectory (e.g., Event 22 on the short-term trajectory in panel B depicts all these participants' second-to-last events, and Event 23 on the short-term trajectory in panel B depicts all these participants' last event). Bars depict 1 *SE* above and below the mean.

term ($M = 96.1$, $SD = 7.5$) than for short-term ($M = 86.6$, $SD = 16.0$) relationships, $t(56) = 3.11$, $p = .003$, $d = .83$, and the peak level of romantic interest for relationships that had ended was higher for long-term ($M = 96.0$, $SD = 8.4$) than for short-term ($M = 86.2$, $SD = 15.4$) relationships, $t(103) = 3.84$, $p < .001$, $d = .76$. These differences exhibited large effect sizes. In short, romantic interest seems to rise at approximately the same rate in short-term and long-term relationships as partners get to know each other, but in time, the average long-term trajectory "breaks away" from the average short-term trajectory and continues to rise, ultimately reaching a higher peak.

Relationship initiation and maintenance behaviors. The percentage of events for which participants indicated that they experienced the desire to engage in 10 relationship initiation and maintenance behaviors are displayed in Table S2 (ongoing relationships) and Table 3 (ended relationships). Overall, participants commonly experienced the desire to care, to make a favorable impression, and to carefully evaluate their partners (i.e., ~50% of events), and they experienced the desire to compete least often (i.e., ~20% of events). Power is quite low for ongoing relationships, but two differences did emerge: The desire to care for the partner was stronger in long-term than short-term relationships ($d = .63$), and the desire to self-protect was stronger in short-term than long-term relationships ($d = -.52$). In ended relationships, four desired behaviors were more common in long-term than in short-term relationships: The desire to care for the partner ($d = .38$), psychological attachment ($d = .76$), the desire to self-disclose ($d = .87$), and the desire to receive self-disclosure ($d = .71$). These differences are consistent with the possibility that the activation of the attachment-behavioral system (Hazan & Shaver, 1994) and the pursuit of intimacy through self-disclosure (Altman & Taylor, 1973; Reis & Shaver, 1988) characterize long-term more than short-term relationships. The other long-term versus short-term differences in ended relationships were small (ds ≤ .16) and not statistically significant.

Discussion

Study 1 offers the first direct empirical comparison between people's actual short-term and long-term relationship trajectories, where "short-term" and "long-term" are defined using the descriptions that pervade the literature on human mating. In some ways, short-term and long-term relationships were distinct, but in other ways, they were similar. Especially notable was the fact that participants' experiences did not initially differ between short-term and long-term relationships, and the intercepts and slopes of romantic interest were similar in both types of relationships. At approximately the 15th event, romantic interest continued to rise in long-term relative to short-term relationships, and ultimately, long-term relationships reached a higher peak of romantic interest than did short-term relationships. These data are consistent with the possibility that short-term relationships are relationships that fail to progress beyond the early initiation stages, perhaps because one or both partners discovered things about each other that caused romantic interest to cease rising or to plummet.

In terms of the desire to engage in specific relationship initiation and maintenance behaviors, four were more prominent in long-term than short-term relationships (caregiving, attachment, self-disclosure, and receiving self-disclosure); a fifth (self-protection) was more common in short-term relationships, but only in the small sample of ongoing relationships. Five others (sexual desire, impression management, careful evaluation, competition, and self-promotion) revealed no differences between short-term and long-term relationships.

Long-term relationships were certainly longer than short-term relationships in these data. Yet the short-term relationships might not exactly correspond to an intuitive definition of "short:" Participants' average short-term relationships seemed to last for many months. However, bear in mind that the beginning of time in these models is the initial meeting, not the initial sexual experience. Indeed, although casual sexual encounters between acquainted individuals are common, sexual experiences between unacquainted

Table 3

Percentage of Events Characterized by 14 Relationship Initiation and Maintenance Behaviors in Ended Relationships

Initiation and maintenance behaviors	Study 1				Study 2a				Study 2b			
	LT	ST	t	d	LT	ST	t	d	LT	ST	t	d
Sexual desire	36.2%	39.4%	−.78	−.15	53.4%	51.3%	.51	.09	53.2%	52.3%	.25	.04
Desire to care	58.0%	47.2%	1.91†	.38	60.5%	38.4%	4.09***	.70	56.2%	50.8%	1.21	.18
Psychological attachment	42.9%	24.9%	3.84***	.76	50.2%	27.7%	4.35***	.74	49.5%	35.3%	3.33***	.50
Desire to make a favorable impression	51.6%	51.9%	−.08	−.02	57.3%	52.5%	1.01	.17	56.0%	58.0%	−.51	−.08
Desire to carefully evaluate	48.9%	45.3%	.80	.16	50.7%	32.9%	3.75***	.64	42.9%	42.0%	.21	.03
Desire to self-protect	33.3%	30.9%	.53	.10	27.3%	28.4%	−.25	−.04	24.7%	22.6%	.72	.11
Desire to compete	19.5%	19.1%	.10	.02	12.3%	16.1%	−1.04	−.18	17.3%	18.0%	−.22	−.03
Desire to self-promote	32.3%	33.5%	−.25	−.05	24.4%	30.3%	−1.29	−.22	27.7%	27.1%	.18	.03
Desire to self-disclose	34.0%	18.5%	4.44***	.87	27.0%	18.3%	2.06*	.35	24.4%	21.5%	.84	.13
Desire to receive self-disclosure	40.5%	24.6%	3.62***	.71	33.7%	23.2%	2.07*	.35	28.5%	25.0%	.93	.14
Desire to evaluate (sex partner)									23.0%	28.1%	−1.60	−.24
Desire to evaluate (parent)									12.5%	5.7%	2.68**	.40
Desire to impress (sex partner)									26.3%	29.2%	−.78	−.12
Desire to impress (parent)									9.2%	5.1%	1.66†	.25

Note. Columns indicate the percentage of participants who reported at a given event that that they desired to engage in each behavior during their most recent ended long-term (LT) and short-term (ST) relationships. *T* tests indicate the significance of the LT vs. ST difference.
† $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

strangers are a rare subset of casual relationships (e.g., approximately 4% of young adult casual sexual experiences, Walsh et al., 2014). Thus, it seems plausible that most short-term relationships take place between two people who already know each other to some degree, and thus, the entire duration of the relationship is much longer than the (shorter) sexual phase of the relationship. (We explore a notoriously short version of a short-term relationship—the one-night-stand—as well as stranger relationship trajectories later in the section Aggregated Results Across Studies.)

Another notable feature of these data was that very few participants said that they were currently involved in a short-term relationship (i.e., 23%). A second study (Study S2, see online supplementary materials) documented an even smaller percentage of participants reporting a short-term relationship that was ongoing (8%) rather than ended (92%). In other words, it is relatively rare for people to be in a relationship that they would call "short-term" at the time. This finding could simply reflect the fact that short-term relationships are shorter and thus harder to catch in progress, or it could mean that the short-term nature of a relationship often becomes clear only with the benefit of hindsight (Perper & Cornog, 2000). Consistent with this latter interpretation, romantic interest trajectories for ongoing short-term and long-term relationships in Study S2 were nearly identical. Importantly, this lopsided distribution of breakup status for short-term relationships creates a confound: It is plausible that people are more likely to recall positive experiences about ongoing relationships than ended relationships (e.g., they are more likely to recall feelings of attachment during an initial sexual experience when thinking about a current partner than an ex). Therefore, unless the data are analyzed separately by breakup status (as we did in Study 1 above), breakup status could create the illusion that short-term and long-term relationships differ. To eliminate this confound entirely, we examined only ended relationships in Study 2a and 2b.

Studies 2a and 2b

Study 1 (a university subject pool population) consisted mostly of young women, so it is possible that some of that our results were driven by the youth or gender composition of this sample. Thus, Studies 2a and 2b replicated Study 1 in an older, potentially more sexually experienced, sample of both male and female Mechanical Turk workers. Study 2b was a preregistered replication (https://osf.io/pa3bz/) of Study 2a and included alternative instructions prompted by reviewer concerns.

Studies 2a and 2b differed from Study 1 in four substantive ways. First, we implemented a screener questionnaire to ensure that all participants had experienced an ended short-term and long-term relationship (and could therefore be randomly assigned to one or the other condition). Second, all participants reported on an ended relationship so that we would not need to split the dataset to avoid the breakup status confound. Third, participants completed four additional desired-behavior measures in Study 2b that were not included in any of the other studies; these four desired behaviors were designed to directly tap the distinction between mating effort and parental effort, which is sometimes used in parallel with short-term and long-term mating in the evolutionary psychological literature (Gangestad & Simpson, 2000). Fourth, we added additional relationship type categorization variables (e.g., one-night-stand, fling) that will be used in the Aggregated Results

Across Studies section later in this article. The procedure also included a few tweaks intended to maximize compliance for the Internet-based sample.

Method

Participants. Participants learned of the study through Mechanical Turk, which is an online crowdsourcing marketplace where workers receive money to complete surveys and other online tasks called HITs. Participants (Study 2a: $N = 143$, 71 female, $M_{age} = 30.9$ years, $SD = 8.1$; Study 2b: $N = 187$, 93 female, $M_{age} = 32.7$ years, $SD = 8.6$) received $1.50 (Study 2a) or $2.00 (Study 2b) to complete an approximately 30-min (Study 2a) or 30 min–45 min (Study 2b) HIT ". . . which includes a Microsoft Excel component in which you will be asked to download one Excel file, complete part of the survey within that file, and then resave and upload the file." Participants were also told that they would need to enable macros in Excel in order to complete the survey in the file; the instructions indicated that they should not accept the HIT if they did not feel comfortable downloading files onto their computer.

In terms of race/ethnicity, 4% (Study 2a) and 6% (Study 2b) of participants reported that they were "Black, African American, Caribbean American," 8%/7% were "Asian-American, Asian, Pacific Islander," 77%/78% were "European-American, Anglo, Caucasian," 4%/6% were "Hispanic-American, Latino(a), Chicano(a)," and 7%/3% were "Biracial; Multiracial." As in Study 1, participants' data contributed to analyses regardless of sexual orientation which was assessed using the same item and scale (Study 2a $M = 7.58$, $SD = 2.41$; Study 2b $M = 7.74$, $SD = 2.19$). Above and beyond the total N reported above, $n = 2$ (Study 2a) and $n = 6$ (Study 2b) participants began but did not complete the study, $n = 4/4$ participants did not follow directions (e.g., gave values for all events rather than just the events that had occurred), $n = 7/7$ reported on relationships that were ongoing rather than ended (contrary to instructions), and $n = 29/31$ participants completed the study but uploaded unreadable, blank, or corrupted Excel files; these participants were excluded from all analyses.

Procedure and materials. Beyond a handful of cosmetic differences designed to encourage participants to carefully read the instructions and complete all items, the procedure and materials for this study were largely identical to Study 1. The following differences were substantive.

Screener questionnaire. We implemented a screener questionnaire to reduce the need to eliminate unusable "crush" participants (i.e., participants who never had a relationship fitting the short-term or long-term description and were excluded from analyses in Study 1). The screener questionnaire included two yes/no questions. In Study 2a, these questions were "Have you ever had a short-term romantic relationship (e.g., a one-night stand, a fling, a brief affair) that is now over (i.e., you and that person are no longer seeing each other, and are broken up)?" and "Have you ever had a long-term, committed, romantic relationship that is now over (i.e., you and that person are no longer seeing each other, and are broken up)?" As described in Study 1, these short-term and long-term relationship descriptors borrowed language commonly used in studies examining the short-term versus long-term distinction.

In Study 2b, we altered the instructions to address a reviewer concern that our use of the term "romantic relationship" (both in

the screener and in the partner nomination instructions described below) might have caused participants in the short-term condition to recall relationships that were actually more similar to long-term relationships than the short-term mating concept as depicted in evolutionary psychological theorizing. To address this possibility, we asked participants in this study to recall short-term and long-term "experiences." Furthermore, we introduced the concepts to participants by adapting the first two paragraphs of Buss and Schmitt (1993), which is the first theoretical articulation of the terms "short-term" and "long-term" as mating-relevant concepts in the evolutionary psychological literature, and which remains dominant today. Our adaptation was:

> All known societies have formal marriage alliances between men and women. Long time durations, however, do not characterize all mating experiences: They can last for a few months, a few days, a few hours, or even a few minutes. In other words, mating experiences can range from *short-term mating*, on one end, to *long-term mating*, on the other.

After reading this passage, the participants encountered two yes/no screener questions: "Have you ever had a short-term mating experience that is now over (i.e., you and that person are no longer seeing each other, and are broken up)?" and "Have you ever had a long-term mating experience that is now over (i.e., you and that person are no longer seeing each other, and are broken up)?"

In both Study 2a and 2b, participants were informed that they were ineligible for the survey if they responded "no" to both questions. Participants who responded "yes" to both questions were randomly assigned to either the short-term condition or the long-term condition. If participants responded "yes" to only the short-term relationship question (Study 2a $n = 9$; Study 2b $n = 18$), they were assigned to the short-term condition; if participants responded "yes" to only the long-term relationship question (Study 2a $n = 11$; Study 2b $n = 5$), they were assigned to the long-term condition. The exclusion of these participants was not planned a priori, but reviewers rightly noted that the inclusion of these 43 participants undermines random assignment. Thus, they are excluded from the analyses reported below.

The screener questionnaire in both studies also asked participants to identify as male or female. This question was linked to a quota in Qualtrics to ensure that we collected data from an approximately equal number of men and women.

Relationship nomination instructions. In Study 2a, participants were asked to "reflect on the most recent short-term romantic relationship (e.g., a fling, one-night-stand) you have had that has ended" or "reflect on the most recent long-term, committed romantic relationship that has ended" ($n = 82$ short-term, $n = 61$ long-term, between-subjects). In Study 2b, participants again read the passage above adapted from Buss and Schmitt (1993) and were asked to "reflect on the most recent short-term mating experience you have had that has ended" or "reflect on the most recent long-term mating experience you have had that has ended" ($n = 82$ short-term, $n = 105$ long-term, between-subjects). The instructions in Study 2b concluded with "Please think of the person with whom you most recently had this type of experience and report his/her initials below."

Additional relationship initiation and maintenance behaviors. In Study 2b, participants completed four additional desired behaviors that were designed to be sexual- and parenting-specific versions of the desire to carefully evaluate and desire to make a favorable impression behaviors assessed in all studies. The four new measures were: *strong desire to carefully evaluate as a sex partner* (that is, you might want to try to figure out whether the other person has attributes that would make him/her a good or bad sex partner); *strong desire to carefully evaluate as a parent* (that is, you might want to try to figure out whether the other person has attributes that would make him/her a good or bad mother or father); *strong desire to present themselves as someone who would be a good sex partner* (that is, you might do things to convey to the other person that you have attributes that would make you a good sex partner); and *strong desire to present themselves as someone who would be a good parent* (that is, you might feel as though you want to show another person that you would make a good mother or father). Participants in Study 2b completed these four measures after completing the original 10 desired-behavior measures.

Relationship type questions. After completing the Excel task, participants categorized their relationship as (a) an experience with an expartner (Study 2a: $n = 22$ long-term, 3 short-term; Study 2b: $n = 37$ long-term, 9 short-term); (b) a one-night-stand (Study 2a: $n = 0$ long-term, 25 short-term; Study 2b: $n = 1$ long-term, 3 short-term); (c) an anonymous experience (Study 2a and 2b: $n = 0$ long-term, 0 short-term); (d), a fling (Study 2a: $n = 2$ long-term, 45 short-term; Study 2b: $n = 3$ long-term, 28 short-term); and (e) a brief affair (Study 2a: $n = 1$ long-term, 32 short-term; Study 2b: $n = 2$ long-term, 20 short-term). Participants also reported whether the relationship partner was (a) a friend (Study 2a: $n = 32$ long-term, 31 short-term; Study 2b: $n = 55$ long-term, 40 short-term); (b) an acquaintance (Study 2a: $n = 16$ long-term, 37 short-term; Study 2b: $n = 38$ long-term, 27 short-term); and/or (c) a stranger (Study 2a: $n = 14$ long-term, 20 short-term; Study 2b: $n = 20$ long-term, 19 short-term) when they "became romantically and/or sexually involved." For both sets of responses, participants could select as many categories as they wished. (Relationships will be presented separately by these categories in conjunction with Study S3 data in the section Aggregated Results Across Studies below.)

Results

Timing of long-term relationships and short-term relationships. Again, we calculated the average duration of these (ended) long-term and short-term relationships. When duration was calculated from the first event to the date the couple broke up for the last time, long-term relationships were longer than short-term relationships in Study 2a (long-term $M = 1,435$ days, $SD = 1,369$, $Mdn = 849$; short-term $M = 739$ days, $SD = 2,348$, $Mdn = 153$), $z = 6.03$, $p < .001$, $r = .51$, and in Study 2b (long-term $M = 1,606$ days, $SD = 1,886$, $Mdn = 1,014$; short-term $M = 595$ days, $SD = 894$, $Mdn = 229$), $z = 6.48$, $p < .001$, $r = .47$. When duration was calculated from the first kiss to the final breakup date, long-term relationships were longer than short-term relationships in Study 2a (long-term $M = 1,192$ days, $SD = 1,247$, $Mdn = 704$; short-term $M = 399$ days, $SD = 1,196$, $Mdn = 63$), $z = 7.38$, $p < .001$, $r = .63$, and in Study 2b (long-term $M = 1,298$ days, $SD = 1,354$, $Mdn = 884$; short-term $M = 371$ days, $SD = 713$, $Mdn = 115$), $z = 7.94$, $p < .001$, $r = .59$. In terms of the number of events reported, long-term relationships included more events than short-term relationships in Study 2a (long-term $M = $

33.0 events, $SD = 6.5$; short-term $M = 20.6$ events, $SD = 8.1$), $t(141) = 9.84$, $p < .001$, $d = 1.66$, and in Study 2b (long-term $M = 33.7$, $SD = 6.9$; short-term $M = 25.2$ events, $SD = 7.0$), $t(185) = 8.26$, $p < .001$, $d = 1.22$.

Event types. Table 4 (Study 2a) and Table 5 (Study 2b) display the percentage, order, and romantic interest values for each event in long-term and short-term relationships that contained each event. Some differences are evident relative to Study 1; given the older age of the Study 2 sample, it is not surprising that a greater proportion of them had experienced the high investment events in their long-term relationships, such as making a major purchase (9% in Study 1 vs. 33% in Study 2a and 38% in Study 2b), moving in together (6% vs. 31% and 43%), and getting engaged (2% vs. 21% and 19%). Once again, long-term relationships contained more events than short-term relationships, and thus, a given event tended (a) to be more likely to occur in long-term than short-term relationships and (b) to be more likely to occur later in the event sequence in long-term than short-term relationships. As in Study 1, event order was much less likely to differ between short-term and long-term relationships for early events than for later events. Finally, although romantic interest was consistently higher in long-term than short-term relationships, these differences only reliably achieved significance for the sexual behaviors in Study 2a.

Romantic interest over time. Figure 4 (Study 2a) and Figure 5 (Study 2b) depict the average romantic interest trajectories for (ended) long-term and short-term relationships. The Study 2a trajectory was nearly identical to the ended relationship trajectories in Study 1: Significant differences do not emerge consistently until the 11th event ($M = 312$ days in real time, $Mdn = 35$), and the average effect size difference between long-term and short-term ended relationships for Events 1 through 11 was only $d = 0.07$. After this point, significant differences begin to emerge as romantic interest in long-term relationships trends higher than short-term relationships; the effect size difference from Event 12 through 20 (i.e., the half-life of the short-term relationships) was $d = .83$. In Study 2b, significant differences first appear at the 13th event (325 days in real time, $Mdn = 39$); the effect size difference for Events 1 through 13 was only $d = .10$, and the effect size difference from Event 14 through 25 (i.e., the half-life of the short-term relationships) was $d = .48$. Ultimately, the peak level of romantic interest was higher for long-term than short-term relationships in Study 2a (long-term $M = 97.5$, $SD = 5.2$; short-term $M = 87.2$, $SD = 20.8$), $t(141) = 3.79$, $p < .001$, $d = .64$, and (nonsignificantly) in Study 2b (long-term $M = 96.4$, $SD = 12.4$; short-term $M = 93.8$, $SD = 10.2$), $t(178) = 1.49$, $p = .138$, $d = .22$.

Relationship initiation and maintenance behaviors. The same four desired relationship initiation and maintenance behaviors that were more common in long-term relationships than short-term relationships in Study 1 (i.e., desire to care, psychological attachment, desire to self-disclose, and desire to receive self-disclose) were more common in long-term than short-term relationships in Study 2a (see Table 3). Study 2a also suggested that the desire to carefully evaluate was more likely to be present in long-term than short-term relationships. In Study 2b, these differences were smaller, and only psychological attachment was substantially higher in long-term than short-term relationships (see Table 3). Study 2b also revealed that the parenting behaviors (i.e., the desire to evaluate the partner as a parent and the desire to make a favorable impression as a parent) were more likely to be present

in long-term than short-term relationships. In general, the pattern of desired-behavior differences across studies suggests that processes related to attachment and parenting may be especially prominent in long-term relationships.

Discussion

Studies 2a and 2b largely replicated the findings of Study 1: Short-term and long-term relationships begin at approximately the same level of romantic interest and rise at the same rates. But as the relationship becomes sexual, romantic interest in short-term relationships levels out and falls, presaging an end to the relationship that arrives sooner than in long-term relationships. With respect to the 10 desired behaviors that we assessed across studies, the most consistent difference was that people experienced more attachment to their partners in long-term than short-term relationships. This effect is consistent with the possibility that the activation of the attachment-behavioral system is a hallmark feature of long-term relationships (Hazan & Shaver, 1994). The desire to engage in caregiving, self-disclosure, and receiving self-disclosure behaviors also tended to be more common in long-term than short-term relationships, but this pattern was somewhat less consistent across studies. (In the section Aggregated Results Across Studies, we meta-analyze all 10 short-term vs. long-term desired-behavior differences across studies and test whether differences across studies reflect between-study heterogeneity or simply sampling variability.) Finally, the parenting behaviors that we only collected in Study 2b were more likely to characterize long-term than short-term relationships.

Overall, the data across studies have suggested that short-term and long-term relationships are partially overlapping and partially nonoverlapping experiences. Intriguingly, given that short-term and long-term relationships tended to exhibit considerable overlap as romantic interest was rising, the *initiation* of short-term and long-term relationships may not require distinct sets of strategies when people are meeting and getting to know each other (cf. Li et al., 2013). Rather, it is possible that people simply initiate relationships, and whether that relationship ends up becoming a short-term or long-term relationship is an emergent property of the two people involved, the way they interact with and affect each other, and myriad other situational forces (Joel, Eastwick, & Finkel, 2017; Mund et al., 2016).

Aggregated Results Across Studies (Ended Relationships Only)

In this section, we combined all relevant data points across all studies (Study 1, S2, 2a, 2b, and S3) to maximize power and to reduce the proliferation of figures (e.g., presenting all the relationship initiation and maintenance behavior trajectories across studies would have required more than 50 graphs). First, we present the romantic interest trajectories with time (in days) on the *x*-axis; second, we conduct analyses separately by sex; third, we separate romantic interest trajectories for different relationship types (e.g., one-night-stand, fling, etc.); fourth, we depict the trajectories of the relationship initiation and maintenance behaviors over time; and fifth, we conducted exploratory analyses on the context in which people originally met their short-term, long-term, and affair partners. (Note that Study S3 asked some participants to report on an "affair" instead of a short-term or long-term relationship.)

Table 4

Incidence (Percentage), Order, and Romantic Interest Corresponding to 48 Relationship Events—Study 2a

Event	Percentage			Order			Romantic interest		
	LT	ST	z	LT	ST	t	LT	ST	t
Early events									
First met the person	100.0%	100.0%	.00	1.4	1.2	1.03	46.0	48.0	−.33
First spent time together one-on-one	100.0%	98.8%	.87	5.0	4.5	.99	66.0	68.0	−.42
First went out together in a group (e.g., a party)	91.8%	73.2%	2.82**	7.9	6.1	1.58	63.2	59.6	.60
First went out on a short date (e.g., coffee/drinks)	91.8%	62.2%	4.03***	8.0	6.9	1.14	71.4	71.1	.04
First went on a long date (e.g., dinner, dancing, movie)	93.4%	61.0%	4.42***	10.6	10.3	.36	79.2	76.7	.54
First flirted	96.7%	97.6%	−.30	3.5	3.5	−.08	59.1	60.6	−.28
First told the person you were romantically interested	96.7%	81.7%	2.74**	7.7	6.7	1.60	80.5	73.8	1.57
Sexual behaviors									
First held hands/touched	98.4%	86.6%	2.51*	7.5	7.4	.12	78.4	73.0	1.19
First kiss	98.4%	97.6%	.33	10.3	7.8	4.51***	84.3	75.8	2.07*
First make-out	96.7%	93.9%	.77	11.9	9.1	4.70***	85.8	77.4	2.15*
First oral sex	83.6%	74.4%	1.32	17.2	11.4	6.66***	91.9	80.7	3.30**
First sexual intercourse	90.2%	87.8%	.44	17.8	12.2	6.43***	91.9	84.0	2.42*
First spent the night together (i.e., one of you spent the night)	93.4%	67.1%	3.78***	17.2	13.5	4.19***	90.1	80.6	2.39*
Social networks									
First told friend(s) about the new relationship	93.4%	65.9%	3.75***	13.0	12.2	.92	84.1	80.9	.86
First told parent(s) about the new relationship	86.9%	30.5%	7.16***	17.9	15.3	1.75	87.3	79.3	1.95
You first met his/her friend(s)	95.1%	59.8%	4.72***	9.7	8.9	.55	70.0	63.6	1.03
He/she first met your friend(s)	86.9%	48.8%	4.88***	12.4	9.4	1.93	73.3	71.0	.37
You first met his/her parent(s)	91.8%	24.4%	8.57***	19.4	16.3	1.58	80.6	70.7	1.51
He/she first met your parent(s)	78.7%	22.0%	7.33***	22.1	16.9	2.73**	83.1	72.9	1.67
Escalating/deescalating relationship									
I first said "I love you"	90.2%	25.6%	8.20***	20.1	18.3	1.26	91.5	93.1	−.47
He/she first said "I love you"	88.5%	28.0%	7.68***	20.2	18.7	1.15	91.3	87.0	1.17
Became exclusive (i.e., not dating other people)	93.4%	34.1%	7.53***	14.5	16.4	−1.54	85.9	85.6	.07
First called him/her my "boyfriend/girlfriend"	91.8%	32.9%	7.47***	15.9	17.7	−1.58	86.5	84.3	.46
Found out he/she was dating other people	36.1%	25.6%	1.50	30.4	17.0	5.37***	35.0	41.2	−.59
I told him/her I was dating other people	27.9%	20.7%	1.11	30.6	14.0	5.26***	30.3	53.2	−2.13*
Broke-up temporarily	34.4%	23.2%	1.66	28.6	23.8	2.20*	54.8	36.2	1.95
Got back together	32.8%	19.5%	2.03*	30.0	26.1	1.68	77.8	67.6	1.23
Moved in together	31.1%	3.7%	5.10***	26.7	23.0	1.37	88.9	89.7	−.07
Got engaged	21.3%	2.4%		28.4	29.0		89.4	99.5	
Got married	18.0%	2.4%		30.2	30.5		90.4	99.5	
Future plans									
First planned a future activity together more than 1 month in advance (e.g., vacation, concert)	78.7%	13.4%	8.61***	22.8	17.4	2.25*	84.5	83.6	.12
First took an overnight trip together	67.2%	12.2%	7.52***	24.6	22.6	.94	85.5	89.5	−.70
First made a major purchase together (e.g., pet, car, house, cell phone plan)	32.8%	3.7%	5.30***	29.1	30.7	−.54	84.4	73.3	.92
First discussed the possibility of marriage	57.4%	6.1%	7.56***	27.7	24.4	1.33	86.0	85.4	.08
First tried a novel activity together (i.e., something one or both of you had never done before)	52.5%	14.6%	5.40***	24.9	19.1	2.34	86.2	81.0	.88

Table 4 (*continued*)

Event	Percentage			Order			Romantic interest		
	LT	ST	z	LT	ST	t	LT	ST	t
Negative events									
First major disagreement/fight	88.5%	35.4%	6.74***	25.8	21.9	3.02**	58.6	39.2	2.93**
First lied to him/her	41.0%	22.0%	2.74**	22.2	15.4	2.50*	62.2	55.3	.82
First caught him/her in a lie	42.6%	25.6%	2.38*	28.3	20.1	4.07***	50.0	34.9	1.62
He/she was jealous for the first time	41.0%	22.0%	2.74**	23.6	20.1	1.55	69.7	59.3	1.22
I was jealous for the first time	54.1%	22.0%	4.40***	23.0	18.3	1.90	70.7	65.2	.67
I was first annoyed with him/her	70.5%	50.0%	2.60**	22.2	18.7	2.26*	65.7	45.7	3.21**
He/she first cancelled plans without justification	31.1%	17.1%	2.22*	27.3	20.1	2.78**	63.6	62.8	.09
I first cancelled plans because I did not want to spend time with him/her	19.7%	15.9%	.67	27.7	23.8	1.15	53.3	33.8	1.88
He/she was too pushy sexually	24.6%	8.5%	2.98**	26.3	24.6	.41	48.5	41.6	.42
He/she became clingy	26.2%	24.4%	.28	25.6	20.0	2.18*	64.1	35.6	3.12**
He/she first tried to control me	31.1%	18.3%	2.01*	26.9	21.7	2.24*	46.8	28.4	1.84
Additional events (write-in events)									
Event #1	8.2%	1.2%		31.8	20.0		48.4	.0	
Event #2	1.6%	.0%		33.0			95.0		
Event #3									
IF this romantic relationship **HAS ENDED**, please enter the date that you									
BROKE UP FOR THE LAST TIME:	100.0%	98.8%	.23	31.5	19.5	9.58***	29.7	21.4	1.67
Please enter TODAY'S DATE (REQUIRED):	100.0%	100.0%	.00	33.0	20.6	9.84***	22.0	10.7	2.25*

Note. Percentage columns indicate the percentage of participants reporting that the event occurred at some point during their current or most recent long-term (LT) and short-term (ST) relationships. Order columns indicate the order in which the event occurred (i.e., 3 = the third event) on average if the event was selected. Romantic interest columns indicate the average level of romantic interest (on a 0–100 scale) experienced by participants at the event if the event was selected. Z and t tests indicate the significance of the LT vs. ST difference within each of the three sets of columns. No hypothesis test is reported in cases where LT and ST combined $n < 20$.
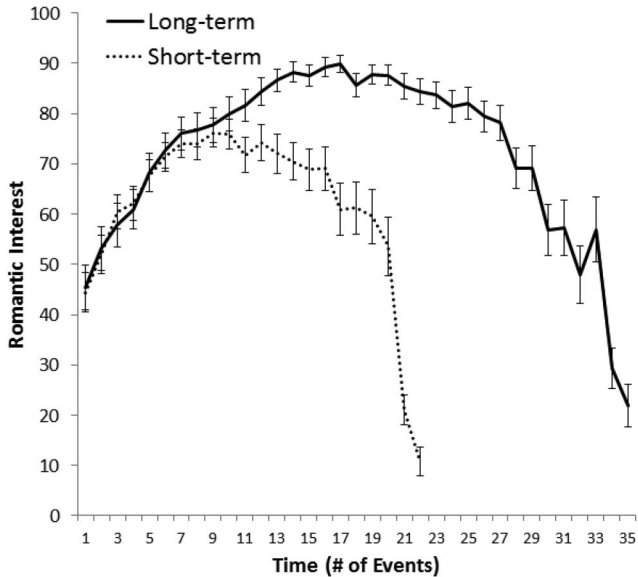* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 5

Incidence (Percentage), Order, and Romantic Interest Corresponding to 48 Relationship Events—Study 2b

Event	Percentage			Order			Romantic Interest		
	LT	ST	z	LT	ST	t	LT	ST	t
Early events									
First met the person	100.0%	100.0%	.00	1.4	1.4	−.15	52.3	51.9	.07
First spent time together one-on-one	98.1%	98.8%	−.37	5.2	5.2	−.01	69.6	71.4	−.40
First went out together in a group (e.g., a party)	88.6%	76.8%	2.14*	7.3	6.6	.75	67.7	62.6	1.02
First went out on a short date (e.g., coffee/drinks)	88.6%	82.9%	1.11	7.4	8.3	−1.45	76.5	75.7	.20
First went out on a long date (e.g., dinner, dancing, movie)	92.4%	79.3%	2.61**	11.7	12.3	−.76	82.1	82.8	−.23
First flirted	98.1%	97.6%	.25	3.5	3.3	.71	64.5	65.5	−.23
First told the person you were romantically interested	94.3%	92.7%	.44	8.3	6.8	2.29*	81.0	79.5	.47
Sexual behaviors									
First held hands/touched	98.1%	96.3%	.74	7.4	7.4	.08	79.0	79.9	−.24
First kiss	97.1%	97.6%	−.18	9.4	8.8	1.31	84.6	85.2	−.21
First make-out	97.1%	90.2%	1.99*	11.0	10.1	1.98*	87.1	86.1	.35
First oral sex	87.6%	75.6%	2.14*	16.4	14.0	2.85**	90.4	88.1	.80
First sexual intercourse	90.5%	81.7%	1.75	17.1	14.4	3.18**	91.7	89.1	.91
First spent the night together (i.e., one of you spent the night)	91.4%	79.3%	2.38*	17.4	14.0	3.63***	90.4	90.0	.13
Social networks									
First told friend(s) about the new relationship	97.1%	80.5%	3.74***	13.4	13.4	−.03	84.3	85.3	−.29
First told parent(s) about the new relationship	89.5%	48.8%	6.13***	18.5	16.3	2.21*	85.9	82.1	.97
You first met his/her friend(s)	89.5%	72.0%	3.09**	9.3	9.6	−.31	67.6	60.2	1.35
He/she first met your friend(s)	87.6%	70.7%	2.88**	10.8	9.6	.96	73.7	60.2	2.67**
You first met his/her parent(s)	79.0%	45.1%	4.80***	20.1	17.8	1.71	80.4	72.8	1.38
He/she first met your parent(s)	82.9%	40.2%	6.03***	22.2	18.2	2.95**	80.2	81.8	−.32
Escalating/deescalating relationship									
I first said "I love you"	88.6%	37.8%	7.29***	20.3	18.9	1.19	93.0	93.1	−.04
He/she first said "I love you"	92.4%	40.2%	7.69***	20.2	18.3	1.73	90.7	87.0	1.01
Became exclusive (i.e., not dating other people)	96.2%	58.5%	6.35***	15.9	15.1	.89	89.3	85.0	1.40
First called him/her my "boyfriend/girlfriend"	94.3%	53.7%	6.50***	16.8	15.5	1.38	89.6	87.2	.79
Found out he/she was dating other people	35.2%	37.8%	−.36	31.6	18.7	6.35***	36.3	38.0	−.20
I told him/her I was dating other people	21.9%	28.0%	−.97	31.7	18.3	4.50***	37.3	36.5	.08
Broke-up temporarily	52.4%	28.0%	3.35***	30.0	25.0	3.15**	45.8	27.1	2.40*
Got back together	49.5%	22.0%	3.87***	31.2	25.6	3.32**	76.0	60.8	2.37*
Moved in together	42.9%	11.0%	4.77***	26.2	21.7	1.79	91.3	83.3	1.27
Got engaged	19.0%	7.3%	2.30*	29.7	26.2	1.18	89.7	84.2	.60
Got married	14.3%	4.9%		32.2	24.0		96.5	91.3	
Future plans									
First planned a future activity together more than 1 month in advance (e.g., vacation, concert)	71.4%	26.8%	6.06***	23.3	20.4	1.56	89.8	87.0	.67
First took an overnight trip together	67.6%	24.4%	5.87***	25.0	22.3	1.57	92.5	88.2	1.11
First made a major purchase together (e.g., pet, car, house, cell phone plan)	38.1%	7.3%	4.85***	29.3	26.7	.98	86.1	77.5	.90
First discussed the possibility of marriage	51.4%	15.9%	5.03***	27.9	22.2	3.05**	89.3	82.6	1.19
First tried a novel activity together (i.e., something one or both of you had never done before)	50.5%	25.6%	3.45***	24.8	19.6	2.44*	86.2	80.2	1.09

Table 5 (continued)

Event	Percentage			Order			Romantic Interest		
	LT	ST	z	LT	ST	t	LT	ST	t
Negative events									
First major disagreement/fight	86.7%	68.3%	3.04**	25.8	21.3	4.75***	62.4	54.1	1.56
First lied to him/her	48.6%	26.8%	3.02**	23.9	18.8	2.28*	57.5	55.7	.23
First caught him/her in a lie	51.4%	28.0%	3.22**	25.6	19.8	3.15**	49.0	60.7	−1.42
He/she was jealous for the first time	52.4%	46.3%	.82	22.3	17.0	3.15**	62.8	59.7	.47
I was jealous for the first time	56.2%	40.2%	2.16*	24.9	20.4	2.62*	66.6	60.9	.88
I was first annoyed with him/her	81.0%	65.9%	2.35*	22.5	19.0	2.70**	58.9	51.9	1.32
He/she first cancelled plans without justification	37.1%	18.3%	2.82**	26.8	20.5	2.36*	50.1	53.5	−.33
I first cancelled plans because I did not want to spend time with him/her	31.4%	24.4%	1.06	29.8	21.4	3.71***	44.8	33.9	1.28
He/she was too pushy sexually	20.0%	12.2%	1.42	29.0	23.6	1.61	46.2	38.2	.63
He/she became clingy	27.6%	28.0%	−.07	25.2	20.9	2.04*	51.3	43.5	.90
He/she first tried to control me	40.0%	29.3%	1.52	28.3	22.3	3.12**	42.6	40.8	.22
Additional events (write-in events)									
Event #1	1.9%	1.2%		25.5	31.0		90.0	1.0	
Event #2	1.0%	1.2%		34.0	33.0		.0	1.0	
Event #3	.0%	1.2%			36.0			35.0	
Event #4	.0%	1.2%			37.0			20.0	
IF this romantic relationship **HAS ENDED**, please enter the date that you									
BROKE UP FOR THE LAST TIME:	100.0%	100.0%	.00	32.5	23.9	8.56***	31.6	32.2	−.10
Please enter TODAY'S DATE (REQUIRED):	100.0%	100.0%	.00	33.7	25.3	8.26***	19.1	20.2	−.21

Note. Percentage columns indicate the percentage of participants reporting that the event occurred at some point during their current or most recent long-term (LT) and short-term (ST) relationships. Order columns indicate the order in which the event occurred (i.e., 3 = the third event) on average if the event was selected. Romantic interest columns indicate the average level of romantic interest (on a 0–100 scale) experienced by participants at the event if the event was selected. Z and t tests indicate the significance of the LT vs. ST difference within each of the three sets of columns. No hypothesis test is reported in cases where LT and ST combined $n < 20$.
* $p < .05$. ** $p < .01$. *** $p < .001$.

Figure 4. Study 2a means of romantic interest are plotted for each event in long-term (solid line) and short-term (dotted line) relationships that have ended for all participants who reached that event. See Figure 3 caption for additional details on graphing procedure. Bars depict 1 *SE* above and below the mean.

Given that ongoing short-term, long-term, and affair relationships tended not to differ from each other in Study 1, S2, and S3, the aggregated analyses presented below only examine ended relationships. In essence, the analyses reported in this section enhance the possibility of documenting differences across relationship type (i.e., by using all available *N* to maximize power) while
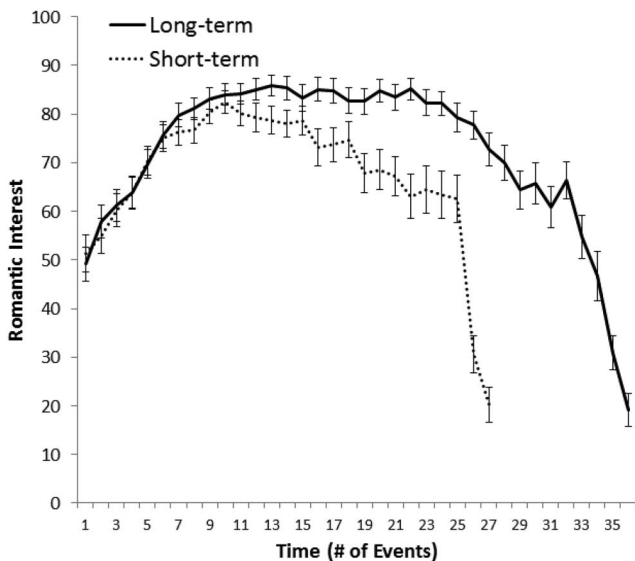
Figure 5. Study 2b means of romantic interest are plotted for each event in long-term (solid line) and short-term (dotted line) relationships that have ended for all participants who reached that event. See Figure 3 caption for additional details on graphing procedure. Bars depict 1 *SE* above and below the mean.

simultaneously avoiding the ongoing versus ended relationship confound.

Time (in days) on the *x*-axis. As discussed above, there are several advantages to using event number instead of day as the metric of time: Only a small fraction of participants provide data on a given day (but all participants generally provide data for a given event number prior to breakup), and relationship length measured in days is highly skewed. But we can nevertheless depict days on the *x*-axis by substituting each event number with the average number of days elapsed between that event and the first event (e.g., in long-term relationships, the average time elapsed at Event 10 is 317 days, so we can use the value "317" instead of "10" on the *x*-axis in the graph). Figure 6 displays the romantic interest trajectories for all ended long-term and short-term relationships using this strategy; note that this depiction requires error bars for both the *y*-axis (i.e., the standard error for romantic interest averages) *and the x-axis* (i.e., the standard error for the time averages). This graph generally approximates the romantic interest graphs in each study: Long-term and short-term trajectories rise together, but short-term trajectories appear to stall and cease rising when romantic interest reaches the low 70s (around Day 300). Graphs using the median number of days (instead of the mean) reveal similar trajectories except that short-term relationships peak at approximately Day 40 while long-term trajectories continue to rise.

Sex differences. Trajectories of romantic interest for long-term and short-term relationships are plotted separately for men and women in Figure 7. For the most part, these trajectories did not
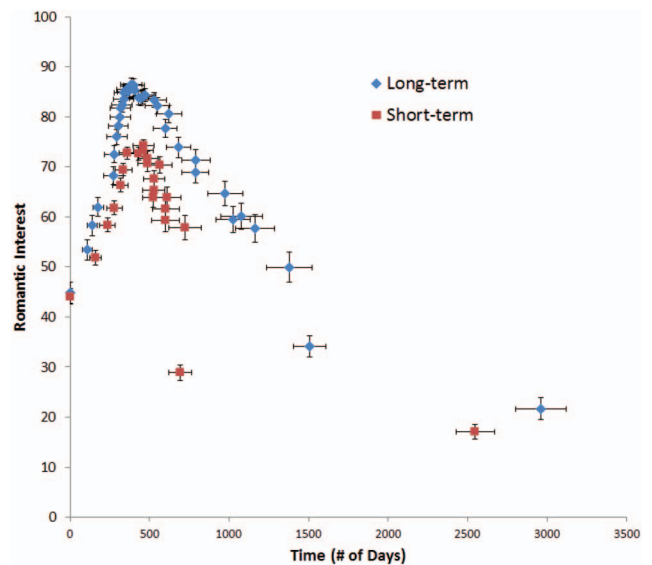
Figure 6. Means of romantic interest across all studies are plotted by days (average number of days for each event) in ended long-term (blue diamonds) and ended short-term (red square) relationships for all participants who reached that event. Trajectories were calculated up until the point that less than half of the original *N* remained (see Figure 3 caption for additional details). The second-to-last and last means depicted for each trajectory correspond to the second-to-last and last (generally "today's date") events reported by all participants who contributed to the trajectory. Bars depict 1 *SE* above and below the mean for both romantic interest (y bars) and time (x bars). See the online article for the color version of this figure.
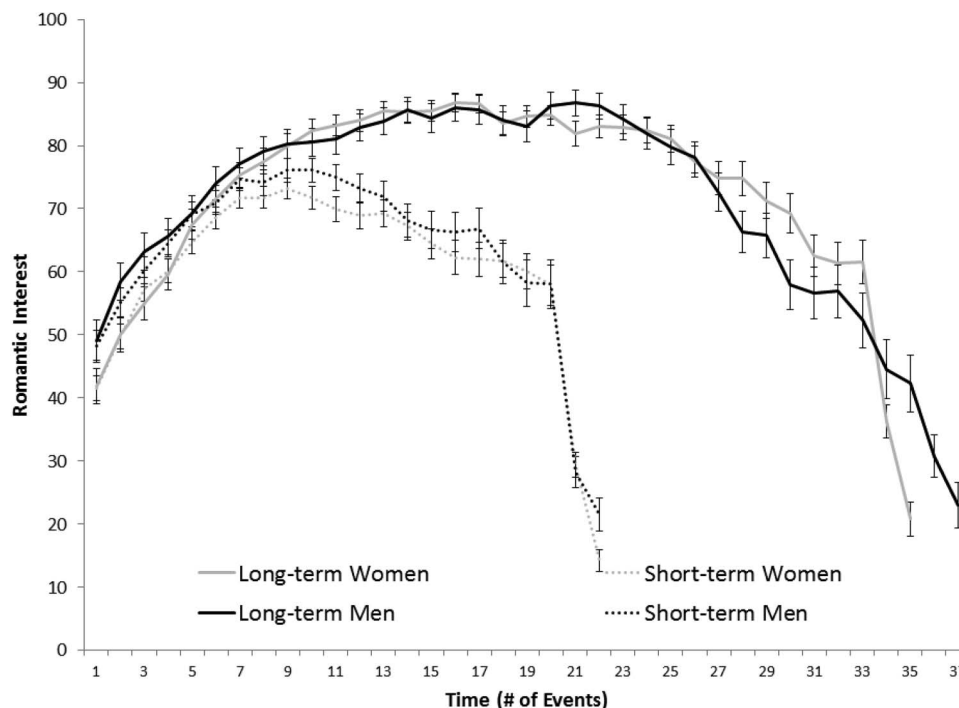
Figure 7. Means of romantic interest across all studies are plotted for each event in ended long-term (solid line) and ended short-term (dotted line) relationships for men (black lines) and women (gray lines) for all participants who reached that event. See Figure 3 caption for additional details on graphing procedure. Bars depict 1 *SE* above and below the mean.

differ by sex: Short-term romantic interest rises and falls for both sexes, whereas long-term romantic interest continues to increase and reaches a high peak for both sexes. The overall romantic interest sex difference was small for long-term ($d = -.09$) and short-term relationships ($d = .17$) when calculated across the entire trajectory. To the extent that any sex difference emerged at all, men tended to report more romantic interest than women very early (rather than later) in the sequence of events (e.g., for the first two events, long-term sex difference $d = .23$, short-term $d = .18$). This sex difference is consistent with suggestions that women are initially more romantically selective than men (Finkel & Eastwick, 2009; Fletcher et al., 2014) and further suggests that, if the relationship continues, women "make up" this difference.[5]

A handful of small-to-medium sized sex differences emerged on the desired behavior variables. Across 20 *t* tests (10 desired behaviors for long-term and 10 desired behaviors for short-term relationships), the following five sex differences were significant: Men experienced more sexual desire than women in long-term relationships ($d = .44$) and short-term relationships ($d = .32$), men experienced more desire to self-promote in long-term ($d = .26$) and short-term ($d = .25$) relationships, and men experienced more desire to compete in short-term relationships ($d = .24$). For the affair relationships in Study S3, sex differences in these three domains (i.e., sexual desire, self-promotion, and competition) were similar in effect size but (given the much smaller sample) only one sex difference was significant (sexual desire $d = .62$). Also, in long-term relationships in Study 2b, men reported more desire to evaluate as a sex partner ($d = .58$) and impress as a sex partner

($d = .45$). In summary, several sex differences did emerge, and all of them are reflected in the broader literature on sex differences such that men typically exhibit greater sexual desire (Baumeister, Catanese, & Vohs, 2001), competitiveness (Wilson & Daly, 1985), and self-promotion (Rudman, 1998) than women.

Relationship subtypes. In Studies 2a, 2b, and S3, participants further categorized their long-term relationships, short-term relationships, and affairs using two series of checkbox items. (Participants could select as many categories as they wished.) First, they indicated whether their relationship was (a) an experience with an expartner, (b) a one-night-stand, (c) an anonymous experience, (d) a fling, and/or (e) a brief affair. Second, they indicated whether the partner was (a) a friend, (b) an acquaintance, and/or (c) a stranger when they became romantically and/or sexually involved.

Figure 8 presents romantic interest trajectories separately by relationship subtypes; the first question is broken down in panel A, and the second question is broken down in panel B. (Anonymous relationships were not graphed because the total sample across studies was a mere $n = 5$, but these trajectories tended to resemble

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[5] These data address how men and women feel about their long-term and short-term relationships conditional on the men and women believing that the relationship was long-term and short-term, respectively. These data cannot address the extent to which men and women differ in their desires to have short-term versus long-term relationships in the first place (e.g., Schmitt et al., 2004) or the extent to which male and female partners disagree that they had a short-term versus long-term relationship.
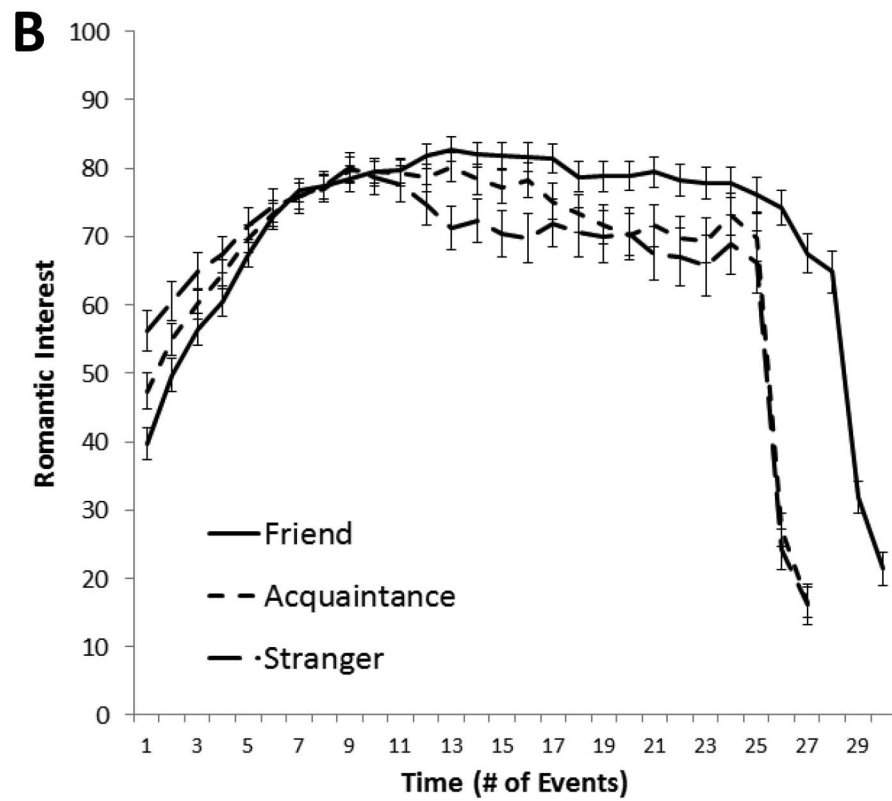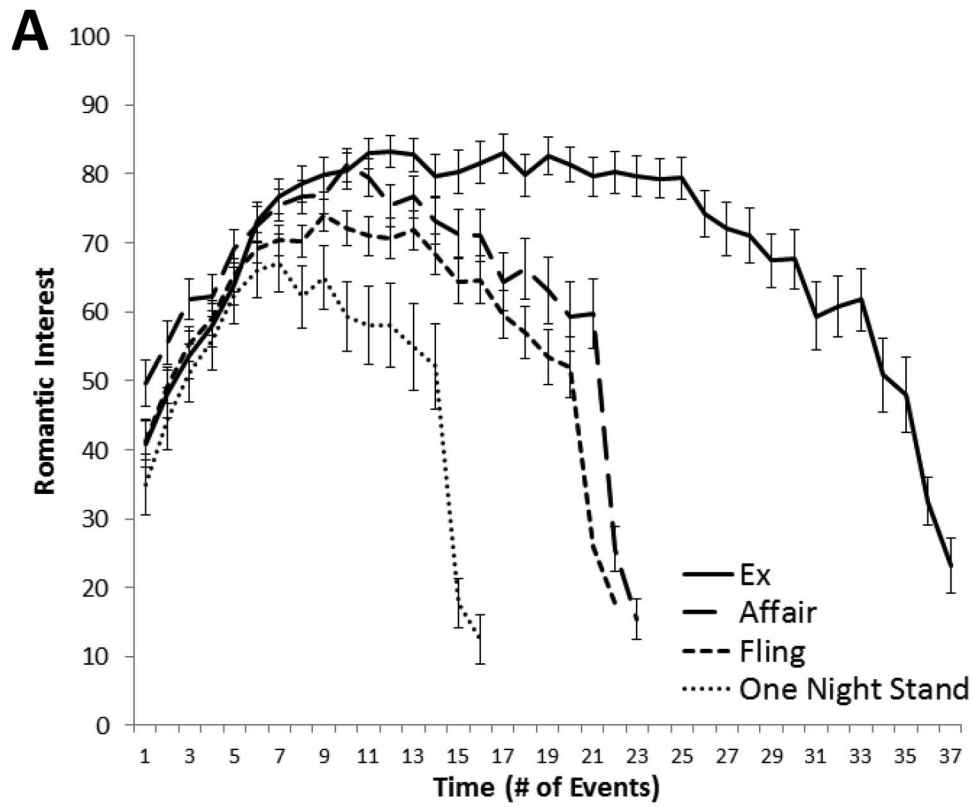
Figure 8 (opposite)

one-night-stand trajectories.) Panel A revealed that relationships with exes generally resembled long-term relationships, whereas flings and brief affairs generally resembled short-term relationships (and were indistinguishable from each other; $d = .15$ for number of events in brief affairs vs. flings). One-night-stands were especially short short-term relationships: These relationships follow the same trajectory of rising romantic interest across the first ~9 events, followed by a rapid decline in interest, ending sooner than the flings ($d = .62$) and brief affairs ($d = .76$). Importantly, the gradual rise in romantic interest that characterized the first several events appeared to be more or less identical, on average, across all relationship subtypes.

Panel B distinguishes between participants who reported that their partner was a friend, an acquaintance, or a stranger *when the relationship became sexual*. Here, a small-to-medium difference emerged such that romantic interest was higher at the first event for relationships that became sexual when the partner was a stranger rather than a friend ($d = .47$) or acquaintance ($d = .26$). In other words, when people engage in sexual behaviors with strangers, they begin those relationships at a much higher level of romantic interest than in relationships in which a friendship or acquaintanceship becomes sexual. These data suggest that people are generally uninterested in engaging in sexual behaviors with a partner until they experience a reasonably high level of romantic interest, and most relationships that eventually become sexual (i.e., the friend and acquaintance trajectories) are not sexual right away because romantic interest has not yet risen sufficiently. Interestingly, relationships did not differ in the length of time they lasted depending on whether the relationship first became sexual when the partner was a stranger, acquaintance, or friend, ds < .16 for number of events. In short, romantic liaisons with strangers were noteworthy in that participants experienced higher romantic interest at the first few events in these relationships than in relationships with friends and acquaintances, yet these stranger relationships were no longer or shorter than the other relationships on average.

Finally, a post hoc case could be made that participants did not understand the long-term versus short-term study prompts if they indicated (a) that their short-term relationship included the events "became exclusive (i.e., not dating other people)," "got engaged," or "got married;" or (b) that their long-term relationship was a "fling" or "one-night-stand." Deleting these participants from the dataset leaves us with $N = 257$ ended long-term relationships and $N = 291$ ended short-term relationships; trajectories for these participants are depicted in Figure 9. In general, these short-term relationships ended a few events earlier than the full sample of short-term relationships, but otherwise, the exclusions did not substantively change the trajectories. Importantly, the long-term
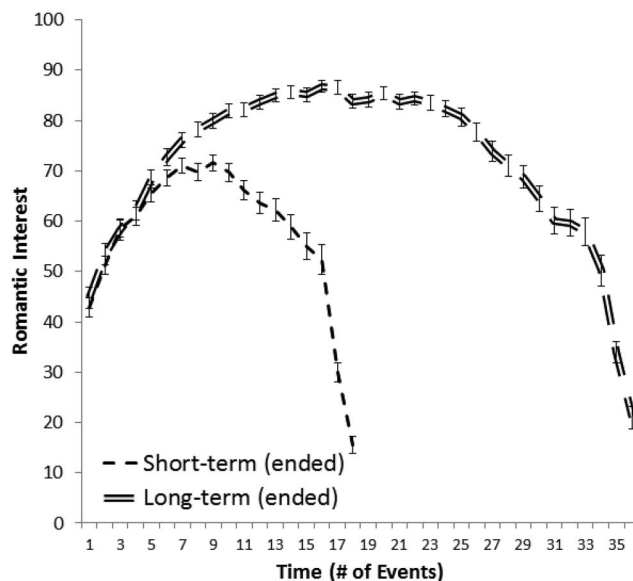

Figure 9. Means of romantic interest across all studies are plotted for each event in ended long-term (solid line) and ended short-term (dotted line) relationships for all participants who reached that event after post hoc exclusions. See Figure 3 caption for additional details on graphing procedure. Bars depict 1 *SE* above and below the mean.

and short-term trajectories were again indistinguishable as romantic interest was rising.

Relationship initiation and maintenance behaviors over time. We conducted 10 meta-analyses across the ended relationships in all five studies—one meta-analysis for each of the 10 desired behaviors. Zero of the 10 meta-analyses revealed significant heterogeneity; this finding likely reflects the fact that our procedures were quite similar across studies and furthermore suggests that any differences in short-term versus long-term effect sizes across studies in Tables 3, S5, and S9 were plausibly due to sampling variability. Given the lack of heterogeneity, we report fixed effect meta-analytic ds.

Five of these analyses revealed significant short-term versus long-term relationship effect size differences: psychological attachment ($d = .63$, $z = 7.37$, $p < .001$), desire to care ($d = .43$, $z = 5.04$, $p < .001$), desire to self-disclose ($d = .35$, $z = 4.19$, $p < .001$), desire to receive self-disclosure ($d = .29$, $z = 3.49$, $p < .001$), and desire to carefully evaluate ($d = .24$, $z = 2.86$, $p = .004$). The remaining five did not significantly differ: desire to self-protect ($d = .03$, $z = 0.31$, $p = .755$), sexual desire ($d = -.01$, $z = -0.11$, $p = .912$), desire to impress ($d = -.03$, $z = -0.32$, $p = .750$), desire to compete ($d = -.07$, $z = -0.91$, $p = .365$), and desire to self-promote ($d = -.11$, $z = -1.34$, $p = .181$).

Figure 8 (opposite). Means of romantic interest across Studies 2a, 2b, and S3 are plotted for each event separated by relationship subtypes (collapsed across ended long-term, short-term, and affair relationships). Panel A depicts trajectories separately for participants who indicated that the relationship was with an ex (solid line), a brief affair (long dashed line), a fling (short dashed line), or a one-night-stand (dotted line). Panel B depicts trajectories separately for participants who indicated that the relationship became sexual when the partner was a friend (solid line), a stranger (long dashed line), or an acquaintance (short dashed line). See Figure 3 caption for additional details on graphing procedure. Bars depict 1 *SE* above and below the mean.

Correlations between the desired behaviors are presented in Table S10; these correlations were generally moderate in size (average $r = .38$ in long-term relationships, $r = .31$ in short-term relationships). Given that only the two self-disclosure measures correlated sufficiently highly to justify combining them into a single construct, we continue to present the 10 measures separately in the analyses that follow.

The relationship initiation and maintenance behaviors are graphed over time in descending order of overall effect size in Figure 10. Short-term versus long-term relationship differences tended to grow as time passed: Panels A–D reveal that, for the first 10 events, psychological attachment, desire to care, desire to self-disclose, and desire to receive self-disclosure differences between short-term and long-term relationships were small ($d = .18$, .19, .06, and .06, respectively). These differences were two to three times larger for events 11 through 20 (i.e., the half-life of short-term relationships; $d = .45$, .39, .22, and .21, respectively). For the remaining six desired behaviors, the short-term versus long-term relationship differences were consistently small or nonexistent. Other interesting patterns emerged in these graphs as well: For example, the various trajectories that declined on average (e.g., desire to make a favorable impression, sexual desire) tended to fall faster in short-term than in long-term relationships, likely presaging the end of the relationship. Also, the desire to self-protect seems to rise and then drop off precipitously just before short-term and long-term relationships end. (Affair trajectories for the 10 relationship initiation and maintenance behaviors tended to be intermediate between the short-term and long-term trajectories when short-term and long-term trajectories differed; see Figure S3.)

Figure 11 presents the four relationship initiation and maintenance behaviors that we only assessed in Study 2b (i.e., desire to evaluate/impress as a sex partner, desire to evaluate/impress as a parent). The two sex partner behaviors peaked early in the relationship before gradually declining over time in a pattern reminiscent of sexual desire. These patterns are consistent with the possibility that the sexual mating system is especially likely to be activated in the early stages of relationships (Hazan & Shaver, 1994). Participants generally reported weak parenting-relevant behaviors until the very late events in long-term relationships. In other words, parenting concerns may typically be one of the last set of features that people consider in their relationships, and only (some) long-term relationships survive long enough for these concerns to become relevant.

Meeting context. In Studies 2a, 2b, and S3, participants indicated the context in which they met the partner from a set of 14 (mutually exclusive) choices (see Table 6). Participants were most likely to have met long-term relationship partners through a friend, at school, or at work; participants were most likely to have met short-term partners through a friend, at school, or at a social gathering; participants were most likely to have met an affair partner at work, at school, or through a friend. After Bonferroni corrections, very few differences within a row were significant: People were more likely to meet an affair partner than a short-term partner at work, and people were more likely to meet an affair partner than a long-term partner from having grown up together. In summary, as a percentage of total relationships formed, differences across relationship type were modest or nonexistent.

General Discussion

Across five studies, we collected detailed descriptions of participants' real-life long-term and short-term relationships. Consistent with Buss and Schmitt's (1993) idea that these two terms "anchor the ends of [a] temporal dimension" (1993, p. 204), short-term relationships ended sooner than long-term relationships in our studies; this manipulation check was in the expected direction in all analyses using either days or number of events as a metric of time. We focused on number of events because the psychometric properties of this variable were strong, and there was no evidence that the association between number of events and literal time (i.e., days) differed systematically between short-term and long-term relationships.

Long-term and short-term relationships differed in substantive ways, too. Most of the 48 events included in our survey occurred more commonly in long-term than short-term relationships. In some cases, this difference might merely be due to the fact that long-term relationships contained more events than short-term relationships, but the size of the difference for many of the high investment events (e.g., meeting the parents, saying "I love you," becoming exclusive) was quite large nonetheless. Furthermore, romantic interest peaked at a higher level in long-term relationships than in short-term relationships, and romantic interest tended to plateau and decline sooner in short-term than in long-term relationships. Finally, participants reported experiencing the desire to engage in behaviors connected to the attachment-behavioral system (e.g., psychological attachment, the desire to care) and parenting (i.e., the parenting-specific desired behaviors in Study 2b) more often in long-term than in short-term relationships, and these effect sizes tended to become larger as time passed.

In other ways, long-term and short-term relationships were similar. The sequence of early events (e.g., flirting, then going out together in a group, then the first kiss) tended to be quite comparable across both types of relationships. In addition, romantic interest in long-term relationships and short-term relationships began at the same level and rose at the same rate for a considerable period of time (i.e., months) before the two trajectories diverged. Similarly, all the relationship initiation and maintenance behaviors revealed null or very small long-term versus short-term differences in this early time frame; this effect was small even for constructs like sexual desire which are typically associated especially strongly with short-term relationships (e.g., Table 1, Gangestad & Simpson, 2000; Schmitt & Buss, 1996). The common thread connecting these similarities is that, among relationships that proved ultimately to be short-term or long-term, the two types of relationships were more or less indistinguishable when people first met and romantic interest was rising; only after the sexual elements of the relationship began to intensify did differences between short-term and long-term relationships reliably appear.

This pattern of similarities and differences presents a set of opportunities and challenges for both close relationships and evolutionary psychological perspectives on human mating. As for the close relationships literature, many theories in the close relationships tradition do not explicitly incorporate the period of time that precedes official relationship formation (for exceptions, see Knapp, 1978; Levinger & Snoek, 1972). The present studies imply that the focus of this literature omits a large number of significant and memorable relationship events; after all, many studies in the
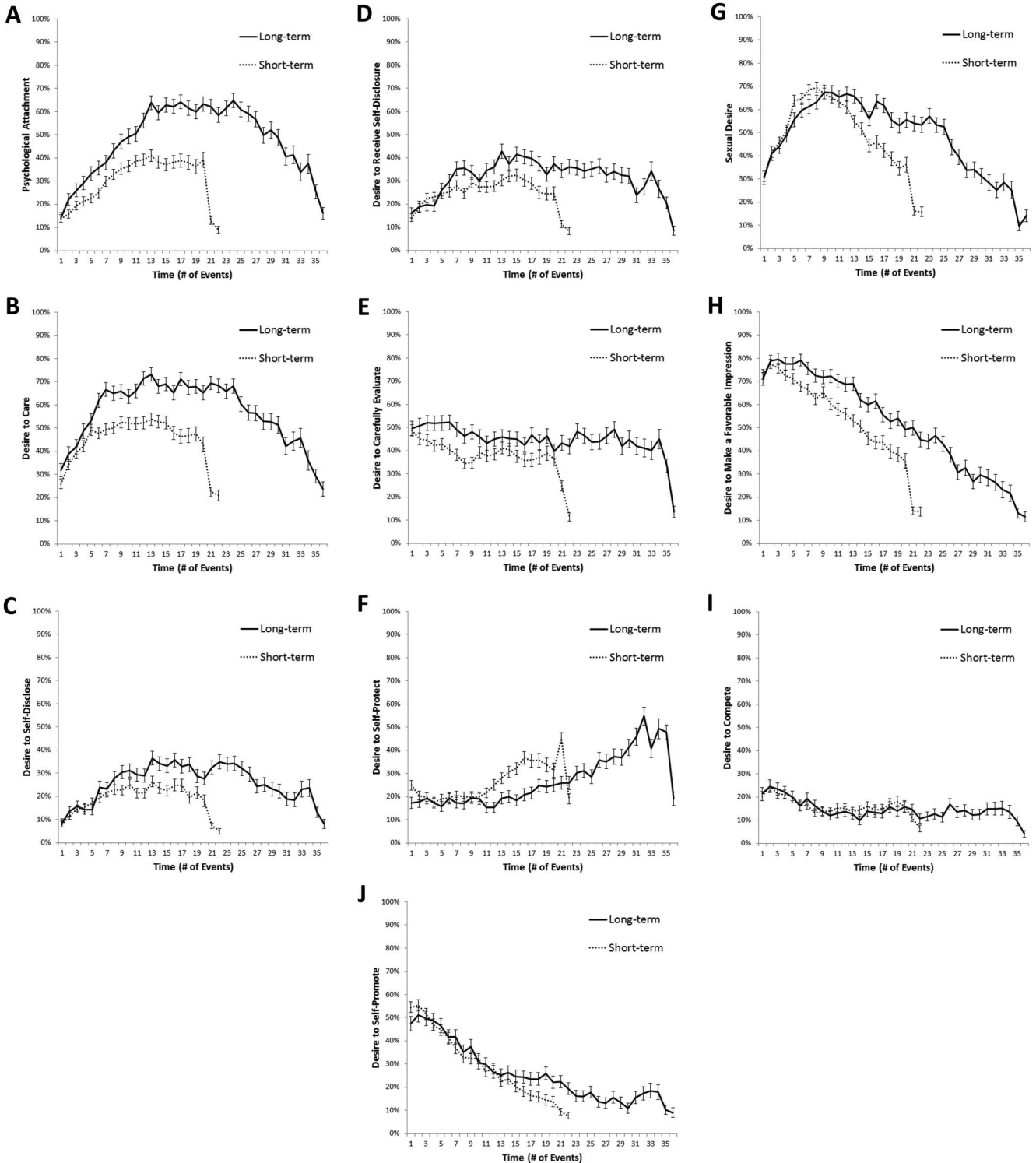
Figure 10. Percentage of participants across all studies reporting that they experienced attachment (panel A), caregiving (panel B), the desire to self-disclose (panel C), the desire to receive self-disclosure (panel D), the desire to carefully evaluate the partner (panel E), the desire to protect oneself (panel F), sexual desire (panel G), the desire to make a favorable impression (panel H), the desire to compete for the partner (panel I), and the desire to promote oneself (panel J) at each event in ended long-term (solid line) and ended short-term (dotted line) relationships for all participants who reached that event (e.g., the value 41% corresponding to the 13th event in
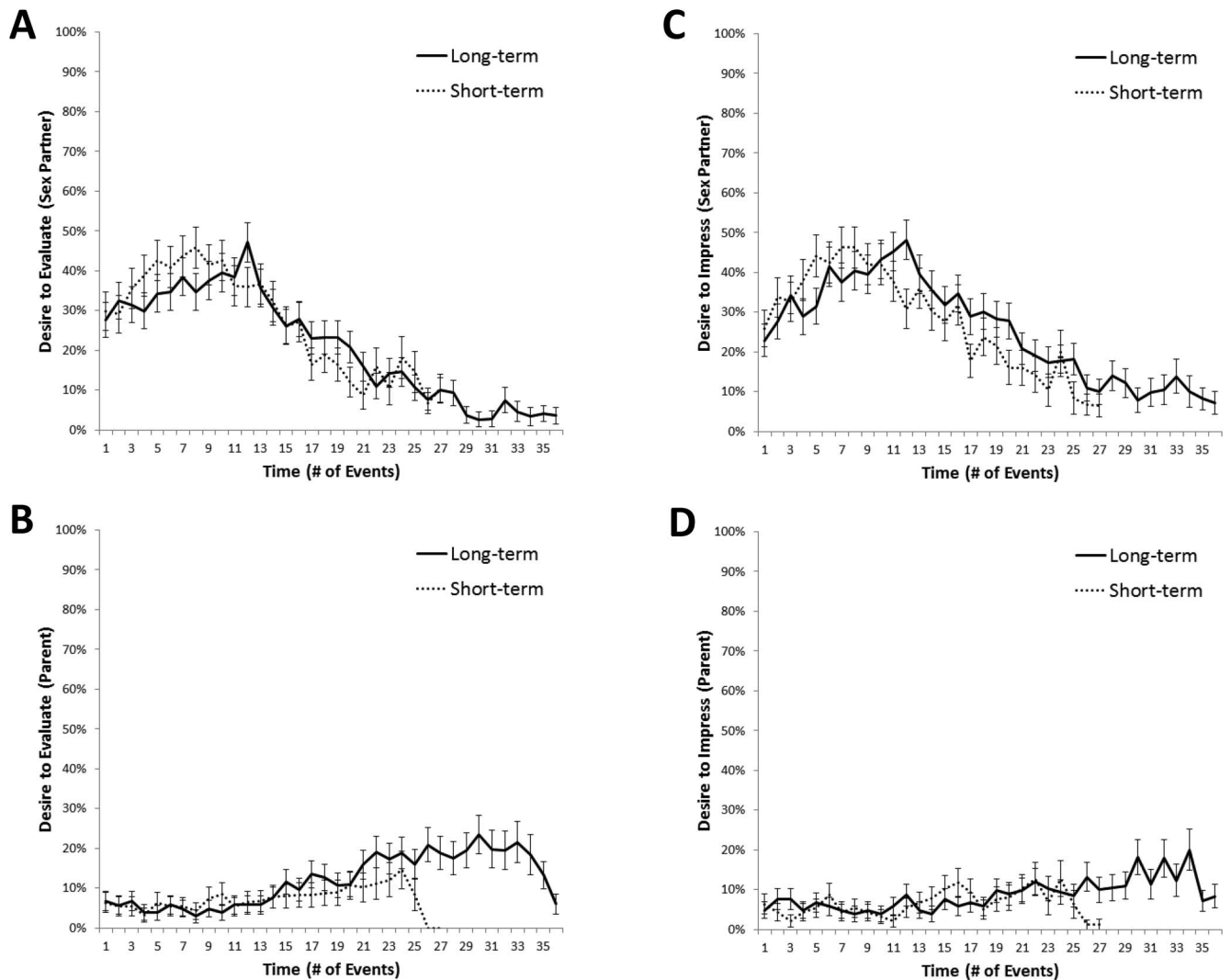
Figure 11. Percentage of participants in Study 2b reporting that they experienced the desire to carefully evaluate the partner as a sex partner (panel A), the desire to carefully evaluate the partner as a parent (panel B), the desire to impress the partner as a sex partner (panel C), and the desire to impress the partner as a parent (panel D). The second-to-last and last means depicted for each trajectory correspond to the second-to-last and last events reported by participants, regardless of where those events occurred in the sequence. Bars depict 1 *SE* above and below the mean.

close relationships literature recruit couples who are exclusive, and exclusivity did not occur until the 16th event in our long-term relationships on average. Surely, at least some of the personally significant events in this relationship formation phase have implications for the future of the relationship, and thus scholars might routinely be failing to capture important precursors of dynamics in established relationships (Campbell & Stanton, 2014; Hunt et al., 2015; Joel, Teper, & MacDonald, 2014). As for the evolutionary

psychological literature, this tradition incorporates short-term relationships to a large degree, with many theories positing that people use short-term or long-term strategies to pursue the goal of obtaining a short-term or long-term relationship (i.e., strategy use is probabilistically associated with different relationship length outcomes). But in light of the current data, a theory would also need to explain why short-term and long-term relationships are characterized by trajectories that overlap at the beginning of a

Figure 10 (continued). the short-term trajectory in panel A is the percentage of participants who experienced feelings of psychological attachment at that event who reported on a short-term relationship that lasted until the 13th event). The second-to-last and last means depicted for each trajectory correspond to the second-to-last and last events reported by participants, regardless of where those events occurred in the sequence. Bars depict 1 *SE* above and below the mean.

Table 6

Percentage of Ended Relationships Separated by Original Meeting Context—Studies 2a, 2b, and S3

Meeting context	LT	ST	AF	% of total
Through a friend	24.5%	19.0%	14.1%	20.5%
At school	21.7%	17.3%	15.6%	18.8%
At work	15.2%$_{a,b}$	12.1%$_a$	26.6%$_b$	15.2%
At a social gathering	9.8%	16.5%	7.8%	12.7%
Online dating site or app	11.4%	12.1%	12.5%	11.9%
At a bar or club	3.3%	8.2%	4.7%	5.8%
Social network site	3.8%	5.6%	6.3%	5.0%
Other	7.1%	3.0%	6.3%	5.0%
Online, but not a dating site	1.6%	3.5%	3.1%	2.7%
You grew up together	.0%$_a$	1.3%$_{a,b}$	3.1%$_b$	1.0%
Through family	.5%	1.3%	.0%	.8%
At a place of worship	.5%	.0%	.0%	.2%
Blind date	.5%	.0%	.0%	.2%
Other mobile communication	.0%	.0%	.0%	.0%
Total	100.0%	100.0%	100.0%	100.0%

Note. Columns indicate the percentage of participants reporting that they met their long-term (LT), short-term (ST), or affair (AF) partners in each context. Participants could only select one response to this item. Some response options contained additional examples omitted from the table for brevity: Online dating site or app (e.g., eHarmony, Match.com, OKCupid, Plenty of Fish, Yahoo dating, Tinder etc.); Social network site (i.e., Facebook, Instagram, MySpace); Online, but not a dating site (e.g., email, chat room, instant messaging, discussion group, virtual world, online game, etc.); Other mobile communication (i.e., SnapChat). No values significantly differed within a row (after Bonferroni correction) except in (two) cases where means do not share the same subscript.

relationship and then only later diverge. If people possessed short-term and long-term adaptations reflecting different strategies that facilitate the pursuit of different relationship goals, why wouldn't differences between short-term and long-term relationships be evenly distributed throughout their time course? The next section of this article outlines the basics of a model that builds upon data presented above (summarized in Table 7) while drawing from both theoretical traditions.

The Relationship Coordination and Strategic Timing Model (ReCAST)

ReCAST in brief. ReCAST is a normative model of relationship development (see Figure 12). In essence, the model recasts the distinction between short-term and long-term relationships as a distinction between initially overlapping relationship trajectories; thus, according to ReCAST, people do not typically initiate relationships using different sets of short-term or long-term strategies. Rather, some goals predominate early in the normative relationship sequence and align with the evolutionary psychological concept of mating effort (e.g., sexual goals), whereas other goals predominate later in the sequence and reflect an increasing influence of parental effort (e.g., attachment goals). The acronym ReCAST reflects the joint influence of (a) close relationships researchers' emphasis on the coordination of relational interdependence over time (i.e., "relationship coordination;" Rusbult & Van Lange, 2003); and (b) evolutionary scholars' emphasis on strategies that correspond to mating and parental effort (i.e., "strategic timing;" Gangestad & Simpson, 2000).

According to ReCAST, long-term relationships (double lines in Figure 12) are those that exhibit heightened and sustained romantic interest along with features indicating an established pair-bond (e.g., psychological attachment, caregiving). When people are asked to imagine a long-term relationship, this trajectory will typically be the concept that comes to mind. Short-term relationships (single line in Figure 12) are those that exhibit (a) a moderate amount of romantic interest and other motivations common early in romantic relationships (e.g., sexual desire); and (b) a trajectory that does not remain elevated long enough for pair-bonding adaptations to fully emerge (and perhaps not even long enough for close relationships researchers to study it). When people are asked to imagine a short-term relationship, this trajectory will typically be the concept that comes to mind. The close relationships literature explains why the two trajectories are initially very difficult to distinguish: The largest predictors of romantic evaluations and breakup are predictors that are difficult to assess early in the acquaintance process (e.g., sexual and emotional chemistry, potential for mutually beneficial interdependence; Finkel et al., 2012; Joel et al., 2017; Karney & Bradbury, 1995; Le et al., 2010).

ReCAST also incorporates the evolutionary psychological concepts of mating effort (gray background in Figure 12) and parental effort (dotted background). According to classic evolutionary biological perspectives, the expenditure of mating effort is associated with attempts to attract mating partners, whereas the expenditure of parental effort is associated with the production and raising of offspring (Low, 1978). Like some evolutionary psychological models (Belsky, Steinberg, & Draper, 1991; Del Giudice, 2009; Gangestad & Simpson, 2000), ReCAST posits a trade-off in these types of effort: In this case, mating effort is expended from the beginning of the romantic sequence whereas parental effort starts to become more relevant as time passes. Importantly, ReCAST separates type of reproductive effort (i.e., mating vs. parental) from relationship length (short-term vs. long-term)—constructs that are sometimes used interchangeably in prior work (e.g., Gangestad & Simpson, 2000)—and depicts the mating versus parental effort distinction as reflecting underlying psychological process and the short-term versus long-term distinction as an outcome.

Thus, the normative short-term relationship may be synonymous with a relationship exhibiting the successful completion of the beginning steps in a relationship sequence (e.g., Dan attracts Jamie for a sexual liaison) but not the subsequent steps required for the relationship to develop deep intimacy and interdependence (e.g., Dan does not form a strong attachment to Jamie). Long-term relationships, on the other hand, do achieve deep intimacy and interdependence—features that would have facilitated attachment bonds and subsequent parental effort in ancestral contexts (Fletcher, Simpson, Campbell, & Overall, 2015; Hazan & Diamond, 2000; Hazan & Shaver, 1994). Elsewhere, a more elaborated discussion of ReCAST outlines the assumptions underlying the model, offers novel predictions, and integrates the model with individual-difference measures of mating strategies (e.g., sociosexuality; Eastwick et al., 2017).

Implications for existing theories. Evolutionary psychological *theories* tend not to make concrete predictions about when in the acquaintance process separate short-term or long-term mating adaptations become activated.[6] But many *methodological features* of studies in this tradition imply that these adaptations can be

activated quite early in the acquaintance process, perhaps when simply viewing a photograph of an unknown individual (e.g., DeBruine, 2005; Little, Jones, Burt, & Perrett, 2007; Penton-Voak et al., 1999; Roney, Hanson, Durante, & Maestripieri, 2006) or when encountering a potential partner for the first time in a video or face-to-face context (e.g., Cantú et al., 2014; Gangestad, Garver-Apgar, Simpson, & Cousins, 2007; Li et al., 2009; Li et al., 2013). Indeed, studies in which participants make short-term and long-term judgments in such settings comprise whole research areas (e.g., the short-term context studies in the Gildersleeve et al., 2014, meta-analysis; see Table 1). In light of the current data, a more precise operationalization could be useful (e.g., "an exciting sex partner," "a person whom you do not know and will never see again") if researchers want participants to think of something other than the trajectories we documented in this article when they pose questions about a "short-term relationship" with a person depicted in a photograph.

Another important implication of the ReCAST model itself is that it depicts the tradeoff between mating and parental effort differently than some other evolutionary theories. In theories such as life history theory (Belsky et al., 1991) and strategic pluralism (Gangestad & Simpson, 2000), this tradeoff operates at the between-persons level: Some people devote resources to mating effort at the expense of parental effort (e.g., fast history strategists; individuals with a low mutation load) whereas other people devote resources to parental effort at the expense of mating effort (e.g., slow history strategists; individuals with a high mutation load). In ReCAST, this tradeoff takes place within a given relationship over time: People generally exert mating effort at the beginning of a relationship and gradually shift to parental effort if the relationship lasts. These perspectives are not incompatible; for example, some between-person personality constructs should positively predict success (e.g., attracting new partners) at early mating effort stages in ReCAST and negatively predict success (e.g., maintaining satisfying relationships) at later stages. In fact, constructs such as life history strategy (Olderbak & Figueredo, 2009, 2010) and sociosexuality (Gangestad & Simpson, 2000; Simpson & Gangestad, 1991) reveal precisely such associations. But ReCAST also underscores the possibility that some between-person personality constructs will predict mating effort with few implications for parental effort (e.g., attractiveness; Eastwick, Neff, Finkel, Luchies, & Hunt, 2014), and vice versa. Such patterns highlight the utility in considering both within-dyad and between-person mating versus parental effort tradeoffs.

Limitations and Future Directions

These studies captured relationships that can be measured with a calendar (e.g., days, weeks, months, years). But some types of short-term relationships may only last for hours (e.g., anonymous relationships). Our method might have been unable to capture this kind of sexual relationship; out of the 329 short-term and affair relationships that we assessed in Studies 2a, 2b, and S3, participants classified a mere seven (2%) of them as anonymous. Of course, anonymous sexual relationships could be this rare in many populations, and indeed, experience sampling studies of young people's sexual experiences corroborate this datum (e.g., Walsh et al., 2014). Anonymous relationships may also have been uncommon in humans' ancestral past, when people's social worlds con-

sisted of a few hundred well-known individuals from one's own and neighboring groups (Dunbar, 2014), only a fraction of whom were opposite sex individuals of appropriate mating age (Hazan & Diamond, 2000). Nevertheless, in modern contexts, people can meet and engage in sexual contact with individuals whom they have never met before and will never see again (e.g., at sex clubs, Escasa, Casey, & Gray, 2011; at brothels that cater to one-time clients, Gray & Garcia, 2013), and this particular form of short-term relationship may be quite different from the short-term relationships we documented here. Of course, these methods could certainly be adapted to investigate, for example, whether anonymous relationships exhibit rising and falling trajectories over a span of hours.

Our conclusions are also restricted to a particular context: Individuals living in a modern Western culture where people commonly choose their own short-term and long-term relationship partners. It is unknown what form these trajectories would take in cultures that routinely involve substantial parental input in offspring partner choice, in cultures that impose strong restrictions on premarital sexual behaviors, or in cultures that do not encourage people to link relationship decisions so tightly to romantic feelings (Apostolou, 2007; Eastwick, 2013). Once again, trajectory methods could shed insight on relationships in these contexts, but the results could be quite different from the ones we documented here.

As discussed above, the method that we adapted (Huston et al., 1981) was ideal for our purposes: It enabled us to document the entire course of people's real-life relationships with a large *N* while minimizing the influence of memory biases (see also Kahneman et al., 2004). Nevertheless, longitudinal methods that follow participants' relationships in real-time should be used to corroborate the current findings, especially before and after the critical moments when a relationship becomes romantic or sexual for the first time; it is possible that some events can be recalled in more detail for long-term than short-term relationships, for example. Dyadic procedures should also be used to examine the extent to which partners agree that they are forming a short-term or long-term relationship and that how tension plays out as the relationship unfolds.

For some research questions in this domain, a prospective examination will be essential. There is a need for research that directly tests the predictive validity of partner-specific short-term and long-term judgments: Participants are commonly asked to complete such items, but at what point can people realistically make a judgment that they are pursuing a short-term or a long-term relationship with a particular person in real life? Given the overlapping trajectories we observed, the predictive validity of short-term and long-term items—phrased as they are in the existing literature—may be limited among new acquaintances and early in the relationship initiation process. There is also a need for research that examines the predictive power of participants' individual short-term versus long-term strategic orientations: To what extent

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[6] One exception is the mate preference priority model (Li et al., 2013), which relies on the postulate that some types of partners or settings activate a "short-term mating mode" (p. 761) during initial encounters. A second exception is articulated by Schmitt (2016, p. 295), who implies that strategies are orthogonal to relationship stage: "Humans can benefit from shifting between long-term and short-term mating strategies . . . when in different stages of romantic relationships."

Table 7
Four Key Empirical Findings in This Article That Form the Foundation of the ReCAST Model

Key finding	Description	Quantification	
1	Romantic interest is initially similar in long-term and short-term relationships.	Initial difference in interest:	Near-zero to small effect size
2	With time, short-term and long-term trajectories diverge.	Typical time:	Weeks (median) to months (average)
3	Eventually, romantic interest is greater in long-term than short-term relationships as short-term relationships plateau.	Later difference in interest:	Medium to large effect size
4	Long-term vs. short-term effect sizes are also initially similar for attachment, caregiving, and parenting motivations and become larger after long-term and short-term romantic interest trajectories diverge.	Initial difference in attachment-behavioral system features:	Near-zero to small effect size
		Later difference in attachment-behavioral system features:	Medium to large effect size

do these trajectories reflect person-level factors (e.g., the intention to avoid forming a long-term relationship) that participants could have articulated prior to meeting the partner? Future research should examine how all of these constructs play out as real relationships evolve.

Context of the Research

These studies originated with the first author's interest in romantic relationship formation (i.e., the period of time between initially meeting a stranger and the formation of an official relationship; Eastwick & Finkel, 2008) and the second author's interest in the normative sequence of events in relationships (Keneski, 2016). In addition, the ReCAST model is one illustration of a renewed metatheoretical focus on relationship trajectories throughout the field of close relationships (Eastwick et al., 2017; Finkel et al., 2017). This article also contributes to a growing body of work at the intersection of close relationships and evolutionary psychology (Durante et al., 2016; Eastwick, 2016; Fletcher et al., 2013, 2015).

Much of the existing literature on human mating assumes that people know a lot about what they want when it comes to relationships: Researchers routinely ask people what qualities they generally want a partner to possess, or whether they want a long-term or short-term relationship with a particular person. But consider the idea that people experience great uncertainty as relationships are developing—and that labels such as "short-
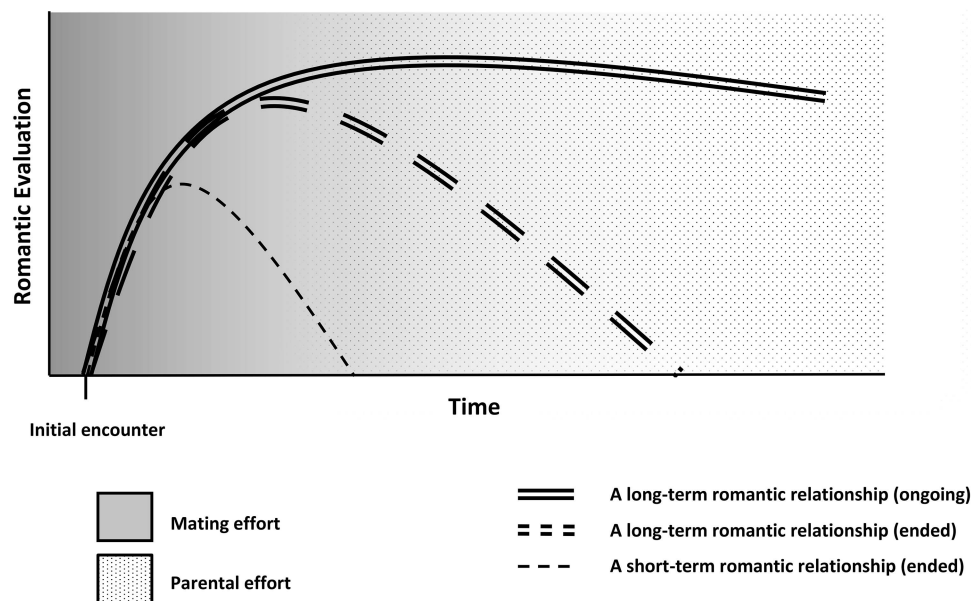

Figure 12. The Relationship Coordination and Strategic Timing (ReCAST) Model Trajectories. The model depicts normative long-term (double lines) and short-term (single line) romantic partner trajectories, and long-term trajectories are shown separately by breakup status (current = solid line; ended = dashed line). Early stages of relationships are characterized by mating effort (solid gray background), whereas later stages of relationships are characterized by parental effort (dotted background).

term" or "long-term" are comfortably applied in hindsight but challenging to apply with great accuracy as relationships unfold. If we are willing to question the assumption that people know what they want, we get to ask a wide variety of new research questions. When can we predict with reasonable accuracy how relationships will progress? What information differentiates which pairs of people will engage in sexual behaviors which pairs will not? What factors predict that a relationship will ultimately become both sexually and emotionally fulfilling? To what extent does it matter for people's relationship development if they had been originally interested in a short-term or long-term relationship? These questions highlight how, if we continue to capture the full time course of people's real-life relationships, the study of romantic relationships may be able to join the other prediction sciences (Joel et al., 2017; Silver, 2012).

Conclusion

The short-term versus long-term relationship length concept plays a different role in the close relationships literature than it does in the evolutionary psychological literature. One consequence of this disconnect is that considerable confusion exists among scholars working at the intersection of these literatures about how long couples must be dating to test predictions about "long-term" relationships (Eastwick, Luchies, Finkel, & Hunt, 2014; Eastwick, Neff, et al., 2014; Meltzer, McNulty, Jackson, & Karney, 2014; Schmitt, 2014). The larger and more problematic consequence is that both literatures paint an incomplete picture of the human mating experience, ultimately hindering theory development and empirical discovery.

The current set of studies represents the first systematic attempt to compare the extent to which real-life short-term and long-term relationships differ in terms of timeline, incidence of significant events, romantic interest, and myriad desired behaviors (e.g., sexual desire, attachment, self-disclosure, etc.). The data suggest that short-term and long-term relationships reflect two different relationship trajectories; they differ in their progression along a normative relationship initiation sequence, and only long-term relationships exhibit the activation of psychological mechanisms that function to establish and maintain pair-bonds. The ReCAST model inspired by these data offers one way of merging close relationships and evolutionary psychological perspectives yet differs from some prior models in suggesting that the initiation of short- and long-term relationships may not require independently evolved sets of strategies. Rather, relationship length—an outcome that seems plainly obvious in hindsight—is an emergent property of the dyad that takes time to crystalize.

References

Agnew, C. R., & VanderDrift, L. E. (2015). Relationship maintenance and dissolution. In J. A. Simpson & J. F. Dovidio (Eds.), *The handbook of personality and social psychology: Interpersonal relations and group processes* (pp. 581–604). Washington, DC: APA Press. http://dx.doi.org/10.1037/14344-021

Altman, I., & Taylor, D. A. (1973). *Social penetration: The development of interpersonal relationships*. New York, NY: Holt, Rinehart and Winston.

Apostolou, M. (2007). Sexual selection under parental choice: The role of parents in the evolution of human mating. *Evolution and Human Be-*

havior, 28, 403–409. http://dx.doi.org/10.1016/j.evolhumbehav.2007.05.007

Asendorpf, J. B., Penke, L., & Back, M. D. (2011). From dating to mating and relating: Predictors of initial and long-term outcomes of speed-dating in a community sample. *European Journal of Personality, 25,* 16–30. http://dx.doi.org/10.1002/per.768

Baumeister, R. F., Catanese, K. R., & Vohs, K. D. (2001). Is there a gender difference in strength of sex drive? Theoretical views, conceptual distinctions, and a review of relevant evidence. *Personality and Social Psychology Review, 5,* 242–273. http://dx.doi.org/10.1207/S15327957PSPR0503_5

Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin, 117,* 497–529. http://dx.doi.org/10.1037/0033-2909.117.3.497

Baxter, L. A., & Bullis, C. (1986). Turning points in developing romantic relationships. *Human Communication Research, 12,* 469–493. http://dx.doi.org/10.1111/j.1468-2958.1986.tb00088.x

Baxter, L. A., & Wilmot, W. W. (1984). Secret tests. *Human Communication Research, 11,* 171–201. http://dx.doi.org/10.1111/j.1468-2958.1984.tb00044.x

Belsky, J., Steinberg, L., & Draper, P. (1991). Childhood experience, interpersonal development, and reproductive strategy: And evolutionary theory of socialization. *Child Development, 62,* 647–670. http://dx.doi.org/10.2307/1131166

Berscheid, E., & Reis, H. T. (1998). Attraction and close relationships. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (4th ed., Vol. 2, pp. 193–281). New York, NY: McGraw-Hill.

Berscheid, E., & Walster, E. H. (1978). *Interpersonal attraction* (2nd ed.). Reading, MA: Addison Wesley.

Bisson, M. A., & Levine, T. R. (2009). Negotiating a friends with benefits relationship. *Archives of Sexual Behavior, 38,* 66–73. http://dx.doi.org/10.1007/s10508-007-9211-2

Bradbury, T. N., & Karney, B. R. (2013). *Intimate relationships* (2nd ed.). New York, NY: Norton.

Braiker, H. B., & Kelley, H. H. (1979). Conflict in the development of close relationships. In R. L. Burgess & T. L. Huston (Eds.), *Social exchange in developing relationships* (pp. 135–168). New York, NY: Academic Press. http://dx.doi.org/10.1016/B978-0-12-143550-9.50011-2

Brewer, W. F. (1988). Memory for randomly sampled autobiographical events. In U. Neisser & E. Winograd (Eds.), *Remembering reconsidered: Ecological and traditional approaches to the study of memory* (pp. 21–90). New York, NY: Cambridge University Press. http://dx.doi.org/10.1017/CBO9780511664014.004

Buss, D. M., & Schmitt, D. P. (1993). Sexual strategies theory: An evolutionary perspective on human mating. *Psychological Review, 100,* 204–232. http://dx.doi.org/10.1037/0033-295X.100.2.204

Calzo, J. P. (2013). Hookup sex versus romantic relationship sex in college: Why do we care and what do we do? *The Journal of Adolescent Health, 52,* 515–516. http://dx.doi.org/10.1016/j.jadohealth.2013.03.001

Campbell, L., & Stanton, S. C. E. (2014). The predictive validity of ideal partner preferences in relationship formation: What we know, what we don't know, and why it matters. *Social and Personality Psychology Compass, 8,* 485–494. http://dx.doi.org/10.1111/spc3.12126

Cantú, S. M., Simpson, J. A., Griskevicius, V., Weisberg, Y. J., Durante, K. M., & Beal, D. J. (2014). Fertile and selectively flirty: Women's behavior toward men changes across the ovulatory cycle. *Psychological Science, 25,* 431–438. http://dx.doi.org/10.1177/0956797613508413

Cárdenas, R. A., & Harris, L. J. (2007). Do women's preferences for symmetry change across the ovulatory cycle? *Evolution and Human Behavior, 28,* 96–105. http://dx.doi.org/10.1016/j.evolhumbehav.2006.08.003

Clark, M. S., & Beck, L. A. (2011). Initiating and evaluating close relationships: A task central to emerging adults. In F. D. Fincham & M. Cui (Eds.), *Romantic relationships in emerging adulthood* (pp. 190–212). New York, NY: Cambridge University Press.

DeBruine, L. M. (2005). Trustworthy but not lust-worthy: Context-specific effects of facial resemblance. *Proceedings of the Royal Society of London, Series B: Biological Sciences, 272,* 919–922. http://dx.doi.org/10.1098/rspb.2004.3003

Del Giudice, M. (2009). Sex, attachment, and the development of reproductive strategies. *Behavioral and Brain Sciences, 32,* 1–21. http://dx.doi.org/10.1017/S0140525X09000016

Dunbar, R. I. M. (2014). The social brain psychological underpinnings and implications for the structure of organizations. *Current Directions in Psychological Science, 23,* 109–114. http://dx.doi.org/10.1177/0963721413517118

Dunleavy, K. N., & Booth-Butterfield, M. (2009). Idiomatic communication in the stages of coming together and falling apart. *Communication Quarterly, 57,* 416–432. http://dx.doi.org/10.1080/01463370903320906

Durante, K. M., Eastwick, P. W., Finkel, E. J., Gangestad, S. W., & Simpson, J. A. (2016). Pair-bonded relationships and romantic alternatives: Toward an integration of evolutionary and relationship science perspectives. In J. M. Olson & M. P. Zanna (Eds.), *Advances in experimental social psychology* (pp. 1–74). Burlington, VT: Academic Press. http://dx.doi.org/10.1016/bs.aesp.2015.09.001

Eastwick, P. W. (2013). Cultural influences on attraction. In J. A. Simpson & L. Campbell (Eds.), *Handbook of close relationships* (pp. 161–182). New York, NY: Oxford University Press.

Eastwick, P. W. (2016). The emerging integration of close relationships research and evolutionary psychology. *Current Directions in Psychological Science, 25,* 183–190. http://dx.doi.org/10.1177/0963721416641048

Eastwick, P. W., & Finkel, E. J. (2008). Sex differences in mate preferences revisited: Do people know what they initially desire in a romantic partner? *Journal of Personality and Social Psychology, 94,* 245–264. http://dx.doi.org/10.1037/0022-3514.94.2.245

Eastwick, P. W., Finkel, E. J., & Eagly, A. H. (2011). When and why do ideal partner preferences affect the process of initiating and maintaining romantic relationships? *Journal of Personality and Social Psychology, 101,* 1012–1032. http://dx.doi.org/10.1037/a0024062

Eastwick, P. W., Finkel, E. J., & Simpson, J. A. (2017). *Relationship trajectories: A meta-theoretical framework and two theoretical applications.* Manuscript submitted for publication.

Eastwick, P. W., Luchies, L. B., Finkel, E. J., & Hunt, L. L. (2014). The many voices of Darwin's descendants: Reply to Schmitt (2014). *Psychological Bulletin, 140,* 673–681. http://dx.doi.org/10.1037/a0036111

Eastwick, P. W., Morgan, T. A., Graham, L. T., Slotter, E. B., Luchies, L. B., & Neff, L. A. (2013). *Integrating strategy and stage perspectives on mating: Male physical attractiveness as a test case.* Unpublished manuscript, University of Texas at Austin, Austin, TX.

Eastwick, P. W., Neff, L. A., Finkel, E. J., Luchies, L. B., & Hunt, L. L. (2014). Is a meta-analysis a foundation, or just another brick? Comment on Meltzer, McNulty, Jackson, and Karney (2014). *Journal of Personality and Social Psychology, 106,* 429–434. http://dx.doi.org/10.1037/a0034767

Escasa, M. J., Casey, J. F., & Gray, P. B. (2011). Salivary testosterone levels in men at a U.S. sex club. *Archives of Sexual Behavior, 40,* 921–926. http://dx.doi.org/10.1007/s10508-010-9711-3

Fielder, R. L., Carey, K. B., & Carey, M. P. (2013). Are hookups replacing romantic relationships? A longitudinal study of first-year female college students. *Journal of Adolescent Health, 52,* 657–659.

Finkel, E. J., & Eastwick, P. W. (2009). Arbitrary social norms influence sex differences in romantic selectivity. *Psychological Science, 20,* 1290–1295. http://dx.doi.org/10.1111/j.1467-9280.2009.02439.x

Finkel, E. J., Eastwick, P. W., Karney, B. R., Reis, H. T., & Sprecher, S. (2012). Online dating: A critical analysis from the perspective of psychological science. *Psychological Science in the Public Interest, 13,* 3–66. http://dx.doi.org/10.1177/1529100612436522

Finkel, E. J., Simpson, J. A., & Eastwick, P. W. (2017). The psychology of close relationships: Fourteen core principles. *Annual Review of Psychology, 68,* 383–411. http://dx.doi.org/10.1146/annurev-psych-010416-044038

Finkel, E. J., Slotter, E. B., Luchies, L. B., Walton, G. M., & Gross, J. J. (2013). A brief intervention to promote conflict reappraisal preserves marital quality over time. *Psychological Science, 24,* 1595–1601. http://dx.doi.org/10.1177/0956797612474938

Fisher, H. E., Aron, A., Mashek, D., Li, H., & Brown, L. L. (2002). Defining the brain systems of lust, romantic attraction, and attachment. *Archives of Sexual Behavior, 31,* 413–419. http://dx.doi.org/10.1023/A:1019888024255

Fletcher, G. J. O., & Kerr, P. S. G. (2010). Through the eyes of love: Reality and illusion in intimate relationships. *Psychological Bulletin, 136,* 627–658. http://dx.doi.org/10.1037/a0019792

Fletcher, G. J., Kerr, P. S., Li, N. P., & Valentine, K. A. (2014). Predicting romantic interest and decisions in the very early stages of mate selection: Standards, accuracy, and sex differences. *Personality and Social Psychology Bulletin, 40,* 540–550.

Fletcher, G. J. O., Simpson, J. A., Campbell, L., & Overall, N. C. (2013). *The science of intimate relationships.* Malden, MA: Wiley-Blackwell.

Fletcher, G. J. O., Simpson, J. A., Campbell, L., & Overall, N. C. (2015). Pair-bonding, romantic love, and evolution: The curious case of Homo sapiens. *Perspectives on Psychological Science, 10,* 20–36. http://dx.doi.org/10.1177/1745691614561683

Fletcher, G. J. O., Tither, J. M., O'Loughlin, C., Friesen, M., & Overall, N. (2004). Warm and homely or cold and beautiful? Sex differences in trading off traits in mate selection. *Personality and Social Psychology Bulletin, 30,* 659–672. http://dx.doi.org/10.1177/0146167203262847

Fox, J., Warber, K. M., & Makstaller, D. C. (2013). The role of Facebook in romantic relationship development: An exploration of Knapp's relational stage model. *Journal of Social and Personal Relationships, 30,* 771–794. http://dx.doi.org/10.1177/0265407512468370

Gagné, F. M., & Lydon, J. E. (2004). Bias and accuracy in close relationships: An integrative review. *Personality and Social Psychology Review, 8,* 322–338. http://dx.doi.org/10.1207/s15327957pspr0804_1

Gangestad, S. W., Garver-Apgar, C. E., Simpson, J. A., & Cousins, A. J. (2007). Changes in women's mate preferences across the ovulatory cycle. *Journal of Personality and Social Psychology, 92,* 151–163. http://dx.doi.org/10.1037/0022-3514.92.1.151

Gangestad, S. W., & Simpson, J. A. (2000). The evolution of human mating: Trade-offs and strategic pluralism. *Behavioral and Brain Sciences, 23,* 573–587. http://dx.doi.org/10.1017/S0140525X0000337X

Gangestad, S. W., Simpson, J. A., Cousins, A. J., Garver-Apgar, C. E., & Christensen, P. N. (2004). Women's preferences for male behavioral displays change across the menstrual cycle. *Psychological Science, 15,* 203–207. http://dx.doi.org/10.1111/j.0956-7976.2004.01503010.x

Gildersleeve, K., Haselton, M. G., & Fales, M. R. (2014). Do women's mate preferences change across the ovulatory cycle? A meta-analytic review. *Psychological Bulletin, 140,* 1205–1259. http://dx.doi.org/10.1037/a0035438

Gray, P. B., & Garcia, J. (2013). *Evolution and human sexual behavior.* Cambridge, MA: Harvard University Press.

Graziano, W. G., & Bruce, J. W. (2008). Attraction and the initiation of relationships: A review of the empirical literature. In S. Sprecher, A. Wenzel, & J. Harvey (Eds.), *Handbook of relationship initiation* (pp. 269–296). New York, NY: Taylor and Francis.

Greiling, H., & Buss, D. M. (2000). Women's sexual strategies: The hidden dimension of extra-pair mating. *Personality and Individual Differences, 28,* 929–963. http://dx.doi.org/10.1016/S0191-8869(99)00151-8

Guerrero, L. K., & Chavez, A. M. (2005). Relational maintenance in cross-sex friendships characterized by different types of romantic intent: An exploratory study. *Western Journal of Communication, 69,* 339–358. http://dx.doi.org/10.1080/10570310500305471

Guerrero, L. K., & Mongeau, P. A. (2008). On becoming "more than friends": The transition from friendship to romantic relationship. In S. Sprecher, A. Wenzel, & J. Harvey (Eds.), *Handbook of relationship initiation* (pp. 175–196). New York, NY: Taylor and Francis.

Halford, W. K., Markman, H. J., Kline, G. H., & Stanley, S. M. (2003). Best practice in couple relationship education. *Journal of Marital and Family Therapy, 29,* 385–406. http://dx.doi.org/10.1111/j.1752-0606.2003.tb01214.x

Harden, K. P. (2014). A sex-positive framework for research on adolescent sexuality. *Perspectives on Psychological Science, 9,* 455–469. http://dx.doi.org/10.1177/1745691614535934

Haselton, M. G., & Gangestad, S. W. (2006). Conditional expression of women's desires and men's mate guarding across the ovulatory cycle. *Hormones and Behavior, 49,* 509–518. http://dx.doi.org/10.1016/j.yhbeh.2005.10.006

Haselton, M. G., & Miller, G. F. (2006). Women's fertility across the cycle increases the short-term attractiveness of creative intelligence. *Human Nature, 17,* 50–73. http://dx.doi.org/10.1007/s12110-006-1020-0

Hazan, C., & Diamond, L. M. (2000). The place of attachment in human mating. *Review of General Psychology, 4,* 186–204. http://dx.doi.org/10.1037/1089-2680.4.2.186

Hazan, C., & Shaver, P. R. (1994). Attachment as an organizational framework for research on close relationships. *Psychological Inquiry, 5,* 1–22. http://dx.doi.org/10.1207/s15327965pli0501_1

Higgins, J. A., Trussell, J., Moore, N. B., & Davidson, J. K. (2010). Virginity lost, satisfaction gained? Physiological and psychological sexual satisfaction at heterosexual debut. *Journal of Sex Research, 47,* 384–394. http://dx.doi.org/10.1080/00224491003774792

Holmes, J. G., & Rempel, J. K. (1989). Trust in close relationships. In C. Hendrick (Ed.), *Review of personality and social psychology: Vol. 10. Close relationships* (pp. 187–220). Thousand Oaks, CA: Sage.

Holt-Lunstad, J., Smith, T. B., & Layton, J. B. (2010). Social relationships and mortality risk: A meta-analytic review. *PLoS Medicine, 7,* e1000316. http://dx.doi.org/10.1371/journal.pmed.1000316

Hunt, L. L., Eastwick, P. W., & Finkel, E. J. (2015). Leveling the playing field: Longer acquaintance predicts reduced assortative mating on attractiveness. *Psychological Science, 26,* 1046–1053. http://dx.doi.org/10.1177/0956797615579273

Huston, T. L., Caughlin, J. P., Houts, R. M., Smith, S. E., & George, L. J. (2001). The connubial crucible: Newlywed years as predictors of marital delight, distress, and divorce. *Journal of Personality and Social Psychology, 80,* 237–252. http://dx.doi.org/10.1037/0022-3514.80.2.237

Huston, T. L., Surra, C. A., Fitzgerald, N. M., & Cate, R. M. (1981). From courtship to marriage: Mate selection as an interpersonal process. In S. Duck & R. Gilmour (Eds.), *Personal relationships (Vol. 2)*: *Developing personal relationships* (pp. 53–88). London, UK: Academic Press.

Joel, S., Eastwick, P. W., & Finkel, E. J. (2017). Is romantic desire predictable? Machine learning applied to initial romantic attraction. *Psychological Science, 28,* 1478–1489. http://dx.doi.org/10.1177/0956797617714580

Joel, S., Teper, R., & MacDonald, G. (2014). People overestimate their willingness to reject potential romantic partners by overlooking their concern for other people. *Psychological Science, 25,* 2233–2240. http://dx.doi.org/10.1177/0956797614552828

Jonason, P. K., Li, N., & Richardson, J. (2010). Positioning the booty-call relationship on the spectrum of relationships: Sexual but more emotional than one-nightstands. *Journal of Sex Research, 47,* 1–10.

Kahneman, D., Krueger, A. B., Schkade, D. A., Schwarz, N., & Stone, A. A. (2004). A survey method for characterizing daily life experience:

The day reconstruction method. *Science, 306,* 1776–1780. http://dx.doi.org/10.1126/science.1103572

Karney, B. R., & Bradbury, T. N. (1995). The longitudinal course of marital quality and stability: A review of theory, method, and research. *Psychological Bulletin, 118,* 3–34. http://dx.doi.org/10.1037/0033-2909.118.1.3

Karney, B. R., & Frye, N. E. (2002). "But we've been getting better lately": Comparing prospective and retrospective views of relationship development. *Journal of Personality and Social Psychology, 82,* 222–238. http://dx.doi.org/10.1037/0022-3514.82.2.222

Kelley, H. H., Holmes, J. G., Kerr, N. L., Reis, H. T., Rusbult, C. E., & Van Lange, P. A. M. (2003). *An atlas of interpersonal situations.* New York, NY: Cambridge University Press. http://dx.doi.org/10.1017/CBO9780511499845

Keneski, E. (2016). *And this relationship is just right: Normative romantic relationship development predicts relationship quality through social network approval.* Unpublished Doctoral Dissertation, University of Texas at Austin, Austin, TX.

Kenrick, D. T., Groth, G. E., Trost, M. R., & Sadalla, E. K. (1993). Integrating evolutionary and social exchange perspectives on relationships: Effects of gender, self-appraisal, and involvement level on mate selection criteria. *Journal of Personality and Social Psychology, 64,* 951–969. http://dx.doi.org/10.1037/0022-3514.64.6.951

Kenrick, D. T., Sadalla, E. K., Groth, G., & Trost, M. R. (1990). Evolution, traits, and the stages of human courtship: Qualifying the parental investment model. *Journal of Personality, 58,* 97–116. http://dx.doi.org/10.1111/j.1467-6494.1990.tb00909.x

Knapp, M. L. (1978). *Social intercourse: From greeting to goodbye.* Boston, MA: Allyn & Bacon.

Koehler, N., Rhodes, G., & Simmons, L. W. (2002). Are human female preferences for symmetrical male faces enhanced when conception is likely? *Animal Behaviour, 64,* 233–238. http://dx.doi.org/10.1006/anbe.2002.3063

Lavner, J. A., Karney, B. R., & Bradbury, T. N. (2014). Relationship problems over the early years of marriage: Stability or change? *Journal of Family Psychology, 28,* 979–985. http://dx.doi.org/10.1037/a0037752

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. http://dx.doi.org/10.1111/j.1475-6811.2010.01285.x

Lee, L. A., & Sbarra, D. A. (2013). The predictors and consequences of relationship dissolution: Breaking down silos. In C. Hazan & M. I. Campa (Eds.), *Human bonding: The science of affectional ties* (pp. 308–342). New York, NY: Oxford University Press.

Lefkowitz, E. S., Vasilenko, S. A., & Leavitt, C. E. (2016). Oral vs. vaginal sex experiences and consequences among first-year college students. *Archives of Sexual Behavior, 45,* 329–337. http://dx.doi.org/10.1007/s10508-015-0654-6

Lehmiller, J. J., Vanderdrift, L. E., & Kelly, J. R. (2014). Sexual communication, satisfaction, and condom use behavior in friends with benefits and romantic partners. *Journal of Sex Research, 51,* 74–85. http://dx.doi.org/10.1080/00224499.2012.719167

Levine, L. J. (1997). Reconstructing memory for emotions. *Journal of Experimental Psychology: General, 126,* 165–177. http://dx.doi.org/10.1037/0096-3445.126.2.165

Levine, L. J., & Pizarro, D. A. (2004). Emotion and memory research: A grumpy overview. *Social Cognition, 22,* 530–554. http://dx.doi.org/10.1521/soco.22.5.530.50767

Levinger, G. (1980). Toward the analysis of close relationships. *Journal of Experimental Social Psychology, 16,* 510–544. http://dx.doi.org/10.1016/0022-1031(80)90056-6

Levinger, G. (1983). Development and change. In H. H. Kelley, E. Berscheid, A. Christensen, J. H. Harvey, T. L. Huston, G. Levinger, . . . D.

Hallfors (Eds.), *Close relationships* (pp. 315–359). New York, NY: Freeman.

Levinger, G., & Snoek, J. D. (1972). *Attraction in relationship: A new look at interpersonal attraction*. Morristown, NJ: General Learning.

Li, N. P., Griskevicius, V., Durante, K. M., Jonason, P. K., Pasisz, D. J., & Aumer, K. (2009). An evolutionary perspective on humor: Sexual selection or interest indication? *Personality and Social Psychology Bulletin, 35,* 923–936. http://dx.doi.org/10.1177/0146167209334786

Li, N. P., & Kenrick, D. T. (2006). Sex similarities and differences in preferences for short-term mates: What, whether, and why. *Journal of Personality and Social Psychology, 90,* 468–489. http://dx.doi.org/10.1037/0022-3514.90.3.468

Li, N. P., Yong, J. C., Tov, W., Sng, O., Fletcher, G. J. O., Valentine, K. A., . . . Balliet, D. (2013). Mate preferences do predict attraction and choices in the early stages of mate selection. *Journal of Personality and Social Psychology, 105,* 757–776. http://dx.doi.org/10.1037/a0033777

Little, A. C., Jones, B. C., & Burriss, R. P. (2007). Preferences for masculinity in male bodies change across the menstrual cycle. *Hormones and Behavior, 51,* 633–639. http://dx.doi.org/10.1016/j.yhbeh.2007.03.006

Little, A. C., Jones, B. C., Burt, D. M., & Perrett, D. I. (2007). Preferences for symmetry in faces change across the menstrual cycle. *Biological Psychology, 76,* 209–216. http://dx.doi.org/10.1016/j.biopsycho.2007.08.003

Loving, T. J., Gleason, M. E., & Pope, M. T. (2009). Transition novelty moderates daters' cortisol responses when talking about marriage. *Personal Relationships, 16,* 187–203. http://dx.doi.org/10.1111/j.1475-6811.2009.01218.x

Low, B. S. (1978). Environmental uncertainty and the parental strategies of marsupials and placentals. *American Naturalist, 112,* 197–213. http://dx.doi.org/10.1086/283260

Lukaszewski, A. W., & Roney, J. R. (2009). Estimated hormones predict women's mate preferences for dominant personality traits. *Personality and Individual Differences, 47,* 191–196. http://dx.doi.org/10.1016/j.paid.2009.02.019

Manning, W. D., Giordano, P. C., & Longmore, M. A. (2006). Hooking up: The relationship contexts of "nonrelationship" sex. *Journal of Adolescent Research, 21,* 459–483. http://dx.doi.org/10.1177/0743558406291692

McFarland, C., Ross, M., & DeCourville, N. (1989). Women's theories of menstruation and biases in recall of menstrual symptoms. *Journal of Personality and Social Psychology, 57,* 522–531. http://dx.doi.org/10.1037/0022-3514.57.3.522

McNulty, J. K., & Russell, V. M. (2010). When "negative" behaviors are positive: A contextual analysis of the long-term effects of problem-solving behaviors on changes in relationship satisfaction. *Journal of Personality and Social Psychology, 98,* 587–604. http://dx.doi.org/10.1037/a0017479

Meltzer, A. L., McNulty, J. K., Jackson, G. L., & Karney, B. R. (2014). Sex differences in the implications of partner physical attractiveness for the trajectory of marital satisfaction. *Journal of Personality and Social Psychology, 106,* 418–428. http://dx.doi.org/10.1037/a0034424

Metts, S., Sprecher, S., & Cupach, W. R. (1991). Retrospective self-reports. In B. M. Montgomery & S. Duck (Eds.), *Studying interpersonal interaction* (pp. 162–178). New York, NY: Guilford Press.

Miller, R. S. (2015). *Intimate relationships* (7th ed.). New York, NY: McGraw-Hill.

Morrison, E. R., Clark, A. P., Gralewski, L., Campbell, N., & Penton-Voak, I. S. (2010). Women's probability of conception is associated with their preference for flirtatious but not masculine facial movement. *Archives of Sexual Behavior, 39,* 1297–1304. http://dx.doi.org/10.1007/s10508-009-9527-1

Mund, M., Finn, C., Hagemeyer, B., & Neyer, F. J. (2016). Understanding dynamic transactions between personality traits and partner relationships. *Current Directions in Psychological Science, 25,* 411–416. http://dx.doi.org/10.1177/0963721416659458

Murray, S. L., & Holmes, J. G. (2009). The architecture of interdependent minds: A Motivation-management theory of mutual responsiveness. *Psychological Review, 116,* 908–928. http://dx.doi.org/10.1037/a0017015

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

Murray, S. L., Holmes, J. G., & Griffin, D. W. (1996). The self-fulfilling nature of positive illusions in romantic relationships: Love is not blind, but prescient. *Journal of Personality and Social Psychology, 71,* 1155–1180. http://dx.doi.org/10.1037/0022-3514.71.6.1155

Murstein, B. I. (1970). Stimulus. Value. Role: A theory of marital choice. *Journal of Marriage and the Family, 32,* 465–481. http://dx.doi.org/10.2307/350113

Neff, L. A., & Karney, B. R. (2005). To know you is to love you: The implications of global adoration and specific accuracy for marital relationships. *Journal of Personality and Social Psychology, 88,* 480–497. http://dx.doi.org/10.1037/0022-3514.88.3.480

Oinonen, K. A., Klemencic, N., & Mazmanian, D. (2008). The periovulatory sociosexuality tactic shift (PSTS): Activational hormonal mechanisms in two female sexual strategies. In G. A. Conti (Ed.), *Progress in biological psychology research* (pp. 139–158). Hauppauge, NY: Nova Science.

Olderbak, S. G., & Figueredo, A. J. (2009). Predicting romantic relationship satisfaction from life history strategy. *Personality and Individual Differences, 46,* 604–610. http://dx.doi.org/10.1016/j.paid.2008.12.019

Olderbak, S. G., & Figueredo, A. J. (2010). Life history strategy as a longitudinal predictor of relationship satisfaction and dissolution. *Personality and Individual Differences, 49,* 234–239. http://dx.doi.org/10.1016/j.paid.2010.03.041

Pallant, J. (2007). *SPSS survival manual: A step-by-step guide to data analysis using SPSS, version 15*. Retrieved from https://myadm2014.files.wordpress.com/2017/02/spss-survival-manual-a-step-by-step-guide-to-data-analysis-using-spss-for-windows-3rd-edition-aug-2007-2.pdf

Paul, E. L., Wenzel, A., & Harvey, J. (2008). Hookups: A facilitator or a barrier to relationship initiation and intimacy development. In S. Sprecher, A. Wenzel, & J. Harvey (Eds.), *Handbook of relationship initiation* (pp. 375–390). New York, NY: Taylor and Francis.

Pawlowski, B., & Jasienska, G. (2005). Women's preferences for sexual dimorphism in height depend on menstrual cycle phase and expected duration of relationship. *Biological Psychology, 70,* 38–43. http://dx.doi.org/10.1016/j.biopsycho.2005.02.002

Penton-Voak, I. S., Perrett, D. I., Castles, D. L., Kobayashi, T., Burt, D. M., Murray, L. K., & Minamisawa, R. (1999). Menstrual cycle alters face preference. *Nature, 399,* 741–742. http://dx.doi.org/10.1038/21557

Perper, T., & Cornog, M. (2000). Idealized human mating strategies versus social complexity. *Behavioral and Brain Sciences, 23,* 619–620. http://dx.doi.org/10.1017/S0140525X00593376

Peters, M., Rhodes, G., & Simmons, L. W. (2008). Does attractiveness in men provide clues to semen quality? *Journal of Evolutionary Biology, 21,* 572–579. http://dx.doi.org/10.1111/j.1420-9101.2007.01477.x

Peters, M., Simmons, L. W., & Rhodes, G. (2009). Preferences across the menstrual cycle for masculinity and symmetry in photographs of male faces and bodies. *PLoS ONE, 4,* e4138. http://dx.doi.org/10.1371/journal.pone.0004138

Prokosch, M. D., Coss, R. G., Scheib, J. E., & Blozis, S. A. (2009). Intelligence and mate choice: Intelligent men are always appealing. *Evolution and Human Behavior, 30,* 11–20. http://dx.doi.org/10.1016/j.evolhumbehav.2008.07.004

Puts, D. A. (2005). Mating context and menstrual phase affect women's preferences for male voice pitch. *Evolution and Human Behavior, 26,* 388–397. http://dx.doi.org/10.1016/j.evolhumbehav.2005.03.001

Regan, P. C. (1998). What if you can't get what you want? Willingness to compromise ideal mate selection standards as a function of sex, mate value, and relationship context. *Personality and Social Psychology Bulletin, 24,* 1294–1303. http://dx.doi.org/10.1177/01461672982412004

Regan, P. C., Levin, L., Sprecher, S., Christopher, F. S., & Cate, R. (2000). Partner preferences: What characteristics do men and women desire in their short-term sexual and long-term romantic partners? *Journal of Psychology & Human Sexuality, 12,* 1–21. http://dx.doi.org/10.1300/J056v12n03_01

Reis, H. T., & Shaver, P. (1988). Intimacy as an interpersonal process. In S. Duck (Ed.), *Handbook of personal relationships* (pp. 367–389). Chichester, UK: Wiley.

Roney, J. R., Hanson, K. N., Durante, K. M., & Maestripieri, D. (2006). Reading men's faces: Women's mate attractiveness judgments track men's testosterone and interest in infants. *Proceedings Biological Sciences, 273,* 2169–2175. http://dx.doi.org/10.1098/rspb.2006.3569

Rudman, L. A. (1998). Self-promotion as a risk factor for women: The costs and benefits of counterstereotypical impression management. *Journal of Personality and Social Psychology, 74,* 629–645. http://dx.doi.org/10.1037/0022-3514.74.3.629

Rusbult, C. E. (1983). A longitudinal test of the investment model: The development (and deterioration) of satisfaction and commitment in heterosexual involvements. *Journal of Personality and Social Psychology, 45,* 101–117. http://dx.doi.org/10.1037/0022-3514.45.1.101

Rusbult, C. E., Martz, J. M., & Agnew, C. R. (1998). The investment model scale: Measuring commitment level, satisfaction level, quality of alternatives, and investment size. *Personal Relationships, 5,* 357–387. http://dx.doi.org/10.1111/j.1475-6811.1998.tb00177.x

Rusbult, C. E., Olsen, N., Davis, J. L., & Hannon, P. A. (2001). Commitment and relationship maintenance mechanisms. In J. H. Harvey & A. Wenzel (Eds.), *Close romantic relationships: Maintenance and enhancement* (pp. 87–113). Mahwah, NJ: Erlbaum.

Rusbult, C. E., & Van Lange, P. A. (2003). Interdependence, interaction, and relationships. *Annual review of psychology, 54,* 351–375.

Sbarra, D. A., Law, R. W., & Portley, R. M. (2011). Divorce and death a meta-analysis and research agenda for clinical, social, and health psychology. *Perspectives on Psychological Science, 6,* 454–474. http://dx.doi.org/10.1177/1745691611414724

Scelza, B. A. (2011). Female choice and extra-pair paternity in a traditional human population. *Biology Letters, 7,* 889–891. http://dx.doi.org/10.1098/rsbl.2011.0478

Scelza, B. A. (2013). Choosy but not chaste: Multiple mating in human females. *Evolutionary Anthropology, 22,* 259–269. http://dx.doi.org/10.1002/evan.21373

Schmitt, D. P. (2005). Fundamentals of human mating strategies. In D. M. Buss (Ed.), *The handbook of evolutionary psychology* (pp. 258–291). Hoboken, NJ: Wiley.

Schmitt, D. P. (2014). On the proper functions of human mate preference adaptations: Comment on Eastwick, Luchies, Finkel, and Hunt (2014). *Psychological Bulletin, 140,* 666–672. http://dx.doi.org/10.1037/a0036225

Schmitt, D. P. (2016). Fundamentals of human mating strategies. In D. M. Buss (Ed.), *The evolutionary psychology handbook* (2nd ed., pp. 294–316). New York, NY: Wiley.

Schmitt, D. P., Alcalay, L., Allik, J., Angleitner, A., Ault, L., Austers, I., . . . Zupanèiè, A. (2004). Patterns and universals of mate poaching across 53 nations: The effects of sex, culture, and personality on romantically attracting another person's partner. *Journal of Personality and Social Psychology, 86,* 560–584. http://dx.doi.org/10.1037/0022-3514.86.4.560

Schmitt, D. P., & Buss, D. M. (1996). Strategic self-promotion and competitor derogation: Sex and context effects on the perceived effectiveness of mate attraction tactics. *Journal of Personality and Social Psychology, 70,* 1185–1204. http://dx.doi.org/10.1037/0022-3514.70.6.1185

Silver, N. (2012). *The signal and the noise: Why so many predictions fail-but some don't.* New York, NY: Penguin Press.

Simpson, J. A., & Gangestad, S. W. (1991). Individual differences in sociosexuality: Evidence for convergent and discriminant validity. *Journal of Personality and Social Psychology, 60,* 870–883. http://dx.doi.org/10.1037/0022-3514.60.6.870

Smiler, A. P., Ward, L. M., Caruthers, A., & Merriwether, A. (2005). Pleasure, empowerment, and love: Factors associated with a positive first coitus. *Sexuality Research & Social Policy, 2,* 41–55. http://dx.doi.org/10.1525/srsp.2005.2.3.41

Smith, E. R., & Zarate, M. A. (1990). Exemplar and prototype use in social categorization. *Social Cognition, 8,* 243–262. http://dx.doi.org/10.1521/soco.1990.8.3.243

Smith, E. R., & Zarate, M. A. (1992). Exemplar-based model of social judgment. *Psychological Review, 99,* 3–21. http://dx.doi.org/10.1037/0033-295X.99.1.3

Sprecher, S., & Duck, S. (1994). Sweet talk: The importance of perceived communication for romantic and friendship attraction experienced during a get-acquainted date. *Personality and Social Psychology Bulletin, 20,* 391–400. http://dx.doi.org/10.1177/0146167294204006

Sprecher, S., Treger, S., & Wondra, J. D. (2013). Effects of self-disclosure role on liking, closeness, and other impressions in get-acquainted interactions. *Journal of Social and Personal Relationships, 30,* 497–514. http://dx.doi.org/10.1177/0265407512459033

Stewart, S., Stinnett, H., & Rosenfeld, L. B. (2000). Sex differences in desired characteristics of short-term and long-term relationship partners. *Journal of Social and Personal Relationships, 17,* 843–853. http://dx.doi.org/10.1177/0265407500176008

Sunnafrank, M., & Ramirez, A., Jr. (2004). At first sight: Persistent relational effects of get-acquainted conversations. *Journal of Social and Personal Relationships, 21,* 361–379. http://dx.doi.org/10.1177/0265407504042837

Surra, C. A. (1985). Courtship types: Variations in interdependence between partners and social networks. *Journal of Personality and Social Psychology, 49,* 357–375. http://dx.doi.org/10.1037/0022-3514.49.2.357

Surra, C. A., & Hughes, D. K. (1997). Commitment processes in accounts of the development of premarital relationships. *Journal of Marriage and the Family, 59,* 5–21. http://dx.doi.org/10.2307/353658

Trivers, R. L. (1972). Parental investment and sexual selection. In B. G. Campbell (Ed.), *Sexual selection and the descent of man, 1871–1971* (pp. 136–179). Chicago, IL: Aldine.

Walsh, J. L., Fielder, R. L., Carey, K. B., & Carey, M. P. (2014). Do alcohol and marijuana use decrease the probability of condom use for college women? *Journal of Sex Research, 51,* 145–158. http://dx.doi.org/10.1080/00224499.2013.821442

Wesche, R., Claxton, S. E., Lefkowitz, E. S., & van Dulmen, M. H. M. (2017). Evaluations and future plans after casual sexual experiences: Differences across partner type. *Journal of Sex Research.* Advance online publication. http://dx.doi.org/10.1080/00224499.2017.1298714

Wilson, M., & Daly, M. (1985). Competitiveness, risk taking, and violence: The young male syndrome. *Ethology and Sociobiology, 6,* 59–73. http://dx.doi.org/10.1016/0162-3095(85)90041-X

Appendix

Mapping Between Days and Event Number

Our decision to use number of events as a metric for time (instead of days) requires that we demonstrate that the mapping between events and days does not systematically differ across short-term and long-term relationships. For example, if events occurred every 20 days (on average) in short-term relationships but every 50 days in long-term relationships, plotting time courses with events (instead of days) on the *x*-axis would "stretch" short-term relationships to appear more like long-term relationships.

We addressed this possible concern in three ways in each study. First, we calculated the number of days elapsed since the first event for all events, and we then calculated the effect size of the difference between long-term and short-term relationships on this variable. In Study 1, for all events up to point where half of short-term relationships remained (i.e., 20 events), the average effect size of the long-term versus short-term difference was $d = .00$. In Study S2, for the all events up to point where half of short-term relationships remained (i.e., 18 events), time elapsed was longer in short-term than long-term relationships by $d = .11$. In Study 2a, for the all events up to point where half of short-term relationships remained (i.e., 20 events), time elapsed was longer in short-term than long-term relationships by $d = .17$. In Study 2b, for the all events up to point where half of short-term relationships remained (i.e., 26 events), time elapsed was longer in long-term than short-term relationships by $d = .07$. In Study S3, for the all events up to point where half of short-term relationships remained (i.e., 18 events), time elapsed was longer in short-term than long-term relationships by $d = .18$. (Also, in Study S3, the difference between short-term relationships and affairs was $d = .11$ and the difference between long-term relationships and affairs was $d = $ .08.) In short, the difference in time elapsed was small and, if anything, trended in a direction that would artificially make short-term relationships look *less* like long-term relationships.

Second, we conducted a multilevel model (with days nested within relationship) predicting days elapsed from event number, relationship type (long-term vs. short-term), and their interaction. This interaction tests whether the association of event number with days differed across relationship type. In this highly powered analysis, this interaction failed to achieve statistical significance in all studies: Study 1 $t(3915) = -1.46$, $p = .144$; Study S2 $t(8478) = 0.84$, $p = .398$, Study 2a $t(3274) = -1.15$, $p = .251$, Study 2b $t(5049) = -0.37$, $p = .712$; and Study S3 $F(2, 6192) = 0.63$, $p = .535$. (Study S3 is an F test because relationship type has three levels: long-term, short-term, and affair.)

Third and finally, we regressed days elapsed on event number for each relationship reported by each participant and exported each slope parameter to a person-level dataset. *T* tests revealed that short-term and long-term slopes did not differ in Study 1, $t(78) = 0.58$, $p = .564$, Study S2, $t(168) = -1.28$, $p = .201$, Study 2a $t(141) = 0.85$, $p = .396$, or Study 2b $t(185) = 0.73$, $p = .464$, and an ANOVA revealed that short-term, long-term, and affair slopes did not differ in Study S3, $F(2, 249) = 0.85$, $p = .428$.

In summary, 15 different tests revealed no evidence for differences across short-term and long-term relationships in the way that events correspond to literal time (e.g., days).