### Relationship Trajectories: A Meta-Theoretical Framework and Theoretical Applications

Paul W. Eastwick, Eli J. Finkel, and Jeffry A. Simpson

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#### TARGET ARTICLE

ABSTRACT

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59 Relationship Trajectories: A Meta-Theoretical Framework and Theoretical 60 61 **Applications** 62 63 Paul W. Eastwick<sup>a</sup>, Eli J. Finkel<sup>b</sup>, and Jeffry A. Simpson<sup>c</sup> 64 <sup>a</sup>Department of Psychology, University of California, Davis, California; <sup>b</sup>Department of Psychology, Northwestern University, Evanston, Illinois; 65 <sup>c</sup>Department of Psychology, University of Minnesota, Minneapolis, Minnesota 66 67 68 **KEY WORDS** 69 Close relationships: This article introduces a metatheoretical framework—the Relationship Trajectories Framework– evolutionary psychology; 70 that conceptualizes how human mating relationships develop across their complete time span, initial attraction; mating from the moment two people meet until the relationship ends. The framework depicts relation-71

depict single trajectories in isolation or two partners' trajectories with respect to each other (dyadic trajectories). Two theoretical models demonstrate the generative power of the framework-the relationship coordination and strategic timing (ReCAST) model and the sociosexuality trajectory model—both of which integrate close relationships and evolutionary psychological perspectives on mating. Finally, additional examples illustrate how the framework can generate new research questions about core relationships topics.

ships as arc-shaped evaluative trajectories that vary on five dimensions: shape (which includes

ascent, peak, and descent), fluctuation, threshold, composition, and density. The framework can

Scholars who study human mating care about time. They generate theoretical models outlining, for example, the differential time-course of passionate versus companionate love (Walster & Walster, 1978), how people confronting relational threats maintain their relationship rather than breaking up (Murray, Holmes, & Collins, 2006), and the different mating strategies people employ depending on the amount of time they anticipate being in a relationship (Buss & Schmitt, 1993). At great expense, they often conduct longitudinal studies to track the relationship dynamics of one or both partners over time.

Studies of dating, for example, regularly employ longitudinal methods to investigate how relationship quality changes over time, which couples are at elevated risk for breakup, or how certain motivations or self-presentational strategies ebb or flow depending on how long people have been dating (Clark & Beck, 2011; Le et al., 2010; Murray, Holmes, & Griffin, 1996). On occasion, they also ask individuals to offer retrospective accounts of their dating history with their partner, reporting on their likelihood of marriage at key relational events between the moment they began dating and the moment they got married (Huston, Surra, Fitzgerald, & Cate, 1981; Surra, 1985). Studies of marriage can command tremendous resources-sometimes for decades-to understand temporal dynamics (Huston, Caughlin, Houts, Smith, & George, 2001; Karney & Bradbury, 1995; Vaillant & Vaillant, 1993). Much of this work explores trajectories of marital quality, which has revealed that relationship evaluations such as passion and satisfaction decline over time on average (Glenn, 1998; VanLaningham, Johnson, & Amato, 2001), although some individuals do sus- 82 tain positive evaluations over time (Amato & James, 2018; 83 & 84 Anderson, Van Ryzin, & Doherty, 2010; Lavner 85 Bradbury, 2010).

Other research investigates time by focusing on specific, 86 meaningful transitions that couples experience (Baxter & 87 Bullis, 1986). Some studies, for example, focus on the influ-88 ence of discrete, common life events, such as the transitions 89 to cohabitation (Rhoades, Stanley, & Markman, 2012), to 90 marriage (Morris & Carter, 1999), to parenthood (Rholes, 91 Simpson, Campbell, & Grich, 2001), or to a long-distance 92 relationship status (Theiss & Knobloch, 2014). Still other 93 studies focus on changes in the primacy of particular sub-94 jective experiences as a relationship develops, such as the 95 transition from the primacy of hotter, more passionate 96 forms of love to warmer, more companionate forms of love 97 (Baumeister & Bratslavsky, 1999; Berscheid & Hatfield, 1978; 98 Hatfield & Rapson, 1993; Hazan & Shaver, 1994; 99 100 Sternberg, 1986).

Despite this extensive attention to temporal dynamics, 101 however, there exists no general, generative framework for <sup>102</sup> conceptualizing how relationships develop over their full 103 time span-from the moment two people meet until a final <sup>104</sup> breakup. To be sure, researchers have developed stage mod- 105 els, which posit that relationships-at least those that 106 endure-advance through discrete stages in a particular <sup>107</sup> sequence (Altman & Taylor, 1973; Knapp, 1978; Levinger & <sup>108</sup> Snoek, 1972; Murstein, 1970). Although stage models have <sup>109</sup> been important and influential, they are also limited. First, <sup>110</sup> there is little evidence that most relationships pass through 111 112

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115 categorically distinct stages (Bradbury & Karney, 2013). 116 Second, stage models generally posit a single normative rela-117 tionship progression (e.g., from stages of increasing attrac-118 tion, to interdependence, to bonding); none of the models 119 provides ways of conceptualizing how certain people or cer-120 tain relationships deviate from the average or typical one. 121 That said, their emphasis on temporal processes that begin 122 shortly after two individuals meet and extend into the estab-123 lishment of a serious relationship (or even through its dis-124 solution) is a major strength-and a major source of 125 inspiration behind the development of the current "whole-126 relationship" framework.

127 The present article is divided into five sections. First, we 128 consider two major gaps in the conceptualization of tem-129 poral dynamics in the science of human mating relation-130 ships. Second, we introduce the Relationship Trajectories 131 Framework—a new metatheoretical approach that presents 132 as its central thesis that relationships can be conceptualized 133 as evaluative arcs that begin at the moment two people 134 meet. Third, we provide an illustration of the generative 135 power of this framework by describing the relationship 136 coordination and strategic timing (ReCAST) model, which 137 introduces falsifiable hypotheses at the intersection of close 138 relationships and evolutionary perspectives on short-term 139 and long-term mating. Fourth, we provide a second illustra-140 tion by describing the sociosexuality trajectory model, which 141 introduces falsifiable hypotheses about the temporal dynam-142 ics linking different sociosexual orientations to relationship 143 processes and outcomes. Fifth and finally, to illustrate the 144 flexibility and generativity of the framework, we conclude 145 with a discussion of several additional possible extensions. 146

### 14808Gaps in Time: What Is Currently Missing in149this Literature?

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The preceding review suggests that time plays a central role
in relationship science. However, most prior work suffers
from two major limitations, a realization that led us to propose a new framework for conceptualizing time in the context of romantic relationships.

# Limitation 1: The Gap Between Models of Initial Attraction and Models of Relationship Dynamics

First, there is a major gap in our understanding of the 160 dynamics of relationship initiation. The initial attraction lit-161 erature does not intersect empirically with the literature on 162 established romantic relationships, mainly because the initial 163 attraction literature examines romantic evaluations over 164 extremely short time scales. In fact, the dependent variable 165 in nearly all studies occurs within seconds or minutes fol-166 lowing initial exposure to a target person, with little if any 167 expectation of future interaction with him or her. 168 Researchers frequently use pictures or descriptions of poten-169 tial partners as stimuli rather than real people. In virtually 170 all studies, once participants have completed an attraction 171 measure, the "relationship" is essentially over; there is no 172 effort to consider how it could develop over time. 173

174 Although scholars occasionally examine initial attraction longitudinally (Asendorpf, Penke, & Back, 2011; Bahns, 175 176 Crandall, Gillath, & Preacher, 2017; Eastwick & Finkel, 177 2008b; Eastwick & Hunt, 2014; Reis, Maniaci, Caprariello, 178 Eastwick, & Finkel, 2011; Sharabi & Caughlin, 2017; 179 Sprecher & Duck, 1994), such studies are rare. Even rarer 180 are studies that attempt to capture the "official" formation 181 of a relationship-defined as the moment two people agree they are romantic partners (Campbell, Chin, & Stanton, 182 183 2016; Eastwick & Finkel, 2008a; Eastwick, Keneski, Morgan, 184 McDonald, & Huang, 2018). Consequently, we know 185 remarkably little about what takes place between the 186 moment two strangers meet and the moment they form a 187 mutually recognized, committed romantic partnership 188 (Campbell & Stanton, 2014; Eastwick & Finkel, 2008c). 189 Despite the fact that relationship scientists conceptualize 190 relationships as having arcs that rise and fall (Bradbury & 191 Karney, 2013), the actual rise of these arcs is largely missing 192 from the current literature.

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Even scholars who solely study dynamics in established relationships should be concerned about this gap, because events and patterns that occur early in a relationship may affect psychological processes that transpire later (e.g., Hunt, Eastwick, & Finkel, 2015; Joel, Teper, & MacDonald, 2014). As one illustration, close relationships researchers have devoted considerable attention to the ways in which personality traits (McNulty, 2013) and other individual differences, such as attachment orientations (Simpson & Rholes, 2012), affect relationship functioning. But with very few exceptions, these personality and individual difference variables are assessed while the relationship is unfolding or established, not before the two partners first met. Thus, in any given study, an individual's score on an "individual difference" predictor variable might be (at least in part) a consequence of events that transpired earlier in the relationship rather than a cause of current relationship functioning.

210 How big is the gap in time between studies of attraction 211 between strangers and studies of established relationships? If 212 people typically initiate relationships by meeting a stranger, 213 asking him or her out on a date and forming an official 214relationship shortly thereafter, the gap might be comfort-215 ingly short (e.g., a few days). However, the available evi-216 dence suggests that such a temporally compressed sequence 217 is rare. Instead, most relationships emerge over time from 218 among people's networks of friends and acquaintances 219 (Bleske-Rechek, Joseph, Williquette, & Donovan, 2016; Hunt 220et al., 2015; Ingham, Woodcock, & Stenner, 1991; Kaestle & 221 Halpern, 2005; Manning, Giordano, & Longmore, 2006; 222 Walsh, Fielder, Carey, & Carey, 2014). Indeed, the time 223 elapsed between when two people first meet and when they 224 officially establish a romantic relationship typically spans 225 months or years (Eastwick et al., 2018; Hunt et al., 2015). 226 Furthermore, sexual encounters with strangers constitute a 227 small fraction of people's sexual experiences, even among 228 sexually active young adults (Manning et al., 2006; Walsh 229 et al., 2014). In other words, people typically make relation-230 ships sexual by altering acquaintanceships or friendships, 231 not by immediately finding chemistry with strangers. 232 For scholars interested in mapping current dating dynamics onto humans' evolved mating patterns, it bears noting that humans most likely initiated sexual relationships with wellknown others during evolutionary history as well (Eibl-Eibesfeldt, 1989).

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In summary, the current "trajectory gap" in the literature is large and noteworthy, and it has consequences for what scholars can conclude from their data. Greater insight regarding the relationship dynamics that take place between first meetings and the official formation of a relationship is likely to yield considerable theoretical and practical payoffs.

#### Limitation 2: The Disconnect Between Relationship Science and Evolved Mating Strategy Models

Second, as highlighted in prior reviews (e.g., Durante, Eastwick, Finkel, Gangestad, & Simpson, 2016), relationship science and evolutionary psychological perspectives remain disconnected with respect to the handling of time. This disconnect is partly theoretical. Close relationships studies typically treat short versus long relationship length as an outcome that follows from unhealthy versus healthy relationship functioning. However, the short-term versus long-term distinction is typically conceptualized as a *predictor* variable in the evolutionary psychological literature. Within this literature, people are conjectured to use different mating strategies and to pursue different kinds of partners, depending on the extent to which one's (conscious or unconscious) relationship length goal is short versus long. One might tie the concepts together by positing that short-term and longterm strategies are the means (i.e., predictors) that humans use to achieve short-term and long-term relationship length goals (i.e., outcomes). Perhaps because the crosstalk between the two disciplines has been so meager historically, there have been few if any attempts to bridge this gap empirically. For example, we know of no data showing that the use of long-term (rather than short-term) strategies leads to the formation of longer lasting relationships. In the absence of such evidence, it is often unclear whether close relationships and evolutionary scholars are referring to the same constructs when they discuss relationships that vary in the extent to which they are short versus long.

276 The disconnect is also partly methodological. Whereas 277 relationship science studies of relationship trajectories often 278 rely on longitudinal procedures (e.g., to assess whether a 279 relationship persists or breaks up), evolutionary psychology 280 studies employing the short-term/long-term distinction typ-281 ically rely on one-time measurement procedures (similar to 282 the initial attraction studies described earlier). In one com-283 mon study design, participants might be asked to rate their 284 short-term and long-term attraction to opposite-sex individ-285 uals depicted in a picture (e.g., DeBruine, 2005; Little, Jones, 286 Burt, & Perrett, 2007, Penton-Voak et al., 1999; Roney, 287 Hanson, Durante, & Maestripieri, 2006), in a written 288 description (e.g., Fletcher et al., 2004), in a video-recording 289 (Cantú et al., 2014; Gangestad, Garver-Apgar, Simpson, & 290 Cousins, 2007; Li et al., 2009), or in person (e.g., Li et al., 291

2013). After participants provide these ratings, the 292 293 study ends.

Without knowing much about how real-life short-term 294 and long-term relationships form and develop, confusion 295 emerges when the current evolutionary psychology and rela- 296 tionship science literatures intersect. For example, one com- 297 monly articulated assertion is that that "sexy" places (e.g., 298 speed-dating events, bars) pull for the formation of short- 299 term relationships, whereas long-term relationships form in  $^{300}$ other environments (Kurzban & Weeden, 2007; Li &  $^{301}$ 302 Meltzer, 2015; Li et al., 2013; cf. Eastwick et al., 2018). This 303 assertion can be applied in a way that renders most-or 304 maybe even all-studies of initial attraction irrelevant to 305 evolutionary perspectives on long-term mating (Maestripieri, 306 Henry, & Nickels, 2017; Schmitt, 2014; cf. Eastwick, Luchies, 307 Finkel, & Hunt, 2014a). In addition, one can find citations 308 justifying the use of dating couples for testing predictions 309 about long-term sexual strategies (presumably by compari- 310 son to short flings; Conroy-Beam & Buss, 2016) or short- 311 term strategies (presumably by comparison to marriages; 312 Meltzer, McNulty, Jackson, & Karney, 2014; cf. Eastwick, 313 Neff, Finkel, Luchies, & Hunt, 2014b). These confusions are 314 grounded in broader issues: Do short-term and long-term 315 relationships look different from their outset, or does the 316 short-term versus long-term nature of a relationship emerge 317 gradually over time as it develops? At what point do people 318 achieve insight into-or even bother to ask themselves- 319 whether they want a short-term or a long-term relationship 320 with a given partner? As we discuss next, answers to these 321 basic questions likely lie somewhere between the opening 322 323 evaluative moments and becoming an official couple.

In summary, the same empirical and theoretical gap that <sup>324</sup> plagues the initial attraction and close relationships litera- 325 tures also creates challenges for scholars working at the <sup>326</sup> 327 intersection of these literatures and evolutionary psychology. A model that attempts to map the complete time course of  $\frac{328}{328}$ 329 human mating relationships holds tremendous integrative 330 potential across disciplines. 331

#### The Relationship Trajectories Framework

335 In this section, we illustrate how scholars can overcome 336 these shortcomings with the Relationship Trajectories 337 Framework. The core premise of the framework is that romantic and sexual relationships-in any meaningful aggre- 338 339 gation, and regardless of their length-can be conceptualized 340 as arc-shaped trajectories that begin when two people meet. 341 The framework is metatheoretical rather than theoretical 342 (see Finkel, 2014) because it does not introduce a specific 343 set of falsifiable predictions. Instead, it serves as a guide for 344 the development of interesting and generative theories, mod- $\frac{1}{345}$ els, and research questions about how different relationships 346 develop over time. Once we have introduced the framework, 347 we discuss two theoretical models that draw from it, both of 348 which are theoretical in that they generate specific, falsifi- 349 able hypotheses. 350

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#### 351 Origins of the Relationship Trajectories Framework

352 The Relationship Trajectories Framework draws inspiration 353 from several of the stage and transition models just noted 354 (e.g., Altman & Taylor, 1973; Hazan & Shaver, 1994; Huston 355 et al., 1981; Knapp, 1978; Levinger, 1980; Surra, 1985). 356 Specifically, it depicts the entire time course of the relation-357 ship, similar to stage models (e.g., Knapp, 1978). However, 358 it also (a) reenvisions stages as rising and falling subjective 359 evaluations and motivations (e.g., Hazan & Shaver, 1994) 360 and (b) explicitly considers both the average, normative tra-361 jectory and individual differences in trajectories. Similar to 362 prior models, time (i.e., the x-axis) can be conceptualized 363 either literally (e.g., in days, weeks, months, or years) or in 364 terms of important relationship events (e.g., first kiss, taking 365 a trip, moving in together). 366

The Relationship Trajectories Framework is broader than 367 prior models in four major ways. First, it encompasses a 368 large array of possible sexual or romantic relationships, not 369 only current romantic relationships. For a relationship to be 370 depicted within this framework, the minimum criterion is 371 that a person must have evaluated another person romantic-372 ally on two or more discrete, separate occasions (i.e., enough 373 information to generate a trajectory across time). Thus, the 374 Relationship Trajectories Framework is well suited to depict 375 past or ongoing relationships of any length, ranging from 376 days to decades. There is no requirement that specific rela-377 tionship evaluations fluctuate over time, but a trajectory is 378 unlikely to be useful or meaningful if evaluations are zero at 379 all time points (i.e., a person never feels any sexual or 380 romantic interest in the partner). With regard to the end-381 point, a relationship can be depicted in this framework for 382 as long as a person can provide an evaluation of the partner 383 (i.e., for as long as he or she can remember the partner); in 384 practice, however, many applications of the framework will 385 concretely represent the "end of a relationship." For 386 example, scholars who study relationships that are official 387 may operationalize the end of the relationship as a mutually 388 acknowledged, final breakup that marks the end of all 389 romantic and sexual contact, whereas scholars who study 390 crushes that never become official relationships may oper-391 ationalize the end of the relationship as the moment when a 392 person permanently stops believing that his or her partner 393 has any romantic potential (Eastwick & Finkel, 2008c).<sup>1</sup> 394

Second, the process starts not with the official formation of a romantic relationship but rather with the initial encounter, even if the first positive romantic evaluation occurred much later. Most commonly, then, the start of a relationship will be a face-to-face meeting, although it can also begin via other informational channels (e.g., an instant messaging chat; Finkel, Eastwick, Karney, Reis & Sprecher,

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410 2012). This relatively early conceptualization of the begin-411 ning of the relationship is essential for addressing the major 412 empirical and theoretical gap just described: Official rela-413 tionship formation typically takes time and follows several 414 important events that happen early in relationship develop-415 ment, and many sexual relationships may never have an 416 official formation event. Given that trajectories apply to 417 more than committed, exclusive partners, a person could 418 have zero, one, or several personally significant trajectories 419 at a given point in time. 420

Third, according to the Relationship Trajectories 421 Framework, the y-axis can be any evaluative (i.e., valenced) 422 judgment (e.g., romantic interest, relationship quality, com-423 mitment, sexual desire). In the romantic domain, evalua-424 tions are organized hierarchically: Specific constructs (e.g., 425 satisfaction, passion, love) are encompassed by a super-426 ordinate global romantic evaluation, akin to an overall sub-427 jective positive romantic attitude (Fletcher, Simpson, & 428 Thomas, 2000). We frequently refer to global romantic eval-429 uations on the y-axis when illustrating our framework, but, 430 as becomes clear in the upcoming Composition section, the 431 constructs that undergird global evaluations (e.g., passion) 432 can be depicted similarly when researchers' hypotheses are 433 captured more appropriately at this lower level of analysis. 434 The y-axis can also depict implicit evaluations (Lee, Rogge, 435 436 & Reis, 2010), negative or aversive evaluations (Gable & 437 Reis, 2001), or other fine-grained judgments that have an 438 evaluative component (e.g., feeling attached; Hazan & 439 Shaver, 1994). 440

Fourth, when researchers are interested in dyadic research questions, the Relationship Trajectories Framework accommodates dyadic trajectories, that is, two individuals' romantic evaluations of each other over time. As elaborated next, two trajectories are depicted side by side in such cases, along with an additional axis that represents partners' closeness or interdependence using nonevaluative metrics (Berscheid, Snyder, & Omoto, 1989; Kelley, 1983).

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#### **Five Dimensions of Relationship Trajectories**

452 The Relationship Trajectories Framework characterizes 453 relationships in terms of five independent dimensions: 454 shape (which includes three elements: ascent, peak, and 455 descent), fluctuation, threshold, composition, and density 456 (see Table 1). The first four dimensions apply to individual 457 trajectories; the fifth applies to the clustering of trajectories 458 over a given period in a person's life. Given our assump-459 tion that romantic/sexual relationships can be conceptual-460 ized as arc-shaped trajectories, it follows that these five 461 dimensions can apply in principle to any (reasonably sized) 462 sample of relationships. Variability across the five dimen-463 sions can stem from actor, partner, relationship-specific, 464 and/or external forces; all the dimensions are reflected in 465 existing literature, although some (e.g., the descent element 466 of shape) are emphasized more heavily than others 467 (e.g., thresholds). 468

<sup>&</sup>lt;sup>1</sup>The Relationship Trajectories Framework makes no assumptions about 403 whether a relationship continues or ends when one partner dies; subjectively, 404 both of these bereavement experiences are common (Stroebe, Schut, & 405 Stroebe, 2005). It also was not developed to apply to nonromantic relationships (e.g., platonic friendships, family relationships), or to any 406 relationship without a face-to-face meeting (e.g., parasocial relationships, 407 paradigms in which people evaluate faces over time), primarily because we do 408 not know whether evaluations in these cases are represented appropriately as 409 arc-shaped trajectories.

|   | Dimension   | Definition   | Example Predictor                       |
|---|-------------|--|---|
| 1 | Shape       |  |   |
|   | Ascent      | The extent to which the normative rise in evaluations at the begin-<br>ning of a trajectory is fast or slow              | Familiarity (Reis et al., 2011)         |
|   | Peak        | The overall evaluation levels ultimately reached by a trajectory   | Responsiveness (Huston et al., 2001)    |
|   | Descent     | The extent to which the normative decline in evaluations at the end<br>of a trajectory is fast or slow                   | Stress (Conger et al, 1999)             |
| 2 | Fluctuation | The extent to which evaluations are variable over time   | Trust (Campbell et al., 2010)           |
| 3 | Threshold   | The extent to which evaluations are linked to the desire/willingness<br>to perform particular behaviors                  | Participant sex (see text)              |
| 4 | Composition | The extent to which global evaluations are built upon specific<br>underlying constructs (e.g., passion, intimacy, trust) | Relationship abuse (Rusbult & Martz, 19 |
| 5 | Density     | The extent to which trajectories are concentrated or dispersed over<br>a given period of time in a person's life         | Extraversion (Paunonen, 2003)           |

#### Shape

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The shape dimension leverages an analogy to the arc-shaped trajectory of rockets that rise, peak, and eventually fall. Similar to rockets, romantic trajectories differ in their ascent (i.e., a trajectory can rise quickly, slowly, or not at all), peak (i.e., the overall level or height of the trajectory can vary from high to low), and descent (i.e., the trajectory can decline quickly, slowly, or not at all). Figure 1 illustrates these three characteristics of shape and how they can, in principle, vary independent of each other.<sup>2</sup> People experience a large number of evaluative moments during a given relationship, so the shape dimension captures something approximating a measure of central tendency of those moments, one that smooths over shorter term perturbations. As illustrated next, there is a nearly limitless number of variables that can affect the shape of a trajectory, and these predictors can cause a trajectory to slope upward or downward, or make a discontinuous jump upward or downward (Singer & Willett, 2003). Some variables could exert their effects from the opening moments of a relationship, well before researchers manage to study it; for example, some people are more likely to rate others positively in general (Wood, Harms, & Vazire, 2010), and this disposition could lead all of their arcs to be elevated on average.

#### Ascent

The rise in romantic evaluations that normatively occurs at the beginning of a trajectory—whether or not that trajectory develops into a full-fledged, official relationship-may take place more quickly in some relationships than others (see Figure 1, Panel A). Many studies have examined predictors of desire for opposite-sex strangers; these initial attraction studies are analogous to the opening moments of relationship trajectories, as a trajectory progresses from time 0 (i.e., when the target is unknown) to time 1 (i.e., the first encounter). Previously identified predictors have included actor effects such as the need to belong (Joel, Eastwick, & Finkel, 2017), attachment anxiety (McClure & Lydon, 2014), and being male (Fletcher, Kerr, Li, & Valentine, 2014);

<sup>2</sup>Here, we discuss the three elements of shape that are essential to arcs (ascent, peak, and descent), but of course, real-life relationship trajectories may have other shape elements that merit exploration as well (e.g., plateaus, spikes or dips around normative transitions; postbreakup rebounds).



572 Figure 1. The shape dimension. Note. Relationship trajectories can vary in ascent (Panel A), peak (Panel B), and descent (Panel C). 573

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partner effects such as being flirtatious (Back et al., 2011) 576 and having an attractive appearance (Walster, Aronson, 577 Abrahams, & Rottman, 1966); relationship-specific effects 578 such as perceiving similarity to one's current partner (Byrne, 579 Ervin, & Lamberth, 1970) and self-disclosing with him or 580 her (Collins & Miller, 1994); and external effects such as 581 meeting in a physiologically arousing environment (Dutton 582 & Aron, 1974). 583

Few studies have examined romantic evaluations longitu- 584 dinally during the pre-official-relationship portion of trajec- 585 tories (e.g., Campbell & Stanton, 2014). Relationship-specific 586 587 variables that predict romantic evaluations during this phase 588 include perceiving that one's partner is attractive and warm 589 (Eastwick & Finkel, 2008b); having relaxed, smooth conver-590 sations with one's partner (Sprecher & Duck, 1994); and 591 experiencing anxiety about whether one's partner will recip-592 rocate one's positive feelings (Eastwick & Finkel, 2008a). 593 Like the predictors of initial attraction just reviewed, these 594 predictors seem to operate via main effects; we are unaware 595 of any studies that have documented predictors of the slope 596 evaluations before relationship of romantic the 597 becomes official. 598

#### Peak 600

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People's romantic evaluations reach greater heights in some 601 relationships than in others (see Figure 1, Panel B). Peak 602 refers not to the single most positive moment in a given 603 person's relationship but rather to the highest level of the 604 smoothed-out curve across the time course of the relation-605 ship. An assortment of actor, relationship-specific, and 606 external factors are likely to predict the peak of an evalu-607 ative arc. A classic longitudinal study of dating relationships 608 found that people eventually reached higher levels of satis-609 faction if they had high affiliation motives and low inde-610 pendence motives (Eidelson, 1980). In the absence of 611 612 comprehensive assessments from a relationship's first to its 613 final encounter, researchers must rely on theory or normative data to make claims about when the peak occurs, as 614 when researchers conceptualize the first wave of data collec-615 616 tion in a newlywed study as a zenith of relationship positivity (Karney & Bradbury, 1997; Kurdek, 1999). Evaluations at 617 this time point tend to be higher for couples who make 618 619 fewer negative attributions about each other's behaviors, display love and responsiveness toward each other, and are not 620 experiencing stress (Huston et al., 2001; Lavner, Bradbury, 621 622 & Karney, 2012; Neff & Karney, 2017).

#### Descent

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625 In some relationships, romantic evaluations reach a high 626 point and then remain stable across long stretches of time, 627 perhaps never declining to a point where one partner 628 becomes motivated to end the relationship (like a rocket 629 sustaining orbit indefinitely). In many relationships, how-630 ever, evaluations eventually decline (Vaillant & Vaillant, 631 1993; VanLaningham et al., 2001). This decline takes place 632 more quickly in some relationships than others (see Figure 633 1, Panel C). One central goal of relationship science is to 634 explain why some relationships decline and eventually end, 635 whereas others remain strong and persist (Bradbury & 636 Karney, 2013). 637

A wide variety of factors predict whether relationship 638 evaluations remain stable or deteriorate among well-estab-639 lished relationships (e.g., marriages). For example, some 640 individual differences affect the intercept (e.g., actor and 641 partner effects of neuroticism; Karney & Bradbury, 1997) 642 and/or slope of evaluations over time (e.g., actor effects of 643 shyness; Baker & McNulty, 2010). Many of the most robust 644 predictors in the existing literature are relationship specific 645



Figure 2. The fluctuation dimension. Note. Relationship trajectories can exhibit little variability over time (left side of figure) or a great deal of variability (right side of figure).

or external, such as conflict about sex (Long, Cate, Fehsenfeld, & Williams, 1996), feelings of ambivalence about the relationship (Huston et al., 2001), rejection and criticism during interactions (Karney & Bradbury, 1997), and financial stressors (Conger, Rueter, & Elder, 1999). Other studies have documented interactions among various features. Stress, for example, predicts steeper declines among people who express more (vs. less) anger during conflict (Cohan & Bradbury, 1997).

#### **Fluctuation**

Relationship evaluations can fluctuate on a moment-tomoment, day-to-day, month-to-month, or year-to-year basis (see Figure 2). Such fluctuations can occur at any point during a relationship and, at times, may be so dramatic that partners break up and then get back together multiple times (Birnbaum, in press; Dailey, Brody, LeFebvre, Crook, 2013).

678 According to the relational turbulence model (Solomon, 679 Knobloch, Theiss, & McLaren, 2016) and interdependence 680 perspectives on commitment (e.g., Kelley, 1983), relationship 681 instability (i.e., dramatically fluctuating highs and lows) can 682 increase people's perception that their relationship is chaotic 683 and unlikely to persist. Considerable research supports this 684 hypothesis. For example, fluctuations in one's own relation-685 ship satisfaction on a week-to-week basis predicts lower 686 commitment and increased likelihood of breakup, independ-687 ently of the average level and slope of satisfaction (Arriaga, 688 2001). The perception of a partner's fluctuating commitment 689 (Arriaga, Reed, Goodfriend, & Agnew, 2006) and fluctua-690 tions in one's own relationship-specific attachment orienta-691 tion (Girme et al., 2018) are also linked to deleterious 692 relationship outcomes over time. In addition, people who 693 report lower levels of trust are more likely to experience 694 fluctuations in relationship quality across time, which in 695 turn predicts larger fluctuations in their partners' relation-696 ship quality (Campbell, Simpson, Boldry, & Rubin, 2010). 697

There are few empirical findings regarding the effect of 698 trajectory fluctuations prior to the formation of a dating 699 relationship. However, some theoretical perspectives suggest 700 that fluctuations may be more normative during the early 701 moments of relationships, and may even presage positive 702 outcomes. Tennov (1979) suggested that limerence-an 703 especially intense form of romantic passion-emerges when 704

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Figure 3. The threshold dimension. *Note.* Relationship trajectories can differ in the extent to which romantic evaluations are linked to specific behaviors. The height of each dotted line indicates the extent to which the person would need to experience a positive evaluation of the partner in order to want to perform the corresponding behavior.

people experience a blend of hope and uncertainty. Events that inspire hope (e.g., a returned text message) and uncertainty (e.g., an unreturned text message) may produce dramatically fluctuating highs and lows, with their combination promoting greater relationship pursuit through effects on passion (Eastwick & Finkel, 2008a, 2008c). Thus, fluctuations in evaluations about desired versus established dating partners may generate different effects.

#### Threshold

Relationship trajectories also vary in the extent to which evaluations are linked to thresholds for the enactment of certain behaviors. Even if the two partners in a relationship experience the same sequence of events and the same rising and falling of romantic evaluations over time, each one may enact different behaviors because the partners have different thresholds for whether she or he is sufficiently romantically interested in the partner to perform a given behavior (see Figure 3). For example, a man might be willing to have sex with a female partner if his desire for her is 60 or higher (on a 100-point scale), but she might be willing to have sex with him only if her desire is 80 or higher. Thresholds may also shift depending on the sign of the trajectory. The threshold for making a relationship official as a trajectory is rising, for example, may be higher than the threshold for officially ending the relationship as the trajectory is falling.

Threshold values may be especially illuminating in the context of Guttman's (1947) scaling techniques (e.g., Bentler, 1968a, 1968b; Garcia-Sevilla, Muntaner, Moreno, & Trullàs, 1984; Podell & Perkins, 1957). Guttman scales can be applied to normative sequences of events when a person who performs an "advanced" behavior should also be willing to perform a "less advanced" behavior. For example, there may be a normative sequence among Western adults today, such that spending time together one-on-one is less advanced than kissing, which is less advanced than sexual intercourse, which is less advanced than getting engaged. Consequently, if an individual's evaluation of a potential partner is not exceptionally high or low, it may cross a threshold for enacting some behaviors but not others.

781 To explore these ideas, we asked heterosexual Amazon Mechanical Turk workers (87 men, 110 women) to indicate 782 the degree to which they would need to be romantically 783 interested in someone (hypothetically) to perform some of 784 the sexual behaviors on the Bentler (1968a, 1968b) Guttman <sup>785</sup> scales. Values for "one-minute continuous lip kissing" and <sup>786</sup> 787 "sexual intercourse, face-to-face" are presented in Figure 4, 788 separately for men and women. Consistent with the Guttman scaling of these behaviors, both men and women 789 reported that their romantic interest threshold was lower for <sup>790</sup> kissing than for sex. However, these thresholds were spaced <sup>791</sup> 792 very differently for men and women. Women and men 793 reported roughly equivalent thresholds for wanting to kiss a 794 hypothetical partner (d = .14, t = 0.96, p = .339), but women 795 reported needing to feel considerably greater romantic inter-796 est than men before they would want to have sex with a 797 partner (d = .56, t = 3.92, p < .001). Thus, conflicts in het-798 erosexual relationships about whether to engage in sex may 799 emerge due to sex thresholds, even if the two partners are 800 equally interested in each other.

801 Quantitatively oriented scholars have also developed techniques that model between-person differences in thresholds 803 (i.e., as a random effect). These techniques do not require 804 people to be aware of their own thresholds (De Haan-805 Rietdijk, Gottman, Bergeman, & Hamaker, 2016; see also 806 Gottman, 2005) because their thresholds are "revealed" 807 when researchers have sufficient repeated measurements of 808 participants' evaluations of (e.g., romantic interest in) and 809 behaviors directed toward (e.g., initiation of sex) a partner 810 across time. Such models are fairly new and have never 811 been applied to relationship studies spanning more than  $\frac{1}{812}$ brief interactions, but they can aid researchers who seek to  $\frac{813}{813}$ document threshold effects in romantic trajectories. 814

#### Composition

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Trajectories also differ in the extent to which they are 818 assembled from various underlying constructs. As just 819 noted, romantic evaluations have a hierarchical structure, 820 with global positive romantic attitudes being composed of 821 more specific constructs, such as passion, love, commitment, 822



Figure 5. The composition dimension. *Note.* Panel A depicts a normative sequence such that global evaluations are initially driven by passion more than intimacy, then later driven by intimacy more than passion. Panel B depicts how, depending on the relationship, global evaluations may be driven by some specific constructs (e.g., passion, left side) rather than others (e.g., intimacy, right side) throughout their time course.

867 trust, satisfaction, and intimacy (Fletcher et al., 2000). These 868 constructs, in turn, can be further broken down into more 869 refined subcomponents, such as dedication commitment and 870 constraint commitment (Stanley & Markman, 1992). In gen-871 eral, higher scores on all of these relationship quality com-872 ponents and subcomponents predict lower likelihood of 873 breakup (Le, Dove, Agnew, Korn, & Mutso, 2010; Rhoades 874 et al., 2010). 875

Several theories in the close relationships tradition,
including attachment theory (Hazan & Shaver, 1994;
Mikulincer & Shaver, 2016) and the triangular theory of
love (Sternberg, 1986), posit that specific constructs may
have distinct time-courses. Constructs such as passion and
sexual desire, for example, tend to peak early in relationship

development, whereas evaluations tied to the attachmentbehavioral system (e.g., feelings of intimacy and emotional bonding) do not peak until later in relationship development. As a result, each global evaluation trajectory is potentially composed of several correlated but distinct subtrajectories, and the global evaluation may be driven by some subtrajectories more than others earlier versus later in the relationship (Figure 5, Panel A).

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Besides these normative shifts in specific constructs that rise and fall across the course of a relationship, there may also be differences across relationships in the degree to which global evaluation trajectories track specific component constructs (see Figure 5, Panel B). For example, one person's overall evaluative arc may be based largely on the level of



Figure 6. The density dimension. Note. In a person's life, relationship trajectories can be relatively concentrated and overlapping (Person A) or relatively dispersed 1014 and nonoverlapping (Person B).

passion, whereas another person's overall evaluative arc may be based primarily on the level of intimacy. Very few existing studies illuminate how and why people's relationship trajectories are shaped by certain constructs rather than others. However, research on abusive relationships indicates that trajectory composition may be quite consequential for predicting relationship dissolution. Although higher satisfaction, more investments, and poorer alternatives generally predict greater relationship stability (Le et al., 2010), more investments and poorer alternatives predict greater stability among women in abusive relationships, whereas satisfaction does not (Rusbult & Martz, 1995). In sum, the underlying composition of global evaluative trajectories may have significant relational consequences, above and beyond the global evaluation itself.

#### Density

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As we widen the aperture, a fifth dimension emerges: People also differ in the extent to which trajectories are concentrated or dispersed over a given period in their life (see Figure 6). If trajectories are particularly dense, they may overlap, meaning that an individual experiences a positive romantic evaluation of multiple partners at the same time (Person A). If trajectories are dispersed, individuals might have long periods "between trajectories" during which they are not romantically interested in anyone (Person B).

One literature that is especially relevant to the density 985 concept is the literature on predictors of infidelity (Allen 986 et al., 2005; Blow & Hartnett, 2005; Buss, Goetz, Duntley, 987 Asao, & Conroy-Beam, 2017; Drigotas & Barta, 2001). These 988 predictors include actor effects, such as being less agreeable 989 or less conscientious (Schmitt et al., 2004), being anxiously 990 attached (Bogaert & Sadava, 2002), and being male 991 (Petersen & Hyde, 2010); relationship-level effects, such as 992 being less committed (Drigotas, Safstrom, & Gentilia, 1999), 993 less satisfied (Glass & Wright, 1985), and poorer at commu-994 nicating (Allen et al., 2008); and external factors, such as 995 having weaker ties to the partner's social network (Treas & 996 Giesen, 2000) and having more opportunity to meet poten-997 tial partners (e.g., Traeen & Stigum, 1998). Although most 998 of this literature conceptualizes infidelity as an event that 999

disrupts a primary relationship, the Relationship Trajectories 1016 Framework represents infidelity as the overlap between two 1018 dynamically unfolding arcs that exert a mutual influence on 1019 each other. 1020

A second, smaller literature bearing on the density con- 1021 cept is work on the duration of singlehood (DePaulo & 1022 Morris, 2005; Slotter & Emery, 2017). Some people are likely 1023 to remain single only briefly between relationships. 1024 Extraverts, for example, are more likely than introverts to 1025 date more people within a specific period (Paunonen, 2003). 1026 In addition, people who report having a greater fear of being 1027 single may not want to experience dispersed trajectories. 1028 Individuals who score high on this measure are motivated 1029 to meet new people to avoid being alone (Spielmann et al., 1030 2013), and they are especially likely to attempt to renew 1031 relationships with their exes (Spielmann, MacDonald, Joel, 1032 & Impett, 2016). On the opposite end of the continuum, 1033 some individuals deliberately remain single for most or all 1034 1035 of their adult lives (DePaulo & Morris, 2005).

Generally speaking, the density dimension could help to 1036 broaden the typical focus of close relationships researchers 1037 beyond an individual's current romantic relationship; very 1038 few studies have collected data on people's multiple roman- 1039 tic partnerships over time (for exceptions, see Eastwick, 1040 Harden, Shukusky, Morgan, & Joel, 2017; Robins, Caspi, & <sup>1041</sup> Moffitt, 2002). Examinations of concurrent romantic part- 1042 nerships, as in the case of consensual nonmonogamy 1043 (Conley, Matsick, Moors, & Ziegler, 2017), are equally rare 1044 despite their cross-cultural and evolutionary relevance 1045 (Marlowe, 2003). Moreover, scholars do not have a strong 1046 (1047) sense of the extent to which people's past romantic relation-1048 ship trajectories affect events and experiences in their future 1049 trajectories. The most relevant studies are those conducted 1050 by Brumbaugh and Fraley (2006, 2007), which have explored 1051 the way in which attachment patterns toward past romantic 1052partners affect an individual's feelings about strangers (i.e., 1053 attachment transference; see also Fraley, Heffernan, Vicary, 1054 & Brumbaugh, 2011). However, many important questions 1055 remain about whether and the degree to which early sexual 1056 and romantic experiences impact later ones; the density 1057 dimension emphasizes the benefits of adopting a longer time 1058



Figure 7. An illustration of dyadic trajectories, with two people reporting their romantic evaluations of each other. *Note.* The closeness (i.e., interdependence) of the two partners is represented by the *z*-axis and is symmetrical around the midpoint, whereas evaluations (i.e., the *y*-axis) can differ for the two partners at a given time point.

horizon with respect to the way the romantic lives of individuals are conceptualized.

#### Dyadic Trajectories

The five features just reviewed are useful for conceptualizing trajectories from the perspective of a given individual; that is, how does one person evaluate another person across time? However, dyadic phenomena and models pervade the close relationships literature (e.g., Bolger, Zuckerman, & Kessler, 2000; Felmlee & Greenberg, 1999; Laurenceau, Barrett, & Pietromonaco, 1998; Murray & Holmes, 2009; Oriña, Wood, & Simpson, 2002; Reis & Shaver, 1988; Schoenfeld & Loving, 2013; Simpson & Overall, 2014; Wieselquist, Rusbult, Foster, & Agnew, 1999), so the Relationship Trajectories Framework also needs to represent the way that two individuals evaluate each other over time.

Figure 7 illustrates two hypothetical individuals' romantic evaluation trajectories with respect to each other across time. Placing two trajectories side by side allows for the straightforward visual representation of actor and partner effects (e.g., need to belong exerts an actor effect on ascent, whereas physical attractiveness exerts a partner effect; Joel et al., 2017). Also, the addition of a second trajectory neces-sitates a new axis-the z-axis-which represents the extent to which the two individuals have a close (i.e., interdepend-ent) relationship (Berscheid et al., 1989; Kelley, 1983). Closeness is a structural property of the dyad, namely, the strength, frequency, and diversity of interconnections that exist between two people (Kelley et al., 1983). For this rea-son, in dyadic applications of the Relationship Trajectories Framework, closeness (on the z-axis) is identical for the two partners (as is duration, represented on the x-axis), whereas 

two partners' evaluations of each other (on the *y*-axis) can and typically will differ.<sup>3</sup> For the couple represented in Figure 7, the two partners have a very close relationship as romantic evaluations peak, a moderately close relationship as romantic evaluations start to decline, and a distant (nonclose) relationship as the trajectories approach the current date. The *z*-axis is symmetrical around the midpoint: Trajectories toward the center of the *z*-axis approach the limit of closeness (e.g., complete interdependence), whereas trajectories toward the edges of the *z*-axis approach the limit of distance (e.g., complete independence). Just as the Relationship Trajectories Framework does not require any particular operationalization of evaluation for the y-axis, it also does not require any particular operationalization of closeness for the z-axis (as long as that operationalization is not more appropriately conceptualized as an evaluative measure, such as "I feel close to my partner"). A researcher could, for example, operationalize closeness as frequency (e.g., time spent interacting face-to-face with the partner), diversity (e.g., number of different activities performed with the partner), strength (e.g., the influence of the partner on one's plans, goals, and decisions), or a blend of all three (Berscheid et al., 1989). These indicators of closeness are independent of relationship length (i.e., the x-axis) and relationship evaluations (i.e., the y-axis), both empirically and theoretically. Dyadic applications of the Relationship Trajectories Framework can address at least

<sup>3</sup>The term *dyadic* has two distinct meanings in the close relationships literature, both of which are represented visually in Figure 7. First, romantic evaluations (i.e., the *y*-axes) are dyadic in the sense that they reflect one person's report about another person. Second, closeness (i.e., the *z*-axis) is dyadic in the sense that it is a property of the dyad; it is a variable that, at the conceptual level, characterizes both partners equally.

three types of research questions, which we discuss in further detail next.

#### Partner Evaluations Affect Each Other Over Time

Partner A's evaluation of Partner B at a given point in time is likely to impact Partner B's evaluation of Partner A at a concurrent or subsequent point in time. In other words,  $Y_A \rightarrow Y_B$ , and vice versa. One clear illustration of such an effect in the existing literature is reciprocity of attraction: When partner B finds out that Partner A likes him, B tends to like A more in return (Backman & Secord, 1959; Kenny, 1994). The close relationships literature also contains examples of one partner's relationship evaluation predicting the other partner's relationship evaluation at a later time point (e.g., Le, McDaniel, Leavitt, & Feinberg, 2016). Such effects can be operationalized as residualized lagged associations (e.g., Wieselquist et al., 1999) or as partner effects in longitudinal applications of the actor-partner interdependence model (e.g., Cook & Kenny, 2005). Models could also examine the lag between partners' evaluations as an autocorrelation over time (Bolger & Shrout, 2007); that is, to what extent does Partner A's evaluation at Time X affect partner B's evaluation at Time X + 1? If researchers collect a sufficient number of time points, they can estimate how long Partner A's evaluation reaches into the future to affect Partner B's evaluations before decaying.

#### Trajectory Similarity Affects Later Evaluations

Two trajectories may be similar or dissimilar with respect to one or more of the five dimensions just reviewed, and the degree of similarity may predict relationship evaluations. For example, two partners' similar patterns of ascent might predict especially positive romantic evaluations in the future, or two partners' dissimilar thresholds for sex may predict especially negative evaluations in the future. An example of dissimilar sex thresholds for men and women was discussed earlier (see the Threshold section); such threshold differences may produce mind-reading challenges, particularly during early relationship development (Haselton, 2003), which could reduce romantic evaluations over time. Nevertheless, in the close relationships literature, studies that examine similarity in relationship evaluations and trajectories are uncommon (for an exception, see Schoenfeld & Loving, 2013).

#### **Closeness and Evaluations Predict One Another**

1227Dyadic applications of the Relationship Trajectories1228Framework highlight how closeness or interdependence1229(properties of the dyad) might be associated with partners'1230romantic evaluations of each other. In other words,  $Z \rightarrow Y_A$ 1231or B, and vice versa. Some familiarity manipulations in the1232attraction literature can be conceptualized as closeness1234closeness (operationalized as increasing frequency of interactions) causes romantic evaluations to become increasingly

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positive. In established relationships, closeness predicts posi- 1236 tive evaluations in established romantic relationships but not 1237 among friendships (Berscheid et al., 1989). 1238

#### The Relationship Trajectories Framework: Conclusion

Many scholars generate models of romantic relationships that have 1243 implicit or explicit temporal components, and longitudinal methods 1244 are common in the close relationships literature. The Relationship 1245 Trajectories Framework is a first attempt at synthesizing this litera- 1246 ture to delineate the major features of relationship arcs-arcs that 1247 begin when two people first meet and continue until their relationship ends. Even though most scholars will be unable to examine 1249 arcs from start to finish-much less the many meaningful arcs that <sup>1250</sup> a person experiences over a period of years or decades-the frame- 1251 work encourages scholars to consider the period they study within  $^{1252} \,$ the context of entire arc. In this way, the framework offers an <sup>1253</sup> organizational structure and, thus, a new way of thinking about 1254 familiar concepts; scholars can draw links between different, hereto-1256 fore disconnected topic areas within the study of human mating 1257 relationships by applying the Relationship Trajectories Framework.

1258 Because the framework is metatheoretical, the five dimen-1259 sions and the dyadic applications cannot, by themselves, 1260 generate specific, falsifiable predictions-nor is that its pur-1261 pose. The Relationship Trajectories Framework requires 1262 input from theoretical models regarding the likely relevance 1263 and magnitude of specific actor, partner, relationship-1264 specific, and/or external forces that ought to affect specific 1265 outcomes. We now turn to two theories that illustrate how 1266 scholars can use this framework to generate novel research 1267 questions that address neglected issues or resolve ambigu-1268 ities associated with temporal dynamics in romantic rela-1269 tionships. The first draws from some of our own published 1270and unpublished work to illustrate how researchers can 1271 deductively derive new hypotheses within the framework. 1272 The second illustrates how the framework can aid research-1273 ers in conducting a synthesis of an existing, large-scale lit-1274 erature in a way that generates novel predictions. 1275

#### **Application 1: The ReCAST Model**

1278 As noted previously, there is a large theoretical and empir- 1279 ical gap between the close relationships and evolutionary 1280 psychological literatures in terms of how short-term versus 1281 long-term relationships are conceptualized. Are short-term 1282 relationships those that simply do not last long enough for 1283 close relationships researchers to study them with their 1284 methods? Or are short-term relationships distinct from 1285 long-term relationships even during their opening moments, 1286 perhaps because they entail the use of short-term (rather 1287 than long-term) strategies? Prior studies of short-term rela- 1288 tionships are inconclusive because they were either hypo-1289 thetical or examined participants' attraction to strangers at a 1290 single point in time (for a review, see Eastwick et al., 2018). 1291 By bringing relationship trajectories to bear on this issue, 1292 one can arrive at a new theoretical synthesis-the ReCAST 1293 model—that helps to resolve these questions. 1294

1295 **Table 2.** Predicates forming the foundation of the relationship coordination and strategic timing model.

|         | - |   | 5 5   |
|---------|---|---|---|
| 1296    |   | Predicate   | Key References  |
| 1297    | 1 | Romantic evaluations predict relationship length.                             | Eastwick & Finkel, 2008; Le et al., 2010                              |
| 1298    | 2 | Relationship-specific effects on evaluations are important (i.e., large).     | Eastwick & Hunt, 2014; Fletcher et al., 2000; Karney & Bradbury, 1995 |
| 1200    | 3 | Relationship-specific effects are difficult to assess early in relationships. | Finkel et al., 2012; Joel et al., 2017                                |
| 1299    | 4 | Attachment-related processes take time to emerge.                             | Fagundes & Schindler, 2012; Hazan & Zeifman, 1994                     |
| 1 2 0 0 | - |   |   |

The ReCAST model is grounded in the Relationship 1302 Trajectories Framework. It draws on the shape dimension by 1303 depicting short-term and long-term relationships as arc-shaped 1304 trajectories: Short-term and long-term relationships end at dif-1305 ferent points in time, primarily because they differ in the peak 1306 of romantic evaluations. The ReCAST model also draws on 1307 the *composition* dimension by positing that some evaluative 1308 components of trajectories (i.e., feelings of attachment, the 1309 1310 desire to provide care) signal the activation of the attachment-1311 behavioral system (Hazan & Shaver, 1994), which presumably evolved to facilitate pair-bond maintenance and parental effort 1312 1313 (Eastwick, 2009; Fletcher, Simpson, Campbell, & Overall, 1314 2015). These evaluations should be more pronounced in long-1315 term than short-term relationships because attachment bonds 1316 are often not fully formed until a relationship matures.

1317 The name "relationship coordination and strategic timing 1318 model" reflects the two scholarly literatures that influenced 1319 the development of the model. The first influence is the close 1320 relationships literature ("relationship coordination"), espe-1321 cially its emphasis on the way people coordinate inter-1322 dependence in romantic relationships (Rusbult & Van Lange, 1323 2003). Core to ReCAST is the idea that relationship length is 1324 largely determined by interpersonal processes and dynamics 1325 that occur within the relationship and require time to 1326 develop. The second influence is the evolutionary psycho-1327 logical literature ("strategic timing"), especially its distinction 1328 between reproductive strategies that correspond to mating 1329 effort (i.e., taking risks and expending energy and time to 1330 secure matings) and parental effort (i.e., taking risks and 1331 expending energy and time to produce and raise offspring; 1332 see Gangestad & Simpson, 2000; Low, 1978). According to 1333 the ReCAST model, the normative mating process in humans 1334 often involves a within-dyad trade-off between mating effort 1335 and parental effort. That is, people exert greater mating effort 1336 early on in trajectories, and if the relationship endures, mat-1337 ing effort begins to wane as parental effort (in the form of 1338 attachment bonds and perhaps parenting) increases. 1339

#### 1341 ReCAST Model: Predicates

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# 1346 Predicate 1: Romantic Evaluations Predict 1347 Relationship Length 1348

The positivity of people's romantic evaluations strongly predicts the likelihood of relationship dissolution. People attempt to end romantic relationships (Le et al., 2010), or fail to pursue them in the first place (Eastwick & Finkel, 2008b), when their evaluations of their partners are insufficiently positive (e.g., when their satisfaction or romantic interest is low). Indeed, a recent meta-analysis documented that the strongest predictors of breakup are evaluations of the partner and/or the relationship (e.g., positive illusions, commitment, love), with effect sizes ranging from d = .57 to .85 (Le et al., 2010). As a general rule, satisfaction and the intention to maintain a relationship are tightly interwoven, even in subsistence, non-WEIRD (White, educated, industrialized, rich, and Democratic) samples (Winking, Eastwick, Smith, & Koster, in press). Although some people do remain in unfulfilling relationships or with partners they dislike (e.g., Rusbult & Martz, 1995; Slotter & Finkel, 2009), such relationships are exceptions to this general rule. Hence, relationship length is largely a function of whether romantic evaluations reach a sufficiently high level of positivity (i.e., above some threshold of acceptance) and remain that way across time (Kelley, 1983).

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## Predicate 2: Relationship-Specific Effects on Evaluations are Important (i.e., Large)

Romantic evaluations are a function of characteristics of the actor, the partner, the relationship, and external events. The largest effect sizes tend to be associated with relationship-specific forces (and sometimes with external events). Two literatures bear on this issue. First, studies that partition romantic evaluations using the social relations model (Kenny, 1994) consistently find that the largest component is relationship-specific variance, that is, relationship uniqueness rather than features of the actor or the partner (e.g., Joel et al., 2017; Krause, Back, Egloff, & Schmukle, 2014). Furthermore, relationship-specific variance often becomes larger as potential romantic partners get to know each other better over time (Eastwick & Hunt, 2014).

1394 Second, in the large literature that documents predictors 1395 of romantic evaluations, the largest predictors tend to be 1396 measures of people's feelings about their partner and/or the 1397 relationship. For example, a confirmatory factor analytic 1398 model found that the most commonly assessed relationship-1399 specific constructs (e.g., satisfaction, commitment, love) are 1400 strongly associated with global relationship evaluations (e.g., 1401 item-total rs  $\approx$  .55; Fletcher et al., 2000). Moreover, the 1402 positivity of couples' real-life interaction patterns robustly 1403 predicts marital satisfaction meta-analytically (rs  $\approx$  .30; 1404 Karney & Bradbury, 1995). External effects, such as stress, 1405 have similar effect sizes (Karney & Bradbury, 1995; Repetti, 1406 1989). Features of the participant himself or herself (i.e., 1407 actor effects) also predict relationship evaluations, but these 1408 effects are modest in size (e.g., the average meta-analytic 1409 effect of the Big 5 personality traits on marital satisfaction is 1410  $r \approx$  .20; Heller, Watson, & Ilies, 2004). Partner effects— 1411 when they emerge—are about half this size ( $r \approx .10$  meta-1412



Figure 8. The relationship coordination and strategic timing model. Note. Normative long-term (double lines) and short-term (single line) romantic partner trajectories; long-term relationships are depicted separately by breakup status (current = solid lines; ended = dashed lines). Early on, relationship trajectories are characterized by more mating effort (solid gray background); later, relationships are characterized by more parental effort (dotted background).

analytically; Le, Impett, Lemay, Muise, & Tskhay, 2018; Malouff, Thorsteinsson, Schutte, Bhullar, & Rooke, 2010) or smaller (Dyrenforth et al., 2010; Watson et al., 2004).

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#### Predicate 3: Relationship-Specific Effects Are Difficult to Assess Early in Relationships

1440 Evaluating the desirability of a potential mate is an essential 1441 task that humans evolved to solve (Buss & Schmitt, 1993), 1442 and this evaluative process often takes considerable time. 1443 Although perceiver (actor) and target (partner) effects can 1444 be assessed even before two people meet, relationship-spe-1445 cific effects on romantic evaluations require time to be 1446 assessed accurately (Finkel et al., 2012; Joel et al., 2017). 1447 Thus, the largest effects on romantic evaluations (see 1448 Predicate 2) should come from judgments that develop 1449 gradually over time as two people get to know each other: 1450 for example, their level of sexual chemistry (Birnbaum, in 1451 press), the way they express emotions while solving prob-1452 lems together (Johnson et al., 2005), how they support each 1453 other and capitalize on each other's successes (Feeney & 1454 Collins, 2015; Lakey & Orehek, 2011), or how they coordin-1455 ate their goal pursuits (Fitzsimons, Finkel, & vanDellen, 1456 2015). Some external effects can be assessed before two peo-1457 ple meet (e.g., living in a stressful neighborhood), but many 1458 of the strongest external predictors (e.g., network support 1459 for the relationship, desirability of alternatives; Le et al., 1460 2010) are difficult or impossible to assess early in the rela-1461 tionship formation process because they require knowledge 1462 of how the partner relates to the external predictor. 1463

#### Predicate 4: Attachment-Related Processes Take Time to Emerge

Mating effort and its concomitant motivations (e.g., passion) 1468 and behaviors (e.g., attempts to initiate sex) often emerge in 1469 the early moments of relationships. However, features asso-1470 ciated with attachment bonds, such as using the partner as a 1471

source of support (e.g., safe haven, secure base; Feeney & 1492 Collins, 2015) typically take years to emerge fully (Fagundes 1493 & Schindler, 2012; Fraley & Davis, 1997; Hazan & Zeifman, 1494 1994). Given that the attachment-behavioral system probably 1495 evolved to keep mates bonded to increase parental invest- 1496 ment in dependent offspring (Eastwick, 2009; Fletcher et al., 1497 2015, Hazan & Diamond, 2000; Stewart-Williams & 1498 Thomas, 2013), pair-bonding behaviors most likely reflect a 1499 blend of mating effort and parental effort. In other words, 1500the tendency for ancestral humans to become attached to, 1501 and provide care for, each other should have (a) maintained 1502relationships (i.e., mating effort) and (b) reduced conflicts of 1503interest with respect to investing in existing (or future) off- <sup>1504</sup> spring (i.e., parental effort; Durante et al., 2016). <sup>1505</sup> Accordingly, if a relationship does not last long enough, 1506 1507 attachment and other features linked to parental effort may 1508 never reach full strength, limiting the ability of the attachment-behavioral system to affect the relationship and  $\frac{1509}{1000}$ 1510 its trajectory.

#### **ReCAST Model: Hypotheses**

The ReCAST model (see Figure 8) addresses these four well-1515 established findings within the Relationship Trajectories 1516 Framework. The model depicts, or recasts, short-term and 1517 long-term relationships as relationship trajectories that start  $\frac{1}{1518}$ out as indistinguishable but end at different points in time. 1519 The model also recasts the mating versus parental effort dis-1520 tinction as a shift that takes place within a dyad over time 1521 rather than (as in some evolutionary models) a trade-off 1522 operationalized between persons (e.g., Belsky, Steinberg, & 1523 Draper, 1991, Del Giudice, 2009, Draper & Harpending, 1524 1982, Ellis, Figueredo, Brumbach, & Schlomer, 2009, 1525 Figueredo et al., 2006, Mascaro, Hackett, & Rilling, 2013). 1526

Figure 8 depicts three hypothetical global romantic evalu- 1527 ation trajectories over time. The double-solid line represents 1528 an ongoing romantic relationship, the double-dashed line is 1529 a long-term romantic relationship that has ended, and the 1530

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 Table 3. Hypotheses generated by the relationship coordination and strategic

 1532
 timing model.

|   | Hypothesis   |
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| 1 | On average, short-term and long-term romantic evaluation trajectories are  |
|   | initially indistinguishable; eventually, evaluations in most long-term rela-<br>tionships achieve a higher peak than in most short-term relationships. |
| 2 | In the early portion of relationship trajectories, people tend not to know   |
|   | whether they are pursuing a short-term or a long-term relationship.  |
| 3 | Wanting someone as a short-term partner is associated with liking him/her "a little."  |
| 4 | Greater mating effort typically characterizes the early portion of trajectories  |
|   | (both short term and long term), whereas greater parental effort typically   |

characterizes the later portion of trajectories (long term only).

1543 single-dashed line is a short-term romantic relationship that 1544 has ended.<sup>4</sup> The gray background in Figure 8 corresponds to 1545 the expenditure of mating effort (beginning in the early 1546 phases of the relationship), whereas the dotted background 1547 corresponds to parental effort (which predominates in the 1548 later phases); the two forms of effort overlap in the inter-1549 mediary phases. Several novel hypotheses flow from the 1550 1551 ReCAST model (see Table 3).

# 1553 Hypothesis 1: On Average, Short-Term and Long-Term 1554 Romantic Evaluation Trajectories Are Initially 1555 Indistinguishable; Eventually, Evaluations in Most Long1556 Term Relationships Achieve a Higher Peak than in Most 1557 Short-Term Relationships

1558 Because the strongest influences on global romantic evalua-1559 tions (i.e., relationship-specific effects; Predicate 2) are diffi-1560 cult to assess until partners know each other reasonably well 1561 (Predicate 3), the eventual length of a relationship will often 1562 be unpredictable until it is well underway-until many rela-1563 tionship events and behaviors have occurred. Hence, short-1564 term and long-term trajectories should be indistinguishable, 1565 on average, until a sufficient amount of time has passed. As 1566 a result, initial attraction and the subsequent pattern of 1567 ascent should be similar in short-term and long-term rela-1568 tionships. When these trajectories diverge, romantic evalua-1569 tions should continue to rise to a higher peak in most long-1570 term relationships, whereas they should plateau or decline in 1571 short-term relationships. 1572

Recent empirical evidence supports this central hypoth-1573 esis of the ReCAST model (Eastwick et al., 2018). In five 1574 studies, participants were told to think about a real "long-1575 term committed romantic relationship" or a "short-term 1576 romantic relationship (e.g., a fling, one-night-stand, or brief 1577 affair)" they had experienced.<sup>5</sup> They then reported the dates 1578 of up to 48 memorable events that might have taken place 1579 in this relationship (e.g., first time together one-on-one, first 1580 1581



**Figure 9.** Average level of romantic interest reported by participants about their real-life short-term (dotted line) and long-term (solid line) relationships at each event (data from Eastwick et al., 2018). *Note*. The number of events varied across participants, so these trajectories were calculated until the point that less than half of the original sample size remained. Then, the second-to-last and last means depicted for each trajectory correspond to the second-to-last and last events reported by all participants who contributed to the trajectory. Bars depict 1 *SE* above and below the mean.

sexual intercourse, first major disagreement/fight), beginning with the moment they first met the partner. They also reported the extent to which they experienced romantic interest (i.e., a global romantic evaluation) for the partner at each event.

Figure 9 presents the romantic interest data from the relationships that had ended (N=262 long-term relation-)ships, and N = 443 short-term relationships) and the ongoing long-term relationships (N=246) for all five studies. The data bear a strong resemblance to the normative trajectories anticipated by the ReCAST model (Figure 8). Ended relationships are arc shaped, with long-term relationships having a higher arc than short-term ones. Supporting Hypothesis 1, participants reported similar levels of romantic interest at the beginning of both short-term and longterm relationships. Also, romantic interest rose at the same rate in both short-term and long-term relationships for the first 10-12 events, which occurred in almost the same sequence in both types of relationships on average (see Table 4). This period often lasted for months in real time, encompassing the getting-acquainted process up through initial sexual contact (e.g., the first kiss). After that point, romantic interest in short-term relationships plateaued and then declined, whereas romantic interest in long-term relationships rose to a higher peak. Romantic interest eventually declined in long-term relationships that ended but remained elevated in most ongoing long-term relationships.

In summary, people felt more positive about their partners when in long-term than in short-term relationships, but not until many events had unfolded. Early in relationship development, short-term and long-term relationships had very similar evaluations and sequences of events.

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<sup>&</sup>lt;sup>4</sup>Ongoing short-term relationships could also be depicted in this framework, but we have omitted them because they have proven empirically elusive to date. For example, in the package of studies we describe next (Eastwick et al., 2018), participants displayed a strong tendency to label their most recent short-term relationships as "ended" (~85%) rather than "ongoing" (~15%).
See also Hypothesis 2.

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#### 1649 Hypothesis 2: In the Early Portion of Relationship 1650 Trajectories, Most People Do not Know Whether They 1651 Are Pursuing a Short-Term or a Long-Term Relationship

1652 In most circumstances, individuals can report their global 1653 romantic evaluation of another person they have just met or 1654 recently started dating-people know, in the moment, how 1655 romantically positive or negative they feel about someone at 1656 any time point. Early on, however, people often lack know-1657 ledge about important relationship-specific factors (e.g., 1658 compatibility; Predicate 3) that eventually may influence the 1659 outcome of the relationship. Therefore, people may not ini-1660 tially know where the relationship is going, making it chal-1661 lenging for them to form confident judgments about 1662 1663 whether they are involved in a short-term or a long-term relationship. Given that short-term and long-term trajecto-1664 1665 ries initially overlap considerably (Hypothesis 1; Figure 9), people should be more likely to express uncertainty than 1666 1667 certainty about whether their current relationship is (or will 1668 be) short term or long term.

1669 In a recent study, we found support for this idea. 1670 Specifically, we asked single undergraduate students to 1671 answer several questions about a real person in their lives 1672 who met four criteria:

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(1) You are romantically interested in the person, (2) you have spent one-on-one time with the person, (3) you have not (yet) engaged in any sexual or physical intimacy with the person, and (4) you are not (yet) involved in a committed romantic relationship with the person.

Participants, therefore, reported on fledgling romantic interests (or "crushes") that correspond to the early portion of ReCAST trajectories, in that romantic evaluations were

1682 Table 4. Average order of the first 12 events in long-term and short-term 1683 relationships

| Event   | Term<br>Order |
|---|---------------|
| First met the person                                    | 1             |
| First flirted   | 2             |
| First spent time together one-on-one                    | 3             |
| First went out together in a group (e.g., a party)      | 4             |
| First went on a short date (e.g., coffee/drinks)        | 5             |
| First held hands/touched                                | 6             |
| First told the person you were romantically interested  | 7             |
| First kiss  | 8             |
| You first met his/her friend(s)                         | 9             |
| First went on a long date (e.g., dinner, dancing, movie | ) 10          |
| He/she first met your friend(s)                         | 11            |
| First make-out  | 12            |

nonzero, but no sexual or relationship formation events had 1708 occurred. We then asked participants the type of relation- 1709 ship they were pursuing: long term, short term, or "I don't 1710 know." The responses (with exact wordings) are shown in 1711 Table 5. The most common response was "I don't know," 1712 both when participants considered what their relationship 1713 was in the moment and when they pondered what they 1714 wanted it to be. These findings indicate that people typically 1715 begin romantic relationships with a "Let's see where it goes" 1716 strategy before they have sufficient information to determine 1717 1718 how positively they feel about the potential partner. 1719

#### Hypothesis 3: Wanting Someone as a Short-Term Partner Is Associated With Liking Him/Her "a Little."

1723 People may be uncertain whether they want a short-term or 1724 a long-term relationship with a partner early on, and yet 1725 they can respond to items such as "This person is a desir-1726 able long-term partner" or "This person is a desirable short-1727 term partner" without confusion, even when reporting on 1728 strangers or hypothetical individuals. What exactly are peo-1729 ple thinking about when they answer these items? 1730 According to the ReCAST model, long-term relationships 1731 reach a high evaluative peak, whereas short-term relation- 1732 ships reach only a middling peak (Hypothesis 1; Figure 9). 1733 If participants have these schemas in mind when they complete items assessing their desire for someone as a "short- 1735 term partner," they might be indicating that they like him 1736 or her a little—enough to pass a threshold in the desire for 1737 some amount of sexual contact but not enough to want a 1738 long-term relationship that would eventually lead to attach- 1739 ment and pair-bonding. Accordingly, ReCAST predicts that 1740 target-specific, long-term interest items should be highest 1741 for partners whom an individual likes a great deal, but tar- 1742 get-specific, short-term interest items should be highest for 1743 partners whom an individual likes a little. 1744

To test this hypothesis, we asked undergraduate students 1745 to nominate three peers of their romantically preferred sex 1746 (e.g., heterosexual women nominated three male peers). 1747 They were told that one of the targets should be someone in 1748 whom they experienced "no romantic interest," one should 1749 be someone in whom they experienced "a little, but not a 1750 great deal" of romantic interest, and one should be someone 1751 in whom they experienced "a great deal" of romantic inter- 1752 est. For each target, participants reported the extent to 1753 which they desired the person as a long-term partner ("I 1754 would like to have a long-term, committed romantic rela- 1755 tionship with [name]") and a short-term partner ("I would 1756

|                                 | A Short-Term Relationship | A Long-Term Relationship | "I Don't Know" | $\chi^2$ |
|---------------------------------|---------------------------|--------------------------|----------------|----------|
| My relationship with is         | 12%                       | 11%                      | 82%            | 106.28** |
| (check all that apply):         |                           |                          |                |          |
| What type of relationship would | 8%                        | 31%                      | 60%            | 43.64**  |
| you like to have with           |                           |                          |                |          |
| in the future (check all        |                           |                          |                |          |
| that apply)?                    |                           |                          |                |          |
| <i>Note. N</i> = 73.            |                           |                          |                |          |
| *** <i>p</i> < .001.            |                           |                          |                |          |



**Figure 10.** Long-term and short-term desire for three real-life individuals. *Note*. N = 126 participants' level of interest in forming a short-term relationship (gray bars) and long-term relationship (white bars) with three targets: one for whom they experienced no romantic interest, one for whom they experienced a little romantic interest, and one for whom they experienced a great deal of romantic interest.

like to have a short-term romantic relationship [e.g., a onenight sexual encounter or brief affair] with [name]").

Means for these items are presented in Figure 10. With respect to the long-term item, participants rated the "strong interest" partner higher than both the "little interest" partner, t(125) = 10.39, p < .001, d = 1.86, and the "no interest" partner, t(125) = 14.25, p < .001, d = 2.55. With respect to the short-term item, participants rated the "little interest" partner higher than both the "strong interest" partner, t(125) = 3.41, p = .001, d = .61, and the "no interest" partner, t(125) = 9.93, p < .001, d = 1.78. Indeed, the short-term item revealed a strong, significant (negative) quadratic pattern across the three targets, F(1, 125) = 71.16, p < .001,  $\eta^2$ = .36. These data are consistent with the hypothesis that wanting someone for a short-term relationship is a euphemism for liking him or her a little, whereas wanting someone for a long-term relationship means that the individual likes him or her a great deal.

# Hypothesis 4: Greater Mating Effort Typically Characterizes the Early Portion of Trajectories (Both Short-Term and Long-Term), Whereas Greater Parental Effort Typically Characterizes the Later Portion of Trajectories (Long-Term Only)

Global romantic evaluations must remain elevated long 1814 enough to (a) avoid breakups (Predicate 1) and (b) allow 1815 time for the attachment-behavioral system to become fully 1816 engaged (Predicate 4). When they do, partners should 1817 experience a within-dyad trade-off between the expenditure 1818 of mating effort and parental effort (Gangestad & Kaplan, 1819 2005; Gangestad & Simpson, 2000). That is, partners should 1820 typically devote more time and energy to mating effort (e.g., 1821 sexual overtures, attempts to attract partners and form rela-1822 tionships with them) early in a relationship trajectory. 1823 However, they should shift more time and energy to behav-1824 iors that are a blend of mating and parental effort (e.g., 1825

attachment, caregiving) as time passes, which in turn should1826presage (especially in ancestral environments) parental effort1827behaviors, such as investing time and resources in raising1828offspring. Most short-term relationships do not last long1829enough for parental effort to become relevant.1830The Eastwick et al. (2018) studies just described provide1831

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The Eastwick et al. (2018) studies just described provide support for this hypothesis. Participants in these studies also reported whether they experienced a variety of specific desires at each time point. Some of these desires reflected the attachment-behavioral system-feelings of psychological attachment, strong caregiving motivation, and the desire to evaluate the partner's potential as a parent-which were linked to parental investment in our hominid ancestors, as just discussed. These features characterized long-term more than short-term relationships, but not immediately. Longterm relationships eventually exhibited these features as time passed, but they began at similarly low levels in both shortterm and long-term relationships. Regardless of whether participants were describing a short-term or a long-term relationship, the earlier portions were characterized by features associated with greater mating effort, such as sexual desire, trying to make a favorable impression on the partner, and attempting to promote oneself. These patterns are consistent with a within-dyad trade-off between mating and parental effort in that partners begin by exerting more mating effort in relationships, and if the relationship progresses into a long-term one, parental effort gradually increases.

#### The ReCAST Model: Constraints and Falsifiability

Theories and models are especially powerful when they specify findings that would be inconsistent with the model, as such findings would indicate that the model must be altered or jettisoned. We offer a few of these specifications here. For example, to the extent that scholars find evidence that information about two people obtained before their initial encounter predicts relationship-specific effects (e.g., sexual chemistry, effective support, capitalization, or goal support) with reasonable effect sizes, then short-term versus longterm relationship length would be "knowable" much earlier than depicted by the ReCAST model. Right now, machine learning approaches have cast doubt on the possibility that relationship-specific attraction can be predicted from information assessed prior to an initial face-to-face interaction (Joel et al., 2017). Nevertheless, it is possible that future compatibility algorithms could be developed to predict longversus short-term relationship length a priori (Finkel et al., 2012). Also, some mating relationships fall outside the scope of the ReCAST model. Like any application of the Relationship Trajectories Framework, it would not apply to cases in which people are unable to evaluate their partner on two or more discrete, separate occasions. Also, the model does not apply to nonconsensual sexual relationships, such as rape.

The ReCAST model would not be falsified by the abundant existing evidence that some people have more short-term relationships than others. As becomes clear next, individuals who are higher in sociosexuality may have more 1885 short-term relationships for a variety of reasons that can all 1886 be represented within the trajectories framework. However, 1887 the current version of the ReCAST model would require 1888 alteration if, for example, it could be demonstrated experi-1889 mentally early in the acquaintance process that some tactics 1890 or mating behaviors (e.g., making subtle physical contact; 1891 Schmitt & Buss, 1996) enhance the probability of forming a 1892 short-term but not a long-term relationship. At present, no 1893 evidence supports this idea in real-life mating contexts. 1894

#### The ReCAST Model: Conclusion

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1897 The ReCAST model applies the shape and composition 1898 dimensions of the Relationship Trajectories Framework to 1899 generate novel, falsifiable hypotheses regarding short-term 1900 and long-term relationships. In doing so, it trains a spotlight 1901 on a crucial gap in the empirical literature-the period of 1902 time between an initial encounter and the formation of an 1903 official relationship-and offers a possible integration of the 1904 close relationships and evolutionary psychological perspec-1905 tives concerning relationship length. The ReCAST model is 1906 similar to prior evolutionary models of human mating in 1907 that it (a) incorporates trade-offs between mating effort and 1908 parental effort and (b) posits that parental effort is more 1909 characteristic of long-term than short-term relationships. 1910 However, it differs from these models by depicting short-1911 term and long-term mating processes not as independent 1912 strategies (e.g., Buss & Schmitt, 1993) but as trajectories that 1913 differ in their progression along a normative sequence; 1914 short-term and long-term relationships are eventually cat-1915 1916 egorically distinct, but they are not so initially.<sup>6</sup> Some basic level of romantic interest in short-term partners is typically 1917 sufficient to inspire sexual desire, impression management, 1918 and other motivations that usually appear early in the nor-1919 1920 mative romantic sequence but insufficient to fully activate 1921 features such as attachment and caregiving, which take longer to unfold. Accordingly, higher levels of romantic interest 1922 1923 are needed to produce meaningful levels of both sexual 1924 desire and, eventually, pair-bonding.

#### Application 2: The Sociosexuality Trajectory Model

The second theoretical model—the sociosexuality trajectory model—focuses on individual differences instead of normative processes. It leverages three dimensions of the Relationship Trajectories Framework—shape, threshold, and density—along with the dyadic component of the framework to propose a new agenda for research on individual differences in sociosexuality. In what follows, we identify several robust findings within the sociosexuality literature and then

<sup>6</sup>The ReCAST model bears some similarity to Buss and Schmitt's (1993) hypothesis that people (women especially) may use short-term mating to evaluate prospective long-term mates. ReCAST differs, however, by suggesting that mating effort and associated behaviors (e.g., sexual desire, desire to impress the partner) normatively characterize the early portions of romantic relationship development for both sexes and that these evaluations shape short-term versus long-term motives (i.e., whether partners want the relationship to be short or long) rather than being shaped by them.

hypothesize that shape, threshold, and density can help to 1944 explain (i.e., are the mechanisms underlying) previously 1945 documented associations between sociosexuality and various 1946 relational/sexual experiences. 1947

Sociosexuality is the degree to which individuals are will-1948 ing to engage in casual sex (i.e., sex outside of a committed 1949 relationship). It is one of the most widely studied individual 1950 difference variables in the psychology of human mating, sig-1951 nificantly advancing research in both the evolutionary and 1952 close relationship traditions. This key construct, however, 1953 has never been examined within a framework that depicts 1954 how mating relationships systematically shift and change 1955 over time. This omission is unfortunate because investigat-1956 ing differences in the shape, threshold, and density of the 1957 emerging relationships of unrestricted (i.e., high sociosexual-1958 ity) and restricted (low sociosexuality) individuals could 1959 yield important insights into why they often have different 1960 experiences in sexual and romantic relationships.

#### **Key Features of Sociosexuality**

1965 The sociosexuality construct (Gangestad & Simpson, 1990) 1966 and its measures (e.g., Penke & Asendorpf, 2008; Simpson & 1967 Gangestad, 1991) focus on variation in "sociosexual" attitudes and behaviors, as first noted by Kinsey, Pomeroy, and 1968 1969 Martin (1948; Kinsey, Pomeroy, Martin, & Gebhard, 1953). 1970 When responding to the revised Sociosexuality Orientation 1971 Inventory (Penke & Asendorpf, 2008), for example, unre-1972 stricted (compared to restricted) individuals report more sex 1973 partners within the past year, have had more one-night 1974 stands, and more frequently engage in sex with partners 1975 without necessarily expecting to have a long-term relation-1976 ship with them. Unrestricted individuals also do not require 1977 love or commitment before having sex, believe that sex 1978 without love is okay, like casual sex, have more sexual fanta-1979 sies about alternative partners (including someone they just 1980 met), and feel more sexually aroused by partners to whom 1981 they are not committed. These measures of sociosexuality 1982 tend to be fairly stable over time (Penke & Asendorpf, 2008; 1983 Simpson & Gangestad, 1991). 1984

Highly unrestricted (vs. restricted) individuals tend to be more extraverted, disinhibited, and sensation seeking, whereas highly restricted individuals typically are more agreeable and inhibited (Gangestad & Simpson, 1990; 1988 Wright & Reise, 1997). In addition, men tend to be more unrestricted than women (Penke & Asendorpf, 2008; Simpson & Gangestad, 1991), and unrestricted men have higher testosterone levels than restricted men (Puts et al., 2015).

#### The Sociosexuality Trajectory Model: Predicates

Several cross-sectional studies conducted within the evolu- 1997 tionary psychology and close relationships traditions have 1998 investigated links between sociosexuality and a wide variety 1999 of sexual, mating, and romantic outcomes. Here, we discuss 2000 six that have received the strongest and most consistent 2001 empirical support (Table 6). These six findings are not 2002

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2003 Table 6. Predicates forming the foundation of the sociosexuality trajectory model.

|      | -       |   |  |
|------|---------|---|--|
| 2004 |         | Predicate   | Key References                           |
| 2005 | 1       | Unrestricted individuals readily perceive, and behave in ways that facilitate obtaining, sexual partners. | Maner et al., 2003; Simpson et al., 1999 |
| 2006 | 2       | Unrestricted individuals are initially attracted to physically attractive partners.                       | Gangestad & Simpson, 2000                |
| 2000 | 3       | Unrestricted individuals have lower quality, less stable relationships.                                   | Hebl & Kashy, 1995; Webster et al., 2015 |
| 2007 | 4       | Unrestricted individuals are more likely to have extra-pair relationships.                                | Seal et al., 1994                        |
| 2008 | 5       | Unrestricted individuals prefer a wider variety of sexual experiences.                                    | Gangestad et al., 2010                   |
| 2009 | 6       | Unrestricted individuals become involved in a larger number of relationships.                             | Penke & Asendorpf, 2008                  |
| 2010 | Note. T | he comparison group for these effects for unrestricted individuals is restricted individuals.             |  |
| 2011 |         |   |  |

restatements of the definition of sociosexuality—the willingness to have sex outside of a committed relationship—but
rather reflect purported downstream consequences of this
willingness. When discussing what unrestricted people tend
to be like, the comparison group is always restricted people.

# 2019 Predicate 1: Unrestricted Individuals Readily Perceive, 2020 and Behave in Ways that Facilitate Obtaining, 2021 Sexual Partners

2022 In initial attraction settings, unrestricted individuals perceive 2023 they have more access to sexual partners and behave in 2024 ways that actually facilitate greater access. For example, they 2025 overperceive sexual interest from opposite-sex others 2026 (Howell, Etchells, & Penton-Voak, 2012; Kohl & Robertson, 2027 2014; Maner et al., 2005; Perilloux, Easton, & Buss, 2012), 2028 selectively attend to attractive opposite-sex others (Maner 2029 et al., 2003) and are more competitive in mating contexts 2030 with same-sex others (Ainsworth & Maner, 2012; Simpson, 2031 Gangestad, Christensen, & Leck, 1999). They also flirt more 2032 frequently and more effectively with potential romantic part-2033 ners (Penke & Asendorpf, 2008; Simpson, Gangestad, & 2034 Biek, 1993). These behaviors may explain why people tend 2035 to desire unrestricted partners in initial attraction contexts 2036 (Joel et al., 2017). 2037

#### 2039 **Predicate 2: Unrestricted Individuals Are Initially** 2040 **Attracted to Physically Attractive Partners**

2041 When individuals report their attraction to potential part-2042 ners (which researchers typically depict in photographs), 2043 unrestricted individuals prefer especially physically attractive 2044 romantic partners (i.e., partners who may possess markers 2045 "good genes"; Gangestad & Simpson, 2000; see also of 2046 Gangestad, Thornhill, & Garver-Apgar, 2010; Lustgraaf & 2047 Sacco, 2015; Price, Pound, Dunn, Hopkins, & Kang, 2013; 2048 Simpson & Gangestad, 1992). Unrestricted women also place 2049 greater value on masculine physical and behavioral attributes 2050 in men (O'Connor et al., 2014; Perilloux, Cloud, & Buss, 2051 2013; Quist, Smith, & DeBruine, 2012; Sacco, Jones, 2052 DeBruine, & Hugenberg, 2012). 2053

# Predicate 3: Unrestricted Individuals Have Lower Quality, Less Stable Relationships

2058 Once a relationship has formed, unrestricted individuals 2059 report having lower quality relationships (e.g., less passion, 2060 lower satisfaction, less commitment) and are at greater risk 2061 for relationship breakup (Foster, Shrira, & Campbell, 2006; Hebl & Kashy, 1995; Rodrigues & Lopes, 2017; Webster et al., 2015).

#### Predicate 4: Unrestricted Individuals Are More Likely to Have Extra-Pair Relationships

In general, unrestricted individuals are more likely to engage in extra-pair relationships while being involved in an ongoing, established one (Gangestad et al., 2010; Rodrigues, Lopes, & Pereira, 2017; Rodrigues, Lopes, & Smith, 2016; Seal, Agostinelli, & Hannett, 1994).

## Predicate 5: Unrestricted Individuals Prefer a Variety of Sexual Experiences

Unrestricted individuals prefer to (and generally do) have sex with a wider variety of sexual partners (Penke & Asendorpf, 2008; Simpson & Gangestad, 1991). For example, they express interest in taking part in a wider array of sexual experiences (e.g., having sex with "someone I didn't care about," having an "illicit affair," taking part in an orgy; see Gangestad et al., 2010).

### Predicate 6: Unrestricted Individuals Become Involved in a Larger Number of Relationships

Unrestricted individuals become involved in more romantic relationships—both uncommitted and "official" relationships—within a given period (Penke & Asendorpf, 2008; Townsend & Wasserman, 2011). Moreover, when they are considering the possibility of forming a sexual relationship, they are less picky about the exact type of sexual relationship that will emerge (e.g., a one-time encounter vs. a multiple-time encounter). That is, they often "take what they can get" (Wilkey, 2016).

#### The Sociosexuality Trajectory Model: Hypotheses

Sociosexuality predicts the outcomes just described, but how or why do these effects occur? In what follows, we draw from the shape, threshold, and density dimensions to propose four mechanisms that could explain these effects. At present, these four hypotheses remain largely untested, partly because they have never been formally proposed and partly because longitudinal data are rare in the sociosexuality literature (Figure 11 and Table 7).

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Figure 11. The sociosexuality trajectory model. *Note*. Top and bottom timelines depict the four major differences between high (unrestricted) and low (restricted) sociosexuality individuals. 1. Ascent is faster in high than low sociosexuality; 2. Peak is lower in high than low sociosexuality; 3. Threshold for sex is lower in high than low sociosexuality; 4. Density is greater in high than low sociosexuality.

#### **Table 7.** Hypotheses generated by the sociosexuality trajectory model.

| 1 | Unrestricted individuals should experience more rapid ascent in the | eir |
|---|---|-----|
|   | trajectories.   |     |

**Hypothesis** 

- 2 Unrestricted individuals should experience a lower peak in their trajectories.
- 3 Unrestricted individuals should have lower thresholds for engaging in sexual intimacy with partners.
- 4 Unrestricted individuals should have a higher density of romantic relationships.
- *Note.* The comparison group for these effects for unrestricted individuals is restricted individuals.

#### Hypothesis 1: Unrestricted Individuals Should Experience More Rapid Ascent in Their Trajectories

With regard to the shape dimension, the current available cross-sectional evidence suggests that unrestricted individu-als should have trajectories in which initial romantic evalua-tions, perhaps especially with respect to feelings of passion, increase more rapidly than is true of restricted individuals. Hypothesis 1 is consistent with the fact that unrestricted persons overperceive sexual interest in potential partners, flirt more (and more effectively) with prospective romantic partners, and are more romantically desirable, on average (Predicate 1). These behaviors should generate stronger ini-tial romantic interest in both unrestricted individuals them-selves (i.e., an actor effect) and in their potential partners (i.e., a partner effect). Both the actor and partner effects on ascent are depicted in Figure 12. Hypothesis 1 is also aligned with unrestricted individuals' initial attraction to more phys-ically attractive partners (Predicate 2), who might be espe-cially desirable for passionate sexual intimacy early in relationship development (cf. Howell et al., 2012; Kohl & Robertson, 2014; Maner et al., 2005; Perilloux et al., 2012). Nevertheless, no studies thus far have examined how socio-sexuality is associated with initial attraction to a particular partner over time. 



**Figure 12.** A dyadic illustration of the actor and partner effects predicted by Hypotheses 1 and 2 in the sociosexuality trajectory model. *Note.* The illustration depicts three effects that are predicted to emerge by shifting the actor (pink trajectory) from low (faded line) to high (bright line) sociosexuality. 1 = the positive actor effect of sociosexuality on the actor's own ascent; 2 = the positive partner effect of sociosexuality on the partner's (blue trajectory) ascent; 3 = the negative actor effect of sociosexuality on the actor's own peak.

#### Hypothesis 2: Unrestricted Individuals Should Experience 2227 a Lower Peak in Their Trajectories 2228

Also with regard to the shape dimension, unrestricted individuals should generally feel less positive than restricted 2230 2231 individuals about their official romantic partners. 2232 Accordingly, their romantic evaluations may not reach or 2233 maintain the same peak of positivity as is true of most 2234 restricted individuals. Hypothesis 2 is consistent with evi- 2235 dence that unrestricted individuals tend to be less satisfied 2236 with, and less committed to, their current official romantic 2237 partners (Predicate 3). In addition, unrestricted individuals 2238

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are more likely to be aware of (or involved in) alternative relationships (Predicate 4), which could lead them to experience less positive romantic evaluations of their current partner/relationship, especially if their alternatives are desirable and immediately available. This actor effect of sociosexuality on peak is also depicted in Figure 12.

2245 To our knowledge, only one longitudinal study has exam-2246 ined the effects of sociosexuality on romantic evaluations 2247 during ongoing relationships (French, Altgelt, & Meltzer, 2248 2017). It found that unrestricted newlyweds reported lower 2249 satisfaction when they got married (an intercept effect), 2250 which suggests a lower peak. Intriguingly, sociosexuality was 2251 unrelated to the speed at which individuals' satisfaction tra-2252 jectories declined over time, suggesting that Predicate 3 (see 2253 earlier) may primarily be a function of peak rather 2254 than descent. 2255

# Hypothesis 3: Unrestricted Individuals Should Have Lower Thresholds for Engaging in Sexual Intimacy with Partners

2260 With regard to the threshold dimension, unrestricted per-2261 sons should have lower thresholds (i.e., lower standards) for 2262 engaging in physical intimacy. Hypothesis 3 is consistent 2263 with the finding that unrestricted individuals engage in sex 2264 with romantic partners relatively sooner after first meeting 2265 them (Gangestad, Thornhill, et al., 2010; Penke & 2266 Asendorpf, 2008; Simpson & Gangestad, 1991), and they are 2267 more likely to pursue alternative sexual experiences, such as 2268 having sex with people they do not necessarily like 2269 (Predicate 5). Direct tests of this hypothesis (e.g., using 2270 Guttman scaling techniques and other approaches that can 2271 identify thresholds) are likely to be fruitful. 2272

## Hypothesis 4: Unrestricted Individuals Should Have a Higher Density of Romantic Relationships

2276 Unrestricted persons should also have trajectories with 2277 higher densities than restricted individuals. This would be 2278 indicated by greater overlap (i.e., concurrent romantic inter-2279 est in or concurrent romantic involvement) with more than 2280 one romantic partner at a time, or by shorter intervals 2281 between the ending of one relationship and the beginning of 2282 another. Several findings are consistent with Hypothesis 4. 2283 Unrestricted individuals, for example, are more likely to 2284 have extrapair partners or be involved in multiple 2285 concurrent relationships (Predicate 4). Greater trajectory 2286 density is also consistent with the fact that unrestricted indi-2287 viduals have not only more sex partners but also more offi-2288 relationship partners (Penke & Asendorpf, 2008; cial 2289 Townsend & Wasserman, 2011); they meet more people to 2290 are attracted and pursue romantically whom they 2291 (Predicate 6). 2292

#### 2294 Sex Differences in Sociosexuality 2295

As previously noted, men score higher than women in sociosexuality; in other words, some amount of variance in sociosexuality is due to sex. Thus, some of the hypotheses we proposed earlier may illuminate sex differences in sociosexuality, whereas others may be independent of sex differences. Consider Hypothesis 3: Given that men have lower thresholds for sex (see the preceding Threshold section), a lower threshold for sex among unrestricted individuals could be explained by the fact that unrestricted individuals are more likely to be men. Now consider Hypothesis 2: Given that men and women probably do not differ in their peak evaluations (Eastwick et al., 2018), a lower peak among unrestricted individuals cannot be explained by sex. Accordingly, the Relationship Trajectories Framework may help isolate which downstream consequences of sociosexuality are due to, or independent of, participants' sex.

#### The Sociosexuality Trajectory Model: Constraints and Falsifiability

In formulating the sociosexuality trajectory model, we inductively generated four specific hypotheses, all of which need to be tested with appropriate longitudinal data that assesses the shape, threshold, and density of the actual relationship trajectories of unrestricted and restricted individuals. Unrestricted and restricted sociosexuality might not be associated with all four of the trajectory patterns just hypothesized. It is possible, for instance, that differences in threshold and density alone might explain the distinct relationship trajectories of restricted and unrestricted people, with no need to entertain shape. Because our four sociosexuality hypotheses are inductive and, therefore, somewhat more speculative than the deductively generated ReCAST hypotheses, the disconfirmation of any one of them would not necessarily undermine the sociosexuality trajectory model as a whole. However, disconfirming evidence for all four hypotheses would undermine its utility considerably.

#### The Sociosexuality Trajectory Model: Conclusion

In conclusion, one novel feature of the Relationship Trajectories Framework is that it allows investigators to identify a priori and then rigorously test different trajectory parameters to discern how individual differences are related to relational outcomes with respect to each of the five trajectory dimensions. Previous research has demonstrated that sociosexuality is associated with several romantic outcomes, and the sociosexuality trajectory model explains these effects by identifying four possible differences between restricted and unrestricted individuals—differences that are operationalized at the level of relationship trajectories.

#### Additional Applications of the Framework

In this final section, we showcase the breadth and applicability of the Relationship Trajectories Framework by describing three brief applications to contexts commonly examined by scholars of human mating.

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#### 2357 Individual Differences and Trade-Offs

2358 Many theories and models in the close relationships and 2359 evolutionary psychological literatures posit a central role for 2360 individual difference constructs; as with the sociosexuality 2361 trajectory model, applications of the framework to these 2362 constructs could generate a host of new predictions. 2363 Consider the many individual differences that reflect trade-2364 offs in evolutionary theorizing. For example, life history the-2365 ory suggests that people who encounter harshness and/or 2366 unpredictability during childhood traverse a developmental 2367 pathway that results in increased pursuit of short-term mat-2368 ing relationships and unstable pair-bonds (i.e., fast strat-2369 egies) instead of long-term mating relationships and 2370 enduring pair-bonds (i.e., slow strategies; Belsky, 2012; 2371 Belsky et al., 1991; Del Giudice, 2009; Ellis et al., 2009; 2372 Simpson et al., 2012). In addition, men who possessed good 2373 genes (as indicated, e.g., by low fluctuating asymmetry or 2374 high testosterone) may have increased their reproductive 2375 success ancestrally by devoting more energy to mating effort 2376 rather than parenting effort (Gangestad & Simpson, 2000; 2377 Roney & Gettler, 2015). 2378

Generally speaking, these trade-off theories imply that an 2379 advantage conferred by an individual difference in the ear-2380 lier mating effort portion of a trajectory may be offset by a 2381 disadvantage in the later parenting effort portion (and vice 2382 versa). Thus, shape differences should emerge in that indi-2383 vidual differences in life history strategy or good genes show 2384 (a) positive actor or partner effects on ascent and (b) nega-2385 tive actor or partner effects on descent. Testosterone effects 2386 are consistent with this hypothesis (Roney & Gettler, 2015), 2387 although studies that better capture the entire relationship 2388 arc are needed. 2389

Now consider the contrapositive logic: If an individual 2390 difference construct does not exhibit a trade-off pattern with 2391 respect to relationship trajectories, it probably does not 2392 merit a trade-off theoretical model. Physical attractiveness 2393 offers a case in point. Some trade-off theoretical perspectives 2394 on attractiveness propose that attractive people should 2395 devote more effort to mating than parenting (e.g., Chu, 2396 Hardaker, & Lycett, 2007; Ma-Kellams, Wang, & Cardiel, 2397 2017). The available evidence, however, does not support 2398 this claim. Physical attractiveness does confer an advantage 2399 in the early phases of trajectories (a meta-analytic partner 2400 effect on initial attraction, r = .37; Eastwick, Luchies, Finkel, 2401 & Hunt, 2014a), but it carries no appreciable disadvantages 2402 during later phases (in established relationships, the actor 2403 effect, r = .03: Meltzer, McNulty, Jackson, & Karney, 2014; 2404the partner effect, r = .08: Eastwick et al., 2014). At present, 2405 a trajectory framework intersects with existing findings to 2406 suggest that extant trade-off perspectives on physical attract-2407 iveness are not tenable; it appears that being physically 2408 attractive makes individuals more appealing early in a rela-2409 tionship but does not harm the relationship later on. 2410

#### Individual Differences in Attachment Orientations

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The Relationship Trajectories Framework is also well suited to clarifying how individual differences in adult attachment orientations affect how relationships develop across their full 2416 time span. Such development should be tied to the central 2417 motives harbored by highly avoidant and highly anx- 2418 ious people. 2419

According to Bowlby (1973), highly avoidant people have 2420 been rejected by their prior attachment figures, which leads 2421 them to develop cautious attitudes about becoming emotion- 2422 ally close to and dependent on future romantic partners and 2423 to value independence, autonomy, and self-reliance 2424 (Mikulincer, 1998). Highly anxious people, on the other 2425 hand, have experienced inconsistent care from earlier attach- 2426 ment figures (Bowlby, 1973), which leads them to yearn for 2427 more emotional closeness and dependence with future part- 2428 ners and to value actions (e.g., intimate self-disclosure early 2429 in a relationship) that can potentially stabilize or enhance 2430 their flagging sense of felt security (Mikulincer, 1998).

These key motivational differences are likely to influence 2432 relationship trajectories in several predictable ways, perhaps <sup>2433</sup> by moderating the normative process of deepening self-dis- 2434 closure that causes trajectories to rise (Altman & Taylor, 2435 2436 1973; Collins & Miller, 1994). With respect to the shape 2437 dimension, for example, most highly avoidant people should 2438 have slower ascent, and they may even behave in ways (e.g., engaging in distancing behavior) that attempt to slow their <sup>2439</sup> 2440 partner's ascent. They also may have lower peaks and perhaps more rapid descent later in relationships. Given their 2441 2442 tendency to be more unrestricted (e.g., Brennan & Shaver, 2443 1995), highly avoidant people may also display different 2444 thresholds than less avoidant (i.e., more secure) people by 2445 engaging in sexual intercourse somewhat earlier in relation-2446 ship development but still not consider a relationship as 2447 official or exclusive when sex has occurred.

2448 Highly anxious people should have markedly different 2449 trajectories. With respect to shape, for instance, highly anx-2450 ious individuals should experience faster ascent (given that 2451 they yearn for greater emotional closeness and dependence), 2452 and they may engage in behaviors that attempt to accelerate 2453 their partner's ascent. Also, they may experience higher 2454 peaks and perhaps more fluctuating patterns of both ascent 2455 (as their relationships develop) and descent (as they end). In 2456 addition, highly anxious individuals might have different 2457 thresholds as revealed by engaging in sexual intercourse ear-2458 lier during relationship development than less anxious (i.e., 2459 more secure) people and by viewing the relationship as 2460 being official or exclusive following sex. The take-away point 2461 is that the interpersonal motives that people bring into ini-2462 tial and relationship formation encounters should have a 2463 bearing on the nature and patterning of their relationship  $\frac{1}{2464}$ trajectories over time. 2465

#### Scaffolding from Micro- to Macrorelationship Processes 2467

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2468 One of the principal strengths of relationship science is its 2469 long-standing theoretical and empirical commitment to 2470 studying the moment-to-moment dynamics of specific inter- 2471 actions between partners (e.g., Bodenmann, 2005; Gottman, 2472 1979; Kelley et al., 1983; Reis & Shaver, 1988). How exactly 2473 do second-to-second or minute-to-minute changes in 2474 relational behaviors and evaluations intersect with the mac-rorelational perspective made possible by considering anentire relationship trajectory arc?

2478 First, microrelational processes are likely to be shaped by 2479 the unique culture of each relationship—a culture that coa-2480 lesces over the long stretch of time that precedes a research-2481 er's observations (Finkel, 2017). Crucial elements of this 2482 culture are likely to manifest in trajectory dimensions: 2483 Thresholds for engaging in particular behaviors (e.g., sex, 2484 confrontation) may shift depending on whether one's global 2485 trajectory is ascending or descending, and entrenched habits 2486 that appear to reflect stable personality traits (e.g., neuroti-2487 cism) may actually be rooted in events and trajectory pat-2488 terns that occurred earlier in the relationship. Partners 2489 interacting in the laboratory bring their specific trajectory 2490 histories with them-histories that begin, we have argued, 2491 with their initial encounter.

2492 Second, microrelational processes can scaffold up to 2493 influence the future of a trajectory. Moment-to-moment 2494 responding can have consequences for whether a relation-2495 ship remains intact or dissolves (e.g., Bodenmann & Cina, 2496 2006; Gottman, 1994; Karney & Bradbury, 1995). However, 2497 the temporal line that connects momentary responses to 2498 partner or relationship evaluations that span days, months, 2499 or years has not been fully illuminated. Studies of reactivity 2500 have begun this endeavor by examining how momentary 2501 ups and downs affect people's global evaluations of their 2502 relationships (e.g., Jacobson, Follette, & McDonald, 1982; 2503 McNulty, O'Mara, & Karney, 2008; Neff & Karney, 2009). 2504 This work suggests that, in some relationships, the global 2505 trajectory has its own natural gravity that continues 2506 unaffected by momentary negativity, whereas in other rela-2507 tionships, negative interactions gradually accelerate a per-2508 son's descent. If we expand the time horizon of this work, 2509 additional patterns may become apparent. The overall trajec-2510 tory in some relationships, for example, may be affected by 2511 momentary negativity in a purely additive, gradual fashion, 2512 whereas in others it might exhibit a "catastrophic" pattern 2513 such that the trajectory shifts suddenly and strongly once 2514 many negative events accumulate (Bak, 1996). Thus, even 2515 for scholars who primarily focus on moment-to-moment 2516 relationship experiences, the Relationship Trajectories 2517 Framework emphasizes myriad possible mechanisms that 2518 might connect these experiences to the global outcomes that 2519 relationship scholars seek to understand. 2520

### 2522 Conclusion

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We began this article by identifying limitations of the close 2524 relationships and evolutionary psychological literatures with 2525 respect to how both literatures conceptualize the time course 2526 of sexual and romantic relationships. We then advanced a 2527 metatheoretical framework-the Relationship Trajectories 2528 Framework-to begin to fill these gaps and presented two 2529 new theoretical models utilizing this framework to derive 2530 several falsifiable predictions. The ReCAST model addresses 2531 normative features of romantic relationships; it differentiates 2532 short-term and long-term relationships, and identifies how 2533

and when relationship length should be predictable. The<br/>sociosexuality trajectory model illustrates how relationship<br/>trajectories can clarify individual differences in the way that<br/>people form, maintain, and end relationships.2534<br/>2535<br/>2536<br/>2537

More generally, the Relationship Trajectories Framework can aid scholars in developing novel predictions and additional models that capture the full time course of people's relationships. This framework can be used to identify different types of mating patterns, some of which may reflect the unique ways in which women and men of different ages and from different cultures form and end relationships over time. The breadth of a trajectory-inspired focus has the potential to generate a literature that depicts not only the processes that characterize existing romantic relationships but also the processes that unfold as individuals initiate relationships and as people move from one relationship to the next, regardless of whether those relationships ultimately last for extended—or limited—stretches of time.

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