

Adult Romantic Relationships as Contexts of Human Development: A Multimethod Comparison of Same-Sex Couples With Opposite-Sex Dating, Engaged, and Married Dyads

Glenn I. Roisman, Eric Clausell, Ashley Holland, Keren Fortuna, and Chryle Elieff
University of Illinois at Urbana-Champaign

This article presents a multimethod, multi-informant comparison of community samples of committed gay male ($n = 30$) and lesbian ($n = 30$) couples with both committed ($n = 50$ young engaged and $n = 40$ older married) and noncommitted ($n = 109$ exclusively dating) heterosexual pairs. Specifically, in this study the quality of same- and opposite-sex relationships was examined at multiple levels of analysis via self-reports and partner reports, laboratory observations, and measures of physiological reactivity during dyadic interactions. Additionally, individuals in same-sex, engaged, and marital relationships were compared with one another on adult attachment security as assessed through the coherence of participants' narratives about their childhood experiences. Results indicated that individuals in committed same-sex relationships were generally not distinguishable from their committed heterosexual counterparts, with one exception—lesbians were especially effective at working together harmoniously in laboratory observations.

Keywords: same-sex couples, married couples, dating couples, engaged couples, observational study

Committed romantic relationships (and marriages in particular) represent fundamental contexts of human development, not only for children but also for the adults involved in them (e.g., Clarke-Stewart & Dunn, 2006; Cummings & Davies, 1994). Nonetheless, there is much debate as to whether committed same-sex relationships are inherently inferior to heterosexual unions in terms of promoting healthy psychological adjustment. It is important to emphasize that although few social scientists espouse this perspective, this is a common lay view that is likely in part attributable to the fact that, until relatively recently, homosexuality was viewed as a form of psychopathology in the *Diagnostic and Statistical Manual of Mental Disorders (DSM)* and the *International Classification of Diseases (ICD)* used by mental health professionals (for a review see Mendelson, 2003). Importantly, however, the assumption that same-sex unions are atypical, psychologically im-

mature, or malevolent contexts of development is a question that can be addressed empirically. Toward that end, this study joins a relatively small set of comparative, observational studies that have examined the quality of same- and opposite-sex relationships at multiple levels of analysis.

Typically, developmental research related to the claim that committed same-sex relationships are unlike heterosexual unions has focused on comparisons of the children of gay, lesbian, and heterosexual parents. Findings in this area of research have been highly consistent. To date, this literature suggests that children reared by individuals with same- versus opposite-sex sexual preferences are generally not distinguishable (see Allen & Burrell, 1996; Stacey & Biblarz, 2001), even when such studies have been based on nationally representative data sets (Wainright, Russell, & Patterson, 2004). A more fundamental question, especially given how few gay and lesbian couples actually have children (Gates & Ost, 2004), is whether committed same-sex couples differ from engaged and married couples in ways that suggest that the development of adults who are involved in same-sex relationships is undermined. Although there is a long history of research on the psychology of gay and lesbian individuals, there is in fact only a modest literature specifically devoted to adult gay and lesbian relationships, and smaller still are the number of investigations that provide direct comparisons of same- and opposite-sex couples.

Nonetheless, a few pioneers, including Blumstein and Schwartz (1983) and Kurdek (e.g., 1986, 1995a, 1996, 1998, 2004) have conducted comparative studies focused on same- and opposite-sex romantic relationships in adulthood using interview and questionnaire methods. In a review of findings drawn from gay and lesbian couples, Kurdek (1995b) identified the following six key principles that govern same-sex relationships: (a) Many gay men and lesbians identify themselves as being involved in a committed relationship; (b) One salient difference between gay and lesbian

Glenn I. Roisman, Eric Clausell, Ashley Holland, Keren Fortuna, and Chryle Elieff, Department of Psychology, University of Illinois at Urbana-Champaign.

This study was sponsored by a Wayne F. Placek Award from the American Psychological Foundation and several grants (including a Beckman Award) from the Research Board at the University of Illinois at Urbana-Champaign. The dating couples study was sponsored by a National Science Foundation Grant to R. Chris Fraley. The authors gratefully acknowledge this financial support as well as Chao-Hsun (Ray) Hu's efforts related to the coding of observational data presented in this report. This article is dedicated to the memory of Nicole Laws-Carroll, an honors student whose contributions to our laboratory and our lives will not soon be forgotten.

Correspondence concerning this article should be addressed to Glenn I. Roisman, Department of Psychology, University of Illinois at Urbana-Champaign, 603 East Daniel Street, Champaign, IL 61820. E-mail: roisman@uiuc.edu

relationships is that lesbians tend to be more sexually exclusive than gay men; (c) Gay men, and particularly lesbians, are more likely to endorse an "ethic of equality" compared with their heterosexual counterparts; (d) As with heterosexual relationships, gay and lesbian partnerships show reliable changes over time; (e) Few differences emerge when comparing global levels of satisfaction for gay, lesbian, and heterosexual couples; and (f) Predictors of relationship stability and satisfaction are consistent across gay, lesbian, and heterosexual couples.

Such longitudinal research by Kurdek (e.g., 2004) on same-versus opposite-sex couples has thus led many social scientists to conclude that gay, lesbian, and heterosexual relationships are quite similar to one another in many respects (Herek, 2006). Nonetheless, it is important to point out that research in this area has not yet fully tapped into the methodological sophistication that now typifies cutting-edge interpersonal relationships research. For example, it is now well-established that the observed quality of adults' relationships as well as measures of cardiac (e.g., heart rate) and electrodermal (e.g., skin conductance) reactivity during interpersonal interactions have proved to be reliable predictors of relationship satisfaction and dissolution (high levels of reactivity tend to be associated with negative interpersonal outcomes; Gottman & Levenson, 1992; Levenson & Gottman, 1985; Roisman, 2007; Tsai & Levenson, 1997). Such measures provide objective assessments of the quality of adults' relationships as developmental contexts that go significantly beyond simply asking adults to describe themselves and their relationships (see Gottman, Levenson, Gross, et al., 2003; Gottman, Levenson, Swanson, et al., 2003).

In fact, surprisingly few comparative studies have been published providing observational data relevant to committed gay, lesbian, and heterosexual relationships. In two exceptions, Gottman, Levenson, Swanson, et al. (2003) found that same-sex couples actually demonstrated more positive (and fewer negative) behaviors during their interactions than did married couples, whereas Julien, Chartrand, Simard, Bouthillier, and Bégin (2003) found no evidence for differences among committed gay male, lesbian, and married couples in terms of the observed quality of their interactions. Although such findings run counter to claims that same-sex unions are typically of relatively low quality, samples from these studies were modest in size and thus this groundbreaking work awaits replication. In addition, both Gottman, Levenson, Swanson, et al. (2003) and Julien et al. (2003) contrasted gay and lesbian couples with married dyads only. As such, it is presently unclear how same-sex couples compare with a broader range of committed (i.e., engaged) and noncommitted (i.e., dating) heterosexual couple types.

In order to expand the comparative literature on same- versus opposite-sex relationships, this report presents a multimethod, multi-informant comparison of samples of committed gay male ($n = 30$) and lesbian ($n = 30$) couples with a range of committed ($n = 50$ young engaged and $n = 40$ older married) and noncommitted ($n = 109$ exclusively dating) heterosexual pairs, all drawn from the same community using identical recruitment methods (this is an important design point because, in Gottman, Levenson, Swanson, et al., 2003, same- and opposite-sex dyads were drawn from different communities, which may in part explain the differences they identified between same- vs. opposite-sex couples). More specifically, in the present study the quality of same- and opposite-sex relationships was examined at multiple levels of

analysis via self-reports and partner reports of adjustment, laboratory observations of interpersonal behavior, and measures of physiological reactivity during dyadic interactions.

In our studies we routinely acquire measures of participants' autonomic responses (i.e., skin conductance and heart rate) during their interactions with romantic partners not only due to empirical evidence (cited earlier) that these forms of physiological activation are intimately tied to interpersonal functioning (e.g., Gottman, & Levenson, 1992; Levenson & Gottman, 1985; Tsai & Levenson, 1997) but also in light of Fowles' (1980, 1988) claim for the existence of two antagonistic motivational systems whose activation can be inferred from unique physiological correlates. Specifically, Fowles (1980) argued that engagement of the Behavioral Inhibition System, which has often been characterized as being involved in the effort to inhibit behavior, is reflected in increases in electrodermal activity, whereas the Behavioral Activation System, which is involved in approach-related (hyper)activation, is signaled by heart rate reactivity. Using this theoretical framework, we have recently shed light on the possible developmental foundations of the patterns of autonomic response so routinely observed among distressed couples in research on the psychophysiology of marriage and divorce (Gottman & Levenson, 1988) in that adults insecure with respect to their early experiences with caregivers appear to show the largest increases in heart rate and skin conductance during their marital and premarital interactions relative to resting conditions (Roisman, 2007).

Finally, in addition to assessing relationship quality at multiple levels of analysis, in this study we also compared individuals in engaged, married, and committed same-sex relationships to one another on adult attachment security, as assessed through the coherence of these adults' narratives about their childhood experiences. Our laboratory has consistently assessed adult attachment security using the resource-intensive, semistructured Adult Attachment Interview (AAI; George, Kaplan, & Main, 1985) because of (a) an interest in examining how adults' represented experiences are reflected in their adult relationships, (b) empirical evidence that secure adults are more likely to have higher quality romantic relationships than their insecure counterparts (Babcock, Jacobson, Gottman, & Yerington, 2000; Bouthillier, Julien, Dube, Belanger, & Hamelin, 2002; Cohn, Silver, Cowan, Cowan, & Pearson, 1992; Creasey, 2002; Crowell et al., 2002; Paley, Cox, Burchinal, & Payne, 1999; Roisman, Madsen, Hennighausen, Sroufe, & Collins, 2001; Wampler, Riggs, & Kimball, 2004), and (c) our view that developing a coherent narrative about childhood experiences is a salient life task of adulthood (Roisman, 2006). It is important to note that adult attachment security also represents the single strongest predictor of attachment security in the next generation (van IJzendoorn, 1995). Given the challenges that gay and lesbian adults face in "coming out" to family members as well as other forms of adversity in their families of origin (Savin-Williams, 2001; Weston, 1992), we wanted to determine whether gay men and lesbians were at any disadvantage in this developmentally salient domain of psychological adaptation. For example, evidence that individuals in same-sex relationships are more likely to produce incoherent narratives about early life experiences could suggest that, relative to their heterosexual counterparts, sexual minorities may face serious challenges in terms of successfully engaging adult relationships. To date, however, there are no published data on the AAI narratives of gay and lesbian adults.

In sum, consistent with emerging evidence from developmental psychology that adults' romantic relationships represent key developmental contexts of adulthood (e.g., Roisman, Masten, Coatsworth, & Tellegen, 2004) and motivated by societal questions about whether same-sex relationships undermine adult development, this article presents a multimethod comparison of committed gay male and lesbian couples with well-defined groups of heterosexual committed (i.e., young engaged and older married) and noncommitted (i.e., young dating) couples drawn from the same community. Using state-of-the-art methods drawn from interpersonal relationships research, our goal was to provide rare empirical data relevant to the developmental resources available within a broad range of couple types. Although we expected to identify relatively few differences between committed same- and opposite sex dyads, because of previous evidence that couples become more effective at collaborating as they mature (Carstensen, 1992, 1993; Carstensen, Gottman, & Levenson, 1995) and those that do not are more likely to divorce (Gottman, & Levenson, 1992), we did anticipate that committed dyads (i.e., gay male, lesbian, engaged, and married) would have higher quality interactions compared with noncommitted (i.e., heterosexual dating) couples. In addition, we attempted to replicate findings from Gottman, Levenson, Swanson, et al. (2003) indicating that same-sex couples interact more harmoniously during conflict interaction tasks than do committed heterosexuals as measured by objective coders. We had no reason to expect differences among committed couples (same- and opposite-sex) in terms of mean levels of relationship satisfaction or autonomic reactivity during their dyadic interactions, other than those attributable to well-documented age-related declines in reactivity (e.g., Carstensen, Gottman, & Levenson, 1995). Nonetheless, these measures, as well as assessments of adult attachment security, were included in this study in order to test the assumption that committed same-sex relationships are lower quality contexts of human development than a range of committed and noncommitted heterosexual relationship types.

Method

Participants

The Relationships Research Laboratory at the University of Illinois has studied romantically involved couples from a diverse

set of relationship types drawn from the same small Midwestern community. Specifically, we have conducted research involving 109 dating couples (all heterosexual and dating one another exclusively but with no expectation of long-term commitment, ages 18 to 25 years), 50 younger engaged couples (ages 18 to 30 years involved in their first engagement; Roisman, 2007; Roisman et al., 2007), 40 older married couples (age 50 or older and married for at least 15 years; Roisman, 2007), and 60 same-sex dyads (30 gay male and 30 lesbian couples; age 18 or older, mutually committed, and coupled for at least a year). In all of our dyadic studies, participants received \$25 each (\$50 per couple) and were recruited from the same community in an identical manner using on- and off-campus flyers and Listservs.

Please note that this work represents a secondary analysis of a set of studies conducted in our laboratory. Generally, we have been interested in examining how developmental experiences and other individual differences contribute to interpersonal functioning within distinct kinds of relationships (e.g., among married, engaged, and dating couples). We began our work on same-sex couples, however, largely to inform debate about how such relationship types might be similar or distinct from heterosexual relationships. In order to be able to compare same-sex couples with participants from other committed relationship types widely recognized by legal and/or social mechanisms not currently available to same-sex couples in most parts of the United States (i.e., engagement, marriage), we decided to focus on same-sex dyads in which both participants (a) had been romantically involved with one another for a year or more and (b) agreed mutually that they were in a committed relationship (although not used as a criterion to define commitment, 85% [51/60] were cohabiting at the time of the study, and two additional couples were temporarily living together. As some studies have used cohabitation as a marker of commitment among same-sex couples [Gottman, Levenson, Swanson, et al., 2003; Julien et al., 2003], we conducted follow-up analyses focused on the subset of cohabiting same-sex participants. The pattern of results was the same as reported here). In addition, to be able to determine whether demographic differences between couples types accounted for any differences identified between same-sex and opposite-sex couples, we recruited a demographically diverse group of same-sex couples. Table 1 summarizes key demographics of each of the groups by sex (i.e., age, relationship length, and percentage White). Table 1 also lists information about the percentage of participants who earned a Bachelor's degree or

Table 1
Demographics of Participants by Relationship Type and Sex

Indicator	Dating		Engaged		Married		Same-sex	
	Male	Female	Male	Female	Male	Female	Gay	Lesbian
Age in years, <i>M</i> (<i>SD</i>)	21 (1.8)	20 (1.5)	23 (2.7)	22 (3.0)	58 (7.6)	56 (6.2)	33 (10.5)	35 (11.5)
Range	18–25	18–25	19–29	18–30	50–77	50–73	19–54	20–61
Rel. length in months, <i>M</i> (<i>SD</i>) ^a	16 (15.3)		41 (22.4)		379 (104.1)		85 (85.3)	71 (57.1)
Range	1–69		4–108		201–621		13–324	12–232
% White	76	73	88	86	98	98	83	90
% Bachelor's degree ^b	40	28	44	50	75	68	63	80

Note. Rel. = relationship.

^a Couples were asked how long they had been involved romantically except married couples, who were asked how long they had been married. ^b % Bachelor's degree is an estimate for dating men and women as this question was not asked at in-take but to the approximately 50% of participants who were followed up longitudinally after a year.

higher by group. (These data were not used as covariates because the younger participants were often still in the midst of completing their educations).

Procedures

All of our studies used an identical procedure. Prior to visiting the University of Illinois, participants separately completed a packet of questionnaires. Upon arrival to the laboratory, the AAI (see below) was administered by research assistants trained by Glenn I. Roisman, a trained and reliable AAI coder (interviews were administered to participants in separate rooms). After the participants completed the AAI, research assistants administered several additional self-report measures, including a questionnaire listing common problem areas in relationships (e.g., money, communication, in-laws). Participants were instructed that this form would be the only questionnaire that their partner would see and that they should use a 10-point scale to describe the degree to which each domain listed was currently a problem area in their relationship (from 1 = *not a problem* to 10 = *is a serious problem*).

Upon finishing the relationship-problem questionnaire, participants were reunited with their partners to complete the last part of the session, a standard relationship interaction task, in a comfortable living room environment. After participants had an opportunity to talk with their partner, physiological sensors were attached and participants were asked to rest for approximately 4 min, during which a nontalking baseline was acquired for the final 3 min. A research assistant entered the room after the rest period with the problem inventories participants had completed previously and instructed couples to identify a problem area (i.e., disagreement) in their relationship. After couples decided on an issue using the problem inventories, participants were given 10 min to discuss and attempt to resolve this problem. Couples were next instructed to take 5 min to talk about areas of agreement.

Surface sensors measuring skin conductance levels and cardiac activity were adhered to participants' torsos and fingers by a research assistant prior to the beginning of the dyadic interaction. Physiological recordings were subsequently monitored from an adjoining room during the interpersonal observation as well as throughout the rest period just prior to the interaction. A research assistant was present in the living room environment only long enough to give directions to the participants and answer any questions they might have.

Apparatus

Audiovisual. Remotely controlled, high-resolution color video cameras were used in conjunction with VCRs to record couples' dyadic interactions (AAIs were audiotaped). Cameras were embedded in two bookshelves facing the participants. Lavalier microphones clipped on participants' clothing were used to record their conversations during the interactions.

Physiological. A system consisting of two Pentium computers, Snapmaster software (HEM Data Corp., Southfield, MI), and bioamplifiers (James Long, Inc., Caroga Lake, NY) was used to acquire continuous recordings of both participants' physiological responses during the dyadic interaction and at rest.

Measures

Reported quality. In our studies of engaged, married, gay male, and lesbian couples, Berscheid, Snyder, and Omoto's (1989) Emotional Tone Index (ETI) was used to assess the frequency with which respondents experience 27 different emotions in their romantic relationships using a 7-point scale (dating couples did not complete this questionnaire). Twelve positive and 15 negative emotions are included in the ETI, with both intense and less intense feeling states represented. Differences between each participant's average rating on the positive and the negative emotions were computed to derive the relative frequency with which adults experience positive and negative emotions in their relationships. In addition, participants used a partner form of the measures to describe their partners' experience of each of these emotions, which was coded using the same method described above. In our more recent studies of dating, gay male couples, and lesbian couples, we have administered the well-known Dyadic Adjustment Scale (DAS; Spanier, 1976). The DAS is a 32-item questionnaire that has been used with a wide variety of couples to assess adjustment/satisfaction (note that some questions were modified slightly to be appropriate for dating and noncohabiting couples). All items of the DAS were composited to create a total dyadic adjustment score. Alpha reliability data for the ETI (positive and negative emotions, self and partner) and DAS (self-report) are provided in Table 2.

Observed quality. In all of our studies of romantically involved couples, we have consistently rated both the overall dyadic quality of adults' interactions as well as the positive and negative affect of each individual during the interactions. Dyadic quality was coded by trained graduate research assistants from videotapes of the couple interactions using the 7-point Overall Quality rating drawn from a system created by Aguilar et al. (1997), which evaluates the degree to which relationships facilitate disclosure of emotions and ideas, appear to sustain personal development, and help individuals with task demands. Coders also used the positive and negative affect ratings from the Interactional Dimensions Coding System (IDCS; Kline et al., 2005). Both affect ratings were made separately along a 9-point scale for each partner, with lower scores reflecting less and higher scores indicating more positive/negative emotion as reflected in each participant's face, voice, and body. In order to create a measure of emotional tone comparable to the self-report emotional tone index described above (see Roisman, 2007), negative affect scores were subtracted from positive affect ratings to create an index of observed emotional tone. As such, the range of possible values for this variable is $-9 = \text{affectively negative behaviors}$ to $9 = \text{affectively positive behaviors}$.

The interrater reliabilities (intraclass correlations; ICCs) of all scales were adequate ($> .60$) across all relationship types (see Table 2). Note that in each study, ICCs were based on a subsample of double-coded interactions (in each case, final scores were arrived at by consensus). Fifty-two percent of the videos were reliability cases in the dating couples study, 80% were reliability cases in the engaged couples study, 100% were reliability cases in the married couples study, and 15% were reliability cases in our study of same-sex couples (less overlap was used in our study of same-sex couples because our coders were highly experienced by that time, having already coded engaged and married couples).

Table 2
Reliability of Measures by Relationship Type and Sex

Indicator	Dating		Engaged		Married		Same-sex	
	Male	Female	Male	Female	Male	Female	Gay	Lesbian
Reported quality								
ETI positive (S)	—	—	.89	.88	.94	.93	.89	.95
ETI negative (S)	—	—	.86	.91	.82	.91	.91	.88
ETI positive (P)	—	—	.94	.91	.95	.92	.92	.92
ETI negative (P)	—	—	.93	.91	.91	.91	.93	.90
DAS adjustment	.88	.86	—	—	—	—	.84	.90
Observed quality								
Dyadic quality		.80		.84		.79	.73	.87
Positive affect	.85	.83	.76	.78	.70	.68	.60	.72
Negative affect	.76	.78	.64	.75	.66	.76	.96	.76
AAI Q-set								
% over .6 threshold	—	—	.84	—	.85	—	.82	.88
Mean	—	—	.79	—	.75	—	.73	.78
Range	—	—	.60–.91	—	.60–.90	—	.60–.83	.61–.91

Note. ETI = Emotional Tone Index (questionnaire); DAS = Dyadic Adjustment Scale (questionnaire); AAI = Adult Attachment Interview; (S) = self-report; (P) = partner report; — = not available. All coefficients above are standardized alphas, except observational data, which are intraclass correlations (all $ps < .001$) and AAI data, as noted (see Method section for details). Partner-report ETI refers to ratings of the individual listed at the top of each column by partner.

Because a number of videos were treated as group-coded training cases, the percentage of cases coded by consensus was 61%, 100%, 100%, and 38% for dating, engaged, married, and same-sex samples, respectively.

Physiological reactivity. In all of our studies of romantic relationships, measures of physiological responding were sampled from participants' electrodermal and cardiac systems during a 3-min rest period and the 10-min disagreement epoch. Electrodermal response was measured by skin conductance level (SCL). A constant-voltage device was used to pass a small voltage between electrodes attached to the palmar surface of the last phalanges of the second and fourth fingers of the nondominant hand. SCL was measured in microsiemens. The specific cardiac measure obtained was heart rate (HR). Electrode stickers were placed in a bipolar configuration on opposite sides of each participant's chest (a ground lead was positioned on the sternum) and cardiac inter-beat intervals (IBI) were measured as time in milliseconds between successive R waves of the electrocardiogram (EKG). Heart rate was calculated second by second using the following standard formula: $HR = (1/IBI) \times 60,000$ ms. As such, HR reflects beats per minute. For SCL and HR, change in physiological responding was calculated by subtracting mean levels of physiological responding during the 3-min rest period from mean levels during the disagreement epoch of the interpersonal interactions, a practice commonly used in physiological research that has been defended conceptually and statistically by Rogosa (1995; see also Llabre, Spitzer, Saab, Ironson, & Schneiderman, 1991).

Adult attachment security. We administered the AAI (George et al., 1985; Hesse, 1999), a well-validated, semistructured interview regarding early experiences with caregivers in all of our studies (relevant data from our study of dating couples, however, are not yet coded). The AAI is designed to examine whether adults are able to construct a coherent narrative regarding their childhood

experiences (Main & Goldwyn, 1998). In the AAI, participants are asked to describe their early relationships with parents and revisit episodes of salient separations and possible rejection, abuse, and loss. Participants then discuss the effects of these experiences on their development.

In each study, the coherence of participants' discourse was assessed using Kobak's (1993) AAI Q-set by coders reliable with Main and Goldwyn's (1998) AAI Coding System. The AAI Q-set (Kobak, 1993) consists of 100 descriptive cards that are sorted into a forced normal distribution across nine piles from least to most characteristic. We estimated intercoder reliability by double-coding a subset of AAIs, achieving $\geq 80\%$ reliability of .6 or greater (Spearman-Brown formula), the standard criterion in research of this kind (see Table 2). A third coder rated transcripts for which initial coders were discrepant and the most highly correlated sorts were ultimately averaged to increase reliability (means and ranges are provided on Table 2). The percentage of double-sorted (reliability) AAIs was as follows: engaged (25%), married (25%), and same-sex (44%). In the final step of data reduction, Pearson correlations were computed between each of the composited sorts and a prototypic "secure versus insecure" prototype sort developed by Kobak and his colleagues (see Kobak, Cole, Fleming, Ferenz-Gillies, & Gamble, 1993). Prototypically secure items include "responds in a clear, well-organized fashion" and "is credible and easy to believe." On the basis of this analysis, participants were assigned scores ranging from -1.00 to 1.00 on security, with higher scores indicating greater resemblance to the prototypically secure individual.

Results

Analytic Plan

One of the analytic challenges of this study was in avoiding violations of the independence assumption inherent in most

statistical tests, particularly for nondistinguishable (i.e., gay male and lesbian) couples. For simplicity of presentation, in initial analyses the scores of gay males and lesbians were averaged within couples to avoid nonindependence (the one exception was for dyadic quality analyses, where this was unnecessary). Using an analysis of variance (ANOVA) framework, groups of males and females from all relationships types were then compared with one another on relationship quality indicators (i.e., self- and partner-reported, observed, and physiological) and on adult attachment security (see Table 3). Males and females were treated as separate groups in initial ANOVA analyses both because of documented sex differences on some variables that were the focus of this investigation (e.g., heart rate reactivity; Smith, Gallo, Goble, Ngu, & Stark, 1998) and in order to provide a complete descriptive account of our data. For each analysis, results of least significant difference (LSD) post hoc tests (e.g., all pairwise contrasts) are provided. (All significant effects are $p < .05$, unless otherwise specified.) Note that the ANOVA analyses presented here are conservative in that they use degrees of freedom for statistical tests based on the number of same-sex couples rather than individuals while retaining a simple and familiar analytic framework that allows for direct comparisons of gay males and lesbians with heterosexual males and females separately.

As described earlier, heterosexual couples were identified with the goal of studying distinct relationship types that, by definition, vary on key demographic parameters. As such, in supplementary ANOVA analyses, we examined the effects of these background characteristics (i.e., age, relationship length, and percentage White) on statistically significant differences identified between individuals from same-sex couples and opposite-sex groups. We examined the effects of demographic variables on differences between individuals in same-sex versus opposite-sex couples only (a) because the primary focus of this article was on these putative differences and (b) the sampling for the same-sex couples study was designed so that participants represented a wide range of ages and relationship durations—unlike our other samples, in which we built in range restrictions for purposes of identifying demographically homogenous

groups (e.g., older married couples in long-term marriages). In each analysis, we examined whether the significant differences between the two groups could be attenuated to nonsignificance by adding the three demographic variables into a univariate ANOVA as covariates in a single block. Details regarding these analyses are available from Glenn I. Roisman by request.

In order to provide confirmation of the conclusions reached using ANOVA, we also present results of multilevel modeling using hierarchical linear modeling software HLM 6.02 (Bryk & Raudenbush, 1992). Specifically, we estimated models in which observations from individual partners (Level I) were nested in couples (Level II). The Level I model was a within-couple regression equation that used information from both partners to estimate an intercept for each dyad, which reflects an average of the outcome score for each couple (to be predicted in a Level II regression by couple type; see Kurdek, 2004). Because HLM models require that the analyst identify a referent couple type for all comparisons, we present two sets of analyses examining comparisons of all groups first to gay male couples and next to lesbian couples. Relationship type was represented using a set of dummy codes that were entered simultaneously in the Level II equation (the referent couple type served as an implicit comparison group; thus, positive unstandardized coefficients indicate that a given couple type had higher scores on the outcome of interest compared with gay male/lesbian dyads and negative effects indicate that a given couple type had lower scores on the outcome of interest compared with gay male/lesbian dyads). In HLM analyses, we also examine whether the effects of individual-level (i.e., sex, ethnicity, and age) and couple-level (i.e., relationship length) covariates accounted for relationship type differences on dependent measures.

Note finally that in all ANOVA and HLM analyses, missing data were imputed within studies using an EM algorithm (< 1% of data from any study were imputed), with one exception—physiological analyses for the engaged sample were based on a subset of 40 cases for whom complete physiological data were collected (we did not impute these values to be consistent with data in Roisman, 2007).

Table 3
Indicators of Relationship Quality and Attachment Security by Relationship Type and Sex

Indicator	Dating		Engaged		Married		Same-sex	
	Male	Female	Male	Female	Male	Female	Gay	Lesbian
Reported quality								
ETI (self)	—	—	3.9 (1.2)	4.1 (1.3)	3.5 (1.3)	3.8 (1.3)	3.4 (1.1)	3.6 (1.4)
ETI (partner)	—	—	3.2 (1.7)	4.0 (1.3)	3.0 (1.6)	3.2 (1.5)	2.9 (1.3)	3.4 (1.3)
DAS adjustment	119 (14.1)	121 (12.5)	—	—	—	—	114 (7.9)	116 (9.9)
Observed quality								
Dyadic quality		3.4 (1.3)		4.1 (1.2)		4.3 (1.0)		4.8 (1.2)
Emotional tone	-0.5 (3.1)	-0.2 (3.2)	0.8 (2.3)	1.0 (2.2)	0.2 (1.8)	0.6 (2.1)	1.0 (2.4)	1.6 (2.1)
Physiological reactivity								
Heart rate	5.3 (4.3)	4.9 (4.4)	4.2 (4.4)	4.3 (3.9)	2.9 (3.5)	3.9 (3.1)	4.1 (2.8)	3.6 (2.8)
Skin conductance	4.3 (2.5)	3.8 (2.0)	4.6 (2.5)	3.7 (2.1)	2.7 (1.6)	2.9 (1.8)	4.3 (1.8)	4.1 (1.7)
AAI Security	—	—	.12 (.49)	.37 (.44)	.24 (.43)	.22 (.41)	.38 (.29)	.38 (.30)

Note. ETI = Emotional Tone Index (questionnaire); DAS = Dyadic Adjustment Scale (questionnaire); AAI = Adult Attachment Interview; — = not available. Partner-report ETI refers to ratings of the individual listed at the top of each column by partner. All values are means (with standard deviations in parentheses).

Group Differences on Relationship Quality and Adult Attachment

Reported quality. Individuals composing gay male, lesbian, engaged, and married couples were compared by sex on self- and partner-reported emotional tone in two ANOVAs. The overall F test for self-reported emotional tone was nonsignificant, $F(5, 239) = 1.67, p = .14$. In contrast, the overall effect for partner-reported emotional tone was statistically significant, $F(5, 239) = 2.98, p < .05$, and post hoc tests were computed. These tests revealed that engaged women were seen by their partners as experiencing more positive relative to negative emotion than all other groups (engaged men, married men, married women, and gay males; effect size r s were .25, .32, .27, .39, respectively) except lesbians (no other differences emerged among individuals in married and same-sex couples). Follow-up analyses demonstrated that differences involving individuals from same-sex relationships were not accounted for by the effects of age, relationship duration, or ethnicity.

In addition, gay men, lesbians, dating males, and dating females were compared on overall self-reported dyadic adjustment as measured by Spanier's (1976) Dyadic Adjustment Scale, $F(3, 277) = 2.91, p < .05$. Note, first, that both gay men and lesbians reported levels of adjustment virtually identical to the norms reported by Spanier (1976) for married men and women ($M = 114.8, SD = 17.8$; based on a sample of 218 individuals). That said, dating men and women reported significantly higher levels of satisfaction than gay men (effect size r s = .21 and .32, respectively), an effect that remained significant when controlling for demographic variables.

Observed quality. Two ANOVAs were computed to examine group differences on observations of dyadic quality as well as of individuals' emotional tone during their laboratory interactions. The overall F test for dyadic quality was significant, $F(4, 258) = 10.6, p < .001$. Using the post hoc test, as expected, dating couples were rated as having significantly lower quality interactions compared with gay male, lesbian, engaged, and married couples (effect size r s = .27, .36, .34, and .49, respectively). In addition, lesbian couples had significantly higher quality interactions than engaged couples (effect size $r = .28$). (No other group differences were significant, and significant differences described above involving individuals from same-sex relationships were not accounted for by demographic variables.)

In terms of observed emotional tone, $F(7, 457) = 4.3, p < .05$, post hoc tests indicated that dating males emitted significantly more negative (vs. positive) affect than gay men, lesbians, engaged men, engaged women, and married women (effect size r s = .23, .27, .20, .26, and .37, respectively). Similarly, dating women showed significantly more negative (vs. positive) emotional tone than gay men, lesbians, engaged men, and engaged women (effect size r s = .18, .21, .21, and .32, respectively). Interestingly, lesbians showed more positive emotional tone than married men (effect size $r = .34$). Note that significant differences between (a) lesbians and married men, (b) dating men and gay men, and (c) dating women and gay men were accounted for (i.e., reduced to nonsignificance) by the effects of demographic variables.

Physiological reactivity. Two ANOVAs were computed to contrast groups on change in heart rate and electrodermal response from baseline (i.e., physiological reactivity). The overall F test for heart rate reactivity was significant, $F(7, 437) = 2.2, p < .05$, and

post hoc tests revealed that married men showed less heart rate reactivity than dating men and women (effect size r s = .29 and .24, respectively). In addition, lesbians showed less heart rate reactivity than dating men (effect size $r = .23$), an effect that was accounted for by demographic variables.

The overall F test for electrodermal reactivity was also significant, $F(7, 437) = 4.7, p < .001$, and post hoc tests revealed that married men showed less electrodermal reactivity than gay men, lesbians, dating men, dating women, engaged men, and engaged women (effect size r s = .36, .29, .41, .26, .43, and .39, respectively). Similarly, married women showed significantly less electrodermal reactivity than gay men, lesbians, dating men, dating women, and engaged men (effect size r s = .31, .18, .36, .36, and .32, respectively). In all cases, the effects of demographic variables (especially age) accounted for differences between individuals in same-sex relationships and older married individuals.

Adult attachment security. An ANOVA was computed to contrast gay males, lesbians, engaged men and women, and married men and women on the security AAI Q-set dimension, reflecting the coherence of adults' narratives about their childhood experiences (AAI data on the dating couples sample are not yet available). The overall F test for security was significant, $F(5, 239) = 3.0, p < .05$, and post hoc tests revealed that engaged men produced significantly less coherent attachment-related narratives (i.e., were less secure) than gay males, lesbians, and engaged women (effect size r s = .20, .26, and .30, respectively). Effects involving gay men and lesbians were not accounted for by demographic variables.

Multilevel Modeling Results

Using the approach outlined earlier, parallel analyses were conducted using an HLM framework to replicate results related to the comparison of lesbian and gay couples with opposite-sex couple groups. Results are summarized in Tables 4 and 5 (Table 4 contrasts gay male dyads with all other relationship types; Table 5 contrasts lesbian dyads with all other couple types). Note that effects of couple type are provided both with and without demographic covariates (unstandardized effects in parentheses are coefficients without any covariates in the models). As would be expected, HLM analyses produced a similar pattern of results as identified above. Most critically, as can be seen in Tables 4 and 5, both gay male and lesbian couples demonstrated significantly more positive emotional tone than did dating couples (effects that held controlling for demographic variables). Similarly, lesbian couples (see Table 5) demonstrated significantly more positive emotional tone than married couples, effects (as in the ANOVA analyses) that were accounted for by demographic differences between the groups.

Summary of Results

This study yielded the following four primary conclusions:

1. Gay males, lesbians, married men, and married women have similarly positive views of their relationships. Interestingly, dating couples and engaged women tend to have even more positive appraisals of their interpersonal experiences than those in longer term relationships, a finding that may reflect the fewer stressors that exist for such couples, the greater ease with which such relationships can be dissolved and, in the case of DAS analyses, that some domains of conflict tapped by the instrument are simply

Table 4

Unstandardized Coefficients for Demographic and Relationship Type Predictors of Relationship Quality Indicators and Attachment Security From HLM Models Comparing Gay Male Dyads With All Other Couple Types

Indicator	Level I variables			Level II variables				
	Age	Ethnicity	Sex	Rel. length	Dating ^a	Engaged ^a	Married ^a	Lesbian ^a
Reported quality								
ETI (self)	-0.00	0.08	0.27*	0.00	—	0.46 (0.55*)	-0.50 (0.20)	-0.06 (0.19)
ETI (partner)	0.01	-0.13	0.56**	0.00	—	0.55 (0.65*)	-0.88 (0.21)	-0.03 (0.50)
DAS adjustment	0.14	4.63*	1.57	-0.03	5.69* (6.00**)	—	—	-0.61 (1.81)
Observed quality								
Emotional tone	0.00	0.86*	0.37*	-0.00	-1.42* (-1.36**)	-0.24 (-0.08)	-0.78 (-0.58)	0.16 (0.62)
Physiological reactivity								
Heart rate	-0.11**	1.06*	-0.12	0.00	-0.25 (0.97)	-1.03 (0.10)	1.47 (-0.73)	-0.27 (-0.49)
Skin conductance	-0.05**	-0.22	-0.47*	0.00	-0.71 (-0.23)	-0.48 (-0.15)	-0.03 (-1.53**)	0.33 (-0.22)
AAI security	-0.01**	0.24**	0.12	0.00	—	-0.31** (-0.14)	-0.13 (-0.16*)	-0.12 (-0.01)

Note. HLM = hierarchical linear modelling; Rel. = relationship; ETI = Emotional Tone Index (questionnaire); DAS = Dyadic Adjustment Scale (questionnaire); AAI = Adult Attachment Interview; — = not available. Partner-report ETI refers to ratings of the individual listed at the top of each column by partner. Coefficients in parentheses represent effects without Level I and II covariates. Positive coefficients indicate that couple type scored higher on the outcome than gay males. Negative coefficients indicate that couple type scored lower on the outcome than gay males. Male = 1, Female = 2 for sex; non-White = 0, White = 1 for ethnicity.

^a Versus gay.

* $p < .05$. ** $p < .01$.

less relevant or salient for dating compared with more committed couples.

2. Committed couples (i.e., gay male, lesbian, married, and engaged) have higher quality laboratory interactions with their partner than noncommitted (i.e., heterosexual dating) couples. Although almost no differences were identified among committed couples in terms of the observed quality of their interactions, in partial replication of Gottman, Levenson, Swanson, et al. (2003), lesbians appear to be particularly skilled at working harmoniously with their partners.

3. Corroborating consistent evidence for age-related declines in physiological reactivity during interpersonal interactions, older

married men and women proved to be the least physiologically reactive couples we have studied. No other group differences emerged in this domain, except that lesbians showed less heart-rate reactivity than dating men.

4. Although all the groups we have studied on average produced coherent narratives about their childhood experiences, engaged men were less secure than gay men, lesbians, and engaged women.

Discussion

In this study, we examined the claim that committed same-sex relationships are atypical, psychologically immature, or malevo-

Table 5

Unstandardized Coefficients for Demographic and Relationship Type Predictors of Relationship Quality Indicators and Attachment Security From HLM Models Comparing Lesbian Dyads With All Other Couple Types

Indicator	Level I variables			Level II variables				
	Age	Ethnicity	Sex	Rel. length	Dating ^a	Engaged ^a	Married ^a	Gay ^a
Reported quality								
ETI (self)	-0.00	0.08	0.27*	0.00	—	0.52 (0.36)	-0.44 (0.01)	0.06 (-0.19)
ETI (partner)	0.01	-0.13	0.56**	0.00	—	0.57 (0.14)	-0.85 (-0.29)	0.03 (-0.50)
DAS adjustment	0.14	4.63*	1.57	-0.03	6.29* (4.19*)	—	—	0.61 (-1.81)
Observed quality								
Emotional tone	0.01	0.86*	0.37*	-0.00	-1.58** (-1.98**)	-0.40 (-0.70)	-0.94 (-1.19*)	-0.16 (-0.62)
Physiological reactivity								
Heart rate	-0.11**	1.06*	-0.12	0.00	0.02 (1.46*)	-0.76 (0.59)	1.74 (-0.24)	0.27 (0.49)
Skin conductance	-0.05**	-0.22	-0.47*	0.00	-1.05* (-0.01)	-0.82 (0.07)	-0.36 (-1.31**)	-0.33 (0.22)
AAI security	-0.01**	0.24**	0.12	0.00	—	-0.19* (-0.13)	-0.01 (-0.15*)	0.12 (0.01)

Note. HLM = hierarchical linear modelling; Rel. = relationship; ETI = Emotional Tone Index (questionnaire); DAS = Dyadic Adjustment Scale (questionnaire); AAI = Adult Attachment Interview; — = not available. Partner-report ETI refers to ratings of the individual listed at the top of each column by partner. Coefficients in parentheses represent effects without Level I and II covariates. Positive coefficients indicate that couple type scored higher on the outcome than lesbian couples. Negative coefficients indicate that couple type scored lower on the outcome than lesbian couples. Male = 1, Female = 2 for sex; non-White = 0, White = 1 for ethnicity.

^a Versus lesbian.

* $p < .05$. ** $p < .01$.

lent contexts of human development by directly observing and systematically comparing individuals in such relationships with heterosexuals drawn from noncommitted dating couples as well as with committed engaged and married dyads. We believe that this report is most profitably viewed in the broader context of longitudinal research (e.g., Kurdek, 2004), demonstrating that, compared with married individuals, committed gay males and lesbians are neither less satisfied with their relationships nor report higher levels of the kinds of personal attributes that mitigate against the quality and longevity of adult relationships.

The current study adds to this literature by demonstrating that, controlling for demographic differences, gay males and lesbians in our studies were generally not distinguishable from their committed heterosexual counterparts on measures of self- and partner-reported relationship quality, as well as in how they interacted with one another—and responded physiologically—while attempting to resolve conflict in their relationships. Similarly, despite the significant challenges faced by many sexual minority youth in their families of origin (Savin-Williams, 2001; Weston, 1992), gay males and lesbians proved to be among the most secure adults we have interviewed in our laboratory, as reflected in the coherence of their narratives about childhood experiences. This latter finding is especially important in that attachment security has been identified as a critical interpersonal resource for adult development (Hesse, 1999). To the extent that differences were identified between committed same- and opposite-sex couples, the findings suggested that lesbians were especially effective at working together harmoniously (in partial replication of Gottman, Levenson, Swanson, et al., 2003).

Rather than reflecting sexual orientation, however, the finding that lesbian couples interacted more harmoniously than other couple types we have studied may in part be attributable to the interpersonal dynamics of interacting with someone of the same sex (see Stacey & Biblarz, 2001, for a similar argument in relation to the high quality parenting of lesbians). In fact, we have recently examined this possibility in a study of same- versus opposite-sex interactions between strangers during a challenging collaborative task (i.e., 3-D puzzle building). Using modified versions of the IDCS emotional tone scales described in the current work—and consistent with the results of the present study—we found that same-sex stranger dyads appear to demonstrate advantages in observations of the quality of their interactions. More specifically, both males and females in same-sex stranger dyads showed more positive relative to negative affect during their interactions than did males or females in opposite-sex dyads (unpublished analyses are available from Glenn I. Roisman). Although clearly not definitive, such results suggest that the emerging finding that same-sex couples in some cases have more positive interactions than opposite-sex dyads (e.g., Gottman, Levenson, Swanson, et al., 2003) may have little to do with sexual orientation per se.

We hope that the major impact of this work will be to draw further attention to two interrelated issues that have been somewhat underemphasized in reviews of comparative research on same- versus opposite-sex relationships (e.g., Herek, 2006). First, as noted by Gottman, Levenson, Gross, et al. (2003) in their seminal study, the vast majority of work in this area has involved the administration of self-report questionnaires and interviews to same- and opposite-sex (typically married) couples. Although such “insider” information is critical in ascertaining participants’ per-

ceptions of their relationship-related experiences, such data provide a relatively narrow database with respect to addressing questions about the relative quality of different kinds of committed partnerships. In contrast, studies that use multiple methods (in this study, self-reports, observations, and measures of interpersonal physiological reactivity) provide a broader basis for comparison and thereby allow for a more complete understanding of same-versus opposite-sex relationships (Gottman, Levenson, Swanson, et al., 2003; Julien et al., 2003).

Second, it is important to emphasize just how limited the comparative literature is currently with respect to studies that have tapped into the kind of methodological sophistication that is commonplace in research on other relationship types. To our knowledge, this article in fact represents only the third published comparative observational study focused on mean-level differences among gay male, lesbian, and heterosexual couples. That the results of this burgeoning literature are coherent across these few studies—and consistent with work by Kurdek and others using “insider” methods (e.g., self-reports, interviews)—is encouraging. Regardless, there is clearly much research to be done in this area, especially in scaling up work of this kind such that relevant analyses are based on a wide variety of state-of-the-art methods applied to more representative samples of same- and opposite-sex couple types. On this point in particular, the current study is not without important limitations. For example, our samples of heterosexual dating, engaged, married, gay male, and lesbian couples were clearly modest in size. In addition, this study relied on secondary analyses of data from couples that were not demographically matched. Finally, we make no claim that these community samples are representative.

We also recognize that, despite our goal of examining the strengths and resources of various kinds of adult relationship forms, some may view this analysis as implicitly adopting what sociological scholars (e.g., Stacey & Biblarz, 2001) have referred to as the hetero-normativity assumption. As Baumrind (1995) emphasized, differences among gay males, lesbians, and heterosexuals (when they emerge) need not be conceptualized as deficits, particularly in a pluralistic society that might be expected to embrace differences that do not threaten development. That said, we emphasize that the methods we use in our laboratory reflect dimensions of variability that are not linked to heterosexual (or homosexual) ideals but rather are empirically validated assessments of factors that promote (and reflect) successful adult relationships, methods widely used in the scientific study of these critical interpersonal contexts (Gottman & Levenson, 1992; Levenson & Gottman, 1985; Tsai & Levenson, 1997). That such sophisticated research tools yield evidence that committed same-sex couples are much like their engaged and married counterparts further calls into question the assumption to the contrary—an assumption that seems increasingly inconsistent with available data.

References

- Aguilar, B., Christian, S. D., Collins, W. A., Cook, J., Hennighausen, K. H., Hyson, D. M., et al. (1997). *Romantic relationship assessment observational rating scales*. Unpublished coding manual, Parent-Child Project, University of Minnesota.
- Allen, M., & Burrell, N. (1996). Comparing the impact of homosexual and

- heterosexual parents on children: Meta-analysis of existing research. *Journal of Homosexuality*, *32*, 19–35.
- Babcock, J. C., Jacobson, N. S., Gottman, J. M., & Yerington, T. P. (2000). Attachment, emotional regulation, and the function of marital violence: Differences between secure, preoccupied, and dismissing violent and nonviolent husbands. *Journal of Family Violence*, *15*, 391–409.
- Baumrind, D. (1995). Commentary on sexual orientation: Research and social policy implications. *Developmental Psychology*, *31*, 130–136.
- Berscheid, E., Snyder, M., & Omoto, A. M. (1989). The relationship closeness inventory: Assessing the closeness of interpersonal relationships. *Journal of Personality and Social Psychology*, *57*, 792–807.
- Blumstein, P., & Schwartz, P. (1983). *American couples: Money, work, sex*. New York: William Morrow.
- Bouthillier, D., Julien, D., Dube, M., Belanger, I., & Hamelin, M. (2002). Predictive validity of adult attachment measures in relation to emotion regulation behaviors in marital interactions. *Journal of Adult Development*, *9*, 291–305.
- Bryk, A., & Raudenbush, S. W. (1992). *Hierarchical linear models for social and behavioral research: Applications and data analysis methods*. Newbury Park, CA: Sage.
- Carstensen, L. L. (1992). Social and emotional patterns in adulthood: Support for socioemotional selectivity theory. *Psychology and Aging*, *7*, 331–338.
- Carstensen, L. L. (1993). Motivation for social contact across the life span: A theory of socioemotional selectivity. In J. E. Jacobs (Ed.), *Nebraska Symposium on Motivation, 1992: Developmental perspectives on motivation. Current theory and research in motivation, Vol. 40* (pp. 209–254). Lincoln, NE: University of Nebraska Press.
- Carstensen, L. L., Gottman, J. M., & Levenson, R. W. (1995). Emotional behavior in long-term marriage. *Psychology and Aging*, *10*, 140–149.
- Clarke-Stewart, A., & Dunn, J. (Eds.). (2006). *Families count: Effects on child and adolescent development*. New York: Cambridge.
- Cohn, D. A., Silver, D. H., Cowan, C. P., Cowan, P. A., & Pearson, J. L. (1992). Working models of childhood attachment and couple relationships. *Journal of Family Issues*, *13*, 432–449.
- Creasey, G. (2002). Associations between working models of attachment and conflict management behavior in romantic couples. *Journal of Counseling Psychology*, *49*, 365–375.
- Crowell, J. A., Treboux, D., Gao, Y., Fyffe, C., Pan, H., & Waters, E. (2002). Assessing secure base behavior in adulthood: Development of a measure, links to adult attachment representations and relations to couples' communication and reports of relationships. *Developmental Psychology*, *38*, 679–693.
- Cummings, E. M., & Davies, P. T. (1994). *Children and marital conflicts: The impact of family dispute and resolution*. New York: Guilford.
- Fowles, D. C. (1980). The three arousal model: Implications of Gray's two-factor learning theory for heart rate, electrodermal activity, and psychopathy. *Psychophysiology*, *17*, 87–104.
- Fowles, D. C. (1988). Psychophysiology and psychopathology: A motivational approach. *Psychophysiology*, *25*, 373–391.
- Gates, G. J., & Ost, J. (2004). *The gay & lesbian atlas*. Washington, DC: Urban Institute Press.
- George, C., Kaplan, N., & Main, M. (1985). *Adult Attachment Interview*. Unpublished manuscript, University of California, Berkeley.
- Gottman, J. M., & Levenson, R. W. (1988). The social psychophysiology of marriage. In P. Noller & M. Fitzpatrick (Eds.), *Perspectives on marital interaction* (pp. 182–200). Clevedon, England: Multilingual Matters.
- Gottman, J. M., & Levenson, R. W. (1992). Marital processes predictive of later dissolution: Behavior, physiology, and health. *Journal of Personality and Social Psychology*, *63*, 221–233.
- Gottman, J. M., Levenson, R. W., Gross, J., Frederickson, B. L., McCoy, K., Rosenthal, L., et al. (2003). Correlates of gay and lesbian couples' relationship satisfaction and relationship dissolution. *Journal of Homosexuality*, *45*, 23–43.
- Gottman, J. M., Levenson, R. W., Swanson, C., Swanson, K., Tyson, R., & Yoshimoto, D. (2003). Observing gay, lesbian and heterosexual couples' relationships: Mathematical modeling of conflict interaction. *Journal of Homosexuality*, *45*, 65–91.
- Herek, G. M. (2006). Legal recognition of same-sex relationships in the United States: A social science perspective. *American Psychologist*, *61*, 607–621.
- Hesse, E. (1999). The Adult Attachment Interview: Historical and current perspectives. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (pp. 395–433). New York: Guilford.
- Julien, D., Chartrand, E., Simard, M.-C., Bouthillier, D., & Bégin, J. (2003). Conflict, social support, and relationship quality: An observational study of heterosexual, gay male, and lesbian couples' communication. *Journal of Family Psychology*, *17*, 419–428.
- Kline, G. H., Julien, D., Baucom, B., Hartman, S., Gilbert, K., Gonzales, T., et al. (2005). The interactional dimensions coding system: A global system for couple interactions. In P. Kerig & D. Baucom (Eds.), *Couple observational coding systems*. Mahwah, NJ: Erlbaum.
- Kobak, R. R. (1993). *The Adult Attachment Interview Q-Set*. Unpublished document, University of Delaware.
- Kobak, R. R., Cole, H., Fleming, W., Ferenz-Gillies, R., & Gamble, W. (1993). Attachment and emotion regulation during mother-teen problem-solving: A control theory analysis. *Child Development*, *64*, 231–245.
- Kurdek, L. A. (1986). Early development of relationship quality in heterosexual married, heterosexual cohabiting, gay, and lesbian couples. *Developmental Psychology*, *22*, 305–309.
- Kurdek, L. A. (1995a). Developmental changes in relationship quality in gay and lesbian cohabiting couples. *Developmental Psychology*, *31*, 86–94.
- Kurdek, L. A. (1995b). Lesbian and gay couples. In A. R. D'Augelli & C. J. Patterson (Eds.), *Lesbian, gay, and bisexual identities over the lifespan: Psychological perspectives*. New York: Oxford University Press.
- Kurdek, L. A. (1996). The deterioration of relationship quality for gay and lesbian cohabiting couples: A five-year prospective longitudinal study. *Personal Relationships*, *3*, 417–442.
- Kurdek, L. A. (1998). Relationship outcomes and their predictors: Longitudinal evidence from heterosexual married, gay cohabiting, and lesbian cohabiting couples. *Journal of Marriage and the Family*, *60*, 553–568.
- Kurdek, L. A. (2004). Are gay and lesbian cohabiting couples really different from heterosexual married couples? *Journal of Marriage and Family*, *66*, 880–900.
- Levenson, R. W., & Gottman, J. M. (1985). Physiological and affective predictors of change in relationship satisfaction. *Journal of Personality and Social Psychology*, *49*, 85–94.
- Llabre, M. M., Spitzer, S. B., Saab, P. G., Ironson, G. H., & Schneiderman, N. (1991). The reliability and specificity of delta versus residualized change as measures of cardiovascular reactivity to behavioral challenges. *Psychophysiology*, *28*, 701–711.
- Main, M., & Goldwyn, R. (1998). *Adult attachment rating and classification systems, Version 6.0*. Unpublished manuscript, University of California at Berkeley.
- Mendelson, G. (2003). Homosexuality and psychiatric nosology. *Australian and New Zealand Journal of Psychiatry*, *37*, 678–683.
- Paley, B., Cox, M. J., Burchinal, M. R., & Payne, C. C. (1999). Attachment and marital functioning: Comparison of spouses with continuous-secure, earned-secure, dismissing, and preoccupied attachment stances. *Journal of Family Psychology*, *13*, 580–597.
- Rogosa, D. (1995). Myths and methods: "Myths about longitudinal re-

- search" plus supplemental questions. In J. M. Gottman (Ed.), *The analysis of change*. Mahwah, NJ: Erlbaum.
- Roisman, G. I. (2006). The role of adult attachment security in non-romantic, non-attachment-related first interactions between same-sex strangers. *Attachment & Human Development, 8*, 341–352.
- Roisman, G. I. (2007). The psychophysiology of adult attachment relationships: Autonomic reactivity in marital and premarital interactions. *Developmental Psychology, 43*, 39–53.
- Roisman, G. I., Holland, A., Fortuna, K., Fraley, R. C., Clausell, E., & Clarke, A. (2007). The Adult Attachment Interview and self-reports of attachment style: An empirical rapprochement. *Journal of Personality and Social Psychology, 92*, 678–697.
- Roisman, G. I., Madsen, S. D., Hennighausen, K. H., Sroufe, L. A., & Collins, W. A. (2001). The coherence of dyadic behavior across parent-child and romantic relationships as mediated by the internalized representation of experience. *Attachment & Human Development, 3*, 156–172.
- Roisman, G. I., Masten, A. S., Coatsworth, J. D., & Tellegen, A. (2004). Salient and emerging developmental tasks in the transition to adulthood. *Child Development, 75*, 123–133.
- Savin-Williams, R. C. (2001). *"Mom, Dad, I'm gay." How families negotiate coming out*. Washington, DC: American Psychological Association.
- Smith, T. M., Gallo, L. C., Goble, L., Ngu, L. Q., & Stark, K. M. (1998). Agency, communion, and cardiovascular reactivity during marital interaction. *Health Psychology, 17*, 537–545.
- Spanier, G. B. (1976). Measuring dyadic adjustment: New scales for assessing the quality of marriage and similar dyads. *Journal of Marriage and the Family, 38*, 15–28.
- Stacey, J., & Biblarz, T. J. (2001). (How) does the sexual orientation of parents matter? *American Sociological Review, 66*, 159–183.
- Tsai, J. L., & Levenson, R. W. (1997). Cultural influences on emotional responding: Chinese American and European American dating couples during interpersonal conflict. *Journal of Cross-Cultural Psychology, 28*, 600–625.
- van IJzendoorn, M. (1995). Adult attachment representations, parental responsiveness, and infant attachment: A meta-analysis on the predictive validity of the adult attachment interview. *Psychological Bulletin, 117*, 387–403.
- Wainright, J. L., Russell, S. T., & Patterson, C. J. (2004). Psychosocial adjustment, school outcomes, and romantic relationships of adolescents with same-sex parents. *Child Development, 75*, 1886–1898.
- Wampler, K. S., Riggs, B., & Kimball, T. G. (2004). Observing attachment behavior in couples: The Adult Attachment Behavior Q-Set (AABQ). *Family Process, 43*, 315–335.
- Weston, K. (1992). *Families we choose: Lesbians, gays, kinship*. New York: Columbia University Press.

Received August 22, 2006

Revision received May 11, 2007

Accepted May 24, 2007 ■