

# Three-Year Follow-Up of Same-Sex Couples Who Had Civil Unions in Vermont, Same-Sex Couples Not in Civil Unions, and Heterosexual Married Couples

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This study was a 3-year follow-up of 65 male and 138 female same-sex couples who had civil unions in Vermont during the 1st year of that legislation. These couples were compared with 23 male and 61 female same-sex couples in their friendship circles who did not have civil unions and with 55 heterosexual married couples (1 member of each was a sibling to a member of a civil union couple). Despite the legalized nature of their relationships, civil union couples did not differ on any measure from same-sex couples who were not in civil unions. However, same-sex couples not in civil unions were more likely to have ended their relationships than same-sex civil union or heterosexual married couples. Compared with heterosexual married participants, both types of same-sex couples reported greater relationship quality, compatibility, and intimacy and lower levels of conflict. Longitudinal predictors of relationship quality at Time 2 included less conflict, greater level of outness, and a shorter relationship length for men in same-sex relationships and included less conflict and more frequent sex for women in same-sex relationships at Time 1.

*Keywords:* same-sex couples, civil unions, lesbian couples, gay male couples

Researchers in adult development have often viewed marriage as consisting of several stages: the early honeymoon period (from the wedding to the arrival of children), the middle years (parenthood of young children), the later years (when children leave the home), and termination of marriage through death or divorce (see Papalia, Sterns, Feldman, & Camp, 2002, for a review). As these categories indicate, the presence of children is the primary marker for transition between stages. The major focus in heterosexual marriage has been on parenthood as a developmental experience. In their book *When Partners Become Parents: The Big Life Change for Couples*, Cowan and Cowan (1992) described changes to partners' identities, emotional well-being, relationship quality, patterns of communication, and family roles, as well as changes in

partners' relationships with grandparents, friends, finances, and in the workplace. This is also a time of stress and marital dissatisfaction (e.g., Anderson, Russell, & Schumm, 1983). Accordingly, relationship satisfaction in marriage often follows a U-shaped curve, with greater happiness at the early and later stages of marriage (Papalia et al., 2002). Because children mark developmental transitions in the marriage, research on married couples without children has focused on whether these couples are dissatisfied or have regrets about not having children (see Rempel's, 1985, book *Childless Elderly: What Are They Missing?*).

In addition to the effect of children, a major focus on changes in marriage over time has been on factors in the marriage that predict unhappiness and divorce. On the basis of research in the 1930s, Terman (1938, cited in Gottman, 1994) was surprised to discover that frequency of sexual activity was not related to marital satisfaction. Gottman has focused on what makes some marriages increase and others decrease in satisfaction over time (see Gottman, 1994, for a review). Focusing on affective and physiological measurements, Gottman (1994; Gottman & Levenson, 1992) found that stability in marriage over time was related to the couples' ability to resolve conflict, including validation of partner's feelings, less whining, less defensiveness, and the ability of both members to adapt to a certain style of conflict. Kurdek (1993) found factors that predicted marital dissolution to include a low income for husbands, a low income and educational level for wives, no pooling of finances, husbands being stepfathers of children, wives being low on perceived social support, husbands having external motives for

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getting married, and the couple having discrepancies in autonomy and motives for getting married.

In contrast to marriage, there has been relatively little focus on heterosexual couples in cohabiting relationships. Although the number of heterosexuals who cohabit has increased vastly since 1970, the rate of cohabitation is still only 8 couples for every 100 that marry (Saluter & Lugaila, 1998). Couples that cohabit report lower relationship quality, do not have the psychological and physical health benefits of marriage, and report more conflict (see Waite & Gallagher, 2000, for a review).

### Lack of Knowledge About the Development of Same-Sex Relationships

Although much progress has been made in advancing the cause of civil rights for lesbian, gay, and bisexual (LGB) people in the United States over the past two decades, legalized relationships remain unavailable to the majority of same-sex couples. In fact, 40 states currently have legislation prohibiting marriage between two people of the same sex, and only a few states have legalized same-sex relationships. Currently, only Massachusetts has same-sex marriage, while Vermont, Connecticut, and New Jersey have same-sex civil unions. California, Maine, Hawaii, and the District of Columbia have registered domestic partnerships for same-sex couples.

In contrast to the enormous literature on heterosexual marriage, there has been far less research on same-sex relationships, for a number of reasons. First, in the absence of same-sex marriage and other forms of legalized relationships as a marker, researchers who have studied same-sex couples have had to come up with their own criteria for defining committed dyads, and these criteria have differed across studies. Some have included anyone who was in a same-sex relationship, no matter how recently the two became committed. For example, Caron and Ulin (1997) did not place a limit on length of relationship; their sample of lesbians had been together between 2 months and 25.5 years, with a mean of 4.5 years. In contrast, Schreurs and Buunk (1996) included only lesbian couples who had been together a minimum of 3 years, and Gottman et al. (2003) stipulated that same-sex couples had to be living together for at least 2 years. In their qualitative study of 50 same-sex couples from Massachusetts who either had been married or had not, Porche, Purvin, and Waddell (2005) stipulated that couples had to have been together for at least 1 year. Elizur and Mintzer's (2003) study of 121 gay men in Israel required that participants were in their relationship for at least 5 years. Thus, it is difficult to know how the results of each study were influenced by the criteria they used for couple inclusion. For example, Kurdek's (1989) research found that relationship satisfaction is higher in lesbian and gay male couples who have been together longer. In the absence of legalized relationships for same-sex couples at the time of these studies, it is impossible to know how many of the couples would have chosen to get married if they could have versus how many would have continued to cohabit.

Second, the presence of children as a marker of developmental transitions may not be as appropriate for same-sex couples as for heterosexual couples, because same-sex couples are far less likely to have children. In comparisons of LGB and heterosexual individuals recruited from siblings (Rothblum, Balsam, & Mickey, 2004), over half of heterosexual men and women had children,

compared with about one third of bisexual men, under 20% of lesbian and bisexual women, and less than 10% of gay men.

Third, relationship dissolutions among same-sex couples may be easier because legal divorce is usually not an impediment. Kurdek (1988, 1992) has conducted the longest running follow-up study of gay and lesbian couples. He studied 80 gay male couples and 53 lesbian couples without children who were recruited through LGB periodicals. These couples were compared with 80 heterosexual married couples with children in Dayton, Ohio. In the 11-year follow-up of his longitudinal sample (Kurdek, 2004), same-sex couples terminated their relationships sooner, on average, than heterosexual married couples, especially heterosexual married couples with children. Using a wide variety of relationship measures, including psychological adjustment, personality traits, relationship styles, conflict resolution, and social support, he found that same-sex couples fare better than heterosexual married couples on 76% of all variables. Thus, it is likely that same-sex couples terminate relationships sooner than married heterosexual couples at least in part because there is an absence of formal barriers (e.g., legal divorce, child custody, etc.) and not because they are less happy in their relationships.

### The Civil Union Study: Time 1

In mid-2000, Vermont was the first U.S. state to legalize same-sex relationships, so that same-sex couples could have the same legal rights as heterosexual married couples at the state level. Same-sex couples came to Vermont from all over the country to legalize their relationships. During the first year that this legislation was enacted, 80% of civil unions were acquired by out-of-state residents. In 2002, we conducted a project that compared couples who had civil unions in Vermont during the first year of that new legislation (July 2000–June 2001) with same-sex couples in their friendship circles who had not had civil unions and with heterosexual married couples (one member of each heterosexual couple was a sibling to a member of one of the same-sex couples; Solomon, Rothblum & Balsam, 2004, 2005). We focused on demographic factors, length of relationship, social support from family and friends, contact with families of origin, social and political activities, degree of "outness," and division of housework, child care, and finances. This was the first study to focus on same-sex couples in legalized relationships in the United States. It was also the first study to examine same-sex couples recruited from a population instead of a convenience sample, because civil unions are a matter of public record.

Results indicated very few differences between same-sex couples in civil unions and those not in civil unions, particularly for women. Women in civil unions were more out about their sexual orientation and more likely to consider themselves married than were women not in civil unions. Men in civil unions were more likely to have children, joint bank accounts with their partner, and mutual friends with their partner. They had more connection with their family of origin and were more likely to consider themselves married. They were less likely than men not in civil unions to have seriously discussed ending their relationship (Solomon et al., 2004). In contrast, both types of same-sex couples differed from heterosexual married couples in numerous ways. Same-sex couples were in their current relationship for a shorter duration and were less religious, less likely to have children, more likely to

share housework and finances, and less close to their family of origin than heterosexual couples. Women in same-sex relationships were more highly educated and perceived less social support from their family of origin than heterosexual married women. Men in same-sex relationships lived in larger cities, were less monogamous and more likely to agree that nonmonogamy was acceptable, and perceived more social support from their friends than heterosexual married men.

It is not surprising that same-sex couples differed from heterosexual couples. Prior studies on lesbians and gay men from convenience samples that compared them with (a) U.S. census data (e.g., Bradford & Ryan, 1988), (b) their heterosexual siblings (e.g., Rothblum et al., 2004; Rothblum & Factor, 2001), and (c) representative national samples (e.g., Laumann, Gagnon, Michael, & Michaels, 1994) have consistently indicated demographic differences. It was also not surprising that same-sex couples in civil unions were quite similar to same-sex couples not in civil unions given that our first study was conducted after the first year of the new legislation. Consequently, that study was more about who chooses to have a civil union versus who does not. It was less about how being in a civil union changes a relationship—for that, follow-up research is needed.

### The Civil Union Study: Time 2

The present study was a three-year follow-up assessment of couples from Time 1. Because Vermont was the first U.S. state to grant legalized civil unions, couples who had civil unions in Vermont have now been in legalized relationships longer than couples from any other state. Although same-sex civil unions are not equivalent to heterosexual marriages at the federal level, they provide public and legal recognition of the relationship. Whereas researchers in the past have used differing inclusion criteria in same-sex couples research, we were able to use civil union status as the standard for inclusion.

We had several hypotheses about changes in the development of the relationships over time. First, we predicted that at Time 2, same-sex couples in civil unions would differ from same-sex couples not in civil unions on more aspects of their relationship, in the direction of being more similar to heterosexual married couples. Specifically, we predicted that couples in civil unions would have become closer to their family of origin (in terms of contact and perceived social support) given the newly legalized status of their relationship. We also expected couples in civil unions to be more out about their sexual orientation because their relationship was a matter of public record. Additionally, we predicted that civil union couples would be less likely to have seriously discussed or considered ending their relationship over the 3-year period.

Our second goal was to examine correlates of relationship quality at Time 2. Here too we predicted that heterosexual married couples and same-sex couples in civil unions would be more satisfied with their relationship than same-sex couples not in civil unions. Finally, our third goal focused on which factors at Time 1 predicted relationship quality at Time 2. Variables at Time 1 that we hypothesized would affect relationship quality at Time 2 included demographic factors (age, education, children, and length of relationship), prior relationship difficulties (considered ending relationship, discussed ending relationship, and conflict), sex and monogamy (frequency of sex, extrarelational sex, extrarelational

affairs, partner's extrarelational sex), and perceived social support from family and friends. In summary, we were interested in the impact of sexual orientation and the legal status of relationships on personal, social, and familial development of relationships over time.

## Method

### *Participants and Procedure*

For the original study at Time 1 (Solomon et al., 2004, 2005), we obtained photocopies of all 2,475 civil union certificates from the Vermont Office of Vital Records of the Vermont Department of Health for the period from July 1, 2000, to June 30, 2001, the first year of this legislation. On the basis of information on the certificates, only 21% of the couples were from Vermont, two thirds of the couples were female, and 10% of the individuals were members of ethnic minority groups. We sent a letter to each couple asking them if they would complete a reply form with contact information for a heterosexual married sibling and his or her spouse and also for a gay or lesbian couple in their friendship circle who had not had a civil union. Siblings and friends did not have to be the same sex as the civil union couples.

Of the 2,475 civil union couples who were sent letters, 165 addresses (7%) were incorrect and an additional 41 couples could not participate (e.g., their partner had died, the relationship had ended). This resulted in an actual pool of 2,269 possible civil union couples. We received reply forms from 947 couples (42%) indicating willingness to participate in the study. We had funding to send questionnaires to 400 civil union couples and 400 same-sex couples not in civil unions, as well as 400 married heterosexual couples. Questionnaires were sent to the first 400 civil union couples who sent back reply forms and who were willing to give us contact information about siblings and friends. Questionnaires did not include names or addresses but had an identifying number that was identical for the two members of the civil union couple (e.g., 166 A and 166 B), their same-sex friends (e.g., 166 C and 166 D), and their heterosexual married sibling and spouse (e.g., 166 E and 166 F). Of the 400 sets of questionnaires sent, we received at least 1 questionnaire from 388 (97%) groups of couples (this ranged from receiving questionnaires from both members of all three types of couples to only 1 questionnaire from all six possible respondents). Of the 800 questionnaires sent to both members of 400 civil union couples, we received 659 (82%). We received 466 (58%) questionnaires from same-sex couples not in civil unions and received 413 (52%) from married heterosexuals (these numbers represent total respondents; we did not always receive 2 questionnaires from each couple).

At Time 2, we contacted all couples if at least one member of the couple had sent back a completed questionnaire at Time 1. For example, if only one member of a civil union couple, neither of their friends who had not had a civil union, and both their heterosexual married sibling and his or her spouse had completed questionnaires at Time 1, then we sent questionnaires to the civil union couple and the heterosexual married couple, but not to the couple that had not had a civil union. Couples were sent two questionnaires and two postage-paid envelopes attached to the letter. They were also sent an email informing them that the package was sent. Studies at both Time 1 and Time 2 had institutional review board approval and a completed questionnaire indicated consent.

We contacted 342 civil union couples where one or both members had returned questionnaires at Time 1. Two indicated that a partner had died, and 13 had terminated their relationship. We received completed questionnaires from 452 individuals, including 203 complete sets of questionnaires from both members of the couple.

Among couples not in civil unions, 248 were contacted. One indicated that a partner had died, 23 had terminated their relationship, 8 said they did not want to participate, and 14 had incorrect addresses. We received completed questionnaires from 209 individuals, including 86 complete sets from both members of the couple.

We contacted 224 heterosexual married couples. One indicated that a spouse had died, 6 had terminated their relationship, 2 were separated, 13 said they did not want to participate, and 12 had wrong addresses. We received completed questionnaires from 137 individuals, including 55 complete sets of questionnaires from both members of the couple.

### Measures

Respondents completed a self-report questionnaire that included multiple measures. We can be contacted for a full report including all measures from this questionnaire.

### Measures Used at Time 1 and Time 2

**Demographics.** This measure included year of birth, race/ethnicity, years of education, individual income, religion while growing up, current religion, importance of religion, frequency of attending religious services, years lived in current location, size of city or town, and distance of last move. At Time 2, participants were also asked if they had moved to a different location since Time 1.

**Relationship.** Respondents were asked to indicate the year that they met their current partner, the year they began going out with their partner, and the year they began living with him or her. At Time 2, they were also asked if they had terminated their relationship, and if the answer was *yes*, when the termination occurred, if they were still in touch with their former partner/spouse, and if they were currently in a new relationship with a man or woman or no one.

**Children.** Respondents were asked if they had children, the number and ages of their children, whether their children were from their current or a prior relationship, how much time per year their children lived with them, and what percentage of the child care they did.

**Sex and monogamy.** Respondents were asked if they had had sex during the past year and, if so, the frequency of sex (on a 9-point Likert scale where 1 = *daily* and 9 = *never*). They were also asked if they or their partner had ever had sex with anyone other than their current partner since they and their partner became a couple, if they had ever had a meaningful love affair with someone else since they and their partner became a couple, and whether they had an agreement with their current partner about sex outside their relationship.

**Ending the relationship.** Respondents were asked whether they had ever seriously considered ending their relationship and if they had ever seriously discussed ending their relationship. These

responses were scored on a 4-point Likert scale (1 = *never* and 4 = *more than three times*)

**Contact and closeness to parents.** There were a number of items about respondents' relationships with their parents and their partner's parents, including contact with mother and father and initiating contact with partner's mother and father (9-point Likert scales where 1 = *daily* and 9 = *never*). Respondents were asked the degree to which their mother and father made them feel like part of the family (1 = *very much* to 9 = *not at all*) and how often they brought their partner along when visiting their mother and father. Same-sex couples were also asked if they considered themselves to be married.

At the beginning of this measure, respondents were asked if either or both parents were deceased. If both parents were deceased, they were asked to omit this section. Each item also had the choice *does not apply in my situation* for respondents with one deceased parent.

**Social support from friends and family.** We assessed social support with Prociano and Heller's (1983) measures, Perceived Social Support From Friends (Cronbach's  $\alpha = .67$ ) and Perceived Social Support From Family ( $\alpha = .82$ ). These scales measure the extent to which respondents believe that friends and family fulfill their needs for support, feedback, and information (e.g., "My friends give me the moral support I need"). Respondents are asked to circle *yes*, *no*, or *don't know* to 20 statements about friends and family. Items are scored as 1 if they are circled in the direction of perceived social support (*don't know* answers are not scored), and a high score indicates high perceived social support. The perceived social support measures are internally consistent and measure constructs that are separate from each other and from measures of social networks (e.g., number of friends; Prociano & Heller, 1983).

**Outness ( $\alpha = .91$ ).** We used the Outness Inventory developed by Mohr and Fassinger (2000) to assess level of outness about sexual orientation for respondents in same-sex relationships. The Outness Inventory is an 11-item self-report measure designed to assess the degree to which individuals are open about their sexual orientation in different spheres of their lives (e.g., "mother or stepmother," "my work peers"). Items are scored on 7-point Likert scales (1 = *person definitely does not know about your sexual orientation status* and 7 = *person definitely knows about your sexual orientation status, and it is openly talked about*). Total scores ranged from 11 to 77.

### Measure Used at Time 1 Only

**Conflict ( $\alpha = .91$ ).** This subscale from the American Couples Study (Blumstein & Schwartz, 1983) consists of 17 areas of conflict (e.g., how the house is kept, social life, sex outside the relationship) scored on a 9-point Likert scale (1 = *daily or almost every day* and 9 = *never*). Items can also be marked *does not apply to my situation*. A low score indicates higher conflict.

### New Measures at Time 2

**Relationship quality.** Relationship quality was assessed using the Dyadic Adjustment Scale (DAS; Spanier, 1976). This is a 32-item scale designed to measure agreement between partners on important issues, satisfaction with demonstrated levels of affection

Table 1  
*Sample Descriptive Statistics at Study Entry and Three-Year Follow-Up by Gender and Couple Type*

Variable	Initial assessment									
	Male						Female			
	Same-sex CU		Same-sex no CU		Hetero.		Same-sex CU		Same-sex no CU	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Age	44.0	9.7	44.4	11.0	45.8	10.5	43.0	9.0	42.0	9.3
Years of education	15.9	1.5	15.6	1.8	15.2	1.9	15.9	1.6	15.9	1.5
Considered ending relationship <sup>a</sup>	1.6	0.9	2.2	1.4	1.6	1.0	1.6	0.9	1.7	0.9
Discussed ending relationship <sup>a</sup>	1.5	0.8	2.0	1.2	1.5	0.9	1.5	0.8	1.7	0.9
Frequency of sex in past year <sup>b</sup>	3.6	1.5	3.9	1.4	3.8	1.3	4.6	1.4	4.8	1.3
Understanding of sex outside relationship <sup>c</sup>	1.7	0.8	1.8	1.1	2.5	1.2	2.1	0.9	2.3	1.0
Contact with mother <sup>d</sup>	3.2	1.4	3.5	1.6	3.2	1.3	3.5	1.6	3.1	1.3
Contact with father <sup>d</sup>	4.3	1.7	4.3	1.7	3.9	1.7	4.1	1.7	4.1	1.6
Partner along while visiting mom <sup>e</sup>	3.2	2.4	4.2	2.5	2.8	1.8	2.9	2.1	3.6	2.4
Partner along while visiting dad <sup>e</sup>	3.3	2.7	4.2	2.8	3.1	2.1	3.0	2.3	3.4	2.5
Contact with partner's mom or stepmom <sup>d</sup>	6.1	2.2	7.0	1.9	5.7	2.3	6.6	1.9	6.9	1.9
Contact with partner's dad or stepdad <sup>d</sup>	6.6	2.1	7.5	1.5	5.9	2.2	7.2	1.8	7.4	1.9
Partner's mom considers you family <sup>f</sup>	2.4	2.3	3.6	2.8	2.0	1.9	2.7	2.5	3.1	2.6
Partner's dad considers you family <sup>f</sup>	3.0	2.8	4.3	3.2	1.9	1.8	2.9	2.7	3.4	2.8
Mom/stepmom thinks of you and your partner as a couple <sup>g</sup>	2.1	2.0	2.5	2.1	—	—	2.2	1.9	2.4	2.0
Dad/stepdad thinks of you and your partner as a couple <sup>g</sup>	3.1	2.3	3.3	2.3	—	—	3.1	2.3	3.3	2.2
Annual income (thousands of \$)	65.8	51.4	79.2	125.7	73.7	80.7	55.5	79.2	54.7	39.2
Outness total <sup>h</sup>	5.6	1.3	5.4	1.2	—	—	5.7	1.1	5.3	1.4
Social support from friends total <sup>i</sup>	14.4	4.4	13.9	4.4	13.0	5.0	14.4	4.4	14.7	4.2
Social support from family total <sup>i</sup>	8.3	2.2	8.3	2.2	8.0	2.4	8.5	2.0	8.2	2.2
DAS total score	—	—	—	—	—	—	—	—	—	—
DAS conflict	—	—	—	—	—	—	—	—	—	—
DAS affection	—	—	—	—	—	—	—	—	—	—
DAS satisfaction	—	—	—	—	—	—	—	—	—	—
DAS compatibility	—	—	—	—	—	—	—	—	—	—
Sternberg Commitment Scale total <sup>j</sup>	—	—	—	—	—	—	—	—	—	—
Intimacy <sup>j</sup>	—	—	—	—	—	—	—	—	—	—
Equality <sup>j</sup>	—	—	—	—	—	—	—	—	—	—
Autonomy <sup>j</sup>	—	—	—	—	—	—	—	—	—	—
Ineffective arguing <sup>k</sup>	—	—	—	—	—	—	—	—	—	—
Partner negative problem solving <sup>k</sup>	—	—	—	—	—	—	—	—	—	—
Partner conflict engagement <sup>k</sup>	—	—	—	—	—	—	—	—	—	—
Partner withdrawal <sup>k</sup>	—	—	—	—	—	—	—	—	—	—
Self conflict engagement <sup>k</sup>	—	—	—	—	—	—	—	—	—	—
Self withdrawal <sup>k</sup>	—	—	—	—	—	—	—	—	—	—

*Note.* Dashes indicate that a variable was not assessed for a given group at a given time. CU = civil union; hetero. = heterosexual; DAS = Dyadic Adjustment Scale.

<sup>a</sup> 1 = never, 2 = once, 3 = 2–3 times, 4 = more than 3 times. <sup>b</sup> 1 = daily or almost every day, 2 = 3–4 times a week, 3 = 1–2 times a week, 4 = 2–3 times a month, 5 = once a month, 6 = once every few months, 7 = about once a year, 8 = less than once a year, 9 = never. <sup>c</sup> 0 = no, 1 = yes. <sup>d</sup> 1 = daily or almost every day, 2 = 3–4 times a week, 3 = 1–2 times a week, 4 = 2–3 times a month, 5 = once a month, 6 = once every few months, 7 = about once a year, 8 = less than once a year, 9 = never. <sup>e</sup> 1 = always to 9 = never. <sup>f</sup> 1 = very much to 9 = not at all. <sup>g</sup> 1 = yes, I am certain he/she does to 5 = no, I am certain he/she does not. <sup>h</sup> Mean of 11-item Outness Inventory, where 1 = person definitely does not know about your sexual orientation status to 7 = person definitely knows about your sexual orientation status and it is openly talked about. <sup>i</sup> 20 items each given 1 point if in the direction of social support. <sup>j</sup> 1 = not at all true to 9 = extremely true. <sup>k</sup> 1 = disagree strongly to 5 = agree strongly.

and sexual relations, degree of harmony, and amount of shared activity between the partners (e.g., “Do you confide in your partner?”). The DAS contains four subscales: Dyadic Consensus (13 items;  $\alpha = .87$ ), Dyadic Satisfaction (10 items;  $\alpha = .43$ ), Dyadic Cohesion (5 items;  $\alpha = .76$ ), and Affectional Expression (4 items;  $\alpha = .71$ ). Response format for the items varies. For ratings of agreement, respondents were asked to choose between 0 (*always*

*disagree*) and 5 (*always agree*); for ratings of frequency, respondents were asked to choose between 0 (*all the time*) and 5 (*never*); for dichotomous ratings, respondents were asked to choose between 0 (*yes*) and 1 (*no*). The score ranges from 0 to 151 and is calculated by summing responses to all items, with higher scores indicating greater relationship quality. Spanier (1976) has correlated the DAS with other measures of relationship adjustment and

Table 1 (continued)

Three-year follow-up													
		Male						Female					
Hetero.		Same-sex CU		Same-sex no CU		Hetero.		Same-sex CU		Same-sex no CU		Hetero.	
<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
43.0	10.5	48.0	9.5	50.0	10.8	49.0	10.0	47.0	8.3	47.0	9.6	47.0	9.3
15.2	1.8	16.0	1.5	15.9	1.6	15.5	1.8	16.1	1.5	16.1	1.4	15.5	1.8
1.8	1.0	1.6	0.8	1.8	0.8	1.5	0.9	1.6	0.9	1.7	0.9	1.7	1.0
1.6	0.9	1.5	0.8	1.5	0.7	1.5	0.9	1.6	0.8	1.5	0.8	1.4	0.8
3.8	1.2	3.8	1.6	4.0	1.3	4.1	1.4	5.1	1.3	5.1	1.2	4.1	1.4
2.4	1.1	0.4	0.5	0.5	0.5	0.1	0.2	0.1	0.3	0.1	0.2	0.1	0.2
2.5	1.2	4.1	2.5	4.9	2.5	4.1	2.4	4.0	2.6	3.9	2.5	3.1	2.5
3.6	1.9	6.2	3.0	5.4	2.8	6.6	3.0	6.1	3.1	5.6	3.0	5.3	3.1
3.6	2.1	3.5	2.5	3.8	2.8	3.6	2.4	3.3	2.3	3.6	2.5	3.3	2.2
3.3	2.1	3.8	2.8	4.1	2.7	3.8	2.5	3.2	2.3	3.4	2.6	3.4	2.3
5.1	1.9	7.3	2.4	7.8	1.9	6.6	2.7	7.2	2.2	7.2	2.3	5.8	2.5
5.9	2.0	8.4	2.0	7.8	1.9	7.7	2.5	8.2	2.0	8.2	2.1	7.6	2.5
2.5	2.1	2.9	2.3	3.2	2.6	1.9	1.3	2.4	2.1	2.9	2.3	2.1	1.7
2.6	2.4	3.4	2.9	3.7	3.1	2.2	1.9	3.1	2.6	3.1	2.7	2.2	1.6
—	—	1.9	1.7	2.6	2.1	—	—	1.9	1.7	2.1	1.7	—	—
—	—	3.0	2.2	2.9	2.2	—	—	3.0	2.2	2.9	2.1	—	—
40.6	44.9	75.2	63.3	45.2	24.0	88.6	70.1	58.1	53.5	68.5	74.3	48.2	43.6
—	—	5.7	1.1	5.5	1.3	—	—	5.8	1.2	5.4	1.2	—	—
14.4	4.3	14.5	4.7	15.3	4.1	10.0	6.1	15.7	4.4	15.7	3.9	14.7	5.4
8.9	2.0	10.5	6.7	11.5	6.7	10.3	6.2	12.3	6.6	10.8	6.7	3.9	0.4
—	—	4.1	0.4	4.1	0.3	4.0	0.4	4.1	0.4	4.1	0.3	4.1	0.5
—	—	4.2	0.4	4.2	0.4	4.0	0.5	4.2	0.4	4.2	0.3	2.3	0.4
—	—	2.4	0.5	2.4	0.5	2.3	0.5	2.4	0.5	2.3	0.5	2.3	0.4
—	—	5.0	0.5	5.0	0.4	5.0	0.5	5.0	0.5	5.0	0.5	5.0	0.5
—	—	3.8	0.6	3.7	0.5	3.5	0.5	3.8	0.5	3.8	0.4	3.5	0.6
—	—	68.7	6.1	69.6	4.1	68.3	5.9	70.0	5.5	69.8	4.5	69.2	6.2
—	—	41.3	7.8	39.8	7.1	38.6	7.6	38.6	8.2	38.8	7.5	36.4	7.6
—	—	63.0	9.7	61.9	7.5	60.9	10.6	64.5	8.3	64.1	7.5	61.6	10.5
—	—	30.5	8.2	31.2	7.9	30.5	7.7	33.2	8.0	32.9	8.2	35.2	6.4
—	—	15.7	6.7	15.4	4.5	18.1	6.2	15.5	6.4	16.0	6.1	17.9	7.7
—	—	8.0	2.4	8.6	1.8	8.8	2.7	7.9	2.3	8.4	2.1	8.8	2.3
—	—	7.6	3.1	7.8	2.8	8.4	3.3	7.7	3.4	7.8	3.1	8.3	3.8
—	—	8.7	3.3	8.6	2.6	9.8	3.3	8.1	3.0	8.6	2.9	9.2	3.2
—	—	8.1	3.0	8.1	2.4	8.5	3.0	7.9	3.1	8.4	3.2	8.1	3.1
—	—	8.9	3.4	9.4	2.6	9.9	3.1	8.3	3.1	8.8	3.1	9.5	3.4

discriminates between divorced and married persons on each item. For the present study, mean total and subscale scores were used, with higher scores indicating higher relationship quality.

*Sternberg Commitment Scale.* We measured relationship commitment with an eight-item subscale from Sternberg's (1988) Triangular Love Scale ( $\alpha = .95$ ). Items (e.g., those asking whether respondents intended to stay in their relationships with their partners) were scored from 1 (*not at all true*) to 9 (*extremely true*),

with a high score indicating high relationship commitment. This scale and the three measures that are described next were used by Kurdek (1996) in his 5-year follow-up study of same-sex couples not in legalized relationships.

*Intimacy, equality, and autonomy.* Kurdek (1996) adapted Cochran and Peplau's (1985) measure of relationship values in heterosexual relationships for same-sex couples. This 19-item scale consists of 6 items for intimacy (e.g., "I spent as much time

Table 2

*Hierarchical Linear Modeling Analyses Assessing Individual, Dyad, and Family/Friend Unit Effects on Change Scores of Outcome Variables*

Variable	Level 1 individual						
	Coef.	Age			Sex		
		95% CI	<i>t</i>		Coef.	95% CI	<i>t</i>
Years of education	0.002	±0.004	1.07	-0.023	±0.088	-0.52	
Geographic move	0.003	±0.002	1.77	0.043	±0.054	1.61	
Considered ending relationship	0.000	±0.008	0.01	0.002	±0.142	0.03	
Discussed ending relationship	-0.004	±0.006	-1.13	0.059	±0.128	0.92	
Frequency of sex in last year	-0.010	±0.010	-2.18	0.148	±0.175	1.73	
Understanding of sex outside relationship	-0.004	±0.010	-0.74	-0.027	±0.190	-0.29	
Contact with mother	0.010	±0.018	1.18	-0.210	±0.292	-1.44	
Contact with father	0.020	±0.018	2.10	0.165	±0.314	1.05	
Partner along while visiting mom	-0.004	±0.024	-0.34	-0.177	±0.398	-0.89	
Partner along while visiting dad	0.178	±0.030	1.22	0.070	±0.442	0.32	
Contact with partner's mom (or stepmom)	-0.000	±0.032	-0.00	-0.182	±0.522	-0.70	
Contact with partner's dad (or stepdad)	-0.017	±0.040	-0.87	-0.172	±0.648	-0.53	
Partner's mom makes you feel like family	-0.000	±0.034	-0.02	-0.121	±0.562	-0.43	
Partner's dad makes you feel like family	0.006	±0.040	0.30	0.711	±0.656	2.17	
Mom thinks of you and partner as a couple	—	—	—	—	—	—	
Dad thinks of you and partner as a couple	—	—	—	—	—	—	
Income	0.005	±0.012	0.85	0.032	0.116	0.27	
Outness	—	—	—	—	—	—	
Social support from family	-0.020	±0.042	-0.96	0.220	±0.792	0.55	
Social support from friends	-0.010	±0.034	-0.60	0.542	±0.637	1.67	

*Note.* All outcome variables represent change scores from Time 1 to Time 2. Dashes indicate that models would not converge for a variable. Coef. = coefficient; CI = confidence interval.

\*\*  $p \leq .01$ . \*\*\*  $p \leq .001$ .

with my partner as possible";  $\alpha = .71$ ), 8 items for equality (e.g., "My partner and I have equal power in the relationship";  $\alpha = .90$ ), and 5 items for autonomy (e.g., "I have major interests of my own outside of the relationship";  $\alpha = .71$ ). Items are scored from 1 (*not at all true*) to 9 (*very true*), and high scores indicate high intimacy, equality, and autonomy, respectively.

*Ineffective Arguing Inventory* ( $\alpha = .86$ ). This eight-item inventory focuses on ineffective methods of conflict. Items (e.g., "Our arguments seem to end in frustrating stalemates") are scored from 1 (*disagree strongly*) to 5 (*agree strongly*), with a high score indicating more ineffective arguing. Kurdek (1994) found the scale to be stable over time and to predict relationship satisfaction.

*Conflict Resolution Styles Inventory (Self and Partner Versions)*. This 16-item scale measures the frequency with which respondents use problematic ways to resolve conflicts in their relationship (Kurdek, 1994). It consists of three subscales: Negative Problem Solving (e.g., "focusing on the problem at hand"—reverse scored;  $\alpha = .85$  for self,  $\alpha = .85$  for partner), Conflict Engagement (e.g., "launching personal attacks";  $\alpha = .87$  for self,  $\alpha = .86$  for partner), and Withdrawal (e.g., "Remaining silent for long periods";  $\alpha = .85$  for self,  $\alpha = .83$  for partner). Respondents are also asked to rate the same 16 items about when their partner has arguments or disagreements with them (Kurdek, 1994). Items (e.g., "tuning the other person out") are scored from 1 (*never*) to 5 (*always*), and high scores indicate more problematic ways of resolving conflict.

## Results

### *Sample Changes From Time 1*

To examine the effects of attrition, we performed a series of Attrition (lost, retained)  $\times$  Gender (male, female)  $\times$  Group (civil union, no civil union, heterosexual) analyses of variance on Time 1 demographic variables, including age, education, income, and family size. This enabled us to examine the main effects of these demographic variables on attrition and any Attrition  $\times$  Gender and/or Group interactions. Participants who were lost between Time 1 and Time 2 tended to be younger ( $43.8 \pm 0.0$  vs.  $45.9 \pm 0.3$ ),  $F(1, 1504) = 19.8, p < .001$ , and were slightly less educated ( $15.5 \pm 1.8$  vs.  $16.0 \pm 4.5$ ),  $F(1, 1515) = 21.9, p < .001$ , than those who continued in the study. Even though age and education differences were significant, effect sizes were small (both  $\eta^2$ s = .01). No other attrition effects or Attrition  $\times$  Gender and/or Group interactions were significant.

### *Relationship Terminations Since Time 1*

There were 44 relationship breakups (including divorces and separations of heterosexual couples) since Time 1, and these were not equally distributed among groups,  $\chi^2(2, N = 342) = 12.69, p < .01$ . Pairwise group comparisons indicated that same-sex couples not in civil unions were more likely to break up (9.3%) than both civil union couples (3.8%),  $\chi^2(1, N = 287) = 7.51, p < .01$ , and heterosexual couples (2.7%),  $\chi^2(1, N = 139) = 8.88, p <$

Table 2 (continued)

Education			Level 2 dyad effects						Level 3 family/friend unit effect variance component	
Coef.	95% CI	<i>t</i>	Same-sex couples vs. siblings and spouses			Same-sex civil unions vs. same-sex friendships			Coef.	$\chi^2$
			Coef.	95% CI	<i>t</i>	Coef.	95% CI	<i>t</i>		
—	—	—	0.001	±0.001	1.97	0.000	±0.001	0.16	0.001	243.5
-0.000	±0.014	-0.02	-0.000	±0.001	-0.85	-0.000	±0.001	-0.52	0.022	321.1**
0.029	±0.042	1.35	0.001	±0.002	0.87	0.000	±0.001	0.19	0.045	296.1
0.022	±0.037	1.14	0.000	±0.001	0.51	-0.001	±0.001	-2.01	0.002	249.7
-0.013	±0.047	-0.53	0.001	±0.002	0.91	-0.000	±0.001	-1.04	0.066	264.5
0.013	±0.055	0.47	-0.001	±0.002	-0.64	-0.000	±0.001	-0.12	0.081	294.9
-0.106	±0.096	-2.18	0.000	±0.002	0.25	0.001	±0.002	1.64	0.002	202.5
0.047	±0.063	0.89	0.000	±0.002	0.27	-0.000	±0.002	-0.02	0.000	235.9
-0.027	±0.135	-0.39	-0.000	±0.002	-0.02	-0.001	±0.002	-1.21	0.070	235.4
-0.047	±0.147	-0.62	-0.001	±0.002	-0.59	0.000	±0.002	0.14	0.012	180.5
-0.080	±0.169	-0.93	-0.004	±0.004	-2.14	-0.000	±0.002	-0.19	0.104	206.6
-0.102	±0.220	-0.91	0.000	±0.004	0.04	-0.000	±0.002	-0.31	0.725	204.2**
0.139	±0.186	1.47	0.003	±0.004	1.65	0.139	±0.186	1.47	0.518	237.1**
0.058	±0.216	0.53	-0.001	±0.004	-0.59	-0.002	±0.002	-1.48	0.517	195.0
—	—	—	—	—	—	—	—	—	—	—
-0.043	±0.073	-1.17	0.001	±0.002	0.84	0.000	±0.001	0.27	0.004	152.6
0.007	±0.247	0.06	0.007	±0.006	2.75**	0.001	±0.004	0.88	0.279	267.1
-0.083	±0.198	-0.82	0.003	±0.004	1.24	0.001	±0.002	0.58	2.062	455.8***

.01. No difference emerged between couples in civil unions and heterosexual couples,  $\chi^2(1, N = 258) = 0.52, ns$ .

### Time 2 Analyses

For all subsequent analyses, we included couples in which both partners had completed questionnaires at Time 1 and Time 2. This subset consisted of 65 male and 138 female couples who had civil unions, 23 male and 61 female couples who had not had civil unions, and 55 heterosexual married couples.

Descriptive statistics for all dependent variables and covariates appear in Table 1. This includes effect sizes and confidence intervals for the initial assessment (Time 1) and the 3-year follow-up assessment (Time 2). Because participants were nested within dyads, which were in turn nested within larger groups of families/friends, all data were analyzed by constructing multilevel models in HLM 6.02 (Raudenbush, Bryk, Cheong, & Congdon, 2000). For each outcome measure, three-level random intercepts models were created. Individual variation in changes from Time 1 to Time 2 on all outcome measures was modeled at Level 1. Sex effects were represented by creating a dummy coded vector that distinguished between men and women. This vector was entered as a Level 1 predictor of all outcomes. Both age and education were also entered as continuous Level 1 covariates to control for their effects on each dependent measure.

At Levels 2 and 3, we were interested in examining dyad and family/friend unit effects, respectively, on Level 1 intercepts. Dyad effects were assessed by constructing weighted orthogonal contrast codes that compared (a) civil union and friendship couples versus

sibling and spouse couples, and (b) civil union couples versus friendship couples. These nested contrasts enabled us to evaluate the independent effects of belonging to a same-sex dyad and of subgroup differences between same-sex civil union dyads and same-sex sibling and spouse dyads. The orthogonal contrast codes were entered as Level 2 fixed effects. The only Level 1 parameter that was allowed to vary at Levels 2 and 3 was the intercept term. Thus, all Level 1 slopes were fixed, which created random intercepts models (see Bryk & Raudenbush, 1992). In cases of binary outcomes (e.g., moved vs. did not move), nonlinear Bernoulli models were constructed. For analyses with complete data, there were 684 participants nested within 342 dyads nested within 255 family/friend units. When missing data were encountered, cases were excluded from analyses. For self-reports of love affairs outside the present relationship, 16% of data were missing. No more than 8% of data were missing for any other outcome. The generic conditional model was as follows:

$$\text{Level 1 (individual): } Y = \pi_0 + \pi_1(\text{age}) + \pi_2(\text{sex}) \\ + \pi_3(\text{education}) + e$$

$$\text{Level 2 (dyad): } \pi_0 = \beta_{00} + \beta_{01}(\text{Dyad Contrast 1}) \\ + \beta_{02}(\text{Dyad Contrast 2}) + r_0$$

$$\pi_1 = \beta_{10}$$

$$\pi_2 = \beta_{20}$$

$$\pi_3 = \beta_{30}$$

Level 3 (family/friend unit):  $\beta_{00} = \gamma_{000} + u_{00}$

$$\beta_{01} = \gamma_{010}$$

$$\beta_{02} = \gamma_{020}$$

$$\beta_{10} = \gamma_{100}$$

$$\beta_{20} = \gamma_{200}$$

$$\beta_{30} = \gamma_{300}$$

Results from the hierarchical linear modeling analyses assessing individual, dyad, and family/friend unit effects on changes in all outcomes from Time 1 to Time 2 are reported in Table 2. Because of the large number of comparisons and the large sample size, only effects with  $p$  values less than or equal to .01 are interpreted.<sup>1</sup> As indicated, models for 3 of the 20 outcome variables would not converge. For the remaining outcomes, no significant Level 1 effects were found. At Level 2, however, larger change scores were reported in social support from family for same-sex couples than for heterosexual siblings and spouses. No other Level 2 effects were found. At Level 3, family/friend unit effects accounted for significant variance in geographic moves, contact with partner's father/stepfather, acceptance by partner's mother, and social support from friends. Thus, variance in each of these outcomes was accounted for by family/friend unit membership, over and above variance accounted for at Levels 1 (individual) and 2 (dyad). Because no family/friend unit characteristics were evaluated at Level 3, the specific source or sources of this variance cannot be identified. Nevertheless, it is not surprising that people within family/friend units were more similar than people across family/friend units on several measures.

Results from the hierarchical linear modeling analyses assessing individual, dyad, and family/friend unit effects on relationship quality appear in Table 3. At Level 1, several age, sex, and education effects emerged. Older participants reported higher DAS affection scores, men reported higher intimacy scores, and women reported more autonomy. In addition, education was a negative predictor of intimacy and a positive predictor of autonomy. At Level 2, a number of dyad effects were found. Same-sex couples reported higher DAS compatibility scores, higher DAS total scores, and higher intimacy scores than heterosexual siblings and spouses. Same-sex couples also reported less ineffective arguing, less negative problem solving, less partner withdrawal, and less self withdrawal than heterosexual siblings and spouses. No differences were observed between same-sex couples who were and were not in civil unions on any of the relationship quality measures. Finally, Level 3 analyses indicated significant family/friend unit effects for intimacy, autonomy, and partner conflict engagement. Again, these effects indicate that variability in these outcomes was attributable to membership within family/friend units.

Following the analyses described earlier, we examined Time 1 predictors of Time 2 relationship quality for men in same-sex relationships, women in same-sex relationships, and heterosexual married couples. This was accomplished with a forward stepping procedure to determine which Time 1 variables belonged in the hierarchical linear models predicting DAS total scores for each group (men in same-sex relationships, women in same-sex rela-

tionships, and heterosexual married couples). This involved testing the significance of each Time 1 predictor separately. Those that were significant univariate predictors at this first step were then added into a multivariate model evaluating their combined effects on DAS total scores. These analyses are summarized in Table 4, which includes the significance of each variable in isolation (forward stepping) in the left three columns, and the significance of each variable in the overall model in the right three columns. Only the overall models are interpreted. For men in same-sex relationships, Time 1 predictors of Time 2 relationship quality included being more out, being in a relationship of shorter duration, and having less conflict. Significant predictors for women in same-sex relationships were greater frequency of sex and less conflict. There were no significant predictors specific to heterosexual married couples.

## Discussion

The current study is the first to examine same-sex couples in legal unions longitudinally, allowing changes over time among these couples to be compared with changes experienced by both same-sex couples not in civil unions and heterosexual couples. Given the national and international debate about same-sex marriage, couples who had civil unions in Vermont continue to be pioneers at a time when researchers, policymakers, and the general public follow the development of their legalized relationships over time. Because all legalized relationships are a matter of public record, Vermont civil unions are the first cohort of same-sex couples in the United States drawn from a population rather than a convenience sample. Because we recruited same-sex couples who were not in civil unions from the friendship circles of civil union couples, the two types of same-sex couples were similar in length of relationship, race/ethnicity, and age. Similarly, by recruiting heterosexual married couples from siblings of civil union couples, we were able to obtain a sample of heterosexuals that was comparable to the civil union couples on age, race/ethnicity, and religion while growing up. This makes any differences between same-sex and heterosexual married couples especially compelling.

### *Cross-Group Differences at Time 2*

Our first goal was to compare participants by type of couple and sex on 3-year longitudinal changes in a wide range of demographic and relationship variables. Although our Time 1 study (Solomon et al., 2004) suggested some differences between same-sex couples with civil unions and those without civil unions, these differences could not be attributed to the civil union itself, given the correlational nature of the study. Rather, we viewed these differences as influential in determining which couples elected to have a civil union. In the current study, conducted 3 years later, we hoped to gain a glimpse into the impact of having a civil union over time. Because civil unions provide a measure of legal and social validity to same-sex relationships, we expected that the same-sex couples in civil unions would look more like heterosexual married couples, who also enjoy the benefits of a legalized union, and would

<sup>1</sup> This  $p$  value was chosen to partially protect against an elevated familywise alpha error rate, while not being too strict for an exploratory study.

Table 3  
Hierarchical Linear Modeling Analyses Assessing Individual, Dyad, and Family/Friend Unit Effects on Relationship Quality

Variable	Level 1 individual effects				Level 2 dyad effects				Level 3 family/friend unit effect variance component								
	Age		Sex		Education		Same-sex couples vs. siblings and spouses		Same-sex civil unions vs. same-sex friendships		Level 3 family/friend unit effect variance component						
	Coef.	95% CI	t	Coef.	95% CI	t	Coef.	95% CI	t	Coef.	95% CI	t	Coef.	95% CI	t	χ <sup>2</sup>	
DAS total	0.002	±0.004	1.35	-0.004	±0.063	-0.12	0.003	±0.018	0.35	0.001	±0.001	3.11**	-0.000	±0.001	-0.17	0.001	239.0
DAS conflict	0.004	±0.004	2.33	0.034	±0.067	1.01	0.018	±0.020	1.89	0.001	±0.001	2.31	0.000	±0.001	0.05	0.000	231.5
DAS affection	0.005	±0.004	2.54**	0.044	±0.078	1.10	-0.004	±0.022	-0.33	0.000	±0.001	1.19	-0.000	±0.001	-1.36	0.000	258.2
DAS compatibility	0.000	±0.004	0.20	0.006	±0.090	0.13	0.003	±0.025	0.22	0.001	±0.001	4.04**	0.000	±0.001	0.06	0.000	249.9
DAS satisfaction	0.000	±0.004	0.05	-0.003	±0.092	-0.07	-0.006	±0.022	-0.59	0.000	±0.001	1.31	-0.000	±0.001	-0.18	0.110	942.0***
Sternberg																	
Commitment Scale	0.039	±0.048	1.56	0.918	±0.949	1.90	0.078	±0.282	0.54	0.003	±0.006	0.99	0.000	±0.004	0.23	1.467	264.1
Intimacy	0.065	±0.072	1.79	-2.065	±1.366	-2.96**	-0.515	±0.396	-2.56**	0.014	±0.010	2.79**	-0.001	±0.006	-0.25	6.980	312.1**
Equality	0.060	±0.080	1.51	1.485	±1.490	1.95	0.090	±0.431	0.41	0.012	±0.012	2.05	-0.002	±0.008	-0.65	0.593	251.8
Autonomy	-0.064	±0.073	-1.73	2.948	±1.378	4.12	0.678	±0.410	3.24**	-0.007	±0.010	-1.61	-0.001	±0.006	-0.28	7.916	332.0***
Ineffective arguing	-0.023	±0.055	-0.82	-0.283	±1.039	-0.53	0.136	±0.288	0.92	-0.012	±0.008	-2.90**	0.001	±0.006	0.51	0.031	246.6
Partner negative problem solving	-0.014	±0.020	-1.31	-0.134	±0.392	-0.67	-0.073	±0.118	0.23	-0.004	±0.002	-2.87**	0.002	±0.002	2.28	0.005	241.2
Partner conflict engagement	-0.016	±0.029	-1.06	0.000	±0.568	0.00	0.191	±0.169	2.23	-0.004	±0.004	-1.90	0.000	±0.002	0.37	1.075	311.6**
Partner withdrawal	-0.026	±0.025	-1.94	-0.442	±0.512	-1.70	0.192	±0.159	0.02	-0.006	±0.004	-3.31***	0.001	±0.002	1.22	0.178	266.5
Self conflict engagement	-0.024	±0.027	-1.75	-0.200	±0.519	-0.76	0.137	±0.155	1.74	-0.002	±0.004	-1.09	0.001	±0.002	1.05	0.622	295.4
Self withdrawal	-0.015	±0.027	-1.13	-0.565	±0.525	-2.11	0.183	±0.165	2.19	-0.005	±0.004	-3.10**	0.002	±0.002	1.43	0.176	272.3

Note. Coef. = coefficient; CI = confidence interval; DAS = Dyadic Adjustment scale.  
\*\* p ≤ .01. \*\*\* p ≤ .001.

Table 4

*Time 1 Predictors of Time 2 Relationship Quality (Dyadic Adjustment Scale Total Score) for Men in Same-Sex Relationships, Women in Same-Sex Relationships, and Heterosexual Married Couples*

Time 1 predictor	Significance during forward stepping					
	Men in same-sex relationships ( <i>n</i> = 176)			Women in same-sex relationships ( <i>n</i> = 397)		
	Coef.	95% CI	<i>t</i>	Coef.	95% CI	<i>t</i>
Age		—			—	
Sex (1 = male, 2 = female)		NA			NA	
Years of education		—			—	
Income		—			—	
No. of children		—			—	
From current relationship		—			—	
From prior relationship		—			—	
Considered ending relationship	-0.062	±0.047	-2.54*	-0.072	±0.057	-2.50*
Discussed ending relationship		—		-0.113	±0.061	-3.63**
Frequency of sex in past year		—		-0.066	±0.049	-2.64*
Had extrarelational sex		—			—	
Had extrarelational love affair		—			—	
Understanding of sex outside the relationship		—			—	
Partner had extrarelational sex		—			—	
Outness		—			—	
Social support from family		—			—	
Social support from friends		—			—	
Length of relationship	-0.011	±0.008	-2.48*		—	
Conflict score	0.145	±0.061	4.70**	0.145	±0.051	5.52**

\*  $p \leq .01$ . \*\*  $p \leq .001$ .

diverge from same-sex couples without such a legalized union. This hypothesis was not supported in the current study. As expected, all couples showed some changes in demographics and relationship variables. However, these changes did not differ by type of couple.

Given these results, can we say that having a civil union makes a difference? In the current social and political context, our findings must be interpreted with caution. There are a number of factors that may have contributed to the lack of significant differences. First of all, although civil unions provide some legal protections to couples residing in Vermont, most couples live in other U.S. states and thus do not enjoy these legal benefits. For these couples, the civil union may have more symbolic value and thus may not have impacted day-to-day life to a large extent. Furthermore, regardless of state of residence, civil unions do not provide numerous benefits available at the federal level, including immigration, retirement, and tax benefits. It may be that without federal legislation, civil unions have limited power to impact same-sex relationships. Along these lines, another factor to consider is that although civil unions provide some symbolic and social validation for a same-sex relationship, these couples still live in a society in which their sexual orientation is invalidated and even denigrated in numerous ways, on a daily basis. Although civil unions may provide some buffer against the stresses of living with heterosexism and homophobia, it is likely that these experiences are something that make all same-sex couples look more similar to each other and different from heterosexual married couples.

Despite the lack of differences between same-sex couples in civil unions and those not in civil unions, our data indicated a significant difference in rates of relationship termination. Same-

sex couples not in civil unions were more likely to have ended their relationships than same-sex couples in civil unions or heterosexual married couples. This implies that civil unions may indeed have an impact on relationships over time, but in ways not measured by the standardized scales included in this study at this time. Indeed, a quote from our participants illustrate some of these complex issues:

Having a civil union has been good for us. Relationships can be hard at times and having at least one formal barrier helps make you think about splitting up. . . . Even though our civil union doesn't give us any real rights in (our home state), we love that we have it. In the past few years (since the civil union) it's seemed as if it was O.K. to have some separate interests. I feel that after our civil union it proved to my partner that she didn't have to worry if I was gone playing tennis, golf or whatever with someone else. So that's been really good.

The difference in termination rate supports Kurdek's (2004) longitudinal research of same-sex couples not in legalized relationships, who terminated their relationships earlier, on average, than did heterosexual married couples. The small number of couples who had terminated their relationship overall did not permit further comparison among types of couples. However, this will be an important variable to examine at future assessment periods when more couples are likely to have terminated their relationships.

#### *Relationship Quality at Time 2*

Our second goal was to compare participants by type of couple and sex on relationship quality measures at Time 2. We included



woman would perceive it to be. Conversely, women may wish for more intimacy and thus may view themselves as having more autonomy in their relationship than a man would perceive.

There is also a common assumption that, because women are socialized to be relational, two women in a relationship are at risk for becoming merged or overinvolved with each other (e.g., Krestan & Bepko, 1980), whereas same-sex male couples are overly disengaged. In fact, the research in this area has not shown this to be the case. For example, Schreurs and Buunk (1996) surveyed lesbian couples in the Netherlands on various measures about closeness, including emotional dependency, intimacy, autonomy, equity, social support from others, and participation in the lesbian community. They found that intimacy in lesbian relationships is not related to lack of autonomy and that both emotional dependency and autonomy are associated with relationship satisfaction. Green et al. (1996) compared lesbian, gay male, and heterosexual married couples on measures of cohesion (emotional closeness), flexibility (adaptability), and relationship satisfaction. Lesbian couples scored highest on the measure of cohesion, but gay men scored higher on this measure than did heterosexual married couples. Lesbian couples scored highest on the measure of flexibility, and both lesbian and gay male couples had higher scores on this measure than did heterosexual couples. Cohesion and flexibility were both positively correlated with relationship satisfaction. Thus, further research is needed to understand the complexities of the concepts of autonomy and intimacy.

Another factor to consider is that the majority of the couples in our study who had civil unions had obtained this legislation after being in their current relationship for a considerable time. Thus, they were not the equivalent of newlyweds in a heterosexual relationship; rather, they took advantage of the newly available legislation in Vermont at the first opportunity to do so. Time 1 results (see Solomon et al., 2004) indicated that men and women in same-sex civil unions, as well as those not in civil unions, had been in their current relationship for a considerable time, although not as long as heterosexual married couples. Research on marriage and on same-sex cohabiting couples (Kurdek, 1989) has indicated that relationship satisfaction is higher in couples who have been together longer, and research on heterosexual couples has indicated that couples who cohabited longer before marriage were more likely to divorce (Waite & Gallagher, 2000). For both of these reasons—the fact that same-sex couples had been together for a shorter period of time than heterosexual couples and had also had cohabited longer before being legally able to formalize their relationship—their higher relationship quality is especially striking.

It is important to point out that the heterosexual married couples in this study are not traditional heterosexuals, because each heterosexual participant was the sibling or in-law of a lesbian or gay man. To take part in this study, same-sex couples in civil unions had to be out to the sibling and in-law who were sent questionnaires. One might expect heterosexual siblings of lesbians and gay men to come from nontraditional families, but research with LGB individuals and their heterosexual siblings (see Rothblum, Balsam, Solomon, & Factor, 2005, for a review) and also our Time 1 data (Solomon et al., 2004) have not shown this to be the case. Heterosexuals recruited through their LGB siblings were more likely to have children, be religious, be more politically conservative, and have more closeness and contact with their family of origin.

Heterosexual women were more likely to be homemakers, do more housework and child care, and have lower levels of education than did lesbians and bisexual women.

Conversely, one could argue that heterosexuals with an LGB sibling may experience family pressure to be conventional, including getting married, having children, and remaining in a marriage even if it is unhappy. Developmental psychologists have suggested that parenting should be considered a within-family variable, given the ways in which different siblings take on different roles within families (e.g., Feinberg & Hetherington, 2001) or the ways in which siblings de-identify with one another to emphasize their own uniqueness (e.g., Schachter, 1985).

### *Time 1 Predictors of Relationship Quality at Time 2*

Our third and final goal was to examine longitudinal predictors of relationship quality at Time 2. When we examined predictors separately for male and female couples in same-sex relationships and heterosexual married couples, we found some interesting differences. For men in same-sex relationships, outness was also a predictor of relationship quality. It is not surprising that the ability to be more open about one's relationship is associated with relationship quality, particularly for gay men who experience greater obstacles to outness than do lesbians (see Herek, 2002). However, we were surprised to find that for men in same-sex relationships, having a relationship of shorter duration was a predictor of greater relationship quality. On the one hand, gay men are often stereotyped as having brief flings or short relationships, and they certainly face social barriers to maintaining long-term relationships. Do male–male couples in longer relationships receive less social support and validation from their communities over time? In contrast to our results, Kurdek's (1992) longitudinal study of cohabiting same-sex couples found that gay men in longer relationships were less likely to have separated. However, his study did not focus on couples in legalized relationships. Given that gay men are underrepresented in legalized relationships in the United States (see Rothblum, 2004), further research is needed to explore barriers to long-term relationships for gay men.

Along the same lines, lesbians are often stereotyped as being asexual, and indeed several prior studies of lesbians have found that this type of couple reports less frequent sex than gay male and heterosexual couples (e.g., Blumstein & Schwartz, 1983; Peplau, Fingerhut, & Beals, 2004). In the current study, however, frequency of sex was an important predictor of relationship quality for lesbians. Thus, it may be important for lesbian couples to overcome the barriers to maintaining a sexual relationship. We did not find independent predictors for heterosexual couples, and this may have been because of the smaller sample size.

### *Limitations of the Current Study*

This study focused on self-reports, and so we do not know the extent to which response biases influenced the results. It was also limited to civil union couples who were willing to let us contact same-sex friends and siblings. Thus, the sample was biased against couples who were not out to their siblings, were more socially isolated, or had no friends in same-sex relationships. Nevertheless, according to information on civil union certificates, our sample's sex ratio, race/ethnicity, and geographic distribution were similar

to those of the whole population of couples in civil unions. Thus, our participants were representative of the population from which they were drawn.

Any longitudinal study of this type has attrition over time, including attrition from relationship terminations, moves to undisclosed locations, and deaths. One advantage of our study was that by including friends and siblings of civil union couples, we could ask one couple for the new address, email, or relationship status of missing couples. Our comparisons of couples who did and did not return surveys at Time 2 showed that there was more attrition among younger and less educated couples. These couples may be more likely to move or change email addresses, or they may have less time to complete questionnaires.

Finally, only 10% of the sample consisted of people of color, and this corresponds to the racial and ethnic composition of the entire civil union population as well. Vermont is one of the only states that asks about race/ethnicity for same-sex couples legalizing their relationships, and the percentage of couples who have had civil unions in subsequent years has continued to be overwhelmingly European American (Richard McCoy, Vermont Department of Health, personal communication, April 21, 2006). Our research comparing same-sex couples who had same-sex marriages in Massachusetts, domestic partnerships in California, or civil unions in Vermont in 2004 (Rothblum, Balsam, & Solomon, in press), found that couples who choose to legalize their same-sex relationships in these three states were overwhelmingly European American. It is possible that people of color in same-sex relationships may be faced with the dilemma of choosing between the lesbian, gay, or bisexual communities and communities of color (e.g., Greene, 2000; Walters, 1998). For example, they may prefer to avoid the public step of legalizing their relationship in order to stay close to their families of origin. Further research is needed on people of color in same-sex relationships.

Finally, a 3-year period may not be long enough to detect differences between couples or to predict relationship quality. Some important developmental factors in the relationship may not become evident until 10 or 20 years after couples have had civil unions, and so continued longitudinal research is necessary.

Nevertheless, the methodology of the present study highlights the fact that it is important to conduct research on the course of interpersonal relationships over time. Traditionally developmental psychology has focused on individual rather than couple trajectories, yet couples also develop changes in satisfaction, compatibility, intimacy, and conflict as their relationships progress. Bronfenbrenner's ecological model (see Bronfenbrenner, 1979, for a review) and Sameroff's (1995) transactional model describe how environmental factors outside the relationship, such as legal, economic, and policy variables, can influence development. This is particularly important in light of the recent changes in same-sex couple legislation, changes that may become more prevalent as other U.S. states and other nations enforce such legislation.

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