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## Divorce in Norwegian same-sex marriages 1993-2011

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*Kenneth Aarskaug Wiik, Ane Seierstad and  
Turid Noack*

## **Divorce in norwegian same-sex marriages 1993-2011**



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## **Divorce in norwegian same-sex marriages 1993-2011**

**Abstract:**

Using longitudinal register data, we first present updated descriptive statistics on the total population of same-sex registered partnerships and marriages formed 1993-2010. Second, we investigate the divorce risk of these couples through 2011 and expect to find that the changing composition of same-sex partnerships has lowered their higher divorce risk. Results show that same-sex couples had a higher risk of divorce compared with opposite-sex married couples and that female couples were significantly more divorce prone than male couples. We found no evidence that the gender gap in divorce or the difference between same-sex and opposite-sex couples have narrowed over time.

**Keywords:** Divorce, registered partnership, same-sex marriage

**JEL classification:** J12

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## **Sammendrag**

I Norge har likekjønnede par siden 1993 kunnet inngå samliv på linje med ekteskap. I årene 1993-2008 i form av registrerte partnerskap og fra 2009 som ekteskap. I løpet av disse årene har det vært en økning i antall inngåelser fra i gjennomsnitt 127 per år på 1990-tallet til rundt 260 de to siste årene. I de aller siste årene har det skjedd en feminisering av de likekjønnede samlivene med en overvekt av kvinnepar fra 2006. Det har også vært en kraftig økning i andelen likekjønnede par med barn. I perioden 1993-2001 var det bare 6 prosent av parene som hadde ett eller flere felles barn mot 18 prosent i perioden 2002-2010. Det er i første rekke kvinnepar som har felles barn, om lag tre av ti i den siste perioden. I vår analyse inngår alle registrerte partnerskap og likekjønnede og ulikekjønnede ekteskap inngått 1993-2010. I utgangspunktet forventet vi at den kraftige økningen av kvinnepar med barn hadde redusert kvinneparenes overrisiko for brudd i tråd med at felles barn har vist seg å gi mindre skilsmisserisiko for ulikekjønnede par. Våre analyser viser imidlertid at likekjønnede par fortsatt har høyere skilsmisserisiko enn ulikekjønnede par. Blant likekjønnede par har kvinneparene betydelig høyere skilsmisserisiko enn mannlige par. Vi finner ingen endringer i disse forskjellene over tid.

# 1. Introduction

The Scandinavian countries were among the first to legally recognize unions between partners of the same sex. So-called registered partnerships, which were different in name but otherwise quite similar to heterosexual marriages, were introduced in Denmark in 1989, followed by Norway in 1993 and Sweden in 1995. In 2009, Norway and Sweden adopted fully gender neutral marriage legislations and gave those already living in registered partnerships the opportunity to convert their civil status to marriage.<sup>1</sup> In Denmark same-sex marriage became legally available in 2012. Currently, same-sex marriage is available in eight other countries as well as in Mexico City and seven U.S. states plus Washington DC (Chamie and Mirkin, 2011).

Registered partners have mostly the same rights and duties as married heterosexual couples in Norway and the registered partnerships are, in practice, same-sex marriages. Most importantly, the procedures for entering and dissolving registered partnerships and opposite-sex marriages are identical. In the first years, exceptions applied to solemnization of the union and to rights to joint adoption and to have medically assisted insemination. From 2002 step child adoptions were allowed, and from 2009 same-sex married couples and registered partners were given the opportunity to adopt children jointly and female couples could receive medically assisted insemination.<sup>2</sup>

Although there has been an increase in research on same-sex unions in recent years, there are few studies on union dissolution among couples consisting of two partners of the same sex (e.g., Peplau and Fingerhut, 2007; Van Eeden-Moorefield et al., 2011). Generally, large-scale quantitative studies on same-sex relationships are rare, and many of the studies that do exist face problems related to sampling or representativeness. The lack of representative samples is the most fundamental problem in quantitative studies on gays and lesbians which usually rely on self-recruited samples from an unknown population. Respondents are, for example, recruited by snowball methods, members of organizations for gays and lesbians, or persons who are willing to respond to Internet questionnaires. Such studies have often been conducted in the United States and they have typically recruited younger well-educated persons (Peplau and Fingerhut, 2007). Population surveys have been considered difficult because of the limited size of the target groups. Additionally, the sensitive character of same-sex relations and problems related to measurement of sexual identity (Black et al., 2000) has probably made it difficult to include it in questionnaires.

Despite such data challenges, there are some recent large-scale quantitative studies on union stability in same-sex relationships. Kalmijn, Loeve, and Manting (2007) used tax record data from the

Netherlands (0.6% sample of the total population) to study union dissolution among opposite-sex married couples and same-sex and opposite-sex cohabiting couples between 1989 and 1999. Their results showed that the dissolution rate for same-sex cohabiting couples was nearly 12 times higher than that for opposite-sex married couples and 3 times higher than the dissolution rate for opposite-sex cohabiting couples. Among same-sex couples, female couples were more stable than male couples (Kalmijn et al., 2007). A more recent study by Lau (2012) confirmed these findings using retrospective data from two British birth cohort studies, although this study relied on a small number of same-sex cohabiting unions ( $n = 263$ ).

In addition to a comparatively long history of legalized same-sex relationships, access to longitudinal and all-encompassing population register data makes it easier to study such relationships in Scandinavia than elsewhere. Analyses covering the period 1993 to 2002 (Norway: 1993 – 2001, Sweden: 1995 – 2002) showed that, overall, divorce risks were significantly higher in same-sex registered partnerships than in opposite-sex marriages. The divorce risk in unions of two women was, however, much higher than in those of two men: In both Norway and Sweden the divorce risk for female partnerships was twice that for male partnerships (Andersson, Noack, Seierstad and Weedon-Fekjær, 2006). Danish data covering the period 1989 to 2002 verify the higher divorce risk for female partnerships, but the difference between female and male partnerships was more moderate (Andersson and Noack, 2011). In Denmark there was also a slight difference in the period trends of divorce risks for male and female registered partners: The divorce risk have increased over calendar time for male unions whereas it decreased for female unions.

These initial divorce risk analyses were, however, from what can be described as a pioneering period of registered partnerships in Scandinavia, and same-sex couples who formalized their union in this period could differ in their behavior from those who registered in subsequent years. For instance, a substantial proportion of the pioneering cohorts of same-sex spouses may have cohabited for several years waiting for the registered partnership law to become effective. Also, in these first years, same-sex parenting was rather uncommon and the vast majority of the partnerships were male. In recent years there has been an increase in the number of same-sex couples with children, particularly among female couples, and the majority of new same-sex partnerships in Scandinavia now consist of two women (Andersson and Noack, 2011).

Using Norwegian population data linked with information from other administrative registers (e.g., children, education, and marital history), the current paper presents an updated analysis of divorce of

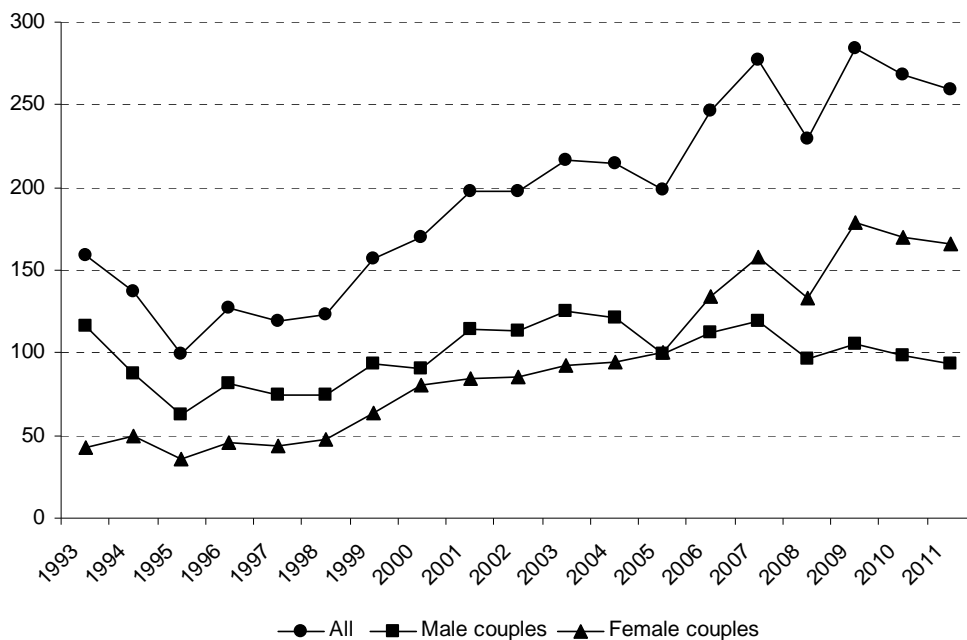


all same-sex registered partnerships and marriages in the period 1993-2011 ( $N = 3,422$ ). We are particularly interested in differentials in divorce by sexual orientation (same-sex vs. opposite-sex unions) and gender (male vs. female couples), and eventual changes in these differences over the study period. In addition, we investigate the correlates of divorce among these couples, among which we pay special attention to the importance of parenting. We also present updated descriptive statistics on the socio-demographic characteristics of the total population of same-sex couples who have legally formalized their unions.

## 2. Recent developments: More women and children

3,681 Norwegian same-sex couples (51% male) formalized their unions between 1993 and 2011, amounting to less than 1% of all marriages contracted in the same period. Of these, 811 (22%) were new same-sex marriages contracted 2009 to 2011. The annual number of newly registered partnerships and marriages is shown in Figure 1. After a spike in partnership registration in the first two years the annual number of new partnerships leveled out followed by an increase from around 1998. Figure 1 further confirms that from 2005 onwards the majority of new partnerships consist of two women. In 2009, when the gender neutral marriage law went into effect, there were 284 same-sex marriages in Norway of which 63% were female.

**Figure 1. Annual number of newly registered partnerships (1993 – 2008) and same-sex marriages (2009 – 2011).  $N = 3,681$ . Male ( $n = 1,875$ ) and female couples ( $n = 1,806$ )**

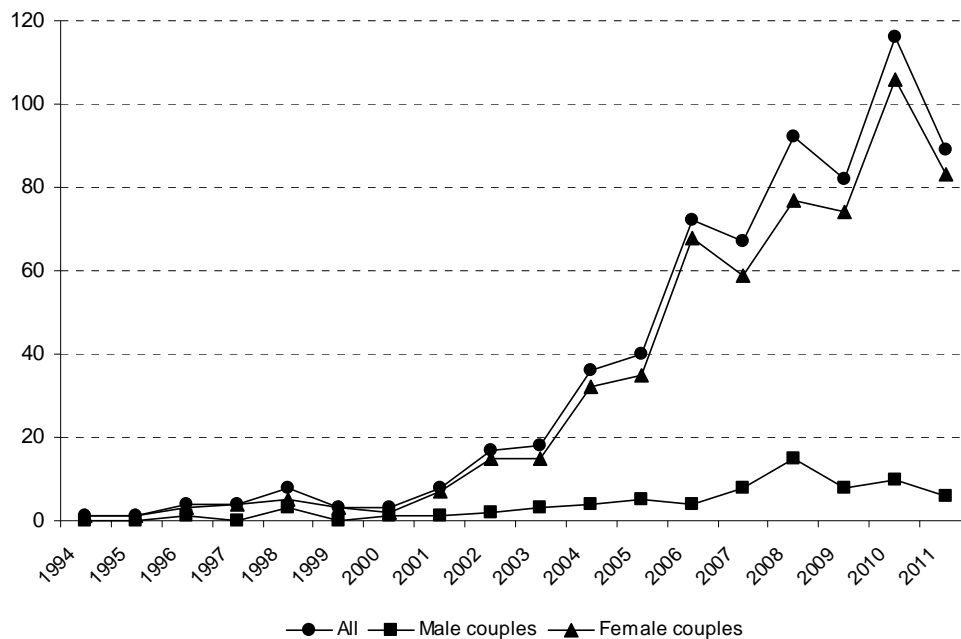


Although nearly one in five Norwegian registered partnerships contracted 1993 to 2001 involved partners who were parents at registration (Andersson et al., 2006), child rearing and childbearing within same-sex partnerships was relatively uncommon during the 1990s. In this period registered partners were not entitled to jointly adopt a child or to receive medically assisted insemination, although there is anecdotal evidence that some doctors gave this kind of treatment to lesbian couples. Additionally, many lesbian women have been inseminated artificially in Denmark, where insemination with donor sperm from anonymous donors has been available to single and lesbian women since 1999 (Stiklestad, 2011).

These exceptions have been moderated during subsequent years, and in 2002 Norwegian same-sex registered partners were allowed to adopt their partner's prior child(ren). With the introduction of the gender neutral marriage law in 2009, women living in same-sex relationships (marriage or registered partnership) could receive medically assisted insemination.<sup>3</sup> In 2009 same-sex couples who had formalized their unions were also given the right to jointly adopt a child. To be sure, this right remains almost illusory since there are very few Norwegian children for adoption.<sup>4</sup> Inter-country adoption is in practice impossible as sending countries unequivocally require that applicant couples are heterosexual. Also, surrogacy is prohibited in Norway, and it is currently discussed whether having children this way abroad, as some male couples have done, should be made punishable by law.

With the increase in the number of same-sex couples and perhaps more liberal attitudes to same-sex parenting, as well as liberalization of the laws concerning adoption of (step) children and artificial insemination of women, same-sex parenting has become more common. As illustrated in Figure 2, the annual number of children with parents who are living in a same-sex registered partnership or marriage in Norway has increased sharply, from only 3 in 2000 to 116 in 2010 and 89 in 2011. Parenting, here defined as being registered as parents to a child while living in a registered partnership or same-sex marriage (including children born prior to formalization of the union), is as expected, much more common among female than male couples. Taken together, only 71 children have so far been registered as children of couples consisting of two men compared with 590 to female couples (see Figure 2).

**Figure 2 Annual number of children in registered partnerships contracted 1993-2008 and same-sex marriages 2009-2011 ( $N = 661$ )**



The increase in same-sex parenting could be related to the divorce risk pattern. Currently, there are few studies on same-sex couples with children (Peplau and Fingerhut, 2007). To most couples, however, having a child together is a confirmation of their relationship and it could deepen and develop their intimate relationship, irrespective of their sexual orientation. At the same time parental stress can reduce relationship quality. Correspondingly, research on heterosexual men and women confirm that having children reduces relationship satisfaction but increases the commitment to the union (Wiik, Bernhardt, and Noack, 2009). Common children also reduce the divorce risk of heterosexual couples, at least when their number is limited to lower parities and children are relatively young (Lyngstad and Jalovaara, 2010). Having children from a prior relationship, on the other hand, has been found to increase the divorce risk for opposite-sex (Lyngstad and Jalovaara, 2010) and same-sex couples alike (Andersson et al., 2006).

Few studies have focused on the association between having children and relationship stability among same-sex couples, but recent results from Sweden indicate that lesbian women undergoing fertility treatment with previous children reported lower levels of relationship quality than those without prior children (Borneskog, Svanberg, Lampic, and Sydsjö, 2012). Goldberg and Sayer (2006) studied female couples with children in the U.S. and found that conflict increased with the transition to

parenthood, although there seems to be few differences in relationship quality between opposite-sex and same-sex couples with children (Peplau and Fingerhut, 2007).

### **3. Aims of the current analysis**

Using Norwegian population register data linked with information from other registers (e.g., children, education, and prior heterosexual marriage), we first present updated descriptive statistics on sociodemographic characteristics of all same-sex couples who formalized their unions from August 1993 to the end of 2010.

Then, we reconsider the divorce risk for these couples in the period up to the end of 2011. First, we assess differentials in the divorce risk of same-sex and opposite-sex unions. The fact that more same-sex couples choose to formalize their unions in itself implies that such relationships have become more normalized and accepted.<sup>5</sup> In addition, a longer observation period means that more same-sex registered partnerships have long duration (up to 18 years). Taken together, these developments could imply that the differences in union dissolution between same-sex and opposite-sex couples have decreased over time.

We then go on to investigate the gender gap in divorce among same-sex couples, and whether this gap has narrowed over the study period. Additionally, we study the correlates of divorce among Norwegian same-sex couples, and we pay special attention to the importance of same-sex parenting. We expect to find that the relative high divorce risk previously found for particularly female couples have decreased with far more female couples having children.

### **4. Data and method**

We used Norwegian register data on all same-sex registered partnerships and marriages in the period 1993 through 2011. To give all couples a minimum of one year exposure time, we restricted the current analyses to same-sex couples who formalized their unions from August 1 1993, when registered partnerships were introduced, through 2010 ( $N = 3,422$  couples, 52% male). The total population of opposite-sex marriages entered in the same period ( $N = 407,495$  couples) was included as comparison group.

To analyze the relative risk of divorce, we used event-history analysis. Cox proportional hazards models were estimated using the PHREG procedure in SAS, assuming a nonparametric underlying

time function. In the event-history analysis, each couple was followed from the day of partnership registration or marriage to the day of any registration of divorce, or to censoring due to the death of one of the partners, the emigration of both partners or the end of the last year for which we have data (i.e., 2011), whichever came first. The date of divorce corresponds to the date the divorce was legalized. In Norway there is normally a required separation period of minimum one year before a divorce can be granted.

In addition, the population data were supplemented with longitudinal register data on couples' education, children, geography, and marital history. Such linking of data is facilitated through a system of universal ID numbers. These personal identity codes are non-identifiable when used in research. (For more information on individual-level register data in Norway, see Røed and Raaum (2003).) First, we made a variable measuring whether couples were male, female or opposite-sex, with values 1 for male couples, 2 for female couples and 3 for married couples consisting of a man and a woman. Next, the influence of having common children on the divorce risk was captured by a time varying dummy variable measuring whether couples got at least one child/became registered as parents to a child after their union was formalized (1 = *yes*, 0 = *no*). We also included an indicator measuring whether (1) or not (0) one or both partners had any prior children with another partner. Year of partnership registration or marriage was included as a set of dummies, with 2008 serving as reference year in multivariate models.

We controlled for several other variables frequently included in studies of divorce among heterosexual couples (Lyngstad and Jalovaara, 2010; Steele, Kallis, Goldstein, and Joshi, 2005). Prior studies confirm that these variables are similarly related to divorce in same-sex couples (e.g., Andersson et al., 2006; Kalmijn et al., 2007; Lau, 2012; Noack et al., 2005). First, we included a variable measuring couples' education level at time of the partnership registration. This variable was grouped into five categories depending on whether both partners' were primary educated (up to 9 years of completed schooling) (1), whether one partner (2) or both partners (3) had completed a secondary education (up to 12 years of schooling), and whether one of the partners (4) or both (5) had completed any tertiary education (13 years +). Next, the mean age of the couple at time of the partnership registration or marriage was grouped into the following four categories: < 31 years (1); 31 – 35 years (2); 36 – 40 years (3), and > 40 years (4). Alternative specifications of the age variable yielded similar results in multivariate models. Age difference between the partners was grouped into three categories (< 4 years (1); 4 – 8 years (2); and 9 years or more (3)).

Furthermore, we included a dummy indicating whether one or both partners had experienced a prior heterosexual marriage (1) or not (0). Note that we have no information about immigrants' possible previous marriages contracted abroad. We further describe the geographical background of the partners, measured by citizenship at the time of partnership formation. Couples in which both partners were Norwegian (1) were distinguished from couples in which at least one partner was foreign (0). Last, we included a dummy measuring whether couples resided in the capital region (i.e., the counties of Oslo and Akershus) or not (1 = *yes*, 0 = *no*).

## 5. Results

### 5.1. Socio-demographic characteristics of Norwegian same-sex couples

Sociodemographic characteristics of couples are shown in Table 1. From this table we first note that 13% of Norwegian same-sex couples had one or more common children. Not surprisingly, parenthood, including adopted children, was far more common in female than male partnerships. 24% ( $n = 401$ ) of female couples had children compared with less than 3% ( $n = 49$ ) of male couples. The corresponding share among opposite-sex married couples was 72%. Also, 20% of the registered partnerships and same-sex marriages contracted 1993 – 2010 involved partners who had child (ren) from a prior relationship (25% of female couples and 14% of male couples). 36% of the opposite-sex married couples involved at least one partner who had one or more children from a prior relationship.

Next, we see from Table 1 that same-sex spouses were relatively old compared with opposite-sex couples: Nearly one third of the same-sex couples were at ages above 40 years when they married or registered their partnership, compared with 18% of opposite-sex couples. This could imply that some of these couples had been living together for a long period before formalizing their union. Regrettably, our data contain no information on eventual premarital cohabitation. Male couples were, however, substantially older than female couples: 35% of male partnerships involved partners with a mean age above 40 compared with 25% of the female couples. From Table 1 it is also evident that there were quite large age gaps between same-sex partners. This was particularly the case among male couples. For instance, the age difference between partners was 9 years or more in 40% of the male couples. Among female couples, on the other hand, 48% were similar in age (age difference of three years or less), which was similar to the share among opposite-sex couples (53%).

Regarding education, Table 1 shows that same-sex couples often have a high level of education. In 63% of the couples one or both partners had completed a postsecondary education (13 years or more

schooling). This was true for 69% of female couples and 57% of male couples, and a considerably higher fraction of female couples involved two tertiary educated partners. This was not surprising, given that a higher share of Norwegian women has completed a tertiary education compared with men among those born in the cohorts after 1960 (Statistics Norway 2012). Further, we see that cross-national partnerships were common: 32% of all same-sex couples involved one or two foreign partners. This was particularly the case for partnerships between men: 46% of male partnership included at least one non-Norwegian partner compared with 17% of female couples. For most of these couples, Norway must have been the only alternative of legalizing their union, since most foreigners who have entered into registered partnerships came from countries where same-sex marriage was not legalized (Andersson et al., 2006). Note, however, that permanent residency (at least one of the partners) was required to enter a registered partnership.

**Table 1. Socio-demographic characteristics of registered partnerships and marriages formed 1993 to 2010. Same-sex ( $N = 3,422$ ) and opposite-sex ( $N = 407,495$ ) couples**

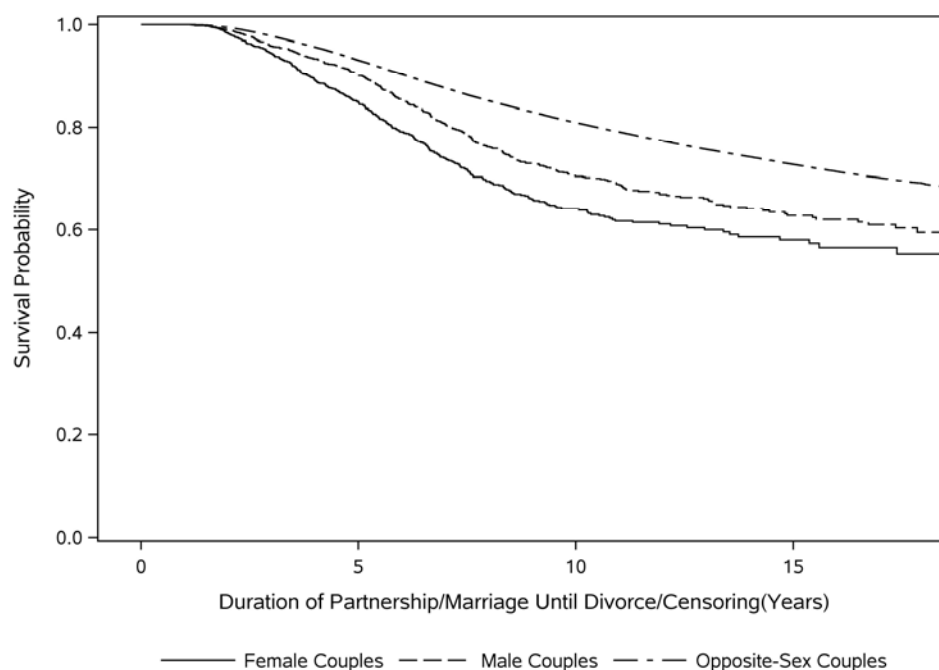
Variable	Same-sex couples			Opposite-sex couples
	All % or M (SD)	Male couples % or M (SD)	Female couples % or M (SD)	% or M (SD)
Year of registration/marriage	2003 (5.09)	2002 (5.11)	2004 (4.86)	2002 (4.89)
Children				
One or more	13.1	2.7	24.3	72.3
Prior Children				
One or more	19.7	14.4	25.4	35.6
Mean age of couple				
< 31	26.7	22.4	31.3	47.1
31 – 35	22.0	20.5	23.7	21.5
36 – 40	21.0	21.7	20.2	13.3
> 40	30.3	35.4	24.8	18.2
Age difference				
< 4	39.0	30.3	48.4	52.9
4 – 8	32.4	29.9	35.2	31.5
> 8	28.6	39.8	16.4	15.6
Couple's education				
Both primary	8.2	9.4	6.9	12.3
One secondary	18.5	22.8	13.8	21.3
Both secondary	10.4	10.4	10.3	19.2
One tertiary	34.4	37.7	30.7	27.3
Both tertiary	28.6	19.7	38.3	20.0
Nationality				
Both Norwegian	67.8	53.8	83.0	76.7
Prior heterosexual marriage				
One or both partners	18.5	15.3	22.0	29.2
Region of residence				
capital region	55.3	59.9	50.2	25.9
$N$ couples	3,422	1,782	1,640	407,495

Also, it is not uncommon for partners in same-sex unions to have had a previously heterosexual family life. Table 1 confirms that 22% of female partnerships included at least one partner who had been previously married to a man. The corresponding share among male couples was 15%. Additional analyses confirmed that there was no clear time trend in the share who had been married to a partner of the opposite sex (not shown in tables). Last, we note that same-sex couples were slightly over-represented in the capital region (55%) and male couples (60%) more so than female couples (50%). Opposite-sex married couples were evenly distributed throughout the country (26% resided in the capital region).

## 5.2. Divorce in same-sex marriages 1993 – 2011

746 same-sex couples (22%) who formalized their partnerships in the period 1993 to 2010 were divorced by the end of 2011. The distribution of the survival time of male, female, and opposite-sex couples as a function of the duration of the registered partnership or marriage (in years) is illustrated graphically in Figure 3.

**Figure 3. Survival time of registered partnerships and marriages 1993 – 2011**



From Figure 3 it is evident that a higher fraction of female couples (solid line) ended in a divorce compared with their male counterparts (dashed line). For instance, after seven years 26% of female partnerships were dissolved compared with 20% of male partnerships. At the end of the observation period (18 years) 45% of female and 40% of male partnerships contracted in 1993 were dissolved. In



comparison, 31% of opposite-sex marriages contracted in 1993 were dissolved by 2011 (see Figure 3, upper line).

The results from the multivariate event-history analyses of the relative divorce risks along with their 95% confidence intervals are presented in Table 2. The model of the divorce risk of all opposite-sex and same-sex couples including available controls in Table 2 (Model 1) shows, in accordance with the descriptive results, that female as well as male same-sex couples have a significantly higher divorce risk compared with opposite-sex couples. This was particularly true for female same-sex couples: Controlling for the presence of children, prior child(ren), couples' mean age, the age difference between partners, year of partnership formation, couples' educational attainment, marital history, nationality, and place of residence, the divorce risk of female couples was 2.28 times that of opposite-sex couples (C.I. 2.06 –2.53). The risk of divorce of same-sex male couples was, on the other hand, estimated to be 1.38 times the divorce risk of opposite-sex married couples (C.I. 1.25 –1.53).

As shown in the model including only same-sex couples in Table 2 (Model 2), the divorce risk of female couples was 1.71 times that of male couples. This gender gap in the divorce risks was similar in an alternative model without controls for common children or prior children (not shown). These models also include controls for year of partnership registration / marriage (not shown in tables). There were, however, no statistically significant differences in divorce risks between same-sex couples who entered their partnerships in 2008 (reference) and those who contracted their partnerships in the other years.

To investigate whether the differences in union dissolution between same-sex couples and opposite-sex married couples have decreased over time, we ran a supplementary model of all couples including an interaction term between union type and calendar year of marriage. Results from this model confirmed that there have been no statistically significant changes in the relative divorce risks of these couples across the study period (not shown in tables).

Similarly, to assess whether there have been any changes in the divorce risks of male and female same-sex couples over the study period, we included an interaction term between year of partnership registration and couples' sex in an alternative model including only same-sex couples (not shown in tables). This interaction effect failed to reach statistical significance at the chosen level ( $p < .05$ ), implying that the gender gap in divorce risks remained stable over time.

**Table 2. Divorce risks in registered partnerships and marriages formed 1993 to 2010**

Variable	Model 1: All couples		Model 2: Same-sex couples	
	Hazard ratio	95% C.I.	Hazard ratio	95% C.I.
Union type				
Opposite-sex couple	1.00	Ref.		
Same-sex male couple	1.38	1.25–1.53	1.00	Ref.
Same-sex female couple	2.28	2.06–2.53	1.71	1.44–2.02
Couple has child(ren)	0.58	0.57–0.59	0.65	0.48–0.87
Prior child(ren)	1.70	1.66–1.73	1.54	1.24–1.93
Mean age of couple (< 31 = ref)				
31 – 35	0.75	0.73–0.77	0.54	0.45–0.66
36 – 40	0.62	0.60–0.63	0.43	0.34–0.52
> 40	0.33	0.32–0.34	0.19	0.15–0.24
Age difference (< 4= ref)				
4 – 8	1.08	1.06–1.10	1.07	0.90–1.28
> 8	1.29	1.26–1.32	1.37	1.14–1.66
Education(both tertiary = ref)				
Both primary	2.52	2.44–2.60	1.63	1.22–2.18
One secondary	2.24	2.18–2.30	1.69	1.34–2.13
Both secondary	1.65	1.60–1.70	1.47	1.11–1.95
One tertiary	1.50	1.46–1.55	1.25	1.01–1.55
Both Norwegian	0.89	0.87–0.91	0.66	0.56–0.78
Prior heterosexual marriage	1.05	1.02–1.07	1.06	0.84–1.34
Lives in capital region	1.08	1.06–1.10	0.87	0.75–1.00
N couples	410,914		3,422	
N divorces	65,930		746	

Note: Both models include controls for calendar year of partnership registration / marriage.

The results regarding the other independent variables included in the models of Table 2 were in line with those found in prior research on divorce among opposite-sex (Lyngstad and Jalovaara 2010) and same-sex (Andersson et al., 2006) couples. For instance, couples with common children were significantly less divorce prone, as were older couples, the age homogamous and those with higher education. The divorce risk of couples in which one or both partners had children from a prior (heterosexual) relationship was, on the other hand, significantly higher than that of couples without any prior children. The data in Table 2 further show that same-sex as well as opposite-sex couples in which both partners were Norwegian, were significantly less divorce prone than couples in which one or both partners were foreign.

### 5.3. Correlates of divorce by union type

Separate models for same-sex male and female couples as well as opposite-sex couples are presented in Table 3 and show that the correlates of divorce were quite similar across the three union types. Having children, however, was positively related to divorce among male couples: Net of the other variables included, the risk of divorce of male couples with children was 76% higher than that of their

childless counterparts. But, as parenthood was far less common among male couples, this association barely reached statistical significance at the chosen level ( $p = .04$ ) and should be treated tentatively. Among women, on the other hand, being registered as parents to one or more children was associated with a statistically significant reduction in the divorce risk relative to childless couples. More precisely, the divorce risk of female couples with common children was estimated to be 51% lower than that of their childless counterparts. A similar reduction in the divorce risk was found for opposite-sex married couples with common children. In contrast, having one or more children from a prior relationship (one or both partners) was positively associated with divorce for male, female and opposite-sex couples alike.

**Table 3. Divorce risks in registered partnerships and marriages formed 1993 to 2010. Results from separate models for male, female, and opposite-sex couples**

Variable	Same-sex male couples		Same-sex female couples		Opposite-sex couples	
	Hazard ratio	95% C.I.	Hazard ratio	95% C.I.	Hazard ratio	95% C.I.
Couple has child(ren)	1.76	1.02–3.04	0.51	0.36–0.72	0.58	0.57–0.60
Prior child(ren)	1.49	1.03–2.14	1.48	1.10–1.98	1.70	1.66–1.73
Mean age of couple (< 31=ref)						
31 – 35	0.51	0.39–0.67	0.60	0.45–0.79	0.75	0.74–0.77
36 – 40	0.44	0.33–0.58	0.42	0.31–0.57	0.62	0.60–0.64
> 40	0.20	0.14–0.28	0.19	0.13–0.27	0.33	0.32–0.32
Age difference (< 4 = ref)						
4 – 8	1.09	0.82–1.43	1.05	0.83–1.33	1.08	1.06–1.10
> 8	1.56	1.19–2.04	1.15	0.85–1.54	1.29	1.26–1.32
Education (both tertiary=ref)						
Both primary	1.21	0.80–1.84	2.11	1.37–3.25	2.53	2.45–2.61
One secondary	1.35	0.95–1.90	1.87	1.35–2.59	2.25	2.18–2.31
Both secondary	1.24	0.81–1.91	1.63	1.11–2.39	1.65	1.60–1.70
One tertiary	1.07	0.77–1.49	1.35	1.01–1.80	1.51	1.46–1.55
Both Norwegian	0.58	0.46–0.74	0.82	0.62–1.07	0.89	0.88–0.91
Prior heterosexual marriage	0.88	0.61–1.28	1.23	0.91–1.66	1.04	1.02–1.07
Lives in capital region	0.81	0.66–0.99	0.89	0.71–1.10	1.08	1.06–1.10
<i>N</i> couples	1,782		1,640		407,492	
<i>N</i> Divorces	387		359		65,184	

Note: Models include controls for calendar year of partnership registration / marriage.

The results presented in table 3 further confirm that for both male and female couples there was a strong negative association between their age upon partnership registration or marriage and the divorce risk, and couples whose mean age of partners was more than 30 years were significantly less divorce prone than those aged 30 or less. We also note that male as well as female couples above 40 years had a significantly lower divorce risk than couples aged 31–40 years (i.e., non-overlapping confidence intervals). A similar negative age gradient was found for opposite-sex married couples.

Age difference between partners and nationality seems to be more important for divorce among male than female couples, findings that are not surprising given the larger age gaps between male partners and the higher share of male couples involving foreign partners. More precisely, the divorce risk of male couples in which the age difference between partners was 9 years or more was 1.56 times the divorce risk of age homogenous male couples (age difference of three years or less). The divorce risk of male couples involving two Norwegian partners was 42% lower than the divorce risk of male couples involving at least one foreign-born partner (see Table 3).

Among female same-sex couples, on the other hand, those in the lower education categories were significantly more divorce prone than couples in which both partners were tertiary educated. As among opposite-sex married couples, the divorce risks of same-sex female couples in which one or both partners' were primary educated was about twice that of couples in which both partners had completed a tertiary education. Similarly, the divorce risk of secondary educated couples (both partners up to 12 years of schooling) was 1.66 (female couples) and 1.65 (opposite-sex couples) times the risk of divorce of tertiary educated couples.

Further, we see from Table 3 that same-sex male couples residing in the capital region were significantly less divorce prone than male couples living elsewhere. The divorce risk of male couples living in the capital region was 19% lower than the risk of male couples living in other parts of Norway. Among opposite-sex married couples, on the other hand, living in the capital region was associated with a 8% increase in the risk of divorce compared with living elsewhere in the country.

## **6. Summary and discussion**

Previous studies from the Scandinavian countries have found that same-sex registered partnerships have a significantly higher divorce risk compared with opposite-sex marriages, and that female couples have a significantly higher divorce risk than their male counterparts (Andersson et al., 2006; Noack et al. 2005). These initial divorce risk analyses were, however, from an early period of registered same-sex partnerships (Norway: 1993 to 2001). In this paper we used updated information on the total population of Norwegian same-sex couples who formalized their relationships in the period 1993 to 2010 to investigate the divorce risk pattern of male and female registered partnerships and marriages. We hypothesized that a changing composition of couples, most importantly a longer observation period (1993 to 2011) as well as the increase in same-sex parenting, would lower divorce risks as compared with those found in earlier studies. Given that far more female couples have

common children we also expected to find that the gender gap in divorce risks would narrow over time.

3,422 same-sex couples (52% male) formalized their unions between 1993 and 2010, which is less than 1% of all marriages contracted in the same period. From 2005 onwards there has been a turnaround in the gender composition, and the majority of new same-sex registered partnerships and marriages now consist of two women. Descriptive results further showed that same-sex female and male couples differ in demographic and socio-economic characteristics. First, female couples more often involved a partner who had been previously heterosexually married: More than one in five female couples included at least one partner who had been married to a man previously. The corresponding share for male partnerships was 14%. In line with prior U.S. studies (e.g., Schwartz and Graf, 2009) we also found that female couples were more homogamous with respect to age, education, and nationality than was the case for their male counterparts. As shown elsewhere (e.g., Black et al., 2000; Carpenter and Gates, 2008), the same-sex couples studied here were relatively highly educated and more often lived in urban areas relative to opposite-sex married couples. More importantly, there has been a sharp increase in the number of same-sex couples with children, particularly so among female couples. By 2011, 661 children had been registered as children of a couple consisting of two women and one in five female couples had children. Only 3% of the male couples had children.

Contrary to what we expected, the results from the current study confirmed that same-sex couples still have a significantly higher divorce risk relative to opposite-sex couples and that female couples are more divorce prone than their male counterparts. In multivariate models where we controlled for several other characteristics of couples', like their age, education and the presence of children, male same-sex couples' risk of divorce was 38% higher than that found for opposite-sex couples. The risk of divorce of female same-sex couples who had legally formalized their unions, on the other hand, was more than twice the divorce risk of married couples consisting of a man and a woman. Comparing male and female same-sex couples, we found that the divorce risk of female same-sex couples was 71% higher than the risk of male couples. Alternative models confirmed that there have been no major changes in the divorce risks of male and female couples over the study period.

We further set out to assess the relation between same-sex parenting and divorce, which has been little studied in the literature on same-sex unions (Peplau and Fingerhut, 2007). Although controlling for children in our models did not reduce the higher divorce risk of same-sex couples relative to opposite-sex couples, our results did confirm that having one or more children significantly reduced the divorce

risk among female couples. Male couples with common children were, on the other hand, more divorce prone than male couples without children. This latter result was slightly unexpected, and should be treated as suggestive due to its marginal statistical significance. Nonetheless, it could be due to the fact that the very few male couples with children (49 couples/ 2, 7 % of male couples) are selected on (unknown) characteristics associated with divorce. Additional analyses of these couples revealed, for instance, that they were slightly younger and more often involved one or two foreign partners than male couples without children. Also, the process of getting a child could be especially troublesome for couples consisting of two men and this could be related to their subsequent excess divorce risk.

Unfortunately, the data we have used do not provide any clear answer to why there is a continuing gender gap in the divorce rates of Norwegian same-sex couples. Although we have information on the whole population of same-sex couples who formalized their relationships, and thereby avoid problems with non-response and other issues that often plague studies on same-sex couples, we lack information about norms, values and partners' commitment to the relationship and each other. Our data also lack information on whether these same-sex couples co-resided before marrying and the duration of any pre-marital cohabitation.

The results from the current paper are in line with prior studies using data from the Netherlands (Kalmijn et al. 2007) and UK (Lau, 2012) showing that same-sex cohabiting couples are significantly less stable than different-sex cohabiters. Contrary to our findings, however, these studies reported that among same-sex couples, female couples were less likely to dissolve than male couples. It is, however, important to bear in mind that these prior studies included same-sex cohabiting couples and that the divorce risk of same-sex couples who married probably differ from those who do not marry. The gender gap in divorce risk could nonetheless reflect gendered patterns in the initiation of divorce, regardless of sexual orientation. For instance, prior studies on heterosexual married and cohabiting couples show that women are more sensitive than men to relationship quality and initial problems within marriage (Amato and Rogers, 1997), and that they overall are less satisfied with their relationships than men (e.g., Wiik et al., 2009). Consequently, women have also been found to be more likely than men to initiate divorce (Kalmijn and Poortman, 2006).

We believe, however, that the most important reason for the excess divorce risk among female couples lies in differences in the motives of lesbians and gays for marrying or entering a registered partnership in the first place. That is, male couples could have a higher threshold for formalizing their union than

is the case for female couples, perhaps reflected by their higher mean age upon registration. Also, as male couples were somewhat older upon partnership registration or marriage, they may have had time to test their relationship before formalizing it. This assumption has been confirmed in the US, where Carpenter and Gates (2008) found that male couples who officially registered their partnership reported longer relationship and cohabitation lengths than their female counterparts. There could, in other words, be a stronger selection of the most committed male couples than what is the case for female couples. Given the unknown nature of the total Norwegian population of gays and lesbians it is, however, difficult to verify how selected the same-sex couples who have chosen to formalize their unions really are and whether there also are differences in the union stability of male and female dating and cohabiting couples. As we have used data on same-sex couples who have legally formalized their unions, we must leave explorations of such aspects to future research.

## Notes

1. As the registered partnerships amounted to a *de facto* same-sex marriage, the right to convert registered partnerships to same-sex marriages was mainly a symbolic act. Additional analyses of the data used in the current paper showed that as much as 35% of the intact partnerships registered between 1993 and 2008 had been converted to same-sex marriages by the end of 2011 (28% of male and 44% of female partnerships).
2. With the introduction of the gender neutral marriage law, faith communities were also allowed, but not required, to wed same-sex couples. As of today, no churches will wed same-sex couples.
3. In Norway, artificial insemination is currently available to women who are married/ registered partners or live in a stable cohabiting relationship. However, it is only allowed to get inseminated with sperm from a known donor.
4. In the period 2000-2011 only 499 adoptions (6% of all adoptions) involved Norwegian children (including foster children). 72% of all adoptions in this period were inter-country adoptions whereas 22% were step-children adoptions (Statistics Norway, 2012a).
5. Indeed, results from several polls and surveys suggest that the majority of the Norwegian population supported the introduction of the gender neutral marriage law, and that the share agreeing that gays and lesbians should have the same rights as heterosexuals has increased. For instance, results from the Norwegian Gender and Generations Survey show that 33% of the respondents (strongly) disagreed to a statement that same-sex couples should have the same rights as opposite-sex couples. Among those aged 40 or less the comparable share was 27% (Authors' own computations).



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