SEX DIFFERENCES IN RELATIONSHIP CONFLICT AND RECONCILIATION

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Abstract. Friendships and other relationships are crucial to human fitness, yet such relationships often terminate acrimoniously. We explore the pattern of relationship conflict, and the processes of reconciliation that are used to repair them. In this sample, an individual fell out with one member of their extended network, on average, every 7.2 months. Conflict with very close family is surprisingly high; nonetheless, most conflicts involve unrelated individuals (friends, colleagues), suggesting that kin relationships are relatively more buffered against the stresses that trigger conflict (reflecting the "kinship premium"). Around 40% of conflicts remain unreconciled after a year. There were striking sex differences in the intimacy of the relationships involved in breakdown, and the precipitating causes, as well as whom participants reported falling out with. These patterns may reflect women's preference for fewer, more intimate (and correspondingly more fragile) relationships. The functional origins of this gender difference are not well understood.

Keywords: social network, gender differences, relationship breakdown, conflict, reconciliation

INTRODUCTION

Most studies of social relationships have typically focussed on a small number of emotionally close ties such as intimate friendships, romantic partners or parent–offspring relationships (PIPP et al. 1985; SIMPSON 1987; SHACKELFORD and BUSS 1996; WELLMAN et al. 1997; OSWALD and CLARK 2003; CUMMINGS et al. 2006; HALL 2011). However, individuals' social networks extend far beyond this limited circle of intimate relationships, and typically encompass a series of layers or circles of acquaintanceship that successively include approximately 5, 15, 50 and 150 individuals (HILL and DUNBAR 2003; ZHOU et al. 2005; SUTCLIFFE et al. 2012). We have little idea how far the findings from studies of particular relationship types generalise to this wider circle of relationships.

More importantly, on average approximately half of an adult's social network consists of family (including extended family and in-laws) (ROBERTS et al. 2009). Kinship has rarely featured as a variable of interest in social psychology (other than in the rather narrow terms of parent–offspring or sibling rela-

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tionships). There are good theoretical as well as empirical reasons to suppose that kinship relationships, even of the most extended kind, behave in a very different way to friendships at a psychological level: they typically involve absolutely higher levels of altruism (the "kinship premium") (MADSEN et al. 2007; CURRY and DUNBAR 2011; CURRY et al. 2012) as well as being more robust to decay in the face of under-investment (ROBERTS et al. 2009, 2011a,b; BURTON-CHELLEW and DUNBAR 2011).

Similarly, while it is well known that there are striking gender differences in friendship style (BLIESZNER and ADAMS 1992; WINSTEAD and GRIFFIN 2001; but see JOHNSON et al. 2003; BECKER et al. 2009), this has been based typically on differences in close friendships ("best friend"). Compared to men's close friendships, women's tend to be more intimate (BLIESZNER and ADAMS 1992; DINDIA and ALLEN 1992; O'CONNOR 1992; WRIGHT 1998; WINSTEAD and GRIFFIN 2001), involve higher expectations (HALL 2011; MACHIN and DUNBAR 2013) and are more fragile and prone to catastrophic failure (BENENSON and CHRISTAKOS 2003). We have little idea how widely these effects are distributed in the different kinds of relationships that populate social networks.

ARGYLE and HENDERSON (1984) argued that that there are six fundamental cross-culturally significant rules of friendship, the breaking of which lead to a reduction in intimacy and, ultimately, a complete breakdown of the friendship. These are the failure to: stand up for a friend in their absence, share important news, provide emotional support, trust and confide in each other, volunteer help when required and work to make the other person happy. Though couched in different terms, our results broadly concur with these (see CURRY and DUNBAR 2013). At a finer level of analysis, ARGYLE and HENDERSON (1984) reported that, when recalling lapsed relationships, respondents were more likely to attribute negative behaviours to the other person and positive ones to themselves, that younger subjects (i.e. those under 20 years of age) attached more significance to public criticism than older subjects did, and that women placed a high level of importance on failure to apportion time equally and give positive regard and emotional support, whereas men placed a greater emphasis on being the target of jokes or public displays of teasing. However, as with many other studies, ARGYLE and HENDERSON (1984) limited their interest to a particular kind of relationship, namely "good friends".

The number and quality of relationships that an individual has have important implications for both wellbeing and fitness in humans (SPENCE 1954; BERKMAN 1984; KAPLAN and TOSHIMA 1990; HOUSE 2001; ADAMS et al. 2002; FOWLER and CHRISTAKIS 2008; REBLIN and UCHINO 2008; SMITH and CHRISTAKIS 2008) as well as in nonhuman primates (SILK et al. 2003, 2009; WITTIG et al. 2008). Since relationship breakdown is likely to have significant implications for an individual, we might expect individuals to exhibit some care

both in whom they fall out with and how much effort they put into attempts at relationship repair. Most studies of conflict and relationship breakdown in humans have used either vignettes based on hypothetical events ["How would you feel if Y did …?"] (e.g. ARGYLE and HENDERSON 1984; SHACKELFORD and BUSS 1996) or in-depth interviews with inevitably limited numbers of subjects (e.g. ROSE and SERIFICA 1986). Although vignette studies have been a valuable tool in social psychology, ecological validity is always an issue, particularly when the events of interest are rare, or may not have been experienced.

An important aspect of relationship conflict is whether or not some form of reconciliation subsequently takes place. Reconciliation can be seen as an adaptive strategy used to repair or restore weakened or severed relationships when one or both parties want the relationship to continue. Although extensively studied by primatologists in the context of the maintenance of social relationships in monkeys and apes (AURELI et al. 1989; DE WAAL 1993; AURELI 2000; SILK 2002; WITTIG and BOESCH 2005), the topic has only very rarely been explored in the human literature.

Here, we use an internet sample to test a number of hypotheses about real-life relationship conflicts or "falling outs" and subsequent reconciliation across all layers of individuals' social networks. We explore both the wider distribution of relationship conflict within extended personal social networks and how the causes and subsequent reconciliation vary. Specifically, we examine the frequency and distribution of conflict with respect to kinship and friendship status to test the hypotheses that (1) close family relationships will be more robust to conflict than less close family relations; (2) kinship relationships will be more robust than friendships (reflecting a kinship "premium"); and (3) that there will be gender differences in these that reflect the tendency for women to have closer, more intimate and hence more fragile relationships than men. We examine the causes of relationship conflict, and test the hypothesis (4) that more valuable relationships are more likely to be reconciled (as commonly found in the primate literature).

METHODS

Participants

Participants were recruited using two website depositories (http://psych.hanover.edu/research/exponnet.html and http://www.socialpsychology.org/expts.htm). In total, 540 participants (428 female, 112 male) aged 18 and over completed the questionnaire. The mean age was 27.7 ± 9.9 SD years (range 18–69). Of the 540 participants, 427 were currently in full-time education, and 363 were currently in a romantic relationship.

Questionnaire

Participants completed an anonymous questionnaire online (see Appendix 1). They first provided brief personal details (age, gender, whether or not they were in a romantic relationship, and whether or not they were in full-time education) before listing all the cases of "severe falling-out" they had had in the last week, in the last month, and in the last year. Specifically, they were asked to answer "Yes" or "No" to the following:

> *"Please think of all the people that you know at least well enough to say "hi" to if you met them in the street, shop or bar/cafe. Have you had any serious disagreements or 'fallings out' with any of these people in the last 7 days/30 days/12 months? (please do not include people that you have been receiving or providing a service from/to, such as tradesmen or shop-assistants for example)."*

If the participant answered "Yes", then he/she was taken to a screen that asked a series of questions about the incident(s), its causes and whether or not the relationship was reconciled, and about the other person involved (gender, age, etc.). For each incident, they were asked to estimate, on a 0–10 analogue scale (0 neutral, 10 intensely close/intimate), the current emotional closeness (EC) they felt to the person concerned (see KORCHMAROS and KENNY 2001; ROBERTS and DUNBAR 2011b), and how close they had felt (on this same scale) before the incident. This emotional closeness index correlates closely with frequency of contact (ROBERTS and DUNBAR 2011a) and with prosocial tendencies (CURRY et al. 2012). They were also asked to specify how the falling out had occurred (face-to-face in private or in public, or by phone, email, text message or instant messaging) and whether or not the relationship had subsequently been reconciled (and, if so, how: see Appendix 1). For ease of analysis, the list of possible reconciliation events were collapsed into four broad categories: still unreconciled at the time of the survey, non-physical forms of reconciliation, physical forms (including physical interaction and gift-giving) and apologies (see Appendix 2).

As a check that our respondents were a natural sample, they were asked to list the number and sex of their inner core 'support clique' (DUNBAR and SPOORS 1995). This has an average size of five individuals, with an approximately even split between family and friends and a homophilic sex bias, in the wider population (ROBERTS et al. 2009). The support clique is cued by asking respondents to list everyone to whom they would go to in times of extreme social, emotional or financial distress; respondents were allowed to list as many individuals as they wished up to a maximum of 15 (the normal upper limit on this category of relationship).

The study was approved by the Oxford University human research ethics committee.

Analyses

As our response variables were often counts, we fitted Generalized Linear Models (GLM), with a Poisson log-linear link, and tested for the significance of model effects using Wald's Chi-Square. We controlled for over-dispersion by scaling parameter estimates using Pearson's χ^2. The parameter estimation method was a Fisher-Newton-Raphson hybrid and the covariance matrix used a model-based estimator.

RESULTS

Descriptive statistics are given in *Table 1*. The two genders do not differ on any of the measures, except (as is to be expected from homophily: MCPHERSON et al. 2001; ROBERTS et al. 2008) in the proportion of females in the support clique (the set of typically ~5 closest relationships: SUTCLIFFE et al. 2012) ($F_{1,538}$ = 24.1, $p < 0.001$). As with the wider network (ROBERTS et al. 2009), about half of the inner core of five strongest relationships (the support clique) are family.

Table 1. Descriptives for main variables

Variable	Males	Females
Sample size	112	428
Mean age (years)	28.2 ± 9.3	27.6 ± 10.0
Maximum age (years)	69	64
Size of support clique* (mean ± SD)	5.0 ± 3.1	5.3 ± 3.2
Females in support clique (%)	49%	62%
In an active romantic relationship (%)	63.4	68.2
In education (%)	80.3	79.4
Number of reported relationship breakdowns	1.54 ± 2.36	1.71 ± 1.52
Relationship breakdown subsequently reconciled (%)	52.6	53.7
Mean (±SD) EC to support clique members	7.8 ± 2.0	8.1 ± 1.5
Mean (± SD) age of support clique members	40.9 ± 10.9	39.7 ± 10.1

* Number of individuals in closest circle of relationships (support clique, as defined by DUNBAR and SPOORS [1995])

Frequency of incidents

Of the 540 participants, 127 participants reported no incidents of falling out with members of their extended social networks within the previous year *(Figure 1)*. The remaining 413 reported a total of 902 cases, an average of 2.18 incidents each for those individuals who reported at least one incident, or 1.67 ± 0.074 each on average for all 540 participants. The two sexes do not differ significantly in terms of the number of reported incidents (*Tables 1* and *2: $F_{1,412} = 0.02$, $p = 0.884$*).
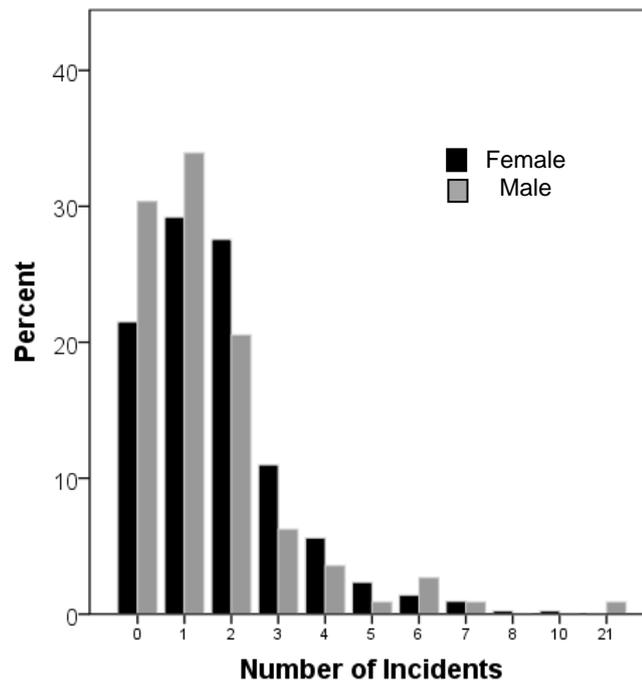

Figure 1. Frequency with which falling-out events were reported per respondent.
Sample: 428 females and 112 males

Overall, respondents were more likely to recall (or report) incidents that had occurred recently *(Table 2),* perhaps because of a reporting bias when the rawness of a very recent relationship breakdown prompted them to complete the questionnaire. Thus, while the data on "last month (excluding last week)" and "last year (excluding last month)" provide upper and lower bounds on falling-out rates (6.07 and 0.87 relationship breakdowns per respondent per year, respectively), the latter is probably the more reliable estimate.

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Table 2. Total incident count for different time periods listed by respondents

Time period	Total incidents reported	Number of respondents	Mean events per respondent	Rate/year
Last week	280	540	0.52	
Males	57	112	0.51	27.04
Females	223	428	0.52	
2–4 weeks ago	191	540	0.35	
Males	44	112	0.42	6.07
Females	144	428	0.34	
5–52 weeks ago	431	540	0.80	
Males	68	112	0.61	0.87
Females	363	428	0.85	

Whom did participants fall out with?

Although a wide range of kin and non-kin relationships might also be involved and a surprisingly high number involved very close family (parents, siblings) *(Figure 2),* in fact most incidents (73%) involved non-kin. Since extended social networks are typically evenly divided between kin (including affines) and non-kin (ROBERTS et al. 2009), this suggests that kin relationships are buffered – even if not wholly protected – against conflict. Nonetheless, between them, the three closest relationships that anyone can have (parent, romantic partner and best friend) accounted for 34.3% of all incidents, in roughly equal proportions.

There was a marked gender bias in whom respondents fell out with (*Figure 2:* $2 \times N$ $\chi^2 = 48.4$, $df = 23$ relationship types, $p = 0.001$). Females recorded incidents with individuals in all 24 categories of relationship listed in the questionnaire, whereas males recorded incidents with only 14 of these. Women were more likely than men to fall out with an offspring, a romantic partner, a non-best friend or any relative other than a full sibling, whereas men were more likely than women to fall out with a full sibling, a colleague or a housemate. There was no difference between the two sexes in the relative frequency with which they fell out with any of their five closest friends.

There was evidence for gender-bias in the sex of the person with whom respondents fell out. The 112 males reported incidents with 80 males and 92 females, while the 428 females reported incidents with 297 males and 435 females. The distribution is significantly different from an even sex split (2×2 χ^2 with equal sex distribution: $\chi^2 = 26.9$, $df = 1$, $p = 0.0001$), with the females be-

ing solely responsible for the significant departure from equality. These data suggest that men do not discriminate as strongly as women do between the two sexes in respect of whom they fall out with, whereas females are much more likely to fall out with another female. These data thus seem to confirm that female–female relationships may be more fragile, as has been previously suggested in the literature.
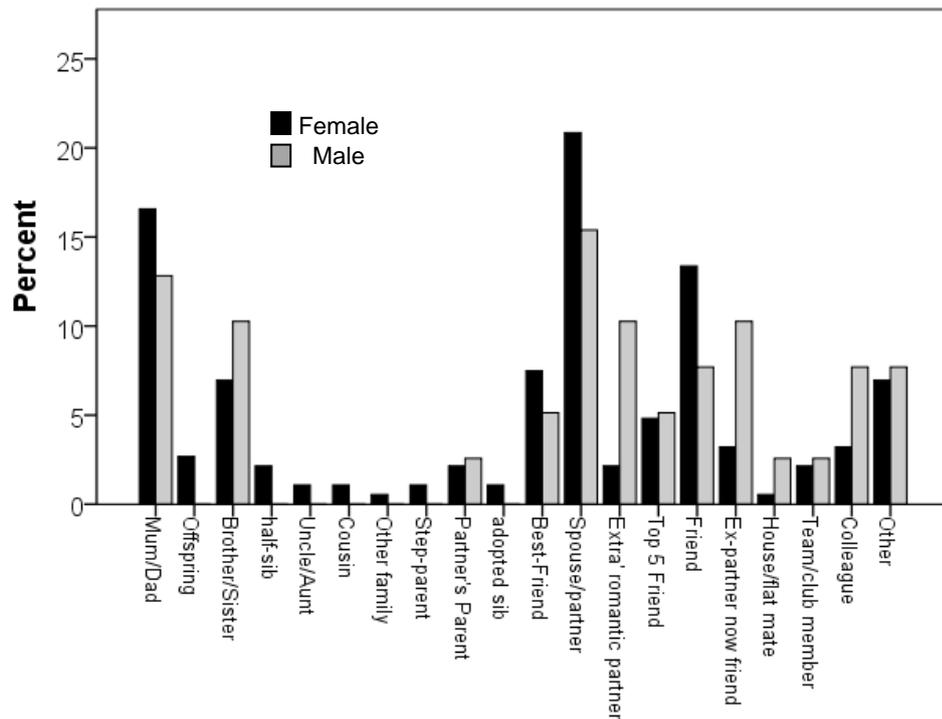

Figure 2. Frequency distribution of the relationships that broke down. Only the 19 most frequently listed of the 24 categories of relationships respondents were offered are shown

There was a bimodal distribution in the duration of the relationship at the time of falling out. Respondents had typically known the person they fell out with either for a relatively short time (~2 years) or for much of their lives *(Figure 3)*. However, there was no significant difference between the sexes in duration of relationship prior to breakdown ($\chi^2 = 18.05$, *df* = 15, *p* = 0.260).

The duration of a relationship is a potential confound in respect of kinship because family are likely to have been known for longer than friends, and thus have had more time to accumulate sufficient numbers of petty conflicts to trig-

ger breakdown. *Figure 4* tests this by plotting the cumulative frequency of relationship duration, frequency of contact (an index of familiarity) and emotional closeness in the relationship for conflicts with kin and non-kin. Conflicts with non-kin occur significantly earlier in a relationship than conflicts with kin (*Figure 4a:* $F_{1,692} = 34.0$, $p < 0.001$) and in relationships with significantly higher levels of emotional closeness (*Figure 4c:* $F_{1,681} = 33.6$, $p < 0.001$), but there is no difference between kin and non-kin in respect of frequency of contact (*Figure 4b:* $F_{1,691} = 0.6$, $p = 0.450$). We interpret this as indicating that kin are more tolerant or forgiving of each others' behaviour than are non-kin, and thus take longer before a severe conflict occurs, but that emotionally close relationships are more at risk than less close ones.
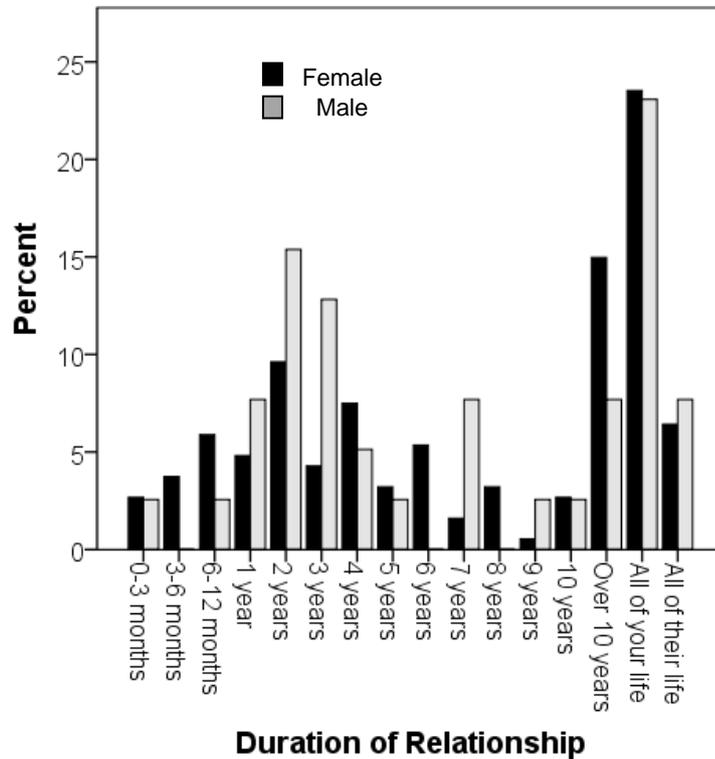

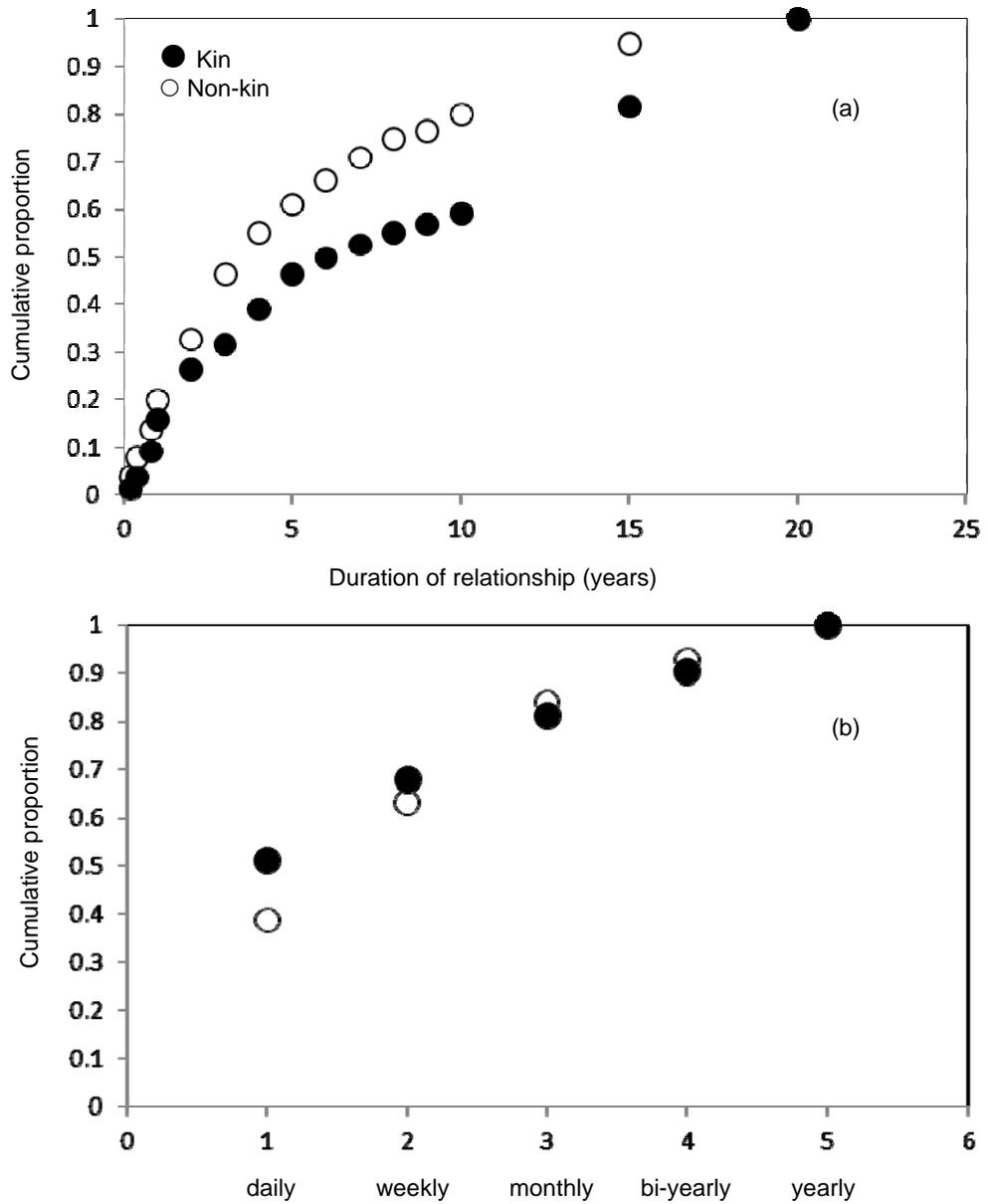*Figure 3.* Frequency distribution of the duration of the relationship at the time of breakdown

Figure 4. Cumulative frequency of (a) duration of relationship, (b) frequency of contact (familiarity) and (c) emotional closeness for kin and non-kin relationship breakdowns. Sample: 301 kin and 393 non-kin
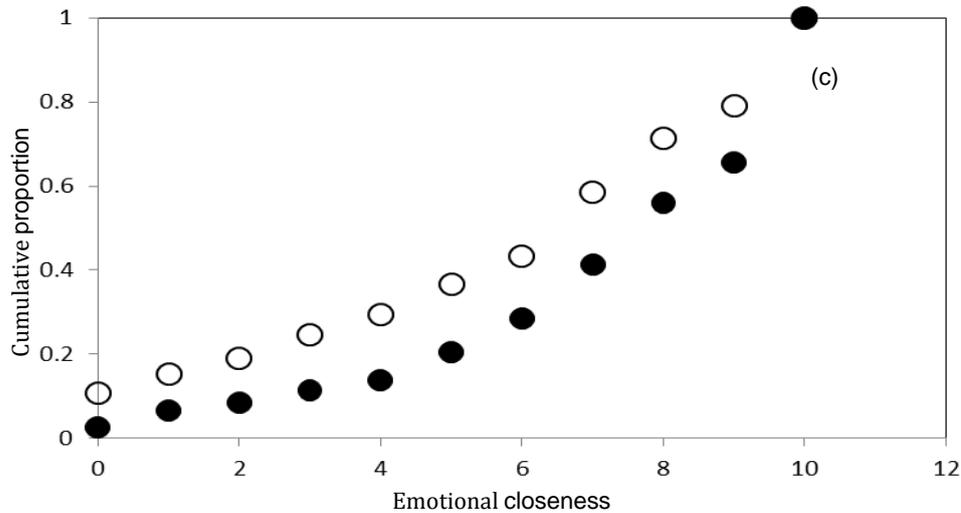
Figure 4. (cont.)

Causes of conflict

Figure 5 summarises the reported causes of conflict. Taken together, the three most common causes, accounting for 53% of all incidents, were: *perceived lack of caring/interest by alter*, *poor communication* and *jealousy/envy*. By comparison, the other causes were noticeably less frequent, accounted for more or less the same number of incidents and were broadly rather non-specific (*cultural differences*, *just drifted apart*, *tiredness*). The two sexes did, however, differ in what they reported as the causes of relationship breakdown ($\chi^2 = 21.98$, *df* = 11 conflict categories, *p* = 0.025). Men were more likely to report drifting apart, alcohol/drugs, competition from rivals and other people's comments ("stirring") as causes of conflict, whereas women were more likely to report poor communication, jealousy and tiredness as causes.

Reconciliation

Of the 904 reported incidents, 382 (42.9%) remained unreconciled at the time of the survey. The frequency with which relationships were reported to have been reconciled after falling out was marginally significantly higher in females than in males (*Table 1:* $\chi^2 = 3.65$, *df* = 1, *p* = 0.056). However, when reconciliation

did occur, there were no gender differences in the mode of reconciliation (χ^2 = 3.70, df = 2, p = 0.157). For both sexes, a non-physical mode (discussion, making reparation, carry on as normal) or an apology were each 3–4 times more likely to be used than a physical mode of reconciliation (giving a gift, physical contact or other forms of interaction such as laughter).
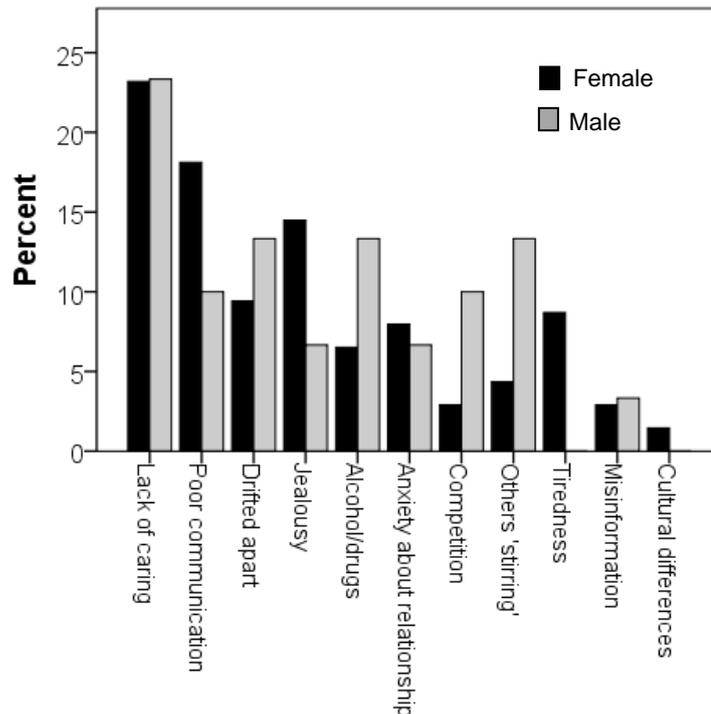

Figure 5. Frequency distribution of the most important causes of relationship breakdown

The rate of reconciliation did not vary across the sample time periods (last week: 40.7% unresolved; weeks 2–4: 39.3%; weeks 5–52: 41.9%). There is no substantive difference between the genders in respect of whether or not a relationship was reconciled in the first two time periods (last week: χ^2 = 0.10, df = 1, p = 0.754; last month: χ^2 = 0.10, df = 1, p = 0.758), but males were significantly more likely to have reconciled a relationship during the past year (χ^2 = 8.84, df = 1, p = 0.003). It seems that, if it is going to happen at all, reconciliation is most likely to occur within the first month: the weekly probability of reconciliation declines dramatically thereafter (first week: 0.4; weeks 2–4: 0.13; weeks 5–52: 0.009). Overall, these data suggest that, on average, an individual

can expect to have one terminal (i.e. unreconciled) relationship breakdown every 2.33 years. Women were marginally less likely to have reconciled a conflict than men ($\chi^2 = 3.815$, $df = 1$, $p = 0.051$), but there was no difference in reconciliation rates with alters of different sex (women: 46.6% vs 40.9% unreconciled conflicts, respectively, for female and male alters; men: 37.1% vs 32.9% for female and male alters). Splitting conflicts by type of relationship suggests that there is no difference in the relative frequency of reconciliation for best friends and parents compared to all other relationships *(Table 3),* but reconciliation with spouses/partners was more likely to involve reconciliation following an apology and less likely to be unreconciled than were other categories of relationship ($\chi^2 = 51.1$, $df = 3$, $p < 0.0001$).

Table 3. Frequency of reconciled breakdowns for different relationship types (both sexes combined)

Relationship	Mode of reconciliation			
	Unreconciled	Non-physical	Physical	Apologies
Spouse/partner*	35 (25.5%)	30 (21.9%)	18 (13.1%)	54 (39.4%)
Best friend	33 (45.2%)	20 (27.4%)	5 (6.8%)	15 (20.5%)
Parent	48 (39.7%)	31 (25.6%)	10 (8.3%)	32 (26.4%)
Other	265 (47.3%)	112 (20.0%)	39 (7.0%)	144 (25.7%)

* includes extra-pair romantic partner

Of the unreconciled relationships, there were 82 for which an apology had been tendered by one party but refused by the other. There was a striking reporting bias in this, however: 55 (67.1%) of the refusals were attributed to the other party and only 32.9% due to the respondent ($\chi^2 = 9.6$, $P = 0.002$). In contrast, apologies that had been accepted were more evenly balanced: of the 117 apologies that had been accepted, 60 (51.2%) were accepted by the other party in response to an apology by the respondent and 48.8% were apologies by the other party that had been accepted by the respondent ($\chi^2 = 0.8$, $df = 1$, $P = 0.782$).

Figure 6 plots the change in emotional closeness (EC_{Before} minus EC_{Now}), as a function of reconciliation category and participant gender. A GLM with change in EC as the dependent variable and reconciliation condition and gender as fixed factors yields a significant overall model ($F_{7,871} = 18.69$, $p < 0.001$), with significant partial effects for both reconciliation condition ($F_{3,871} = 20.48$, $p < 0.001$) and gender ($F_{1,871} = 3.92$, $p = 0.048$), but no interaction effect

($F_{3,871} = 0.95$, $p = 0.416$). Planned post hoc tests reveal a significant difference between *Unreconciled* and the other three conditions (Scheffé tests: $P < 0.001$), but no differences between the three reconciled conditions. The change in emotional closeness is significantly greater if the incident remains unreconciled, but mode of reconciliation itself does not seem to matter greatly. The sex differences are confined to the *Unreconciled* and *Apologies* conditions (pairwise *t*-tests with unequal variances: *Unreconciled*, $t_{93.4} = -2.19$, $p = 0.031$; *Non-physical*, $t_{43.2} = 0.13$, $p = 0.894$; *Physical*, $t_{29.7} = -0.44$, $p = 0.647$; *Apologies*, $t_{130.2} = -3.17$, $p = 0.002$). Overall, women are less likely to report that the relationship returned to its previous emotional level than men are, and women appear to respond more negatively than men to both a failure to reconcile and a simple verbal apology.
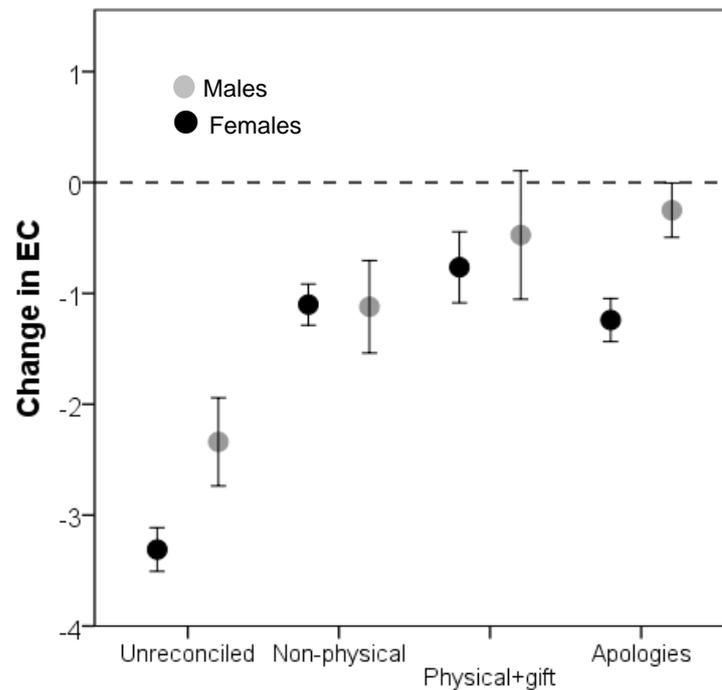

Figure 6. Change in emotional closeness (EC, indexed on a 0–10 scale) following a relationship breakdown (EC before the incident minus EC at the time of the sample) as a function of whether or not, and how, reconciliation occurred

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DISCUSSION

On average, an individual has a major falling out with a member of their extended personal social network nearly twice a year, somewhat more of these being with non-kin members of their social network than with kin. Of these, 40% remain unreconciled and are effectively lost (or at least, remain unreconciled for some considerable time). Two points are worth noting. First, although the majority of incidents involve non-kin (broadly confirming hypothesis (1)), in fact the *risk* per individual is much higher for emotionally close family and friends (those within the inner two layers of the personal social network). Second, a significant proportion (almost 40%) are with individuals with whom the individual has had a long term relationship (more than 10 years: *Figure 3*). Contrary to hypothesis (2), close family relationships were not necessarily protected against conflict compared either to more distant kin in the outer layers of the network or to friends – even though, overall, relationships with non-kin were more likely to involve conflict than those with kin (i.e. there is a "kinship premium"). Nor were close friends protected more than the wider circle of acquaintances: if anything, the reverse was the case. This probably reflects the fact that close relationships involve more opportunities for conflict and hence greater likelihood that the boundary of acceptable behaviour is transgressed. That boundary may also be higher for close relationships (SUTCLIFFE et al. 2012), especially for non-kin where the relationship is not protected by a kinship premium.

Previous studies have suggested that the natural rate of relationship decay is consistently higher in friendship than in family relationships (BURT 2000; ROBERTS and DUNBAR 2011a, b). In general terms, the probability of decay is negatively related to the length of the relationship, the age of the individual concerned and the extent to which the two individuals are embedded within a wider, stable, shared social network, but is positively related to changes in circumstances that decrease opportunities for interaction and increase the costs of investment (e.g. adolescents moving to college or university) (BURT 2000; OSWALD and CLARK 2003; ROBERTS and DUNBAR 2011b). Our results do not address these processes directly, but it is clear that they may well underpin the single most common cause of conflict in our sample (namely *lack of caring* [i.e. loss of interest in the relationship and reduced motivation to make the effort to interact]). However, this cause accounts for under a quarter of all cases; in fact, most of the conflicts in our sample were triggered by specific events.

Because close friends and family provide emotionally important resources across a lifetime (DUNBAR and SPOORS 1995; SUTCLIFFE et al. 2012; CURRY et al. 2012), one might expect that these relationships would be buffered against conflict in order to protect them. In our data, family relationships do appear to

be more buffered against conflict than non-kin friendships in so far as any falling out occurs longer into the relationship. However, our data also suggest that some individuals, and women in particular, are sometimes willing to jeopardise precisely those relationships (close kinship relationships) that might be essential to their longer-term social and psychological functionality (see also ROBERTS et al. 2008). This pattern of relationship conflict is surprising from both an evolutionary and a social psychological perspective and would merit more detailed investigation.

Perhaps not too surprisingly, people are more likely to report conflicts if they are recent. The rates of falling out in *Table 2* suggest that only about 22.6% of incidents are remembered as being serious enough to list a month later, and only about 3.2% are remembered a year later. However, it is not clear whether this reflects an adaptive process of conflict resolution (or a form of "protective forgetfulness") or simply a problem of recall (or, conversely, a recency effect). Similar recall biases have been reported from studies of social network size and composition that have nothing to do with interpersonal conflict. BERNARD et al. (1980, 1982) compared reported and actual patterns of contact and found that memory for the fine-grained detail of interactions with others is poor, with memory for events decaying exponentially with time (much as we found for conflicts). In these studies, people recalled less than half of their actual interactions, failed to remember whom they had interacted with, and falsely recalled interactions they had not had – although, in mitigation, it should perhaps be noted that selective forgetting is not random, but is systematically biased to favour long-term enduring patterns of interactions with others (FREEMAN et al. 1987, 1988).

The substantive issue, perhaps, is the fact that 40% of conflicts were unresolved and this seems a high price to pay. It seems unlikely that so high a failure rate is simply due to error on the part of the individuals concerned (such as that they had just "pushed" too hard when trying to reinvigorate a dying relationship). An alternative possibility may be that close relationships involve a great deal more contact and thus provide more opportunity for something to go wrong: approximately 40% of our social time is devoted to our five closest relationships, and 60% is devoted to our 15 closest relationships (SUTCLIFFE et al. 2012). Given that time is both limited and inelastic, close relationships may also be more at risk of being taken for granted when individuals struggle to allocate their limited social capital among competing interests (including other relationships) in ways that are most advantageous to themselves (SUTCLIFFE et al. 2012). In the case of friendships at least, reduced time devoted to a relationship rapidly and inexorably leads to a decline in its quality (ROBERTS et al. 2011a,b). Kin relationships may be more resistant to these pressures, but ultimately there is a limit to which even kin will tolerate neglect or exploitation. It may be that,

because of this, when kinship relationships do finally collapse, they are more likely to do so catastrophically because they have been pushed beyond a more generous trust threshold than friendships – hence the unexpectedly high rates with which such incidents were reported *(Figure 2)*. Parents, and to a lesser extent siblings, seem to be especially prone to this effect.

We found striking gender effects in a number of aspects of relationship conflict. Most of these suggest that women's relationships were more fragile than those of men, broadly confirming hypothesis (3). Women did not report significantly more relationship conflicts than men *(Figure 1)*, but they were more likely to fall out with important close friends and family, reporting conflicts with a wider range of relationship categories and especially so with other women (*Figures 2* and *3*). When they did fall out with people, they were generally more demanding in respect of the processes of reconciliation *(Figure 6)*. This seems to reflect the general perception that female relationships are more focussed and intimate, and as a result more fragile, than male relationships are, both across the lifespan (BLIESZNER and ADAMS 1992; DINDIA and ALLEN 1992; O'CONNOR 1992; WRIGHT 1998; WINSTEAD and GRIFFIN 2001; BENENSON and CHRISTAKOS 2003; VIGIL 2007; HALL 2011) and cross-culturally (KON and LOSENKOV 1978).

Why this should be so raises an intriguing evolutionary question to which there is, as yet, no entirely satisfactory answer. This combination of fewer, more focussed and intimate, yet more fragile relationships in women seems to run counter to the claim that women are more socially skilled than men and have larger social networks (e.g. STILLER and DUNBAR 2007). One suggestion for women's better social skills has been that, ancestrally at least, women typically moved to their husband's community on marriage and were thus left without matrilineal kin support; greater social skills were therefore needed to allow them to survive in a socially hostile environment where males have extensive kin support networks (RODSETH et al. 1991). However, VIGIL (2008) has also used the same explanation to justify women's focus on fewer, more intimate relationships (women need the support of an intimate friend to buffer them against the stresses of living in a community without any kin): in a non-natal social environment where close female kin are not readily to hand, it may be essential to have a particularly close "sister-like" friend who can offer the kind of support that a mother or biological sister would provide. Nonetheless, the fact that women have better social skills and larger active networks than men seems at odds with the fact that their relationships generally are more fragile and liable to (in many cases, terminal) fracture, and some explanation is needed to resolve this apparent inconsistency. Our data do not allow us to address the function of these close relationships in such detail, but they do point to the need for further work.

One problem that always bedevils normative samples of this kind is that of obtaining a balanced, random sample. Short of running a very large scale structured national sample (which is then specific to a particular country and culture), this is almost impossible, and few studies aim to achieve this. Our aim was to obtain a reasonable sample of sufficient size and age range to provide some provisional insights into the natural history of relationship breakdown. Social psychologists have come to favour pseudo-experimental interventions (often using vignettes or questions about hypothetical events), but these lack ecological validity, and hence credibility, if subjects have not experienced the relevant event(s), especially with the target alter – as will often be the case with a young adult or student sample. As is often the case, our study attracted many more female than male respondents (approximately 4:1 ratio), and while our results on sex differences appear to be robust, efforts to attract more male respondents would clearly be advantageous. However, the biggest problem we faced was in obtaining an unbiased sample from which to estimate the risk of relationship conflict. Inevitably, those attracted to respond to a questionnaire such as ours are most likely to be those who have experienced recent conflicts. However, this should not have affected our analyses of the characteristics of the conflicts themselves, including their relative frequency, kinship and duration descriptives, and reconciliation rates.

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APPENDIX 1

Questionnaire Details

1. Please enter your gender.
Female; Male; Other

2. Please enter the year of your birth
Drop down from 1900 to 2009

3. Please enter the month of your birth
Drop down from Jan to Dec.

4. Are you currently in a 'romantic' relationship?
Yes; No; Unsure.

5. If you are currently in a 'romantic' relationship, how long have you been in this relationship?
Not in a relationship; 0–6 months; 6–24 months; 2–5 years; More than 5 years

6. Please list everyone whom you feel you would go to for advice, emotional support or help in a moment of great social, emotional or financial distress [15 slots available]**:**
Indicate their sex and relationship to you (friend, family member, etc)

7. Please think of all the people that you know at least well enough to say 'hi' to if you met them in the street or shop or bar/cafe. Have you had any serious disagreements or 'fallings out' with any of these people in the last 7 days? (please do not include people that you have been recieving or providing a service from/to, such as tradesmen or shop-assistants for example).

8. Please think of all the people that you know at least well enough to say 'hi' to if you met them in the street or shop or bar/cafe. Have you had any serious disagreements or 'fallings out' with any of these people in the last 30 days? (please do not include people that you have been receiving or providing a service from/to, such as tradesmen or shop-assistants for example). Please do not include incidents that you have already described in Question 7.

9. Please think of all the people that you know at least well enough to say 'hi' to if you met them in the street or shop or bar/cafe. Have you had any serious disagreements or 'fallings out' with any of these people in the last 12 months? (please do not include people that you have been recieving or providing a service from/to, such as tradesmen or shop-assistants for example). Please do not include incidents that you have already described in response to Questions 6 and 7.

10. Please provide details for each the people you fell out with. We will then ask you for details of each incident.

      Person's Gender; female/male/other

      Person's age in years (guess if you must); 0–99

      How long have you known this person (in years)?; 0–99

      Their relationship to you?

      *Drop-down list***:** Colleague; House/flat mate, but not really a friend; Best-friend; Top 5 friend; Friend; Spouse/partner; 'Extra' romantic partner; Mum/dad/parent; Brother/sister; Niece/nephew; Uncle/aunt; Cousin; Grandparent; Grandchild;

      Other family member; Partner's family; Other

      How often do you see/meet this person face-to-face?

      *Drop-down list***:** Most days; Most weeks; Most months; About 2–3 times a year; Once a year or less

      How often do you contact this person by phone/text/email/letter?

      *Drop-down list***:** Most days; Most weeks; Most months; About 2–3 times a year; Once a year or less

      Have you ever lived with this person?

      *Drop-down list***:** No; Yes, when I was a child; Yes, but only as an adult; I live with them now

11. Please provide some details of the incident and the feelings involved at the time.

      Please choose the category that best describes the incident

      *Drop-down list***:** disagreement over money or sharing; disagreement over an activity (where to eat, go out etc); disagreement over a shared job (at work/home or fixing a car etc); conflict over other friends; conflict over potential sexual partners; conflict over sexual partners; one person making fun of the other in front of other people; one person making fun of the other in private; one person (allegedly) saying things behind the other's back; disagreement over chores/housework etc; one person insulting the other in public; one person insulting the other in private; you told the person off for doing wrong to someone else; they told you off for doing wrong to someone else

      Please rate how emotionally close you felt to the person BEFORE the incident

      0–10 (0 – no closeness, 1 – minimal closeness, 10 – extremely close)

      Please rate how angry you FELT at the TIME of the incident

      0–10 (0 – no anger, 1 – minimal anger, 10 – maximum anger)

      Please rate how 'let-down' or betrayed you FELT at the TIME

      0–10 (0 – no betrayal, 1 – minimal betrayal, 10 – extremely betrayed)

Please rate how angry you think the person FELT with you at the TIME

0–10 (0 – no anger, 1 – minimal anger, 10 – maximum anger)

Please rate how 'let-down' or betrayed you think the person FELT at the TIME

0–10 (0 – no betrayal, 1 – minimal betrayal, 10 – extremely betrayed)

12. Please provide details of the time since the incident and your current feelings about the matter.

Please rate how emotionally close you feel to this person now

0–10 (0 – no closeness, 1 – minimal closeness, 10 – maximum closeness)

How angry do you feel NOW about the incident?

0–10 (0 – no anger, 1 – minimal anger, 10 – maximum anger)

How angry do you think THEY FEEL NOW?

0–10 (0 – no anger, 1 – minimal anger, 10 – maximum anger)

Is your relationship different now?

*Drop-down list***:** No, it's the same; Yes, different (weaker now); Yes, different (stronger now); Yes, different, not sure how

How, if at all yet, did the two of you 'make-up' or reconcile your differences?

*Drop-down list***:** You gave an apology; They gave an apology; You both gave apologies; You gave a gift; They gave you a gift; You both gave gifts; The offender paid back a roughly equal amount of money etc; Honest and frank discussion; Shared activity/bonding/laughter; Physical contact; You tried to make amends, they refused; They tried to make amends, you refused; Both ignored the situation but things are fine; Both ignored the situation and things are still to be resolved; The incident was too recent for any attempts yet

How often do you fall out or have significant disagreements with this person?

*Drop-down list***:** Most days; At least once a week; About every two weeks; About every month; About every 3 months; About once a year; Less than once a year; This was the 1st time

What do you blame the incident on?

*Drop-down list***:** Nothing, just one of those things; Tiredness; Alcohol or other drugs; Misinformation; Jealousy/envy; Poor communication; One person not really caring; Cultural differences; Other people 'stirring up' trouble; Competition; General anxiety about relationship

APPENDIX 2

List of options for reconciling relationship breakdowns, and their categorisation:

Unresolved:
Both ignored the situation and things are still to be resolved
The incident was too recent for any attempts yet
You tried to make amends, they refused
They tried to make amends, you refused
Non-physical:
Honest and frank discussion
Both ignored the situation but things are now fine
The offender made financial or other restitution of a loss
Physical/gift exchange:
Shared activity/bonding/laughter (with no direct mention of incident)
Physical contact
You gave a gift
They gave you a gift
You both gave gifts
Apologies:
They gave an apology
You gave an apology
You both gave apologies