A Global Shift in the Social Relationships of Networked Individuals:
Meeting and Dating Online Comes of Age

Bernie Hogan
William H. Dutton
Nai Li

oiioiioii
oiioiioii
oiioiioii

UNIVERSITY OF
OXFORD

Oxford Internet Institute
University of Oxford

A Global Shift in the Social Relationships of Networked Individuals: Meeting and Dating Online Comes of Age [*]

Bernie Hogan [†], William H. Dutton and Nai Li
Oxford Internet Institute

February 14, 2011

[†]Corresponding author: bernie.hogan@oii.ox.ac.uk

Abstract

This paper reports on an analysis of original data from a cross-national survey in 18 countries of couples and their social relationships. The survey focused on cohabiting couples, who have the Internet at home. Each member of each couple was asked how they met their partners, what dating strategies they used before they met, how they maintain their current relationships and social networks, and how these individuals use the Internet in everyday life and work. The survey was conducted online, using a professional pool of respondents to draw our samples. There is wide variety across the world and within nations, such as in approaches to online relationships, to friendships, and to the Internet. However, several general patterns are clear. First, slightly over a third of the sample has some experience with online dating, while 15 percent are currently in a relationship that started online. Beginning in 1997, coinciding with the rise of Web 2.0 technologies, online dating starts to gain prominence. This rise in prominence continues until 2009, when over 30 percent of Internet-enabled couples appear to have met through online dating. A similar growing prominence of the Internet is also occurring around the maintenance of relationships, and the development of social relations more generally. In these and other ways, it is clear that the Internet has become a new place to look for relationships, and that the Internet is important for strong as well as weak ties within social networks.

Contents

List of Figures

List of Tables

v

Introduction

Social relationships are being reconfigured through the Internet. For weak ties, there is much research suggesting how the Internet expands social capital [Steinfield et al., 2008], renews old friendships, broadens political campaigns [Schussman and Earl, 2004] and makes individuals more accessible to the public and one another. The Internet is likely to enable weak tie relationships since these people are often physically distant and hard to reach in other ways, and numbered in the hundreds [Boase et al., 2006]. However, the Internet is also reconfiguring strong ties – the relationships of people who are our most physically close and emotionally intimate, such as married couples and cohabiting partners [Dutton et al., 2009b]. Past research has demonstrated the significance of the Internet in introducing and maintaining close personal relationships, but with specific populations and case studies. This paper reports on research that extends these findings to a global scale, building on existing, and refined indicators.

This paper reports on a analysis of original data from a cross-national survey of couples and relationships in 17 countries. The survey focused on how individuals met their partners, what dating strategies they used before they met, how they maintain their current relationships and social networks, and how these individuals use the Internet in everyday life and work. The survey was conducted online, using a professional pool of respondents to draw our samples. One distinctive feature of this survey was its focus on the couple: we asked both members of a couple to separately complete the survey. The instrument asked about a variety of personality indicators, relationship satisfaction questions, Internet use behaviors, life history questions, and general attitudes towards dating. Based on this data, the report is able to generalize about cohabiting couples who have the Internet at home. But within this group, there is wide variety, such as in approaches to online relationships, to friendships, and to the Internet.

1.1 Outline

The report begins with a summary of key findings, followed by an overview of the study's methodology, including the demographic profile of the sample. Section 2 is an overview of the prevalence of online dating, both over time and across nationalities. We discuss

the changing face of marriage markets, finding that people are still meeting in traditional contexts, such as bars and through friends, but that there is a notable shift towards meeting online, and meeting through individualistic activities rather than group-oriented ones in Section 3. The paper then moves beyond meeting intimate partners to making friends online more broadly in Section 4. As we report, many respondents have met other people through the Internet, primarily through social network sites. Section 5 argues that there is a clear link between online dating and online friendship. Findings show that exposure to online dating, as well as contact with others who have found partners online, are correlated with positive attitudes towards online dating.

The penultimate section examines ways in which the Internet can strengthen existing relationships as well as come between relationships. Here we note that the Internet does not merely reconfigure a couple's access to each other, but presents new opportunities for extramarital activities via easy access to goods, pornography, gambling, and potential romantic and sexual partners. Additionally, it provides both more choices for communication (via email, instant messaging (IM), social network sites, blogs, etc. . .), but also less clarity about what is the most appropriate medium for particular communication needs.

This paper concludes with reflections on the future of relationships online and offline. We discuss the rise not merely of online dating, but of the notion of networked individualism, and the person-to-person connections that make online dating make sense. We consider how differences in the perception of "the Internet" as either a separate space or one embedded in everyday life might explain cross-national differences in types of online activity. Finally, we reiterate the notion of the Internet as an experience technology to posit a rationale for the increasing diffusion of online dating and online friendships.

1.2   Key Findings

- Online dating is a complement rather than a substitute for offline dating. The search strategies of those who found their partners online and those who did not is very similar with one exception: online couples looked online.

- Online dating is more prevalent among older people (40 and over) who are seeking a relationship than it is among younger (below 40) people.

- There are discernable differences cross-nationally, and across regions, in terms of dating practices, online behaviors, and Internet use. Respondents in Japan, which is known for high technology adoption, are more reluctant to embrace online dating, whereas in Brazil, which is often seen as a site of gregarious public spaces, people tend to be more comfortable with meeting people online.

- Favorable attitudes towards online dating do not depend on success at online dating, but instead are related simply to exposure to online dating activities. In that sense, like the Internet broadly, online dating is an experience technology.

- Online dating is socially shaped. People who know others who date online are themselves more likely to date online and to approve of online dating.

- Practices vary significantly by gender and sexual orientation. While lesbians tend to show patterns that appear to be in-between men and women on most accounts, gay men show a pattern of hyper masculinity, rather than feminized masculinity - they are more open to online dating, more promiscuous, and more individualistic.

- Around the world, hypocrisy and disapproval are common in relationships. Many spouses do activities they do not approve of their spouse doing, or that their spouse disapproves of. This is only slightly more prevalent for those who started their relationship online.

- The ways that people are seeking out partners are becoming more of a blend of offline and online networks, which has been called networked individualism, rather than simply more or less group based.

1.3 Research Design

This research was designed and directed by the Oxford Internet Institute (OII) project team, in collaboration with colleagues at eHarmony Lab. It was conducted using an online panel. The sampling frame for the panel was provided by Toluna, a firm specializing in the construction of online panels. Toluna sent an email to participants that directed respondents to the OII's server, which hosted the project questionnaire. The OII used a modified version of Limesurvey, a flexible open source survey delivery service. We made minor upgrades during the deployment, but remained within Limesurvey 1.8. Admittedly, the survey was long for an online instrument, especially for two participants (taking approximately 40 minutes, each). However, the panel recruitment process offers a modest incentive to generate a higher response rates, which is one aspect of Toluna's model for constructing successful panels. Also, Limesurvey allowed individuals to stop, and continue the survey later, which also enabled a higher response rate. More details can be found in the Appendix (and at the project Web site.)

1.4 Demographics

The sampling strategy was focused on ensuring variance, primarily by age groups, and focusing on cohabiting couples. For each country, we selected individuals that were at

least 18 years of age, and in a cohabiting relationship. Within age groups we wanted no less than 10 percent and no more than 15 percent respondents between 18 and 25 years of age. Similarly, we wanted no less than 10 percent and no more than 15 percent of respondents older than 55. In terms of gender we wanted no more than 10 percent same sex households. We also wanted no less than 45 percent and no more than 55 percent surveys started by men (or women). Response rates and sample characteristics were monitored to shape the quality of our samples in each nation, and avoid potential biases between countries. The sample was not weighted in this preliminary analysis. We acknowledge this may lead to issues of bias, and intend on refining the weighting in later drafts of this work, and will flag any statistical relationships that need to be amended following an analysis after weighting. However, weighting is of limited utility given the absence of accurate population estimates of online cohabiting couples.

Sample size per country

The 'Me, My Spouse and the Internet' project is anchored on a series of separate data collection efforts. The combined data set encompasses a Pan-European study as well as a survey fielded in Brazil and Japan. These are in addition to an earlier round of surveys collecting data in the US, Australian and earlier UK sample, but the questions were not entirely comparable, preventing the construction of a combined data set.

The project targeted European countries where Internet penetration reached at least 30 percent. For countries with a sufficiently high Internet penetration (over 30 percent) and a larger population (over 10 million), we sought a sample of approximately 1200 couples (N=2400 individuals). We captured smaller samples in other countries. Table 1.1 shows the resulting sample across all nations. Some of the samples are odd numbers, despite having both members of a couple, because a small number of couples live separately in different countries.[1]

Gender and sexuality

The version of the data set used for this report uses both couple members for the analysis. Consequently, gender is very near 50 percent (49.8 percent). It is off from 50 percent because we have slightly more cohabiting gay men (2.65 percent, N=670) than cohabiting lesbians (2.2 percent, N=560).

Gays and lesbians in our sample are broadly distributed through the many countries. Consequently, we do not have the sample power to report any behaviors by both sexuality and country. However, the sample is still large enough for bivariate tests of significance in almost all cases.

---

[1]To note, this is one advantage of an online survey with this research design. Both individuals do not need to be living in the same house to take the survey one after the other.

Table 1.1: Sample size per country

Country	Frequency	Percent	Cumulative Frequency
Germany	2,638	10.5	10.5
France	2,970	11.8	22.3
UK	2,552	10.1	32.4
Italy	3,515	13.9	46.3
Spain	2,673	10.6	56.9
Netherlands	1,491	5.9	62.9
Greece	297	1.2	64.0
Portugal	603	2.4	66.4
Belgium	1,124	4.5	70.9
Sweden	794	3.1	74.1
Austria	309	1.2	75.3
Switzerland	278	1.1	76.4
Denmark	241	1.0	77.3
Finland	508	2.0	79.4
Norway	317	1.3	80.6
Ireland	368	1.5	82.0
Japan	2,084	8.3	90.3
Brazil	2,438	9.7	100.0

Age

The average age in the sample is 40.7. That age is 42 for men and 39 for women. The age distribution of the sample is approximately normal with a slight positive skew towards older respondents. The distribution is shown in Figure 1.1

Income

The mean income of the sample is approximately £35k per year, although there are obvious disparities by country. Figure 1.2 shows the differences in income per country. This figure also shows the average age per country. The average age in most countries is close to the grand mean. For income, Northern European countries are clearly more prosperous, reflecting larger population differences in GDP per capita. While the income of Finland's sample is not as high as incomes of Norway, Sweden, and Denmark, the Finnish sample is also younger.
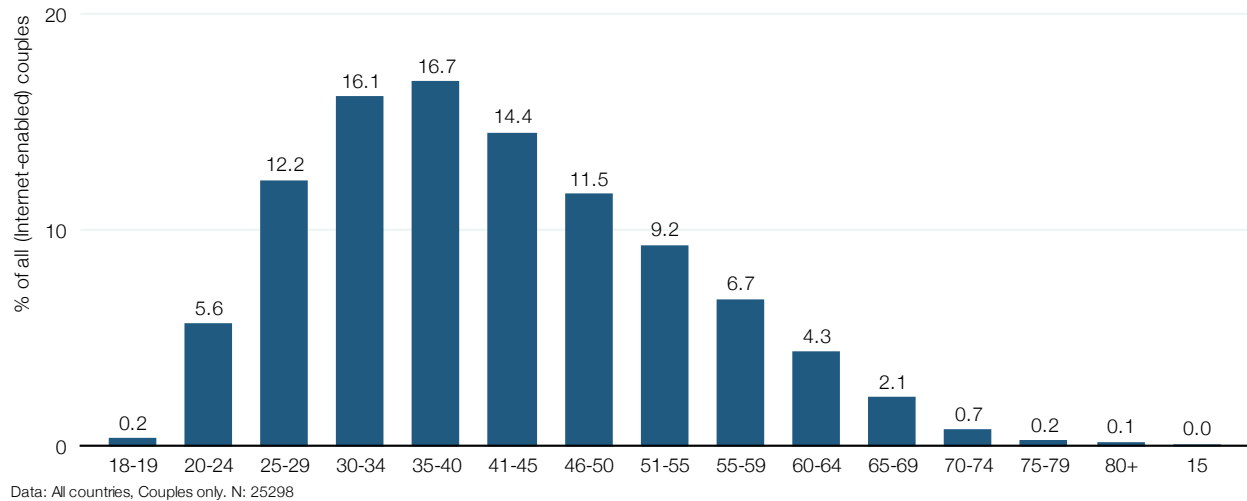
Figure 1.1: Age distribution of sample

Education

The sample includes substantial variation in schooling, although it is clear that people with at least a diploma, or degree, are more strongly represented in some countries than others. This disparity does not correlate with population level estimates of education in the countries, but reflects the online population. For example, Brazilian and Greek samples have a much greater percent of individuals with post-secondary education. These percentages map more closely on to the population in each country who have an Internet connection. Consequently, in countries where the Internet is more broadly diffused, such as Denmark, the postsecondary rates of those with the Internet are very similar to the rate in the population, whereas in Brazil, Internet is substantially more likely to be used by those with more education. Socioeconomic status is generally related to Internet access. So in these and other ways, the samples are designed to be representative of Internet users in each nation, rather than the nation as a whole.
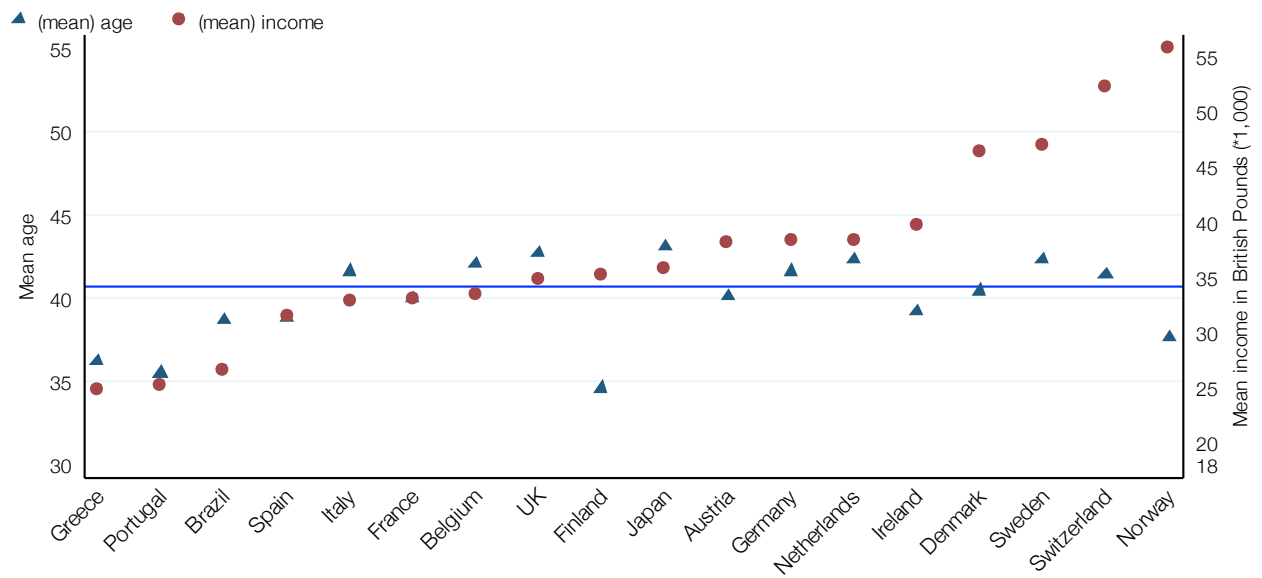
Figure 1.2: The mean income and age per country, sorted by income. The distributions are centered so the mean for both is the horizontal line.
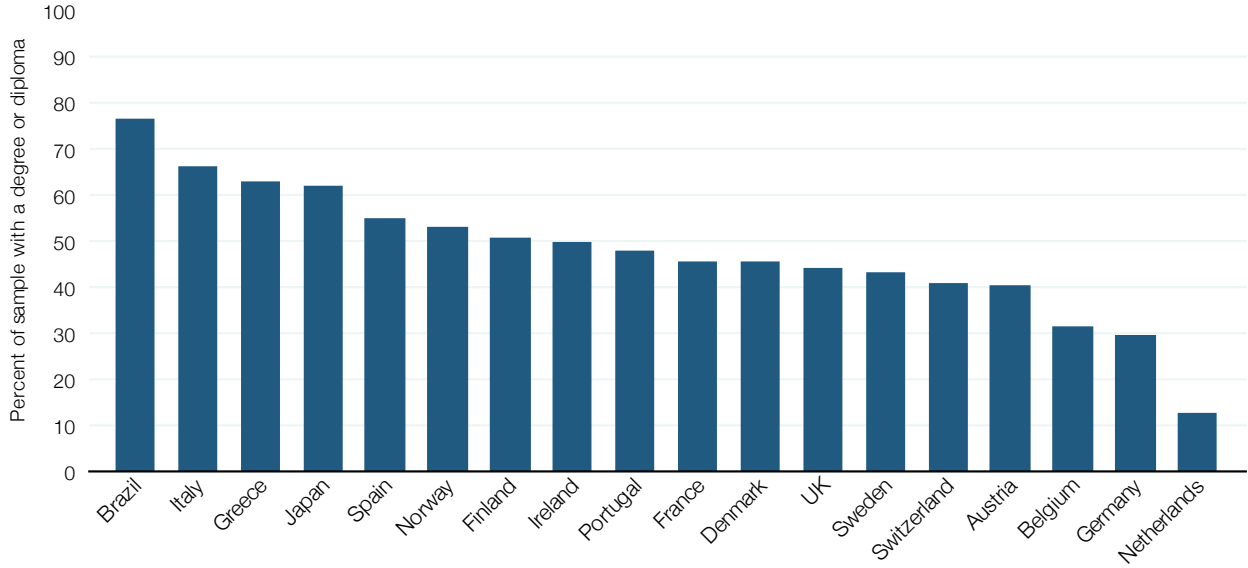
Data: All countries. N: 21887

Figure 1.3: Percent of sample with a college diploma, a university degree or more education

2.1   Online dating exposure generally

The Internet is now firmly entrenched in the everyday social activities of a large of the world's population, and certainly a majority of Europeans. In line with this central role of the Internet, the surveys demonstrate that people are finding relationships online. Figure 2.1 shows the overall rate of our sample being in a relationship that started online. This indicator is a composite of several variables. It includes people who found their partner online through numerous sources, including websites, personal contact and social network sites in addition to online dating sites.
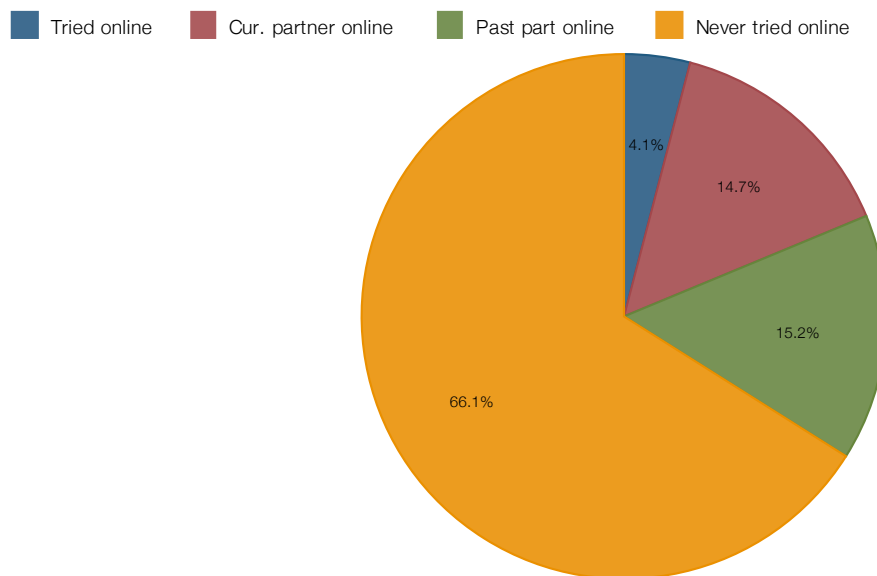
Figure 2.1: Overall distribution of exposure to online dating

We can see that slightly over a third of the sample has some experience with online dating, while 15 percent are currently in a relationship that started online. Through the remainder of this paper, unless otherwise specified, we are focusing on this 15 percent who are currently in a relationship that started online when considering rates of online dating. The remainder of this section focuses on the rates of online dating across age, time period, cohort and country.

2.2 The rise of online dating

There have been competing views on the prevalence of online dating: is it a trend primarily for the young and Internet-savvy, or a means to compensate for the loss of social networks among those who are divorced and removed from their local community [Sautter et al., 2010, Madden and Lenhart, 2006]? To explore these questions we first look at measures of the prevalence of online dating by year and age to consider three distinct effects: "age effects", where we consider online dating rates by age, "period effects", where we consider online dating in a particular historical period (i.e. the present) and "cohort effects", online dating for people of a given age, in a given period. There are several ways to calculate this, each of which reveals a slice of the overall picture [Kupper et al., 1985]. Figure 2.2 is simply a line graph showing the period effect of online dating.

There is a clear trend towards the increased use of the Internet over time for meeting one's current partner. The chart goes back as far as 1980, and indeed, in our sample there are several people who said they found their partner online even before the web, but in the time of the e-mail, gopher, and virtual communities, such as on Usenet. It is possible to consider these cases as legitimate, suspect, or noise. For the most part we consider them legitimate but exceptional, while admitting the potential for noise in the interpretation of the question. Regardless, the key point that emerges from this timeline is that beginning in 1997, online dating starts to gain prominence. This coincides with the rise of Web 2.0 technologies, such as dynamic webpages based on databases rather than static html pages. This rise in prominence continues until 2009. By 2009, over 30 percent of Internet-enabled couples appear to have met through online dating.

2.3 Disentangling age and time period effects

One might assume that online dating is for the young, as youth tend to be more rapid adopters of technology. However, this is largely because online dating is on the rise, and young people are most likely to be single and seeking out a relationship. If you were to randomly select someone fifty-five years old, the chances that they started their relationship online would be very slim. This is primarily because of a "cohort" effect
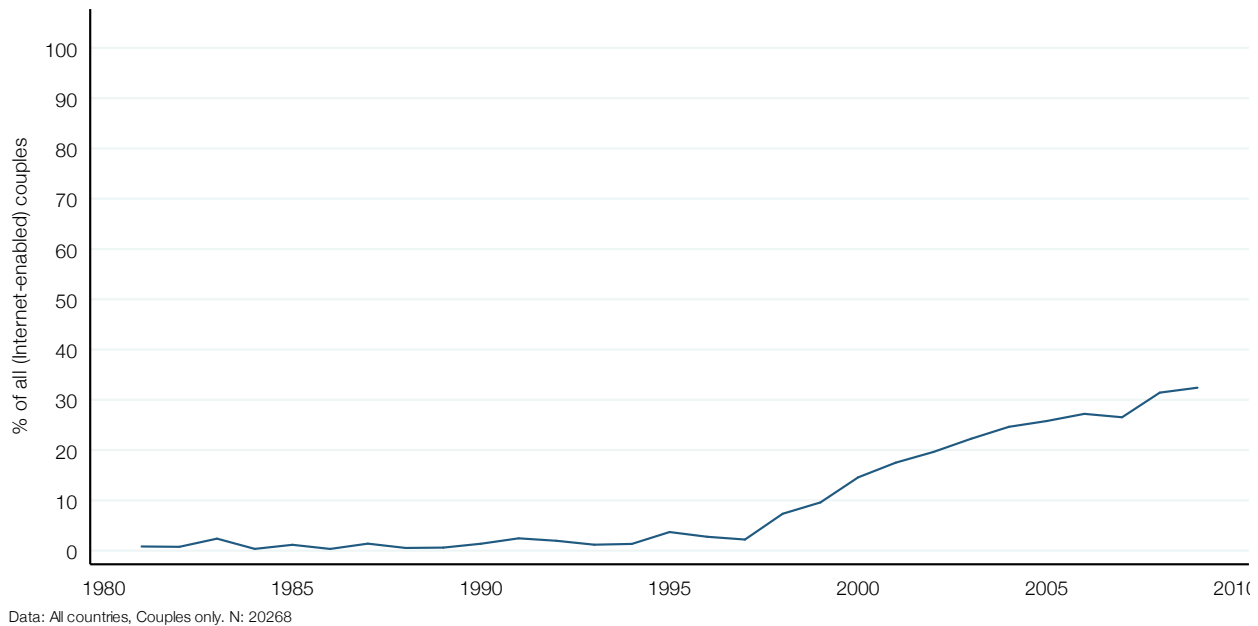
Figure 2.2: Percent of relationships that began online, by year

- most people start their relationships in their late teens to early thirties. As such, the cohort of people who were in their twenties and thirties prior to the web would have already found a mate by the time online relationships took hold. Thus, we can see in Figure 2.3 how few older couples started their relationship online.

In order to look beyond this cohort effect, we look not at the respondent's current age, but at the age when the relationship started. Furthermore, if we give online dating a fair chance by only filtering it to people who started their relationship since 1997 (when on-line dating started to gain in popularity, see Section), a very different picture emerges. In Figure 2.4 we can see that older people are disproportionately more likely to use online dating as a means to find their current partner, than younger people. About 23 percent of people below forty started a relationship through the Internet, whereas about 36 percent of people forty and above found their current partner online. That said, only two people in our sample started a relationship in their seventies, and neither did this through the Internet. Generally, in all countries, diffusion of the Internet is lower among people retired or of retirement age, decreasing the likelihood of the Internet being as viable for the elder population.
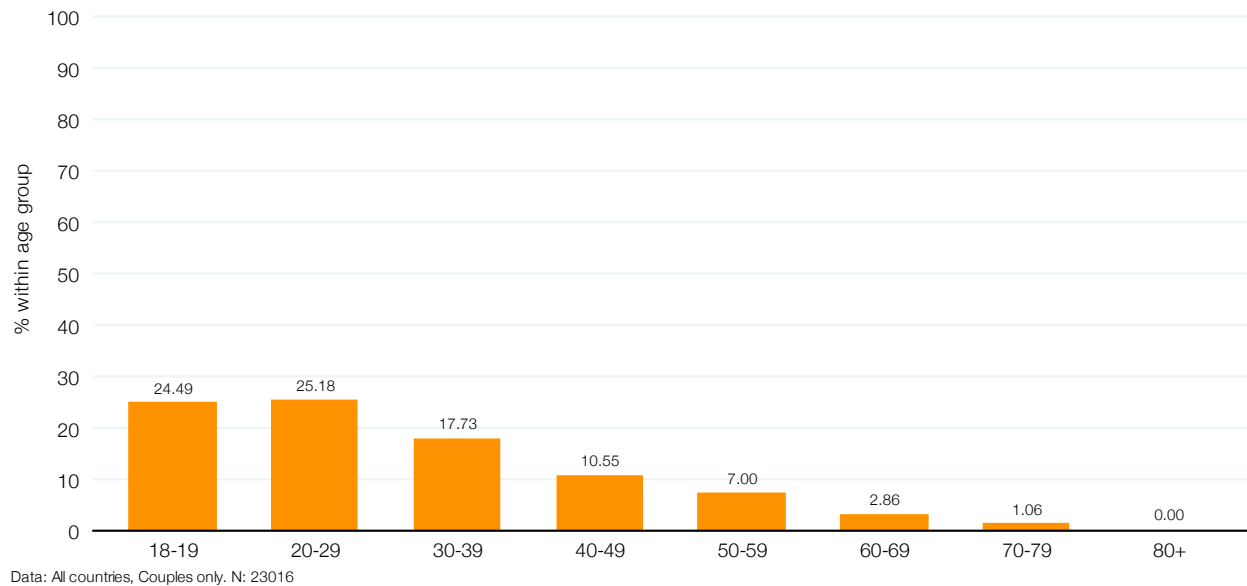
Figure 2.3: Percent of cohabiting relationships that began online (within 10 year age bins)

2.4   Online dating by country

The rates for dating online do vary substantially by country, as to be expected [Dutton et al., 2009b]. In Figure 2.5, we simply report on the overall figures for people who found their current partner online by country since 1997. The northern European countries are slightly but significantly more likely to use online dating.

Recall that everyone in this sample has access to the Internet, so this is not necessarily a function of Scandanavia's high rates of connectivity. However, it takes two to find a relationship online, and in this regard, Italy and Greece, which have lower rates of Internet connectivity in general, may make the overall dating pool that much smaller and thus make the Internet less attractive as a source for relationships. To this end, we posit that online dating requires a critical mass of Internet connectivity and exposure. This is one further reason for its rise after 1997.

Data: All countries, Couples only. N: 14488
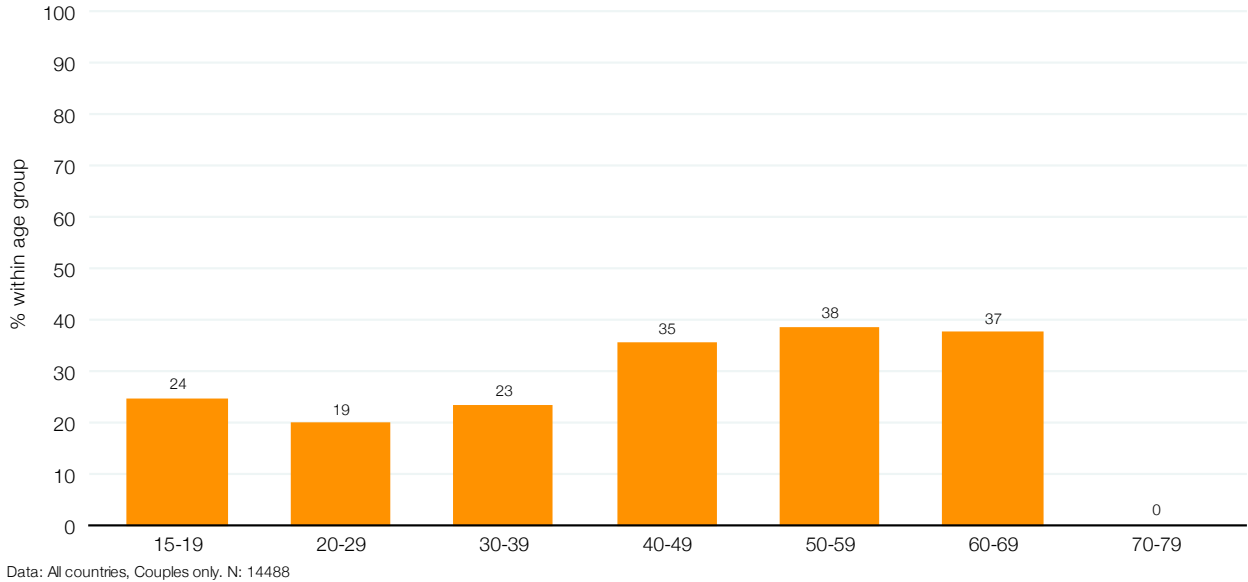
Figure 2.4: Percent of relationships since 1997 that began online, by age when relationship started (within 10 year age bins)

Figure 2.5: Percent of relationships that began online (since 1997), by country (sorted by frequency)

The changing face of marriage markets

The 'marriage market' is a term referring to the distribution of potential partners given the various ways in which people meet each other both offline and online [Goldman et al., 1984]. Our survey indicates that marriage markets have not changed dramatically since the rise of online dating, except in the very important respect that people have now added the Internet 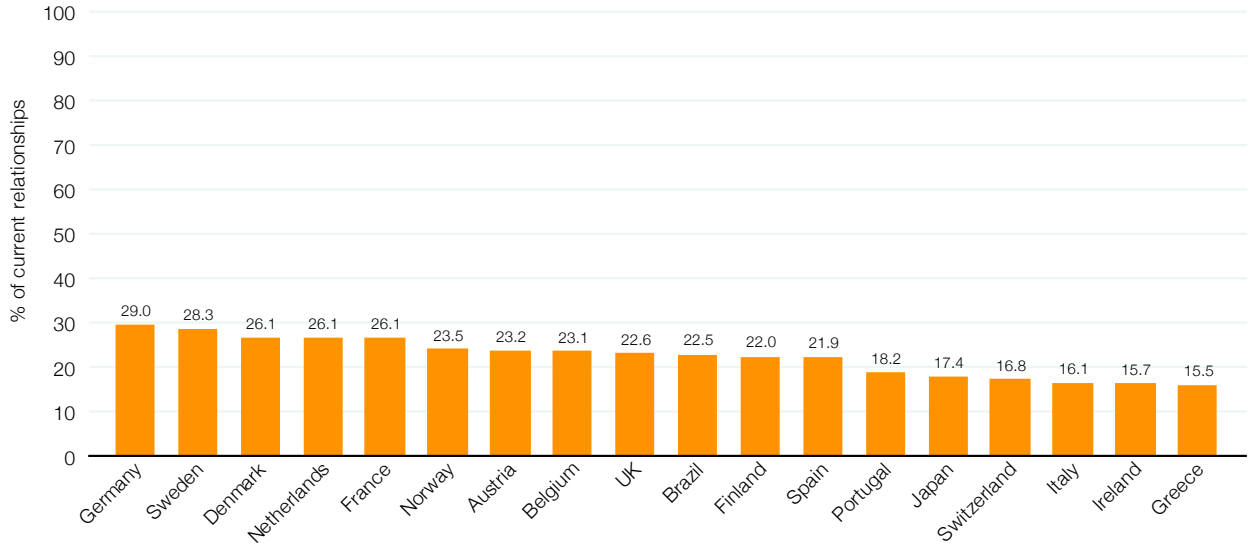to the repertoire of means for meeting potential partners. However, the Internet denotes a variety of activities that include but also go beyond online dating. Social network sites [SNS], forums, personal websites and chat rooms are all ways in which people find each other online. The use of SNS, in particular, are on the rise. Despite this rise, it is not accurate to say that online "love will find you when you least expect it" – for online dating sites remain the primary context for making successful online matches.

3.1   The marriage market in general

We asked our sample where they looked for a partner, before their current relationship. The categories were predefined, and therefore this not an exhaustive sample. That said, 89 percent of those who completed the survey answered 'yes' to at least one of the questions. The following charts using these questions reports the percentages for this group only. First, Figure 3.1 shows the frequencies by gender and sexuality. We separated out gay men and lesbians in this case because it is obvious from the data that these groups demonstrate distinctly different practices from heterosexuals. In particular, both gay men and lesbians reported notably higher use of online means. Gay men also indicated higher levels of the use of personal ads, and less use of family contacts and church events.[1]

What is also clear from this table is the way in which heterosexual men and women differ. There were significant differences in the percent of men and women for all contexts except looking through friends of friends. However, many of the differences are slight. The most substantive differences are in the use of bars or clubs (a difference of eight percent) and the use of public spaces (a difference of six percent).[2]

---

[1]All claims about differences in this section were tested using one-way Anovas with Bonferroni post-hoc tests for differences between individual groups.

[2]These numbers differ slightly from simple calculations based on the chart due to rounding.
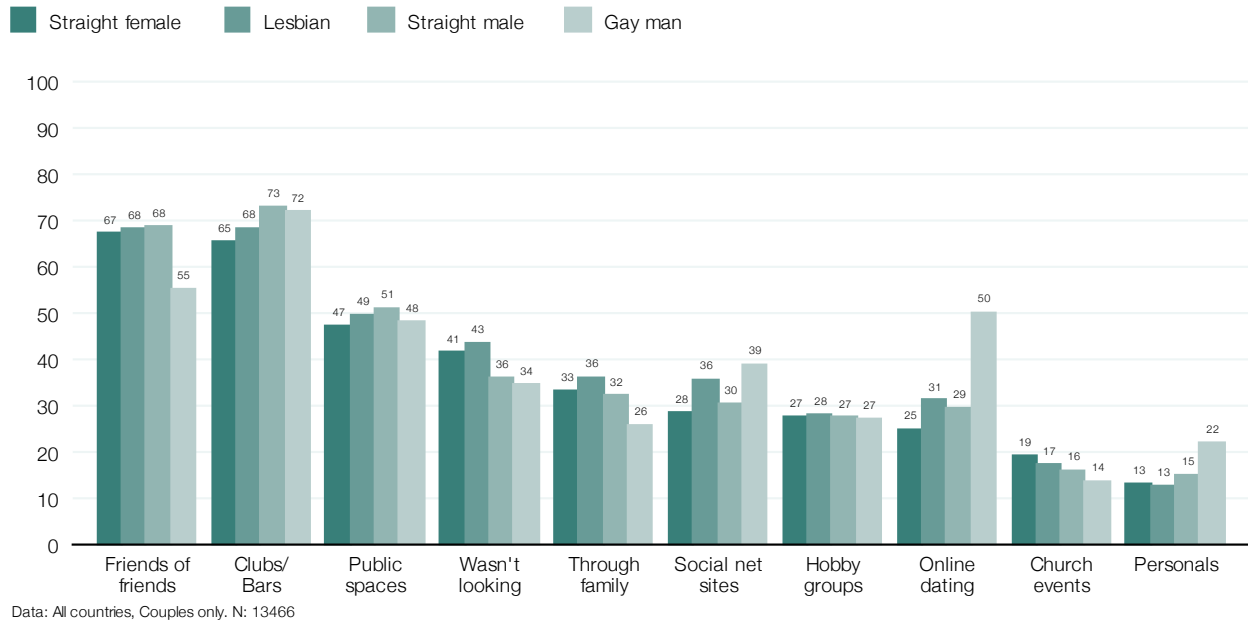
Figure 3.1: Differences in the use of marriage market sites by sexuality and gender.

3.2 How self-selected are the online daters?

Online dating (through both dating sites and social network sites) has become a significant part of the repertoire for singles looking for a relationship. Has this come at the expense of other sites, such as bars, parties, churches or hobby groups? The answer, as shown in Figure 3.2 indicates a complementary role, rather than a substitution effect. The Internet has become a new place among others to look for relationships.

We asked respondents to recall where they looked for a potential partner before their current relationship. The results clearly show that there is has not been a great deal of change for those who started their relationship before 1997, and 1997 and afterwards. In both cases, "clubs/bars" and "friends of friends" appear to be the most common ways for people to seek out a potential partner. Before 1997, 64 percent of people looked through friends of friends and through "bars and clubs". That number increases to 69 and 67 percent, respectively for people who started their relationship since 1997. Nevertheless, this difference is small in comparison to the spike in the use of online services, from a statistically ambiguous six percent of couples to almost a third of the sample. Overall, we reinforce earlier notions that individuals are becoming more selective and individualistic in their choice of context for meeting [Couch and Liamputtong, 2008].

The general trend is probably best expressed as a shift towards increased options for networked individuals in the marriage market. The use of groups, such as church, hobby
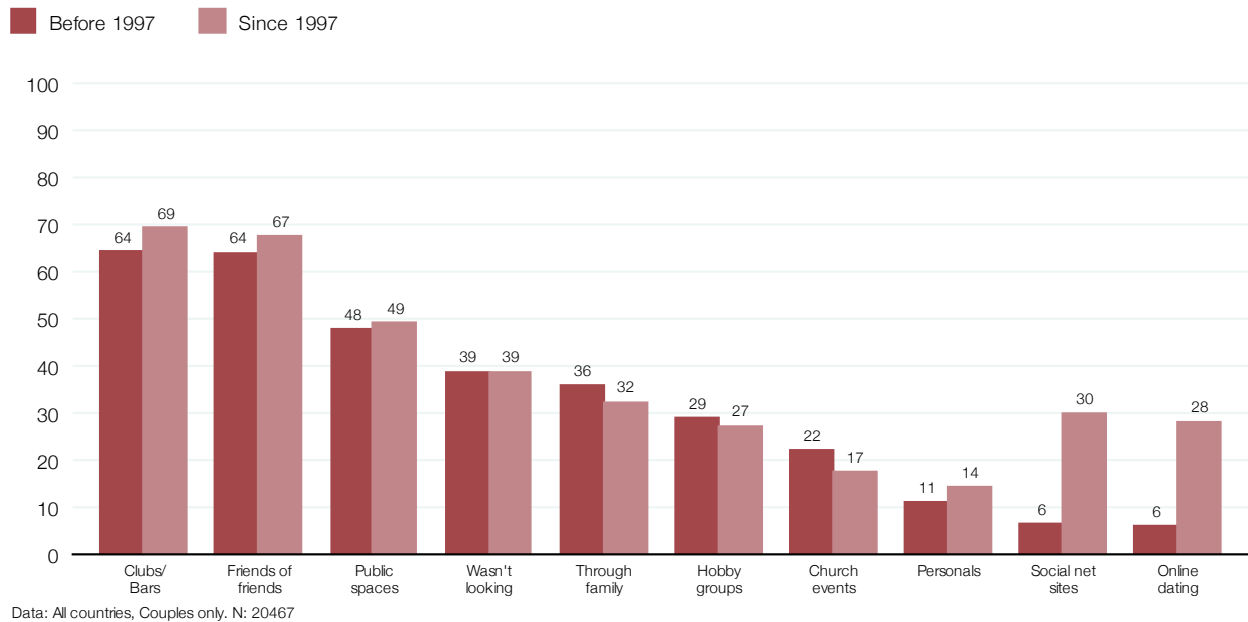
Figure 3.2: Rates of activity for different ways that people look for a potential mate, before and since 1997.

groups, and even the family have all shown a slight decline. By contrast, (offline) personals, friends of friends and online sites (which are generally individual rather than group focused) are on the rise. And the Internet has become a new option that can reinforces individuals on their own or in groups, such as with friends of friends on SNS.

3.3 Where people are meeting offline

The people who met their current partner offline did so through a multitude of means. The top context is one that was not yet mentioned, but is clearly a highly successful context: work. We did not ask if people were looking through work, as it is generally not a site where people go *because* they want to meet someone, but it is a place where people meet and get to know one another, nevertheless. The same may be said of college/university.

We can also compare these percentages to those above, to get a rough estimate of the relative 'success rate' of the various contexts, although that inference needs many qualifications. For example, of the people who looked at bars or clubs, 23 percent of them met their current partner that way. However, almost nine percent of people who said they were not looking at bars and clubs still ended up meeting their partner that way.
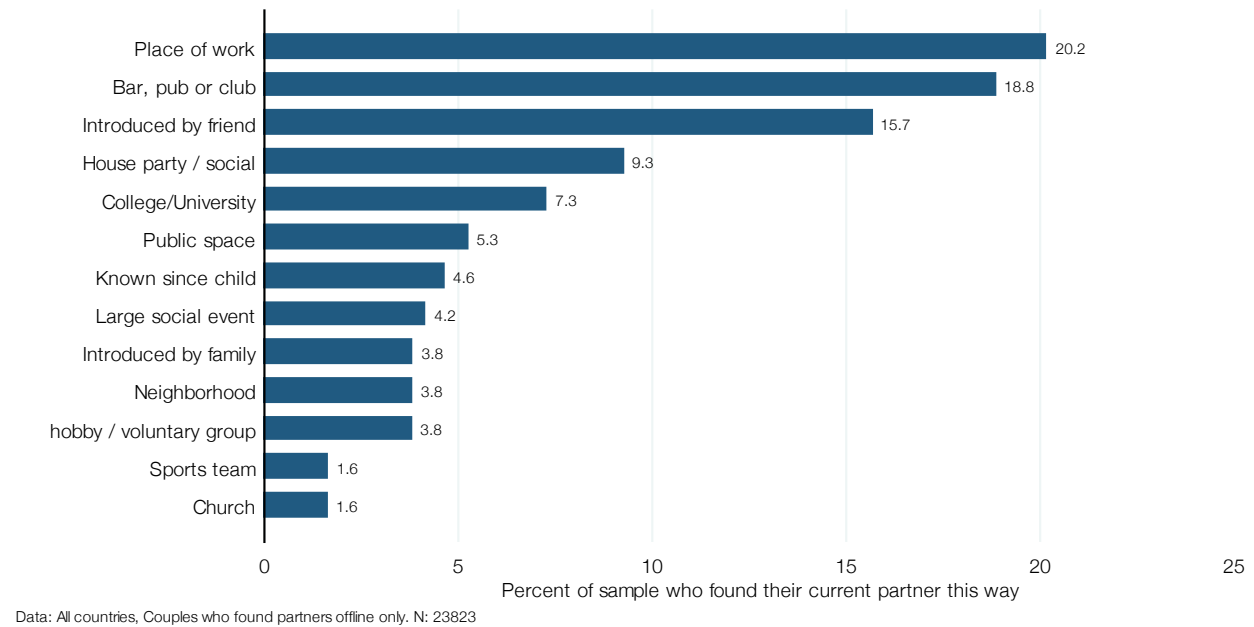
Figure 3.3: Distribution of offline contexts where individuals met their partner. Axis capped at 25 percent for visual clarity.

Thinking about the 'success rate' in such a way, our sample suggests that looking for a partner through one's family, church and hobby group appears to be less successful. For example, only one in fifteen people who looked through church actually found their current partner that way. Interestingly, these are also the areas that declined after 1997. This is one of the cues we use to posit that in the past 15 years people have not only gotten more individualistic about their relationship strategies, but also more instrumentally focused. Individuals are increasingly considering the practice of finding a mate as a distinct and intentional activity with its own set of contexts and conventions, rather than something that just happens' as one goes about other activities. However, this could be an artifact of our questionnaire, which was focused on dating and partners.

3.4 Where people are meeting online

There are many ways to find someone online, not only through online dating or social network sites. Figure 3.4 shows the overall distribution of where people met their current partner if they met online.

As we can see, online dating services were very popular, followed by chat rooms and increasingly social network sites. The rates for social network sites on this chart do not tell

Legend:
- A personal website of your own or your partner‚Äôs
- Other
- A forum, bulletin board, or online community
- A chat room, MUD or MOO
- Online gaming or other online virtual world
- Directly contacted them (email, instant message)
- Social networking site (e.g., Facebook, Bebo, Twitter)
- An online dating site (where you search and browse profiles)

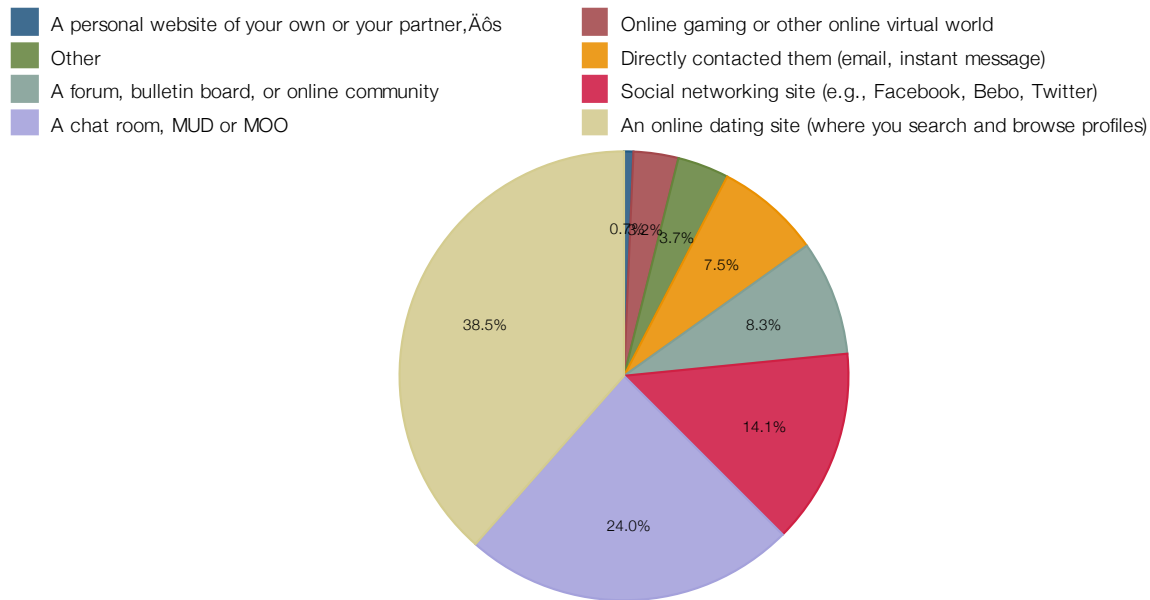Pie chart values: 0.7%, 3.2%, 3.7%, 7.5%, 8.3%, 14.1%, 24.0%, 38.5%

Figure 3.4: Distribution of contexts where people met their current partner, if met online.

the full story. For people who began their relationship before 2000, less than 10 percent claim to have met on a social networking site. Of course, since we did not ask for the specific name of the site, we cannot verify that these are actually social network sites, and not sites such as Geocities, which could have had a bulletin board for interaction. The number of people who met through a social network site then doubled to 21 percent by 2005. During the same time period, chat rooms decreased as a site of interaction relevant to meeting one's partner. Given their different affordances [Hogan and Quan-Haase, 2010], SNS cannot be seen as a direct substitute for chat rooms, but they may have served a similar purpose of providing a social space to converge and meet others.

3.5 National differences: Online relationships by country

A simple distribution of sites of interaction does not provide a complete view of the online marriage market. Rather, there are per-country differences, reflecting differences in cultural values, historical trajectories and routes to 'domestication of the Internet' [Haddon, 2006].

Figure 3.5 is a bar chart that shows the relative use of these different contexts by country. The values for each of the countries tell a distinct story about the local culture as well
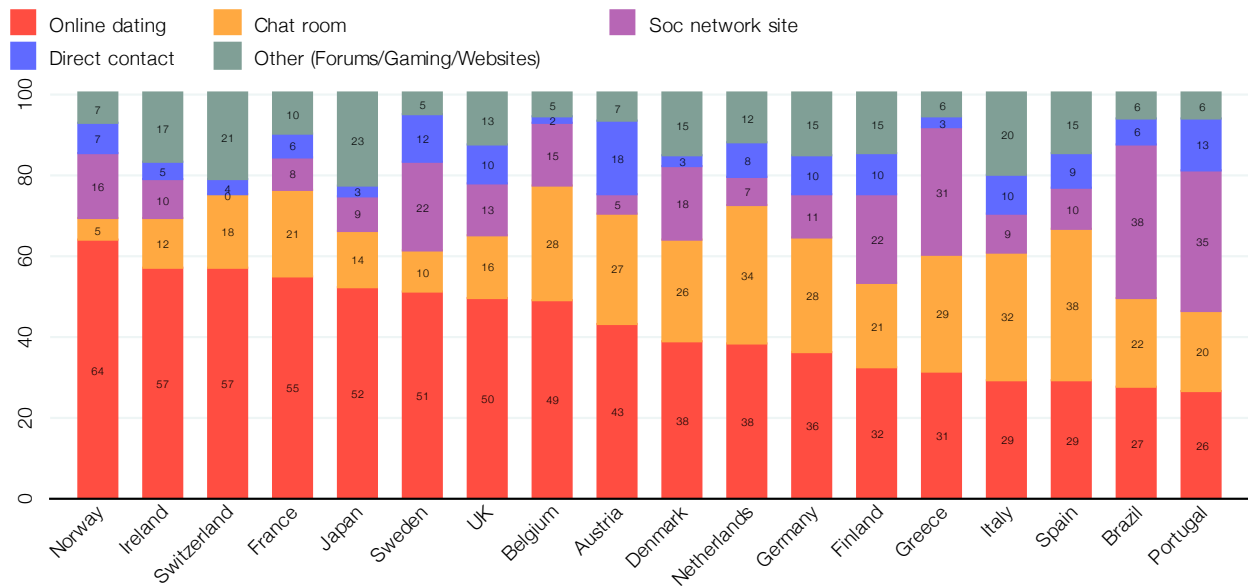
Figure 3.5: Percent of sample, per country, that met their current partner through a given online medium.

as showing differences across countries. For example, Japan has a unique Internet ecosystem that early on developed towards a much greater reliance on a mobile browser and forums than most other nations. There, FC2, a mobile homepage site is the top non-search engine in traffic. By contrast, Brazil is one of the world's heaviest users of social network sites, in particular, Orkut, Google's Social Network Site (rather than global leader Facebook).

In many countries, over half of those currently in a relationship that started online did not use online dating. Instead, they used a combination of social network sites, chat rooms, and to a lesser extent forums and online gaming. The data provide some evidence to suggest that individuals from Spain and Portugal prefer meeting in sociable "friend-of-a-friend" contexts online, whereas individuals in the Northern European countries prefer to meet through the more structured, person-to-person interactions of online dating sites.

Meeting friends online

The Internet reconfigures access to people generally, not simply in the case of dating or intimate relationships [Gennaro and Dutton, 2007]. In fact, people are much more likely to meet someone online for other reasons, primarily as a matter of friendship but also for work [Wang and Wellman, 2010]. Undoubtedly, there are safety concerns with meeting people online that one does not know. That said, the value that individuals place in online friendships suggest that these concerns, while real, are probably exaggerated by media stories. Many people online are likely to have met someone that they did not know before, and most of these individuals are likely to have met some of these individuals offline as well. As is shown below, the percent of people who meet someone online is quite high in this sample, even for those who have never done any online dating, but not out of line with other surveys, such as the Oxford Internet Survey of Britons [Dutton et al., 2009a], which found 38 percent of online Britons in 2009 had met someone online that they did not know before. A majority of Internet users, approximately 55 percent of the sample met someone on the Internet that they did not know before.

4.1   Where do people meet online?

There are many different ways to meet people online, from forums to social network sites. However, different online media encourage different levels of identification with one's offline identity. Social network sites such as Facebook, Mixi and Orkut encourage people to harmonize their online and offline personas through the use of real names and headshots as profile photographs [Ellison et al., 2006]. By contrast, forums and chat rooms tend to encourage people not to use their real names, but instead to use a pseudonym [Kendall, 2002]. This is likely to be one key reason why people tend to meet the most new friends through social network sites. Personal websites also can have abundant information about the individual, but only a small proportion of individuals have personal websites, beyond profile pages created on a SNS.
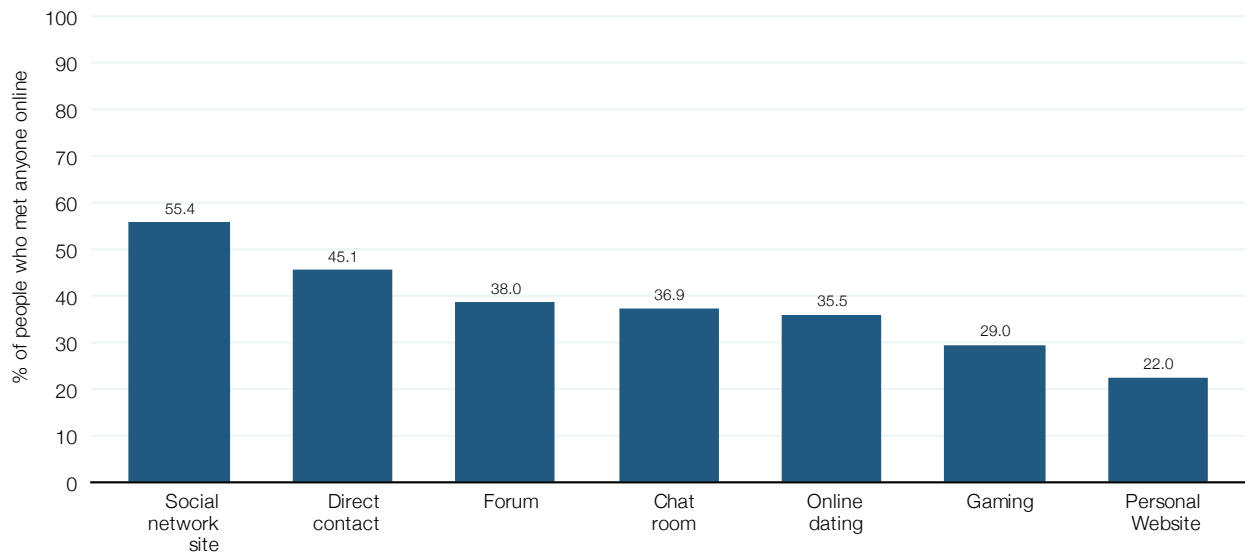
Figure 4.1: Online contexts where people met someone new that they later met offline.

4.2   Meeting people offline

Who are the most social online? By a large margin, the respondents in Brazil indicate that they are the most gregarious online and the most likely to bridge the online offline gap. Fully 83 percent of Internet-enabled Brazilians claim to have met someone offline that they first knew online. However, this is not limited to dating, as it could be for friendship or work, as well. By contrast, the Japanese sample appears to be the most cautious in meeting someone offline that they know online. Again, however, this could be due to the greater reliance of mobile communication rather than the Internet in Japan. Between these two extremes are the European countries, for which the variation isn't particularly remarkable, except to say that both those in Northern Europe (Norway, Finland, Sweden) and in Southern (Greece, Portugal and Spain) Europe tend to be more likely to meet offline than those in Western Europe (Germany, France, UK, etc...). To note, this report cannot speak on Eastern Europe, although Russia is being surveyed as a part of the expanded 2011 data capture for this study.
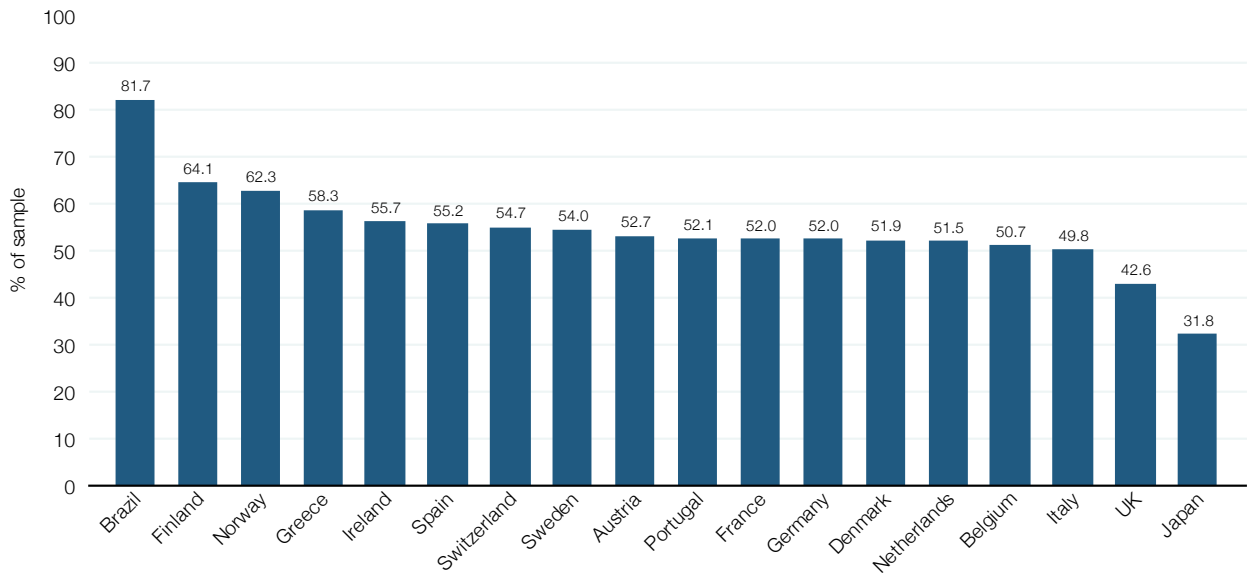
Data: All countries, Couples only. N: 22340

Figure 4.2: Percent who have met someone online that they later met offline.

**Online relationships as an experience technology?**

The Internet is a relatively new medium, and certainly, the sorts of web technologies that support online relationships (either through social network sites, chat rooms or dating sites) are even newer still. This means that many myths about online relationships may persist.

Below we explore both the extent to which people have heard of online dating and their attitudes about it. While exposure and attitudes are clearly coupled with age and county, what really stands out is whether people have tried online dating or not. This makes online dating an example of what we have called an 'experience technology', which is to say, people's values change about the technology through experience with it [Dutton and Shepherd, 2006]. This is much like online banking. Those who have never tried it are far more likely to consider it unsafe or difficult than those who have. Experience generates greater trust and confidence.

We look first at people's exposure to online dating, either through their own experience or through that of others in their personal network. We then look at meeting people online broadly. With these behavioral measures of experience with online relationships, we then explore attitudes towards meeting others online, and meeting potential partners online. It is clear that exposure to online dating is related to a more positive outlook to online dating, but interestingly, people do not need to have been successful to feel positive about it - they only need to try it in order to gain a more positive view.

5.1   Knowing someone who dated online

When asked whether individuals knew someone who either began a relationship or married someone they met online, we discovered substantial variation by country. This variation was most apparent for meeting someone online, with fully 81 percent of the Brazilians in the sample saying they knew someone who met online. At the other extreme, less than forty percent of the Germans said they knew of someone in their network who began a relationship online. The range was not as wide for knowing someone who *married* their spouse or partner online. In this case there was only a difference of 20 percentage points between the highest group (again Brazil) and the countries where it was the least common to know someone who met their spouse or partner online (UK and Austria).

Know someone who tried online dating   Know someone who married through online dating
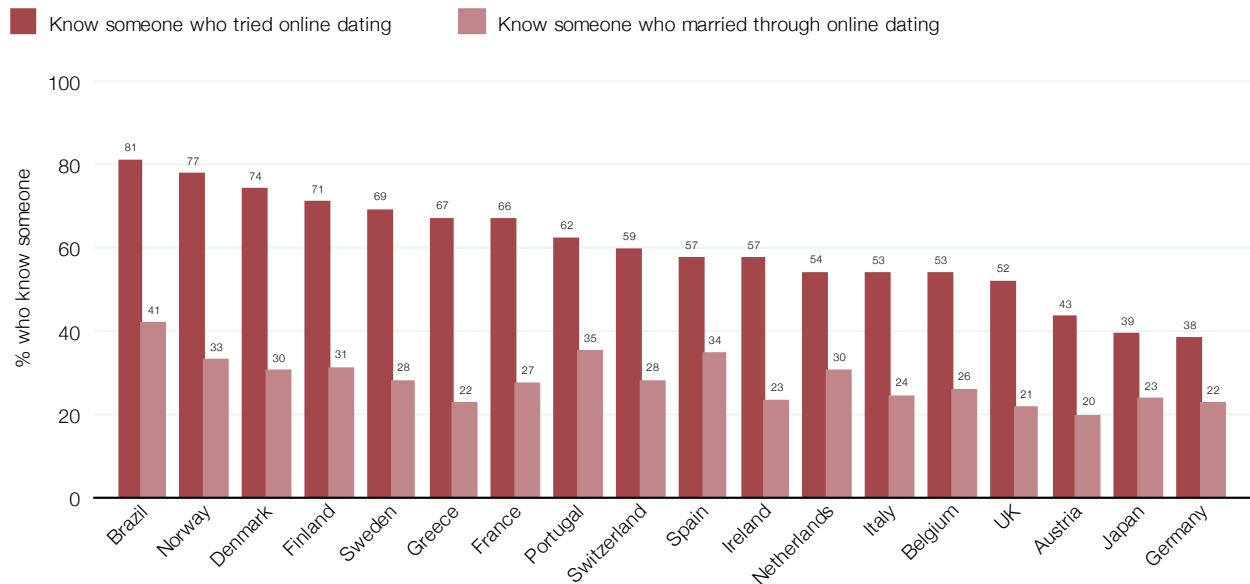
Figure 5.1: Percent who are know someone who dated (or married) online, by country (sorted).

5.2 Knowing someone who met online

Other than country, there are few variables that clearly distinguish those who know someone who met their partner online. One exception is schooling. There is a clear positive relationship between education and exposure to a couple who met online. This is not a linear trend, however. Instead it appears that there is a clear upward trend as people increase in years of education, but it levels off (or even decreases slightly from postgraduate education to PHDs).

5.3 Feelings towards online dating

Feelings towards online dating appear to vary less with one being successful than with simply having tried online dating at all. This sets up a chicken and egg, of course, since we cannot therefore tell which came first - the openness to online dating followed by the attitude change or the attitude change leading to online dating. What we can tell, however, is that *experience* with online dating is tied to approval of online dating, while *success* only serves to increase this approval, rather than be a necessary condition for such approval.
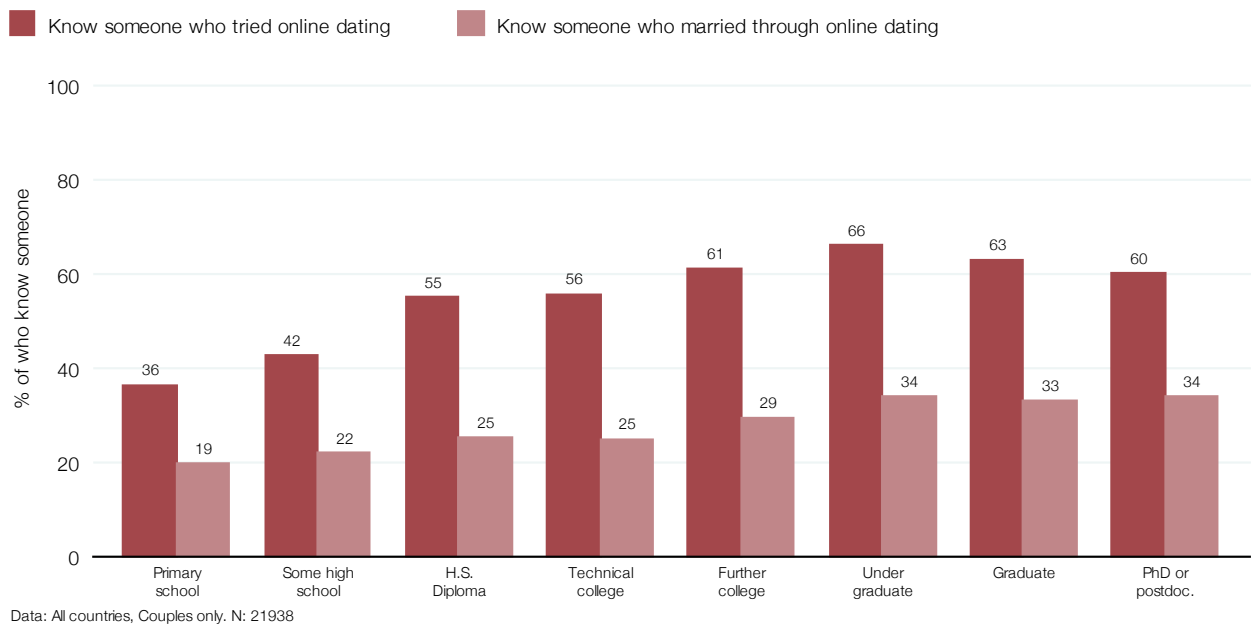
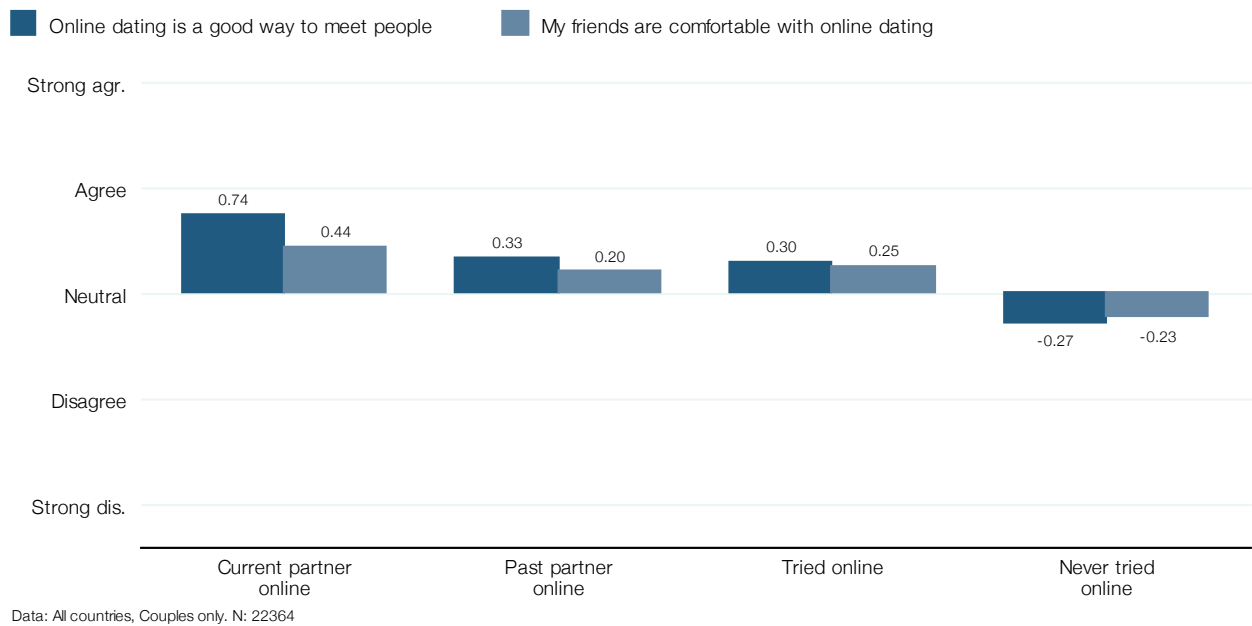Figure 5.2: Percent who know a couple that met online, by education.

Figure 5.3: Value of attitudes towards online dating by the experience of the respondent with online dating

It goes without saying that once people are in a relationship, they do not stop using the Internet. It is a technology that can be turned to many purposes. However, once people are in a relationship, they do not stop using the Internet for intimacy. Just as there are many shades of accessibility, from a comment on a blog to a full videoconference, there are many shades of intimacy from everyday chatting with an attractive person to cybersex and emotional attachments [Daneback et al., 2007]. People who started their relationship online are obviously comfortable seeking out intimacy over the Internet, but what happens once they are in a relationship?

6.1   Prevalence of online personal activities

The Internet makes people accessible to each other. Sometimes this can actually cut into relationships. This is not to say that people were completely monogamous or puritanical before their relationship, but it is to say that it makes meeting new people for relationships easier than before. Survey responses indicate two general patterns. First, many people have taken advantage of this ease of accessibility to meet new people, as discussed above, and reconnect with old friends, and this can be disruptive to relationships. Second, many people will disclose intimate and personal details in online settings with individuals other than their spouse or partner [Whitty, 2004]. Similar findings have recently been explored on a small scale [Bridges and Morokoff, 2010], however, this section will provide a more extensive cross-national picture.

6.2   Approval of online personal activities

We asked respondents about whether or not they would approve of a variety of online activities, ranging from completely mundane 'shopping online' to more personal activities, such as having an 'emotionally intimate relationship with someone you consider attractive'. Responses suggested a willingness to disclose their views across this wide range. While it seemed that many of the activities were not done by everyone in the
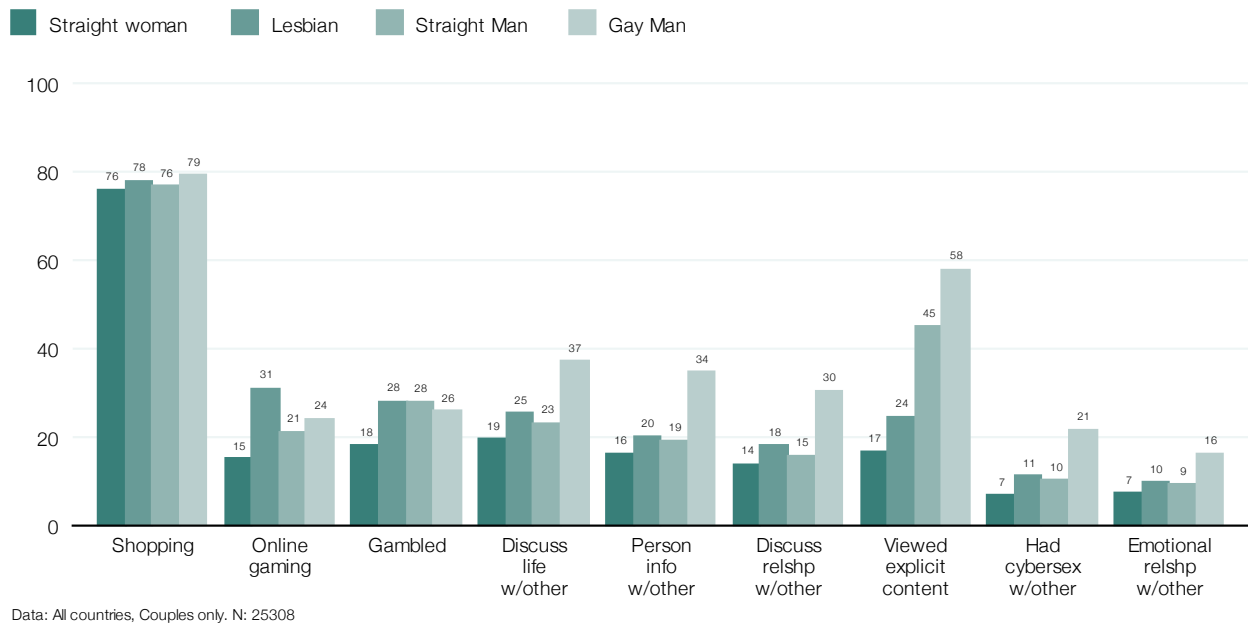
28

Figure 6.1: Percent who have done these online activities since current relationship, by sexuality / gender.

sample, there was a general convergence on what is considered appropriate and inappropriate online behavior. To note, where the word "other" in Figure 6.1, the actual question wording is "someone other than your spouse / partner that you consider attractive".

The first category, online shopping, is seen as a baseline. For the most part, we expected people to broadly approve of this activity, regardless of Internet use. There were no differences between the different groups on these activities. For all the other activities, however, there were significant differences. In general, men are more permissive then women on these activities, and gay men are especially permissive of virtually all the activities. This chart indicates that gay men tend to be the most permissive in their relationships, a finding that has received mixed support in the literature [Kurdek, 2004]. For example, while there is much variation, gay men are more likely to approve of their partners looking at erotic material, whereas heterosexual women clearly disapprove. Gay men also tend to be less likely to strongly disapprove of cybersex and emotionally intimate relationships with others online.
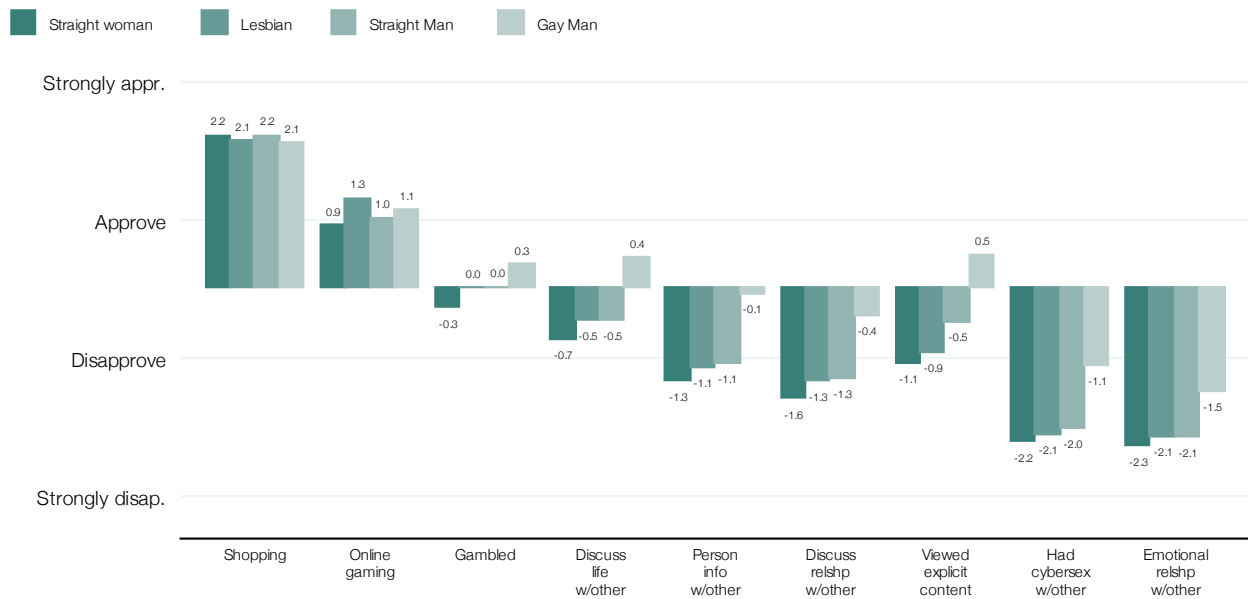
Figure 6.2: Distribution of approval of one's spouse doing these activities, by sexuality and gender

6.3 Online behavior and attitudes together

Those who have done any online activity are more likely to say they approve of that activity. This is one aspect of an experience technology, but also a process of reconciling attitudes with behavior. Interestingly, this convergence of attitudes and behaviors tends to be individual, rather than couple specific. Individuals will do an activity that they indicate that do not want their partner to do. As is shown in Figure 6.3, there are many activities, especially non-normative ones, where the difference in attitudes is rather substantial between those who do an activity and those who do not. The difference in approval rates (for one's spouse doing an activity) is highest for gambling, rather than intimate activities (cybersex, discussing personal information with someone you consider attractive). That is to say, people who do not gamble really do not approve of gambling, more so than people who do not have cybersex or view pornography.
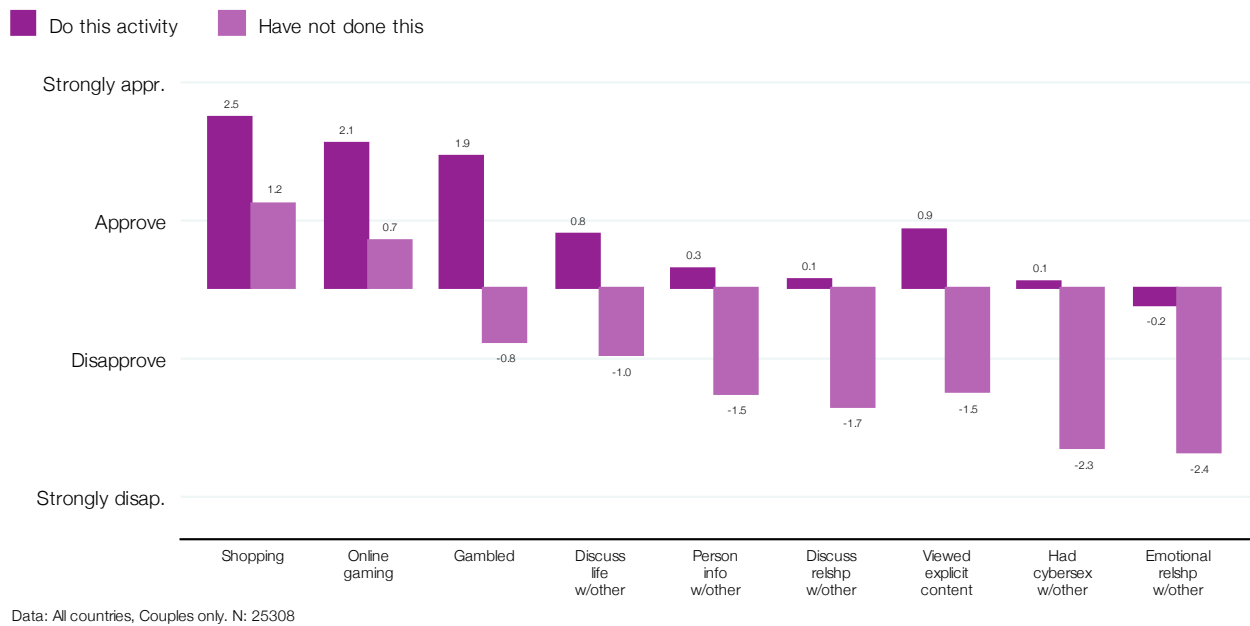
Figure 6.3: Approval of one's spouse doing a particular online activity by whether the respondent does the activity, sorted

Concluding remarks

This report has discussed a wide range of topics related to online relationships and the Internet, but it meant to provide a broad overview of an extremely rich set of data from around the world. Later reports will dig more deeply into some of the issues and trends identified here. Nevertheless, based on these preliminary findings, several themes have emerged as especially salient. These themes tend not to contradict earlier academic research on the Internet, but they challenge many notions of online relationships presented so often in popular accounts that they have created a number of mass media myths.

Networked individuals: In its current form, the Internet tends to facilitate a plethora of means for networked individuals to connect to each other one-on-one [Wellman, 2002]. The Internet is creating new spaces, including online dating sites, for developing relationships. Intimate social relationships are a person-to-person matter, and the Internet empowers the individual to connect with old friends, new friends, groups and individuals in ways that add to their opportunities for meeting people generally and for more personal relationships.

Experience technology: Early reports of online dating were resigned to talk-shows and other curios. Viewing online dating as a curiosity was based on the infrequency of meeting online . Presently, online dating (either through dating sites or social network sites) seems to have reached a critical mass in many countries. Consequently, Internet-enabled individuals are likely to know someone who dated online, or know someone who married their online-met partner. Furthermore, mere exposure to online dating appears to be correlated with more favorable opinions about this activity. Obviously, we cannot disentangle causation here. That is, people more favorable to online dating are likely to try it. But given that a favorable opinion of online dating does not depend on being successful at online dating indicates that experience is more important to the continued diffusion of online dating than success.

Shifting boundaries: Cross-national analysis of meeting friends and romantic partners online demonstrates that some places are more likely than others to consider the online world a site for meeting new individuals. This is partially due to differences in how the online world is perceived. In countries where social network sites have rapidly diffused, it is easy to consider the online world as merely an extension of the offline one. By contrast, in countries where interest-based groups, pseudonyms and icons (rather than face

pictures) dominate, it is easy to consider the online world a place where one goes to meet people that might not otherwise be accessible, and may be considered separate from the offline world.

In general, it is clear that meeting others online either for friendship or romantic purposes is now a common, and in some contexts dominant, practice [Sautter et al., 2010]. This means it is worth changing the topic from "why or how" are people meeting online to, how sites are structured and designed to encourage or discourage certain kinds of meeting and matching. There are clear biases in the way that online media are structured. By reconfiguring how individual profiles are displayed (a process one might call curation [Hogan, 2010]), relationships themselves become reconfigured. There is evidence to suggest that this may lead to greater relationship satisfaction [Hitsch et al., 2010]. However, there can be unintended or unanticipated consequences. It also appears to create a greater potential for extra-marital practices [Whitty, 2004], and may even give rise to moral panics. Based on the evidence presented here, these reconfigurations are working alongside offline practices to provide greater choice and opportunity, and in many senses fulfilling a oft-held promise that the Internet will bring people together and increase social (and even romantic) connections.

Appendices

Study Design

The study was focused on married or cohabiting couples, both of who are online. This was driven by a research interest in the relationships of online couples. The OII research project, 'Me, My Spouse and the Internet', was anchored in this population, and sought to explore the role of the Internet in how these couples met, maintained their relationships, and used the Internet. The study was conducted primarily through a set of questionnaires completed online in 18 countries.

This restricts the sample pool to couples who have access to the Internet. This is not something we believe hampers our ability to make claims, but it should be noted that we are generalizing to a specific population: Internet-connected cohabiting couples, and not to a population at large. We can only speculate on the differences between these two populations. Future work will compare this study to national data from related research, such as the World Internet Project and Oxford Internet Surveys to assess potential biases.

The working data set featured in this report employs all surveys where the first respondent completed the survey, and we believe that the survey was filled out honestly and conscientiously. That said, the second person did not need to complete the survey, but merely pass the screening questions. For this reason, the N may vary depending on where the question was asked in the survey.

Online surveys have distinct advantages and disadvantages, such as the potential for dishonesty. We believe we have corrected many of these biases. Three biases stand out:

- *Laziness in matrix questions*: 0.01 percent of the sample filled out virtually every question set exactly the same. The chances of this occurring naturally are infinitesimal. To assess this, we calculate the standard deviation in any given matrix. If the standard deviation is zero, then all questions were answered the same. If people filled out more than 18 out of 25 question matrices exactly the same, they were excluded. This process eliminated 64 individuals.

- *The same person for both partners*: This is actually quite difficult to assess, especially if the person is deliberately trying to anticipate what the other person says, rather than simply filling out the survey twice. In this instance we have no way of knowing. However, we can know when people are filling out the survey twice by looking

for two partners whose scores are too highly correlated, especially on demographic variables. We removed approximately 20 percent of the same sex couples for this reason – as they had the same gender, birth year, education, and occupation and were highly correlated on many other variables, suggesting they were the same person.

- *Concordance*: Spouses may not actually agree on many facts, such as year they were married, or whether it should be classified as marriage or civil partnership. In cases where the years differ by three or fewer, cases were included and the overall 'relationship start' variable was assigned to the earliest of the two dates (so long as it didn't create logical inconsistencies in other ways). In many cases, this is actually a preferable situation to a case of high concordance because it demonstrates that the two surveys were likely to have been done by two different people rather than a single person completing the questionnaire twice.

In contrast to these negative biases, there are a great many positive benefits. The most notable of these is disclosure. Past research has demonstrated that people are more likely to disclose private details to a computer rather than an in-person interviewer [Joinson, 2001]. Given the sensitivity of many of the questions (including infidelity), we believe we have estimates here that are more realistic than estimates that are based on in-person surveys or even telephone surveys.

Online surveys have a problematic reputation, primarily due to concerns over sampling. Poorly drawn convenience samples from website pop-ups are not descriptive of all online surveys. This study was designed cooperatively by researchers at eHarmony and the Oxford Internet Institute, working with a professional firm that builds samples of respondents for online surveys. That said, most of the questions included in this report are either demographic or questions designed by the Oxford Internet Institute. This is primarily because eHarmony's questions are focused on personal attributes and personality tests, whereas this report focuses on Internet behavior and demographic differences. Future reports and / or academic work will employ both personality variables and behavioral variables.

[Boase et al., 2006] Boase, J., Horrigan, J., Wellman, B., and Rainie, L. (2006). *Pew Report: The Strength of Internet Ties*. Pew Internet and American Life Project, Washington, DC.

[Bridges and Morokoff, 2010] Bridges, A. J. and Morokoff, P. J. (2010). Sexual media use and relational satisfaction in heterosexual couples. *Personal Relationships*, Advance:no–no.

[Couch and Liamputtong, 2008] Couch, D. and Liamputtong, P. (2008). Online dating and mating: the use of the internet to meet sexual partners. *Qualitative health research*, 18(2):268–79.

[Daneback et al., 2007] Daneback, K., Må nsson, S.-A., and Ross, M. W. (2007). Using the Internet to find offline sex partners. *CyberPsychology & Behavior*, 10(1):100–107.

[Dutton et al., 2009a] Dutton, W., Helsper, E. J., and Gerber, M. M. (2009a). *The Internet in Britain: 2009*. Oxford Internet Institute, University of Oxford.

[Dutton and Shepherd, 2006] Dutton, W. and Shepherd, A. (2006). Trust in the Internet as an experience technology. *Information, Communication & Society*, 9(4):433–451.

[Dutton et al., 2009b] Dutton, W. H., Helsper, E. J., Whitty, M. T., Li, N., Buckwalter, J. G., and Lee, E. (2009b). The Role of the Internet in Reconfiguring Marriages: A Cross-national Study. *Interpersona*, 3(December):3–18.

[Ellison et al., 2006] Ellison, N., Heino, R., and Gibbs, J. (2006). Managing Impressions Online: Self-Presentation Processes in the Online Dating Environment. *Journal of Computer-Mediated Communication*, 11(2):415–441.

[Gennaro and Dutton, 2007] Gennaro, C. D. and Dutton, W. (2007). Reconfiguring Friendships: Social relationships and the Internet. *Information, Communication & Society*, 10(5):591–618.

[Goldman et al., 1984] Goldman, N., Westoff, C. F. ., and Hammerslough, C. (1984). Demography of the Marriage Market in the United States. *Population Index*, 50(1):5–25.

[Haddon, 2006] Haddon, L. (2006). Communication Problems. *Knowledge, Communication & Policy*, 19(1):19–27.

[Hitsch et al., 2010] Hitsch, G. J., Hortaçsu, A., and Ariely, D. (2010). Matching and sorting in online dating. *The American Economic Review*, 100(1):130–163.

[Hogan, 2010] Hogan, B. (2010). The Presentation of Self in the Age of Social Media: Distinguishing Performances and Exhibitions Online. *Bulletin of Science, Technology and Society*, 10(6):Forthcoming.

[Hogan and Quan-Haase, 2010] Hogan, B. and Quan-Haase, a. (2010). Persistence and Change in Social Media. *Bulletin of Science, Technology & Society*, 30(5):309–315.

[Joinson, 2001] Joinson, A. N. (2001). Knowing me, knowing you: reciprocal self-disclosure in Internet-based surveys. *CyberPsychology & Behavior*, 4(5):587–91.

[Kendall, 2002] Kendall, L. (2002). *Hanging Out in the Virtual Pub*. University of California Press, Berkeley, CA.

[Kupper et al., 1985] Kupper, L. L., Janis, J. M., Karmous, A., and Greenberg, B. G. (1985). Statistical Age-Period-Cohort Analysis: A Review and Critique. *Journal Of Chronic Diseases*, 38(10):811–830.

[Kurdek, 2004] Kurdek, L. A. (2004). Are Gay and Lesbian cohabiting couples really different from heterosexual married couples? *Journal of Marriage and Family*, 66(4):880–900.

[Madden and Lenhart, 2006] Madden, M. and Lenhart, A. (2006). Online dating. *Pew Internet and American Life Project*.

[Sautter et al., 2010] Sautter, J. M., Tippett, R. M., and Morgan, S. P. (2010). The Social Demography of Internet Dating in the United States. *Social Science Quarterly*, 91(2):554—-575.

[Schussman and Earl, 2004] Schussman, A. and Earl, J. (2004). From Barricades to Firewalls ? From Strategic Voting Movement Leadership in the Internet Age. *Sociological Inquiry*, 74(4):439–463.

[Steinfield et al., 2008] Steinfield, C., Ellison, N. B., and Lampe, C. (2008). Social capital, self-esteem, and use of online social network sites: A longitudinal analysis. *Journal of Applied Developmental Psychology*, 29(6):434–445.

[Wang and Wellman, 2010] Wang, H. and Wellman, B. (2010). Social Connectivity in America: Changes in Adult Friendship Network Size From 2002 to 2007. *American Behavioral Scientist*, 53(8):1148–1169.

[Wellman, 2002] Wellman, B. (2002). Little boxes, Glocalization, and Networked Individualism. In Tanabe, M., van den Bessclaar, P., and Ishida, T., editors, *Digital Cities*, pages 10–25. Springer-Verlag, Heidelberg.

[Whitty, 2004] Whitty, M. T. (2004). Cyber-Flirting: An Examination of Men's and Women's Flirting Behaviour Both Offline and on the Internet. *Behaviour Change*, 21(2):115–126.

Oxford Internet Institute
University of Oxford
1 St Giles Oxford OX1 3JS
United Kingdom

Phone: +44 (0)1865 287210
Fax: +44 (0)1865 287211
Email: enquiries@oii.ox.ac.uk
Website: www.oii.ox.ac.uk