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Prof. Dr. Matthijs Kalmijn, 1st supervisor

Dr. Stephanie Steinmetz, 2nd supervisor

Master Thesis

Does tolerance matter?
A study of same-sex unions and well-being in nine European
countries.

Mirjam M. Fischer

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Abstract

This study first examines whether there is a well-being gap between same-sex and mixed-sex couples in 9 European countries using representative survey data from the first wave of the Generations and Gender Survey. Results show that a well-being gap between same-sex and mixed-sex couples in only exists when social well-being is considered in relation to country-level tolerance. Not only is the well-being gap smaller in tolerant countries but it is reversed suggesting that same-sex couples have higher social well-being than their peers in mixed-sex relationships when tolerance is high. This is found using both a normative and a legal measure of social tolerance. Trends in the sample that suggest a similar association when looking at depression but the estimates are not statistically significant.

Keywords: tolerance, social well-being, depression, same-sex, mixed-sex, Europe

Word count: 10,022 excl. abstract, references, figures and tables

1. Introduction

Tolerance is the object of countless public policies; particularly the European Union is a great promoter of tolerance, pluralism and social cohesion, mostly in terms of ethnic and religious diversity. While tolerance is a desirable end in itself, it is certainly also worthwhile to examine consequences of tolerance for individuals at the receiving end. This study firstly takes this extra step by examining a potential well-being gap between same-sex and mixed-sex unions and its relationship with tolerance. To this end, this study operates with a twofold definition: on the one hand, tolerance is understood in terms of ‘social tolerance’, denoting public acceptance of variations in appearances, life styles, personalities or beliefs (Boswell, 2009). The ‘social’ aspect points towards a distinction of individual (dis)approval by members of societies from the tolerance of diversity in a society at large (Boswell, 2009). On

the other hand, tolerance is understood in terms of a supportive legal context for same-sex couples. To my knowledge, this is an entirely novel approach to studying well-being of same-sex couples since it has not yet been examined in relationship to the national context using representative data.

The literature on family structures has begun to consider same-sex couples as a same-sex union type that deserves distinctive attention. Since it has been shown repeatedly that varying union types and living arrangements among mixed-sex couples can affect well-being, the question arises how being in a same-sex union relates to well-being. The popular finding of the married being happier (Diener, Suh, Lucas, & Smith, 1999) and healthier (Wilson & Oswald, 2005; Waite & Gallagher, 2002) than the cohabiting, who in turn do better than singles, has often been confirmed, whereas evidence on same-sex couples remains scarce. Balsam, Beauchaine, Rothblum, & Solomon (2008) found greater relationship quality, compatibility, and intimacy as well as lower levels of conflict among same-sex couples compared to heterosexual married couples in a 3-year follow-up study. There is also evidence for shorter relationship duration among same-sex couples who live together compared to married mixed-sex couples (Balsam, Beauchaine, Rothblum, & Solomon, 2008; Kurdek L. A., 1998). While Kurdek (2004) also suggests that same-sex couples do not differ greatly from mixed-sex couples when it comes to the processes that regulate relationship functioning there seem to be some variations in well-being related factors between same-sex and mixed-sex unions that deserve scrutiny. Therefore, the first research question reads:

RQ1: Is there a gap in well-being between individuals in same-sex and mixed-sex unions?

In a large review of empirical work on the connection between marriage and mental and physical health benefits, Wilson and Oswald (2005) consider mostly interpersonal

mechanisms in search for an explanation. Recently, the social context has been considered as well: a study by Kalmijn (2010), based on pooled data from the European Values Survey (EVS) and World Values Survey (WVS), found that the negative effect of divorce on well-being is stronger in countries that have strong norms against divorce. Verbakel (2012) confirmed these results for women, showing that the well-being gap between married and divorced women is larger in countries where familialistic values prevail. Evidence from these studies (also Schultz Lee & Ono, 2012) suggests that valuable insights into the well-being of individuals in varying union types may be gained by examining the institutional contexts of countries. Particularly when studying well-being of individuals in non-traditional unions, such as same-sex couples, the possibility of tolerance playing a role suggests itself. Therefore, this study examines the potential well-being gap between same-sex and mixed-sex couples within different countries with divergent institutional contexts.

RQ2: If such a gap between same-sex and mixed-sex unions exists, to what extent does it differ between countries with varying levels of tolerance?

The link between tolerance (or the absence thereof) and well-being for same-sex couples has been examined extensively in qualitative literature. These studies have often focused on experiences of homophobia, victimization and discrimination of lesbians, gay men and bisexuals (LGB) (Harper & Schneider, 2003; McDemott, Roen, & Scourfield, 2008; Meyer I. H., 1995; Pilkington & D'Augelli, 1995). One strand of research has focused on these issues from the perspective of homosexual identity formation, highlighting the impact a hostile social climate can have on the self-image of individuals who identify or begin to identify as LGB (Flowers & Buston, 2001). Others have highlighted general negative consequences, which can follow from victimization, such as vulnerability for self-harm (McDemott, Roen, & Scourfield, 2008) and psychological stress (Iwasaki & Ristok, 2007). Flowers & Buston (2001) suggest that the experience of alienation and isolation of LGB

people growing up within a social context of compulsory heterosexuality is key to understanding these issues.

There is also a small but growing body of quantitative literature on the subject of LGB well-being and tolerance, with a focus on mental and physical health. A meta-analysis of 12 quantitative national-level studies of adults in the US and Europe concludes that there is indeed evidence from national-level studies that gay men are at higher risk for mental health problems than their heterosexual counterparts. The review suggests that this is due to stress related to their minority status (Lewis, 2009). These findings were repeated among 16 regional studies of LGB youth (Lewis, 2009). Another review of 20 empirical studies from the US and Europe demonstrates emerging evidence that minority stress also has detrimental effects on physical health in LGB, manifested in heightened risk for cancer, cardiovascular diseases and other chronic diseases (Lick, Durso, & Johnson, 2013). Since clearly not all LGB people show such symptoms, it is evident that the LGB-status itself is not the sole predictor for these outcomes. Instead, these findings suggest that LGB experience stress that is distinctive to their group and perhaps related to intolerance.

This study offers a novel approach by employing a cross-national perspective to this issue by examining the relationship between union types and well-being across nine different European countries in relation with tolerance. This is done by uniquely applying the data from the first wave of the Generations and Gender Survey (GGS) to this issue. The GGS offers the distinctive opportunity to identify couples live together in a household and those living apart, allowing for the inclusion of both living arrangements. The data are based on randomly sampled households in various European countries; the countries included in this study are Austria, Belgium, Bulgaria, the Czech Republic, France, Germany, the Netherlands, Norway and Poland. While LGB people are far more visible today than they were a few decades ago and discriminatory laws are slowly giving way to protective laws, LGB people

continue to face discrimination and rejection in their daily lives (Harper & Schneider, 2003). In fact, there are large differences when it comes to tolerance of homosexuality in European countries (Steinmetz & Araujo, forthcoming). Therefore, the relationship between union types and well-being is examined in the context of varying tolerance levels across these countries, by drawing on additional contextual information from the European Social Survey (ESS), the European Values Survey (EVS) and the International Lesbian, Gay, Bisexual, Trans and Intersex Association Europe (ILGA-Europe). In response to a call for research that not only focuses on the absence of ill-being when it comes to LGB people (Harper & Schneider, 2003; Riggle, Whitman, Olson, Rotosky, & Stong, 2008) but also on the occurrence of well-being, this study focuses on well-being operationalized as both the absence of depression and the presence of social well-being.

2. Theoretical background and hypotheses

2.1. A definition of well-being

When it comes to scientific research on well-being, there are two common views on how the notion of leading a good life can be approached (see Keyes, Shmotkin, & Ryff, 2002 or Waterman, 1993). One strand of literature suggests that cognitive life satisfaction and an excess of positive over negative affect are the main source of well-being (Diener, Suh, Lucas, & Smith, 1999; Diener, 2000). Considering well-being in terms of (the absence of) feelings of anxiety, sadness or depression falls under this notion of negative affect and is also regarded as dimensions of mental health (Headey, Kelley, & Waring, 1993). This is the hedonic approach. Another strand of literature, the eudaimonic approach, considers positive (psychological) functioning as the ultimate source of well-being. Positive functioning is defined as identifying with more affirmative than negative self-attributes, such as self-acceptance, self-development, a sense of autonomy and purpose (e.g., working towards

valued goals), and experiencing positive relationships (Huppert, 2009, p. 138). This notion of well-being involves people living “intensely alive and authentic, existing as whom they really are” (Ryan & Deci, 2001, p. 146). Keyes has argued that positive psychological functioning is also interrelated with mental health (for a discussion see Keyes, 2002).

Whereas positive psychological functioning is often understood as an individual and private aspect referring to self-acceptance, positive relations with others, personal growth, purpose in life, environmental mastery and autonomy, Keyes (1998) introduced the notion of social well-being to represent the public side of well-being. Since individuals are embedded in social structures, processes influencing well-being also involve the realm of the wider social environment of an individual. Keyes (1998) defines social well-being as “the appraisal of one’s circumstance and functioning in society” (p. 122). Thereby he points towards the potential benefits of public life like social integration and cohesion, a sense of belonging and interdependence and a sense of a shared consciousness and collective fate, as formulated in concerns about public health by Durkheim (1951). Particularly, the notion of social integration understood as the connection between individuals through shared norms (Durkheim, 1951) appears relevant in the context of this study. If social integration is a source of well-being, and if disconnection of the self from a society which does not reflect one’s own values or life style is a source of distress, then the notion of social well-being is particularly relevant for researching the well-being of individuals in same-sex unions since the norms that govern their societies may reject their way of living and inhibit social integration.

Accordingly, this study considers well-being both in terms of social well-being and in terms of negative affect (depression). Particularly prior quantitative research on the well-being of individuals with same-sex sexual partners has largely focused on well-being in terms of mental (King, et al., 2008; Meyer I. , 2003). The paradigm shift from the clinical focus on

ill-being towards a perspective understanding well-being as more than the mere absence of ill-being appears to trail behind somewhat in this field. By including depression in the definition of well-being, this study, on the one hand, adds to this existing body of knowledge. On the other hand, aspects of social well-being are explored, which expands the focus that has so far been on the absence of ill-being.

2.2. Individual-level mechanisms: Why would there be a well-being gap between union types?

Firstly, I will consider the well-being gap in the hypothetical absence of discrimination in order to hypothesize the main effect of being in a same-sex union on well-being. There are viable explanations for both the possibilities of higher and lower levels of well-being among same-sex unions. Leads that point towards lower well-being among individuals in same-sex unions can be derived from studies that have found shorter relationship duration and more frequent relationship dissolution among same-sex couples (Kurdek, 2006). The event of relationship dissolution can be considered a stressor and if it occurs more frequently among same-sex couples, this may be an explanation for a possible well-being gap. Even though only couples are included in this study, higher dissolution tendencies among same-sex couples suggest that there might be a higher chance that same-sex couples have experienced more frequent relationship dissolution in the past, which may affect the way they perceive the stability of their current relationship. Lower perceived stability may in turn affect well-being negatively.

Alternatively, there is also reason to assume that individuals in same-sex unions may experience greater levels of well-being than individuals in mixed-sex unions. Being open about their situation may both require and foster high levels of self-confidence, which can be a source of well-being, both directly (Bjorkman & Malterud, 2012) and indirectly via

increased relationship quality (Caron & Ulin, 1997). Since individuals in mixed-sex relationships are not faced with the imminent need of such self-confidence, individuals in same-sex relationships may overall show greater levels of well-being. Well-being is derived from openness and positivity that accompanies people who feel free to be who they really are (Ryan & Deci, 2001) and achieving this status may be particularly rewarding to people in same-sex relationships if they overcome fears of rejection. Moreover, being in a satisfying romantic relationship is associated with greater well-being and some studies have suggested that particularly women in same-sex relationships sometimes perceive their relationship quality to be higher than individuals in mixed-sex couples (Meuwly, Feinstein, Davila, Nuñez, & Bodenmann, 2013). Greater well-being among same-sex couples could, therefore, also be explained by differences in relationship quality. There are reasons for variations in well-being into both directions; therefore, I do not expect to find a well-being gap in the absence of discrimination since the factors discussed potentially cancel each other out.

Hypothesis 1: In the absence of discrimination, there is no well-being gap between individuals in same-sex and mixed-sex unions.

3. Country-level considerations

The mechanisms hitherto discussed are on an interpersonal level, exclusively. While this perspective is important to consider when thinking about a potential well-being gap between same-sex and mixed-sex couples, the aim of this study is to examine this relationship relative to the social and legal context that make up the level of tolerance in a country. Tolerance refers to the level of acceptance of same-sex unions and LGB in general. Conceptually, a distinction can be made between formal and informal dimensions on the national level. Tolerance as a normative concept refers here to the informal institutional context in a country and is composed of shared values and standards that govern the realm of

the accepted within societies. Tolerance as a formal institution refers to the degree to which individuals in same-sex unions are permitted, and supported in, living their lives as they wish from a legal perspective. The lines between those two dimensions are blurry since both aspects of tolerance on the country-level are so closely intertwined and mutually interdependent that a clear separation is unattractive. Rather both approaches are employed in a complementary fashion to sketch the impact of varying levels of tolerance across countries.

3.1. Dimensions of tolerance

Informal institutional context. Tolerance of same-sex unions in contemporary Western societies is often still inhibited by deeply anchored standards of heterosexuality. In a qualitative study of mental health disparities between heterosexuals and LGB people in the Netherlands, Aggarwal and Gerrets (2013) set out to investigate the paradox between a seemingly liberal and tolerant society and this persisting gap. According to a multitude of scientific opinion polls among the Dutch population, most people indicate that they are tolerant of homosexuality. In fact, many consider their tolerance of homosexuals as integral to their national identity (Hekma & Duyvendak, 2011). Yet, life history interviews with homosexuals living in the Netherlands revealed that identifying as gay is considered a “spoiled identity” (Aggerwal & Gerrets, 2013, p. 110). Even when growing up in a pro-gay family and environment, being gay is just not considered ‘gewoon’ (Dutch for normal, customary, usual or self-explanatory). The aspect that was most frequently described as challenging to normalcy or to being ‘gewoon’ was defiance of traditional gender roles.

Heterosexuality as a ubiquitous institution, which organizes male and female relationships by unwritten but compulsory rules of conduct, and which evokes strong ramifications when ignored or crossed, is famously described in *Compulsory Heterosexuality and Lesbian Existence* by Annemarie Rich (1980). And indeed, the socio-cultural context of

heterosexuality is considered one of the most powerful organizing principles in our societies (e.g., Bunch, 1975) and challenging to LGB acceptance because it involves the alignment of biological sex, gender identity and gender roles. A heteronormative climate therefore represents the opposite of tolerance of sexual orientation diversity, to which LGB are exposed when interacting with religious, legal, economic and social systems in a location (Oswald, Cuthbertson, & Lazarevic, 2010).

It is apparent that the well-being gap needs to be considered as embedded in a heteronormative culture, which can clash severely with non-heterosexual identity and behaviour. Religious and political affiliations, the prevalence of traditional family and gender values and gender equality are thought to influence (Kuyper, Iedema, & Keuzekamp, 2013; Steinmetz & Araujo, forthcoming), or in fact constitute (Oswald, Cuthbertson, & Lazarevic, 2010), tolerance of sexual orientation diversity on the country- and community-level, respectively.

Formal institutional context. Formal laws and policies are more tangible in expressing support or rejection of LGB people than informal institutions. While laws and policies are easily observed, the scope of possibilities always remains difficult to delineate since same-sex couples can creatively react to legal obstacles and sometimes circumvent them by establishing alternative legal ties through wills, trusts, authorizations and contracts (Oswald & Kivalanka, 2008). Laws relevant to LGB people can be either enabling (e.g. access to services, benefits) or protective (e.g. anti-discrimination legislation). Enabling laws, such as being able to marry or adopt children, are often subject to heated public debate. In the United States, for example, concerns for child well-being are often raised in combination with these legal rights. Protective laws seem to stir less of a public response and seem to be accepted more easily.

3.2. Country-level mechanisms: How can the institutional context affect the well-being gap between union types?

Informal institutional context. In order to comprehend the paths in which the normative dimension of tolerance on the country-level may interfere with the well-being of individuals in same-sex unions, the notion of social stress offers a point of departure (Meyer, 2003). In addition to personal and interpersonal stressors, same-sex unions may evoke disapproval from their social environment. A disapproving social environment goes beyond the stress caused by individual discriminatory encounters or by deeply rooted fear of rejection in interpersonal relationships; instead social stress refers to conditions in the environment that cause stress and that are structural in nature (Meyer, 2003, p. 675).

There are different ways in which individuals in same-sex unions may be affected by this. On the one hand, there are emotional pathways. One option is simply the fact that the environment is encoded with a general message of rejection (Oswald, Cuthbertson, & Lazarevic, 2010). In other words, individuals in same-sex unions do not necessarily need to encounter negative sentiments on a daily basis to be affected. It suffices if they know that norms and values prevail in their larger environment, which are incompatible with same-sex relationships, such as traditional family values that focus on the nuclear family or strict standards of masculinity and femininity. The environment then functions as an indirect source of chronic stress. If the normative context is to be understood as collective social control, which either enhances or inhibits the acceptance of sexual orientation diversity (Oswald, Cuthbertson, & Lazarevic, 2010), this can also entail very concrete habits, practices and sanctions, which keep the institution intact. Another option is a lack of social approval, which is central to the well-being of individuals. Ormel, Lindenberg, Steverink and Vonkorff (1997), for example, suggest that social stress is created when a mismatch of values with own behaviour or desires arises and, as a result, presents a conflict between norm compliance and

being ‘true to their self’. Durkheim (1951) was famously concerned with social integration and alienation from social structures and institutions. He considers people’s identities to be interlinked with a sense of belonging to communities or other social organizations, within which they share norms and interests with others. Therefore, if a person cannot identify with the prevailing norms that organize a society they may feel isolated and forfeit well-being. Moss (1973) argues from a symbolic interaction paradigm, suggesting that people derive meaning about their life and themselves from interaction with their social environment. If the environment is hostile or in some way incongruent, this suggests that a person would derive a negative self-image, which in turn dampens well-being.

On the other hand, social stress may arise due to behaviours of people in the immediate environment as opposed to fear or feelings of rejection and alienation. If a normative climate is hostile towards same-sex couples the threshold for verbal or even physical assault may be lower. Translated to the country-level, as opposed to individual incidents, this can mean that people may be less likely to stand up for someone who experiences verbal or physical discrimination in public. Overall, these mechanisms may cause individuals with same-sex partners or desires to conceal their situation, preventing them to achieve well-being in the eudaimonic sense (e.g. self-actualization).

Hypothesis 2: If a well-being gap between individuals in same-sex and mixed-sex couples exists, it is smaller in countries where the informal institutional context is tolerant towards LGB people compared to countries in which tolerance is low.

Formal institutional context. The pathways in which the formal institutional context may affect the well-being gap are somewhat more concrete than the normative ones, since the lack of legal support can very effectively limit the extent to which individuals in same-sex

unions can lead equally autonomous lives as individuals in mixed-sex unions can within that same country. This is particularly true for the right to establish formal legal ties. Its denial usually entails economic disadvantages and brings along a number of security issues when it comes to medical emergencies, inheritance, child custody or life and death decisions (Oswald & Kuvalanka, 2008). This can be stressful, particularly when the acquisition of shared property or family planning is involved. Some countries have answered this by allowing same-sex couples to gain marriage-like rights by establishing civil unions or registered partnerships but the degree to which such rights are available to same-sex couples differs substantially between countries. There is empirical evidence from a study based on a non-representative online survey that individuals in legally recognized same-sex unions show lower levels of psychological distress and higher levels of psychological well-being compared to individuals who are single or in a non-registered union (Riggle, Rosotsky, & Horne, 2010). The lack of equal rights must therefore be recognized as one pivotal force which contributes to the perpetuation of a structure that marginalizes gay women and men not only legally but socially and economically (Herdt & Kertzner, 2006, p. 33). Goldberg and Smith (2011) suggest that marriage and adoption legislation replicates and structures local practices, such as community members' attitudes and behaviours towards LGB people (p.140). In this aspect, the lines between formal and informal institution are blurred since a link between legislation and public opinion is suggested.

With regard to protective laws against discrimination and verbal or physical assaults, incidents cannot always be prevented from happening. They can, however, give victims legal ground to seek justice. More importantly, perhaps, there is a symbolic dimension to protective laws. The presence of such laws communicates that LGB people are considered worthy of the state's protection. The denial of rights, while an injustice in itself, communicates a rejecting attitude of official institutions in a country towards its LGB citizens.

Globally, more than one third of all countries still criminalize same-sex conducts between consenting adults in private, even though not all of these countries also enforce persecution (Paoli Itaborahy & Zhu, 2013, p. 10). In Europe, there is currently no country that criminalizes the mere sexual act between consenting adults of the same sex in private and only Greece and the United Kingdom associate Bailiwick of Guernsey still handle a higher age of consent for homosexual acts than for heterosexual act. When it comes to the full range of protecting and enabling laws considered by the state sponsored homophobia report, there are still great variations across Europe (see result section). Hypothesis 3 expresses expectations about the legal context:

Hypothesis 3: If a well-being gap between individuals in same-sex and mixed-sex unions exists, it is greater in countries where the legal context is intolerant towards LGB people compared to countries with more tolerant legislation.

4. Method

4.1. Sample

The data come from the first wave of the Generations and Gender Survey (GGS), a large cross-national panel survey designed to improve understanding of demographic and social development in the UNECE countries. The GGS lends itself perfectly to the purpose of this study due to detailed questions regarding personal relationships, social connectivity and well-being. Data are currently available for eighteen countries. The countries included in this study are selected on the basis of the availability of the dependent variables and under the condition that individuals in same-sex unions can be identified: Austria (2008-09), Belgium (2008-10), Bulgaria (2004), the Czech Republic (2004-05), France (2005), Germany (2005), the Netherlands (2002-04), Norway (2007-08) and Poland (2010-11). Lithuania and Russia

are omitted from the analysis since only two and three same-sex couples could be identified, respectively. The survey is aiming at national representativeness and is conducted either face-to-face, via computer assisted telephone contact and/or self-administered questionnaires sent by mail¹.

The questions about the respondents' partners allow for the identification of couples who live together with a partner in a shared household and those who live separately. Overall, the sample includes 63,227 individual observations in these countries. The sample size varies between 3,866 in Austria and 12,156 in Poland. Across the nine countries, same-sex couples make up 0.78% of the sample on average (0.95 % when using weights). This is similar to the percentage found in the four waves of the ESS. The numbers of same-sex couples found in each country are: 114 in Germany, 96 in the Netherlands, 67 in Belgium, 62 in Norway, 29 in Bulgaria, 27 in the Czech Republic, 13 in Austria and 8 in Poland. Lower numbers of same-sex couples in these countries may be connected to the less tolerant climate, which may cause individuals with same-sex sexual attraction and partners to be more reluctant to reveal their situation. Also, in order to correct for the misrepresentation of specific social and demographic groups in the sample, a standardized weight based on country specific population weights was applied. However, the application of the weight barely changes the means of the variables of interest, which lead me to decide to use unweighted data for estimating the models.

4.2. Missing data and unlikely cases

Missing data were deleted listwise under the assumption that the information is missing at random. The number of missing values on individual level variables does not exceed 2%, with the exception of the depression scale. Unfortunately, the depression scale

¹ <http://www.ggp-i.org/data/data-documentation.html>

was unavailable for Germany, the Netherlands, Austria and Poland. An exclusion of these countries would mean the omission of 26% of all same-sex couples in the sample, which is a loss of valuable data. In order to solve this issue, the robustness of the main effects that are found to affect social well-being in this study is tested carefully across all countries (see section 7). Since the effects on social well-being are shown to be robust in section 7, it can be assumed that the depression index behaves similarly across the missing countries as it does across the available ones. Among the five countries in which the depression scale are available, there are 0.86% of cases missing on average. Except in Norway there are 28% are missing on the depression scale. This is a result of non-response to paper and pencil questionnaires that were administered by mail (Moor & Komter, 2012). No further information about potential selectivity is known. Therefore the data is treated as randomly missing and excluded. A control analysis, whereby multivariate normal regression² was used to impute likely values on the depression scale for these missing cases, showed that the effects do not change substantively when the missing observations are included.

There are a number of individuals in same-sex relationships that have indicated being married to their current partner (48%). Yet, legally this was possible only in the Netherlands and Belgium at the time of data collection (Paoli Itaborahy & Zhu, 2014). According to the ILGA-reports (2008-2014), Germany, France and Norway offered the option of civil partnerships for same-sex couples at the time of data collection, which provides most or all rights equal to marriage. One possible explanation therefore could be that the respondents in these countries preferred to refer to their legally registered partnership as marriage. This could be an act of protest against the fact that marriage was not accessible to them at the time.

² I used 50 imputations and a manually set seeding code (1234) for replication purposes. According to Schafer and Olsen (1998) at least 20 imputations are required when missing 30% of data in order to achieve great precision in estimation.

Also in the Czech Republic an act of protest is thinkable. Legally binding unions are often perceived as having more legitimacy, therefore same-sex couples may have simply chosen to refer to themselves as married in order to assert their commitment to the relationship towards their partners and/or towards others. Civil partnerships were not accessible to same-sex couples at the exact time of data collection in 2004 and 2005 but followed one year later. This could mean that the issue of same-sex unions possibly appeared high on the media agenda at the time, making such acts of protest or social desirability even more likely to occur in such high numbers.

Reasons of social desirability and protests might also apply to the four individuals in same-sex unions who claim to be married in Poland, where the legal registration of same-sex couples is not possible at all. In order to preserve as many same-sex respondents as possible, these cases were included in the analysis. Additional analysis of the sub-sample of same-sex couples only showed no evidence that those indicating that they are married are any different from the non-married in terms of social well-being or depression. In Austria and Bulgaria there were no same-sex couples who indicated that they were married.

Finally, twenty-eight respondents indicated that they were younger than twelve years old when they first started living together with their partner. In order to preserve the cases but limit the influence of these unlikely data, the cases were coded as having lived together for 0 years. Eight respondents refused to indicate the gender of their partners and are omitted from since knowing the gender of both the respondent and their partner is essential to the analysis.

4.3. Dependent variables

Social well-being. When individuals have fewer close relationships than desired or when existing ones do not have the desired depth, loneliness occurs and the subjective evaluation of one's well-being is most likely affected. Loneliness is one indicator of social

well-being and the GGP offers a shortened version of the loneliness scale developed by De Jong-Gierveld and Tilburg (2006). The six items refer to two distinct subscales of loneliness, which together also form a reliable factor of loneliness overall. Three items correspond to the social sub-scale (having meaningful relationships): ‘there are plenty of people that I can lean on in case of trouble’, ‘there are many people I can count on completely’, and ‘there are enough people I feel close to’. Three other items, which are part of the scale referring to the emotional sub-scale (feelings of belonging): ‘I experience a general feeling of emptiness and often’, ‘I feel rejected’ ‘I miss having people around’. In this study, the measure is used as 6-item scale to capture overall loneliness. A scale reliability coefficient of $\alpha = 0.74$ suggests that the 6-item scale is indeed consistent. Three items are recoded so that a high score on the index indicates high levels of social well-being (and low levels of loneliness).

Depression. Depression is measured by a shortened version of the Center for Epidemiologic Studies Depression Scale (CES-D) (Vikat, et al., 2009). The seven items selected include the following statements: ‘I felt that I could not shake off the blues even with help from my family or friends’, ‘I felt depressed’, ‘I thought my life had been a failure’, ‘I felt fearful’, ‘I felt lonely’, ‘I had crying spells’ and ‘I felt sad’. Respondents indicated whether they experienced such feelings 1 seldom or never, 2 sometimes, 3 often or 4 most or all of the time. The index created from these seven items shows great internal consistency ($\alpha = 0.89$). The items are recoded in a way that a high score denotes more depressive symptoms. Please note that a positive effect on depression must be interpreted as adverse for well-being.

4.4. Individual-level covariates

Union types. The distinction between same-sex and mixed-sex couples is generated by combining the information from questions on the household grid. The GGS also allows

the identification of couples who do live together and those who do not and both are included in the analysis.

Control variables. There are a number of factors that need to be taken into account, since they may spuriously affect the relationship between union types and well-being. For example whether a couples lives together or not: the sources of stress related to a sexual minority status may differ for couples who are openly living together as gay and same-sex couples, who may not display their situation as obviously to the social environment if the partners live in separate homes. This could entail less frequent exposure to hostility and open discrimination, as well as less fear thereof. Alternatively, the dynamics in same-sex relationships could mirror those of mixed-sex relationships in a way that living together communicates commitment and feelings of security, which in turn may result in higher well-being. In fact, couples who do not live together may experience lower well-being if they are hiding their true identity instead of living openly and confidently together. Greater levels of “outness” in couples who live together may result in greater well-being³.

Similarly, the presence of children may affect diverse relationships differently. Some have shown that the presence of children or their expectancy can cause anxiety and stress in mixed-sex parents if they do not have good emotional bonds with their own parents (Matthey, Barnett, Ungerer, & Waters, 2000) or experience a sense of loss of control (Keeton, Perry-Jenkins, & Sayer, 2008). On the one hand, this could be similar or potentially worse for same-sex couples since individuals in same-sex couples may have problematic relationships with their own parents more often due to their sexual orientation. Also, Goldberg and Smith (2011) have shown that same-sex couple’s stress increased when a child entered the

³ It was initially tested whether those living together and those who are not should form separate comparison groups by means of an interaction effect between cohabitation and same-sex union. Since no significant result was obtained, living together is accounted for by a control variable only.

relationship if feelings of internalized homonegativity were present. This suggested that parents' well-being suffered due to feelings of fear and guilt towards the child, in case the child would ever experience stigmatization because of the same-sex parents. On the other hand, we could expect same-sex couples to be happier when a child is in the relationship because often there are severe legal obstacles to same-sex adoptions. When these obstacles have been overcome or creatively circumvented, the presence of a child could be more deeply appreciated than usual.

As previously mentioned, there is evidence that same-sex couples have shorter relationships on average (e.g. Kurdek L. A., 2006), which may affect well-being directly or through perceived levels of commitment and relationship quality. Therefore, the duration of the current relationship is controlled. In representative surveys it appears that samples of lesbians and gay men have a tendency to be higher educated (see e.g., Schwartz & Graf (2010) using U.S. Census data or Jaspers and Verbakel (2013) using Dutch Labour Force Surveys 1994-2007). This may be due to sampling bias. The level of education is thought to affect well-being according to a review of subjective well-being and its determinants (Dolan, Peasgood, & White, 2008) as well as gender and age: women report higher subjective well-being but are also more prone to depression (Velde, Bracke, & Levecque, 2010); there is evidence for a U-shaped life course effect on well-being; and studies suggest a link between socio-economic factors and well-being. Also, there is evidence that gay men and women experience different kinds of stress related to their sexual orientation (Lewis, Derlega, Berendt, Morris, & Rose, 2001). In order to limit the influence of such differences, age and age-squared, gender and the level of education are taken into account. Related to these factors, the likeliness of being unemployed may differ between the union types and have a negative impact on well-being (Dolan, Peasgood, & White, 2008; Helliwell & Putnam, 2004).

4.5. Country-level covariates

Informal institutional context. In order to map the informal institutional context in a country, four components are combined to form one standardized indicator ($\alpha = 0.83$). A higher score indicates a more tolerant normative context for same-sex couples. The first component is a variable from the ESS, namely the average opinion whether “gay men and lesbians should be free to live their own life as they wish”. The country score is created by calculating the mean score between 0 ‘disagree strongly’ and 4 ‘agree strongly’ from individual level data. The second component is a country’s average score on a religiosity index, based on data from the ESS. The religiosity index is created from the standardized questions asking about the frequency of religious service attendance and the frequency of praying outside religious services. A Cronbach’s alpha score between $\alpha = 0.93$ and $\alpha = 0.96$ across the survey waves suggests great internal consistency and reliability of the religiosity index. Thirdly, an additive index constructed from ten standardized items on family values and gender roles from the European Values Survey (EVS). Kuyper, Iedema, & Keuzekamp (2013) have shown an association between traditional attitudes on gender roles and tolerance of homosexuality, possibly because both measures point towards a concept of tolerance of gender deviance or general traditional values. The items were coded in a way that a lower score represents traditional views on family and gender and a higher represents more liberal views (see Table 1). The overall index of the informal institutional context is internally consistent and can be considered reliable ($\alpha = 0.74$).

Finally, the Gender Empowerment Measure (GEM) from the Human Development Reports by the UN Development Programme (UNDP, 2008) is included to measure gender equality, since there appears to be a relationship between objective measures of gender equality and tolerance of homosexuality (Kuyper, Iedema, & Keuzekamp, 2013; Oswald, Cuthbertson, & Lazarevic, 2010). The GEM provides insights into gender disparities in

relative economic income, labour market participation in high positions and parliamentary positions in many countries and is, therefore, a valuable addition to the collection of variables modelling the normative context for same-sex couples. The greater the gender disparity is, the lower the GEM.

Formal institutional context. In order to measure the legal context for lesbians and gay men in different countries, a dataset⁴ was created based on the *State-sponsored Homophobia*-reports, which are released annually by the International Lesbian, Gay, Bisexual, Trans and Intersex Association (ILGA) annually since 2008. The relevant laws are: adoption rights for same-sex couples, equal age of consent for homosexual and heterosexual acts, marriage equality (or alternatively having almost all or some rights similar to marriage, e.g.: civil partnerships) and four dimensions of anti-discrimination laws. The anti-discrimination laws cover prohibition of discrimination based on sexuality in employment relations, constitutional prohibition of discrimination based on sexuality, the prohibition of incitement to hatred as well as the recognition of hate crimes based on sexual orientation as aggravating circumstance. The legality status for homosexual acts between consenting adults is the same across all countries in the sample and is therefore not included here.

For each law a dummy variable was created to indicate whether it was present in a country at the time of the GGS data collection. The dummies are added up to form a 9-point scale. So for each of the laws that are in place in one country, the country gains one point on the scale of favourable legal context. Note that three laws granting (1) some or (2) most rights equal to marriage and (3) full marriage equality are treated hierarchically. For each of these three laws, one-third of a point is assigned. If a country grants full marriage equality, the points for some and most rights are also granted and add up to 1. This method is applied so that marriage equality weighs in equally with any other law instead of triple. The Netherlands

⁴ The dataset that was compiled based on these reports is available upon request.

implemented the law that considers hate crimes based on sexual orientation an aggravating circumstance in 2003, which falls into the middle of the data collection span of the GGS (2002 – 2004). Therefore, half a point was awarded for this law.

[Table 1: Variable description]

4.6. Analysis

The relationship between well-being and union type is explored by estimating several linear OLS regression models. Since there are only nine countries in total, a multi-level design cannot be applied. Models M1a-M6a are run with social well-being as the outcome variable, whereas models M1b-M6b are regressed for depression. First, a baseline model with the union type as sole predictor is run (M1). Then it is tested whether a well-being gap between same-sex and mixed-sex unions exists while controlling for individual level covariates (M2). In the following models I test the effect of tolerance on well by including variables for the informal (M3) and the formal institutional context (M4). Then, an interaction term between the institutional context and being in a same-sex union is added in order to see whether same-sex couples are affected differently by varying levels of tolerance than mixed-sex couples (M5, M6). In addition, a number of analyses were repeated using sub-groups of the sample to test the robustness of the results (see section 7).

5. Descriptive Results

Before looking at the regression results, it is useful to examine the composition of the sample as well as bivariate relationships between the outcome variable and the main predictors. The univariate results are described using weighted mean estimates. The means of binary variables can be interpreted as percentage of the respondents who score 1 on the respective variable.

[Table 2. Descriptive statistics.]

The composition of the sample differs somewhat between union types when it comes to the individual level covariates. 88% of the mixed-sex couples are living together and 53% have a child living in the household. On average, their relationships already last for 20 years. As generally observed in randomly sampled surveys, there are slightly more women (51%) than men (49%). The average age lies at 46 years and half of the people have a medium level of education. 7% are unemployed and about 15% of all individuals in mixed-sex relationships have a (second generation) migration background.

Among the individuals in same-sex unions, fewer live together with their partner (77%) and they have children living in the house less often (27%). Their relationship duration is shorter on average with 14 years. Unlike what is observed among the individuals in mixed-sex unions, there are more men (59%) than women (41%) in the sample. The average age of individuals in same-sex relationships is lower with 43 years and they are somewhat higher educated on average (44% medium and 37% high education) compared individual in mixed-sex couples. Comparable to the individuals in mixed-sex relationships 6% are unemployed and (second generation) 17% have a migration background. With regard to the dependent variables, there are but minor differences between union types (see Figure 1).

[Figure 1. Average Social Well-Being (1 low – 3 high) and Depression (1 seldom – 4 most of the time) per country and union type.]

Next, the correlation among the country-level measures of tolerance is examined. The formal and informal institutional context are moderately correlated ($r = 0.63$ when $N = 9$, $r = 0.57$ when $N = 5$), which empirically confirms their conceptualization as two distinct but interrelated dimensions of tolerance. Most countries that score high on the legal dimension also score high on the normative dimension. Yet, at the lower end of the legal scale there is a

cluster of countries that all have but two laws in place while scoring quite differently on the normative dimension. Austria, the Czech Republic and Bulgaria show a combination of few supportive laws but a moderately tolerant normative climate. Together with Poland, they had only two of the seven laws in place at the time of the GGS data collection, namely equal age of consent for hetero- and homosexual acts and the prohibition of employment discrimination based on sexual orientation. In fact, all countries had both these laws in place, except Germany who did not explicitly prohibit employment discrimination based on sexual orientation. Yet, Germany was the only country who had adopted an anti-discrimination law into its constitution. The laws referring to incitement to hatred and aggravating circumstances were only found in Belgium, France and the Netherlands. Finally, laws regulating marriage and access to marriage-like benefits via registered partnerships were in place in Belgium, France, Germany, the Netherlands and Norway. Full marriage equality was only granted in Belgium and the Netherlands, who overall score highest on the legal scale with 6 and 5.5 points, respectively. It is noteworthy that Norway, as most tolerant country in a normative sense, is in the middle of the cluster on the legal dimension, suggesting that legal tolerance perhaps lagged behind public opinion at the moment of data collection in 2007-08. To further examine these measures in relation to a potential well-being, regression analyses were performed.

[Figure 2. The association between the two tolerance measures.]

6. Regression results

Well-Being Gap. The first hypothesis describes the expectation that there is no well-being gap when discrimination and tolerance are not taken into account. For social well-being the main effect of being in a same-sex union is not significant and suggests that, indeed, there is no such difference in well-being between the union types (M1a, M2a). A very small effect

size (Cohen's $d = 0.08$) confirms that the variance can be neglected. When looking at depression, however, there is a small positive effect of being in a same-sex union in M1a, which persists when controlling for other individual level covariates ($b = 0.06$, $p < 0.05$, M2a). This means that individuals in same-sex couples show slightly higher levels of depression than individuals in mixed-sex couples. Yet, the effect size of $d = 0.12$ is very small. Overall, the evidence rather points towards the absence of a notable well-being gap, lending support to hypothesis 1.

[Table 3. Regression Models With Individual- and Country-Level Variables Predicting Social Well-Being and Depression.]

Tolerance. In the following part the role of tolerance is explored. First, I focus on the main effects of the tolerance measures. There is a significant effect of the informal institutional context on social well-being for all union types ($b = 0.13$, $p < 0.001$, M3a), yet no such association is found when looking at depression. A more favourable legal context comes with both somewhat higher levels of social well-being ($b = 0.06$, $p < .001$, M4a) and slightly lower levels of depression in all union types ($b = -0.01$, $p < 0.001$, M4b). Overall, this suggest that individuals in both union types benefit from tolerance, mostly so when looking at social well-being.

[Table 4. Regression Models With Cross-Level Interaction Terms Predicting Social Well-Being and Depression.]

I then examine whether the well-being gap is dependent on the level of tolerance in different countries (hypotheses 2 and 3) by introducing interaction terms into the model. When looking at social well-being, there appears to be an effect on the well-being gap between same-sex and mixed-sex couples ($b = 0.07$, $p < 0.01$, M5a). That means that for every unit change in the informal institutional context, same-sex couples' well-being

increases by 0.07 points. The gap is largest when tolerance is at its lowest ($-0.02 + (0.07 * -1.81) = -0.15^5$). At an average level of tolerance, the gap has almost vanished ($-0.02 + (0.07 * 0) = -0.02$) and at the highest level of tolerance the gap is reversed in favour of the individuals in same-sex couples. So in high tolerance countries, individuals in same-sex couples show greater levels of social well-being than their peers in mixed-sex unions ($-0.02 + (0.07 * 1.58) = 0.09$). Figure 3 shows a plot of the predicted values on social well-being for individual in same-sex and mixed-sex unions, which helps understanding this association. These results provide evident support for hypothesis 2.

[Figure 3. Two-way graphs showing the relationship between the two measures of tolerance and the two measures of well-being based on predicted values by union type.]

When looking at the joint effect of being in a same-sex union and the formal institutional context on social well-being, a similar but smaller effect can be observed. The interaction effect is significant with a small positive coefficient ($b = 0.02$, $p < 0.05$, M6a), implying that with every unit change on the formal institutional context index, same-sex couples show an increase in social well-being by 0.02 points. According to this estimate, the gap is very small and in favour of mixed-sex couples, when the least favourable laws are in place ($-0.09 + (0.02*2) = -0.05$). When the most supportive laws are in place, there is a well-being gap in favour of same-sex couples ($-0.09 + (0.02*6) = 0.03$). This estimate lends support to the expectation formulated in hypothesis 3.

Neither of the interaction terms are significant when looking at depression as outcome, implying that the very small difference in depression between same-sex and mixed-sex couples does neither depend on varying levels of the normative dimension of tolerance nor the legal one. Possibly, the smaller sample size when looking at the only five countries,

⁵ The effect size can be calculated in the following manner: $bx_1 + (b(x_1*x_2) * \text{value of } x_2)$.

which offer the depression scale, may cause these estimates not to be significant. Despite the non-significant results, it is therefore interesting to examine the direction of the coefficients and the implied association in the sample. Both the coefficient for the combined effect of union type and the informal context ($b = -0.02$, $p > 0.05$, M5b) and the combined effect with the formal context ($b = -0.02$, $p > 0.05$, M6b) imply that there is a slight trend towards depression reduction in the sample when tolerance is higher (see figure 3). However, this cannot be generalized to the population as a whole.

7. Robustness checks

Both the data and the methods used in this study involve a number of challenges that need to be addressed in order to explore whether this introduces a bias to the results obtained above. One such issue is the fact that the dependent variables are indices treated as continuous variables, while they are in fact not normally distributed. The estimates of linear regression models rely on strict assumptions about the structure of the data in order to allow generalizations to the target population. Yet, the distribution of the social well-being measure is positively skewed and the depression index is negatively skewed, implying that most people have high overall well-being. Log-transformations did not bring the distribution closer to normal. Therefore, all models were also run as ordered logistic regression models for categorical variables. All effects found were replicated using ordered logistic regression models, which implies that the estimates obtained by linear OLS regression can be trusted.

Moreover, it is possible that one particular subset of observations in the sample drives the (significance of a) regression estimate, such as all observations in one country or all females. Rigorous tests were executed to ensure that this is not the case for the interaction effects found when looking at social well-being. Firstly, the analysis was run under the exclusion of each country in turn. Thereby, I replicated the main findings with regard to the

interaction effects between the context and being in a same-sex union, which implies that they are robust and not driven by any single country (see Table 5). Then, this procedure was replicated using ordered logistic models, which again produced highly significant interactions throughout ($p \leq 0.001$, detailed results not reported here). After that, the main models were ran under the exclusion of the couples who indicated that they do not live together in order to obtain a more homogeneous group. Again, the interaction effects remain robust with a slightly higher coefficient. The number of people who do not live together is too small per country to replicate the test on this group as well. Finally, the main models were run for men and women separately and some changes in the interaction effects can be observed when looking at social well-being.

[Table 5. Robustness checks by analysing subgroups of the sample.]

The interaction with the formal institutional context is not significant for either men or women. One possible explanation is that the proportion of same-sex couples becomes too small in the sample when removing almost half of their number from the analysis. Despite the lack of significance, the regression coefficients remain almost unchanged for the interaction with the formal institutional context. The interaction with the informal institutional context remains significant when looking at men but not for women. The proportion of men in same-sex unions is somewhat larger than the proportion of women in same-sex unions, which may explain the robustness of the interaction with the informal institutional context for men. But a change in coefficients is observed as well: the size of the interaction coefficient is larger for the male subsample and is halved in size for the females, compared to the findings in the full sample and among men. This points towards more substantive reasons than the mere imbalance of group proportions. A three-way interaction effect (gender x union type x informal institutional context) was included to empirically test if there is a difference in the joint effect of union type and normative tolerance between women and men but it was not

significant. It becomes apparent that the gender issue needs to be addressed by re-examining the literature and building a model specifically tailored at this issue, which is beyond the intended scope of this study.

8. Discussion and Conclusions

The current study uniquely applied representative data to studying same-sex couples' well-being in relation with tolerance on the country-level. Results indicate that their well-being indeed depends on both measures of tolerance employed here, when looking at social well-being. This is in line with evidence from qualitative literature, where feelings of isolation in LGB people living in a heteronormative society have been highlighted (Harper & Schneider, 2003; Flowers & Buston, 2001). In fact, I find that there is no notable well-being gap between same-sex and mixed-sex couples unless it is considered in association with tolerance. This adds a new perspective to the discussion on same-sex couples as a non-traditional union type in literature on family structures. While there are differences within these unions regarding factors related to well-being, such as relationship duration or quality, they seem to cancel each other out and result in no apparent well-being gap, overall. This could lead to incorrectly concluding that there is in fact no difference in well-being between these union types. Only the cross-national comparative design applied in this study can bring out the well-being gap by letting the level of tolerance vary across countries.

Interestingly, the gap is not only smaller in countries with higher levels of tolerance but it is in fact reversed. Same-sex couples show greater levels of social well-being than their peers in mixed-sex relationships in tolerant countries. Possibly, being accepted and feeling free to live openly as who they really are is particularly rewarding for individuals who are in some fashion different from the majority of mainstream society. As previously discussed, being open about their situation may both require and foster high levels of self-confidence,

which can be a source of well-being. Also, if there is no negative influence from the environment, factors like greater relationship quality in (female) same-sex couples can create this well-being gap in favour of the same-sex couples.

For depression, no significant joint effect of union type and either measure of tolerance was found. Yet, the coefficients suggested both measures of tolerance diminish the gap between union types in terms of depression in the sample. Even though the effect cannot be generalized to the population it may give an idea what this association might look like if more representative data on depression and same-sex couples were available. But there are also reasons rooted in theoretical consideration why this effect is not significant. Depression can be considered a private aspect of well-being, whereas social well-being explicitly refers to its relationship with the social environment (Keyes C. L., 1998). For social well-being, understood as feeling socially integrated and having feelings of social cohesion and belonging, the dependency on the congruence of one's own views and values with the values of society at large is very apparent. Depression as private aspect of well-being, involving issues such as self-acceptance and personal growth, is probably influenced by multitude of individual and personality characteristics as well. Another explanation is that this study looks at couples, exclusively. This makes a selection of individuals who already have at least this one close relationship with their partner, which potentially buffers against severe mental issues such as depression. Future research should examine how the relationship between tolerance and identifying with a non-heterosexual sexual orientation unfolds when singles are included in the sample.

It is also noteworthy that the measures of tolerance are associated with higher levels of social well-being in both individuals in same-sex and mixed-sex unions. This suggests that individuals in both types of unions are less lonely and exhibit greater levels of social well-being when societies are more liberal in terms of gender and family values, have higher

gender equality and when societal tolerance of sexual orientation diversity is higher. The same beneficial effects of tolerance are found for depression. These findings are in line with a study, which found fewer suicide attempts among both LGB and heterosexual youth in schools in the US state Oregon, when the social environment was more favourable for LGB youth in terms of higher proportion of same-sex couples, Democrats, gay-straight alliances and non-discriminatory policies (Hatzenbuehler M. , 2011). Possibly, more liberal societies create less social stress for many people through reducing the risk of disapproval by others on the basis of being somehow different from the norm, regardless of what these differences might be.

There are some limitations to this study that need to be addressed. Firstly, the number of countries is too low to apply a multi-level design. Using linear OLS models does not provide the opportunity to decompose the variance in well-being for each level of analysis and it cannot be analysed how the well-being gap depends on multiple characteristics of countries simultaneously. Second, the proportion of individuals in same-sex unions in the sample is very small and can limit statistical power. That means the probability is greater to commit a Type-I error of falsely rejecting the null-hypothesis and concluding that there is an effect, while there is not. Data in which individuals with same-sex sexual preferences or partners make up a greater proportion of the sample would greatly limit this problem. Third, there is no possibility of checking whether selection has occurred with regard to the same-sex couples in the sample. It could be the case that only open, confident and rather happy individuals in same-sex couples may be self-assured enough to reveal their situation, particularly in an environment where they are not accepted. This could mean that the same-sex couples with the lowest levels of social well-being and high levels of depression are not captured in this survey because they chose not to reveal their identity. This could be a problem especially in countries where tolerance is low. Such a disproportionate selection of

same-sex couples with high well-being and low level of depression would lead to an underestimation of the effect of tolerance on the well-being gap.

Despite some data limitations, this study substantively furthered our knowledge on the relationship of same-sex union well-being and tolerance due to a some noteworthy design advantages. The large representative sample allowed for analysing same-sex couples and mixed-sex couples in a comparative fashion across countries. This has helped to reveal the well-being gap, which only becomes apparent when considered in relation to tolerance. An additional methodological strength of this study is the twofold operationalization of social tolerance on the country-level. It integrates both a direct and two indirect attitudinal measures of tolerance in the normative part. Through the inclusion of the Gender Equality Measure an objective measure (in comparison with the attitudinal items) is added, which is not sensitive to social desirability bias. The second operationalization of tolerance as a legal concept complements the normative dimension and adds another layer of objectively quantifiable measures, namely the number of laws supportive of same-sex unions. Finally, previous studies have examined LGB well-being in relation to various local contexts, such as school climates (Hatzenbuehler, Birkett, Van Wagenen, & Meyer, 2014), the religious climate in counties within the US state of Oregon (Hatzenbuehler, Pachankis, & Wolff, 2012) or the community-level climate (Oswald, Cuthbertson, & Lazarevic, 2010) but never in relation to the national context. While these approaches are insightful for interpersonal processes, the national context is more suited when addressing general feelings of belonging that characterize social well-being and that extend beyond interpersonal experiences. I would like to conclude this study with a call for a more widely spread inclusion of sexual orientation items in large cross-national surveys in order to make data available that can advance our knowledge on the nature of the well-being gap between same-sex and mixed-sex couples.

Table 1. Variable description.

Variable	Description	Source
Individual level		
Social Well-Being	Index: ‘there are plenty of people that I can lean on in case of trouble’ (recoded 1 no, 2 more or less, 3 yes), ‘there are many people that I can count on completely’ (recoded 1 no, 2 more or less, 3 yes), ‘there are enough people I feel close to’ (recoded 1 no, 2 more or less, 3 yes), ‘I experience a general sense of emptiness’, ‘I feel rejected’, ‘I miss having people around’.	GGS
Depression	Index: ‘last week: I felt that I could not shake off the blues even with help from my family or friends’, ‘last week: I felt depressed’, ‘last week: I thought my life had been a failure’, ‘last week: I felt fearful’, ‘last week: I felt lonely’, ‘last week: I had crying spells’ and ‘last week: I felt sad’ (1 seldom or never, 2 sometimes, 3 often or 4 most or all of the time).	GGS
Union type	Dummy distinguishing mixed-sex (0) and same-sex unions (1). Constructed from ‘relation to R of hh member (partner)’ and ‘sex of hh member’ for couples who live together. Else from ‘current partner status (non-resident partner)’ and ‘sex of current partner’.	GGS
Living together	0 no, 1 yes. Constructed from ‘relation to R of hh member (partner)’	GGS
Child	0 no, 1 yes. Constructed from ‘relation to R of hh member’, including biological and non-biological children.	GGS
Relationship duration	Survey year – year starting relationship/year first living together (continuous variable). Item: ‘In what month and year did you and he/she first start living together? (if co-resident partner)/ In what month and year did this relationship start? (if non-resident partner)’.	
Age	Continuous variable, age-squared also included.	GGS
Female	Gender, recoded (0 male, 1 female).	GGS
Un-employment	0 not unemployed, 1 unemployed. Constructed using ‘activity status respondent (unemployed)’.	GGS
Education	‘highest education respondent’, recoded into low (iscd 0 – 2 lower secondary), medium (iscd 3 – 4 post-secondary non-tertiary) and high (iscd 5 – 6 tertiary).	GGS
Migration background	Based on the items born in country, father born in country and mother born in country. If at least one item is answered with no the value 1 is assigned to indicate a (second generation) migration background.	GGS
Country	Country dummies, reference country is Bulgaria.	GSS
Country level		
Formal institutional context	Additive scale counting laws (range 0-7): (1) equal age of consent, (2) anti-discrimination laws in employment relations, (3) constitutional prohibition of discrimination based on sexuality, (4) prohibition of incitement to hatred, (5) recognition of aggravating circumstance for hate crimes based on sexual orientation, (6) adoption rights for gays and lesbians, (7) marriage equality or alternatively having almost all or some rights of civil partnership [the three questions on marriage	http://ilga.org

rights are treated hierarchically and form together one point on the 7-point scale].

Informal institutional context	Normative context constructed from 4 standardized country-level variables. The data from the ESS, EVS and UN-Human Development Report (UN-HDR) are from the years which come closest to the year of data collection of the GSS. If it falls in between time points, the average is used. For some countries in the GSS there are multiple survey years, then the average is used as well.	
	(1) Tolerance of homosexuality. Mean score on the item "should gays and lesbians be free to live their own life as they wish?" for each country, (recoded 1 disagree strongly, 5 agree strongly). ESS-rounds used: AT (3), BE (4 & 5), BG (3), CZ (2 & 3), FR (2 & 3), DE (2 & 3), NL (1 & 2), NO (3 & 4), PL (5 & 6).	ESS
	(2) Religious climate. Mean score on the religiosity index for each country. The index combines information from the items that ask how religious are you (0 not at all religious, 10 very religious), how often do you attend religious services apart from special occasions (recoded, 0 never, 6 every day) and how often do you often pray apart from at religious services (recoded, 0 never, 6 every day). Standardized z-scores were calculated and the variables added up consequently. ESS-rounds used: see tolerance of homosexuality.	ESS
	(3) Gender Equality Measure (GEM). Range 0 perfect inequality – 1 perfect equality. Year of the used GEM scores: AT (2008), BE (2008), BG (2006), CZ (2004/06), FR (2004/06), DE (2004/06), NL (2002/06), NO (2006/08), PL (2008).	http://hdr.ndp.org
	(4) Family and gender values. Additive index constructed from 10 standardized items. The higher the score on the index, the more liberal the societies. The items included are: ‘working mother can have warm relationship with children’, ‘husband and wife should both contribute to household income’, ‘job best way for women to be independent’, ‘fathers as well suited to look after children as mothers’, ‘pre-school child suffers with mother working’, ‘children need both parents to grow up happily’, ‘women really want home and children’, ‘being housewife as fulfilling as paid job’, ‘women need children to be fulfilled’, ‘if a woman wants to have a child as a single parent, but she does not want a stable relationship with a man, do you approve or disapprove’ (recoded 1 disapprove, 2 depends, 3 approve). EVS-waves used: AT (4), BE (4), BG (3 & 4), CZ (3 & 4), FR (3 & 4), DE (3 & 4), NL (3), NO (4), PL (4)	EVS

Table 2. Descriptive statistics.

				Unweighted	Weighted
Mixed-sex unions	N	Min	Max	mean	mean
Social Well-Being	62,734	1	3	2.68	2.67
Depression	38,305	1	4	1.28	1.27
Living together	62,734	0	1	0.90	0.88
Child in household	62,734	0	1	0.55	0.53
Relationship duration	62,734	0	66	20.34	19.93
Female	62,734	0	1	0.54	0.51
Age	62,734	17	85	46.25	46.09
<i>Education</i>	62,734				
high	62,734	0	1	0.27	0.26
medium	62,734	0	1	0.52	0.49
low	62,734	0	1	0.21	0.25
Unemployed	62,734	0	1	0.07	0.07
Migration background	62,734	0	1	0.11	0.15
Same-sex unions					
Well-being	493	1	3	2.71	2.71
Depressive symptoms	272	1	4	1.34	1.32
Living together	493	0	1	0.76	0.77
Child in household	493	0	1	0.26	0.27
Relationship duration	493	0	58	13.93	14.38
Female	493	0	1	0.46	0.41
Age	493	18	80	44.19	43.37
<i>Education</i>					
high	493	0	1	0.43	0.37
medium	493	0	1	0.40	0.44
low	493	0	1	0.17	0.19
Unemployed	493	0	1	0.06	0.06
Migration background	493	0	1	0.13	0.17
Country level					
Informal institutional context	9	-1.81	1.58	-0.10	
	5	-0.87	1.58	0.33	
Formal institutional context	9	2	6	3.23	
	5	2	6	3.53	

Source: GGS Wave 1, own calculations.

Table 3. Regression Models With Individual- and Country-Level Variables Predicting Social Well-Being and Depression.

Variable	Social Well-Being (1 low - 3 high)						Depression (1 seldom - 4 most of the time)																																																																																																																																																																																																																																																																																																																																														
	Model 1a		Model 2a		Model 3a		Model 2b		Model 3b		Model 4b																																																																																																																																																																																																																																																																																																																																										
	b	SE	b	SE	b	SE	b	SE	b	SE	b	SE																																																																																																																																																																																																																																																																																																																																									
Individual predictor													Same-sex (1 = yes)	0.02	0.02	0.00	0.02	0.00	0.02	0.00	0.02	0.03	0.07*	0.03	0.07*	0.03	0.07*	Country variables														Informal institutional context					0.13***	0.00					0.00	0.00			Formal institutional context						0.06***									Control Variables															Age			-0.01***	0.00	-0.01***	0.00	-0.01***	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Age squared			0.00***	0.00	0.00***	0.00	0.00***	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Female (1 = yes)			-0.01**	0.00	-0.01**	0.00	-0.01**	0.00	0.16***	0.00	0.16***	0.00	0.16***	0.00	Living together (1 = yes)			0.02**	0.01	0.02**	0.01	0.02**	0.01	-0.08***	0.01	-0.08***	0.01	-0.08***	0.01	Child (1 = yes)			-0.01***	0.00	-0.01***	0.00	-0.01**	0.00	0.00	0.01	0.00	0.01	0.00	0.01	Relationship duration			0.00***	0.00	0.00***	0.00	0.00***	0.00	-0.00***	0.01	-0.00***	0.00	-0.00***	0.00	Education (ref. is low)															medium			0.07***	0.01	0.07***	0.01	0.07***	0.01	-0.09***	0.01	-0.09***	0.01	-0.09***	0.01	high			0.12***	0.00	0.12***	0.00	0.12***	0.00	-0.12***	0.01	-0.12***	0.01	-0.12***	0.01	Unemployed (1 = yes)			-0.12***	0.01	-0.12***	0.01	-0.12***	0.01	0.13***	0.01	0.13***	0.01	0.13***	0.01	Migrant (1 = yes)			-0.09***	0.00	-0.09***	0.00	-0.09***	0.00	0.07***	0.01	0.07***	0.03	0.07***	0.01	Country dummies			yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	Constant	2.68***	0.00	2.62***	0.01	2.74***	0.01	2.51***	0.02	1.26***	0.02	1.26***	0.02	1.28***	0.02	R-squared	0.00		0.11		0.11		0.11		0.06		0.06		0.06		F for change in R-squared	2.32		423.35***		423.35***		423.35***		138.22***		138.22***		138.57***		Degrees of freedom	1		19		19		19		15		15		15		N	66191		66191		66191		66191		35262		35262		35262	
Same-sex (1 = yes)	0.02	0.02	0.00	0.02	0.00	0.02	0.00	0.02	0.03	0.07*	0.03	0.07*	0.03	0.07*																																																																																																																																																																																																																																																																																																																																							
Country variables														Informal institutional context					0.13***	0.00					0.00	0.00			Formal institutional context						0.06***									Control Variables															Age			-0.01***	0.00	-0.01***	0.00	-0.01***	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Age squared			0.00***	0.00	0.00***	0.00	0.00***	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Female (1 = yes)			-0.01**	0.00	-0.01**	0.00	-0.01**	0.00	0.16***	0.00	0.16***	0.00	0.16***	0.00	Living together (1 = yes)			0.02**	0.01	0.02**	0.01	0.02**	0.01	-0.08***	0.01	-0.08***	0.01	-0.08***	0.01	Child (1 = yes)			-0.01***	0.00	-0.01***	0.00	-0.01**	0.00	0.00	0.01	0.00	0.01	0.00	0.01	Relationship duration			0.00***	0.00	0.00***	0.00	0.00***	0.00	-0.00***	0.01	-0.00***	0.00	-0.00***	0.00	Education (ref. is low)															medium			0.07***	0.01	0.07***	0.01	0.07***	0.01	-0.09***	0.01	-0.09***	0.01	-0.09***	0.01	high			0.12***	0.00	0.12***	0.00	0.12***	0.00	-0.12***	0.01	-0.12***	0.01	-0.12***	0.01	Unemployed (1 = yes)			-0.12***	0.01	-0.12***	0.01	-0.12***	0.01	0.13***	0.01	0.13***	0.01	0.13***	0.01	Migrant (1 = yes)			-0.09***	0.00	-0.09***	0.00	-0.09***	0.00	0.07***	0.01	0.07***	0.03	0.07***	0.01	Country dummies			yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	Constant	2.68***	0.00	2.62***	0.01	2.74***	0.01	2.51***	0.02	1.26***	0.02	1.26***	0.02	1.28***	0.02	R-squared	0.00		0.11		0.11		0.11		0.06		0.06		0.06		F for change in R-squared	2.32		423.35***		423.35***		423.35***		138.22***		138.22***		138.57***		Degrees of freedom	1		19		19		19		15		15		15		N	66191		66191		66191		66191		35262		35262		35262																													
Informal institutional context					0.13***	0.00					0.00	0.00																																																																																																																																																																																																																																																																																																																																									
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Age			-0.01***	0.00	-0.01***	0.00	-0.01***	0.00	0.00	0.00	0.00	0.00	0.00	0.00																																																																																																																																																																																																																																																																																																																																							
Age squared			0.00***	0.00	0.00***	0.00	0.00***	0.00	0.00	0.00	0.00	0.00	0.00	0.00																																																																																																																																																																																																																																																																																																																																							
Female (1 = yes)			-0.01**	0.00	-0.01**	0.00	-0.01**	0.00	0.16***	0.00	0.16***	0.00	0.16***	0.00																																																																																																																																																																																																																																																																																																																																							
Living together (1 = yes)			0.02**	0.01	0.02**	0.01	0.02**	0.01	-0.08***	0.01	-0.08***	0.01	-0.08***	0.01																																																																																																																																																																																																																																																																																																																																							
Child (1 = yes)			-0.01***	0.00	-0.01***	0.00	-0.01**	0.00	0.00	0.01	0.00	0.01	0.00	0.01																																																																																																																																																																																																																																																																																																																																							
Relationship duration			0.00***	0.00	0.00***	0.00	0.00***	0.00	-0.00***	0.01	-0.00***	0.00	-0.00***	0.00																																																																																																																																																																																																																																																																																																																																							
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medium			0.07***	0.01	0.07***	0.01	0.07***	0.01	-0.09***	0.01	-0.09***	0.01	-0.09***	0.01																																																																																																																																																																																																																																																																																																																																							
high			0.12***	0.00	0.12***	0.00	0.12***	0.00	-0.12***	0.01	-0.12***	0.01	-0.12***	0.01																																																																																																																																																																																																																																																																																																																																							
Unemployed (1 = yes)			-0.12***	0.01	-0.12***	0.01	-0.12***	0.01	0.13***	0.01	0.13***	0.01	0.13***	0.01																																																																																																																																																																																																																																																																																																																																							
Migrant (1 = yes)			-0.09***	0.00	-0.09***	0.00	-0.09***	0.00	0.07***	0.01	0.07***	0.03	0.07***	0.01																																																																																																																																																																																																																																																																																																																																							
Country dummies			yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes																																																																																																																																																																																																																																																																																																																																							
Constant	2.68***	0.00	2.62***	0.01	2.74***	0.01	2.51***	0.02	1.26***	0.02	1.26***	0.02	1.28***	0.02																																																																																																																																																																																																																																																																																																																																							
R-squared	0.00		0.11		0.11		0.11		0.06		0.06		0.06																																																																																																																																																																																																																																																																																																																																								
F for change in R-squared	2.32		423.35***		423.35***		423.35***		138.22***		138.22***		138.57***																																																																																																																																																																																																																																																																																																																																								
Degrees of freedom	1		19		19		19		15		15		15																																																																																																																																																																																																																																																																																																																																								
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† p ≤ 0.10, *p ≤ 0.05, **p ≤ 0.01, ***p ≤ 0.001. Country-level N=9 for a-models, country-level N=5 for b-models. Source: GGS Wave 1, own calculations.

Table 4. Regression Models With Cross-Level Interaction Terms Predicting Social Well-Being and Depression.

Variable	Social Well-Being (1 low - 3 high)				Depression (1 seldom - 4 most o. t. time)			
	Model 5a		Model 6a		Model 5b		Model 6b	
	b	SE	b	SE	b	SE	b	SE
Individual predictor								
Same-sex (1 = yes)	-0.02	0.02	-0.09†	0.05	0.08	0.06	0.14	0.09
Country variables								
Informal institutional context	0.28***	0.02			0.19***	0.03		
Formal institutional context			0.06***	0.00			-0.01***	0.00
Interaction terms								
Same-sex * Informal	0.07**	0.02			-0.02	0.03		
Same-sex * Formal			0.02*	0.01			-0.02	0.02
Constant	2.87***	0.02	2.51***	0.02	1.27***	0.02	1.28***	0.02
Control Variables	yes		yes		yes		yes	
R-squared	0.11		0.11		0.06		0.06	
F for change in R-squared	402.64***		402.44***		129.59***		129.63***	
Degrees of freedom	20		20		16		16	
N	66191		66191		35262		35262	

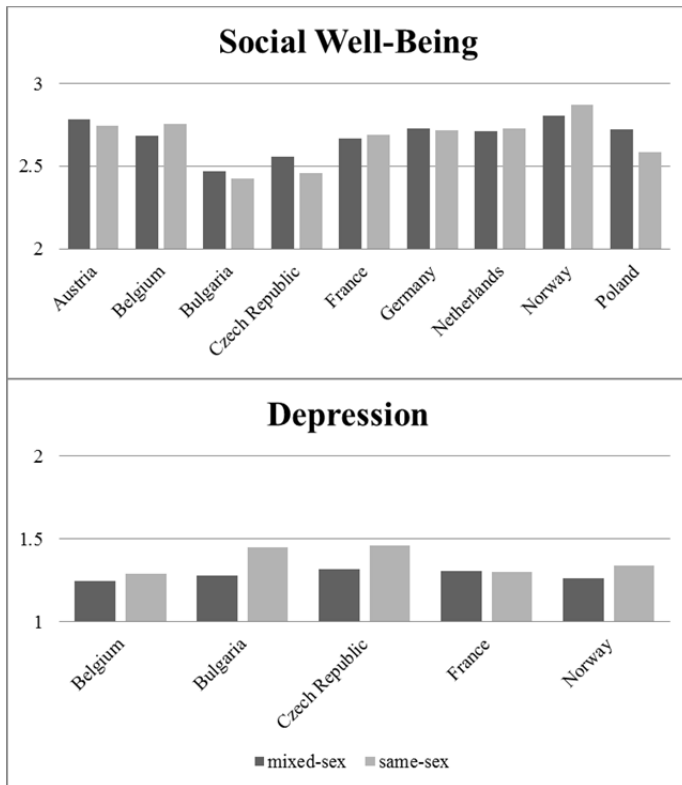
† p ≤ 0.10, *p ≤ 0.05, **p ≤ 0.01, ***p ≤ 0.001. Country-level N=9 for a-models, country-level N=5 for b-models.
Source: GGS Wave 1, own calculations.

Table 5. Robustness checks by analysing subgroups of the sample.

Sub-group	N	Social Well-Being (1 low - 3 high)			
		Informal institutional context * same-sex		Formal institutional context * same-sex	
		b	SE	b	SE
excluding BG	57,101	0.0706**	0.0256	0.0242*	0.0118
excluding DE	59,563	0.0654**	0.0244	0.0280*	0.0133
excluding FR	59,083	0.0652**	0.0233	0.0254*	0.0116
excluding NL	60,915	0.0656**	0.0237	0.0308*	0.0133
excluding NO	55,492	0.0845*	0.0336	0.0267*	0.0118
excluding AT	62,325	0.0642**	0.0239	0.0242*	0.0118
excluding BE	60,703	0.0605*	0.0242	0.0227†	0.0136
excluding PL	54,035	0.0606*	0.0261	0.0225†	0.0118
excluding CZ	60,311	0.0584*	0.0249	0.0205†	0.0121
Living together	59,604	0.0874**	0.0275	0.0272*	0.0131
Men	30,820	0.0819**	0.0307	0.0248	0.0156
Women	35,371	0.0445	0.0356	0.0212	0.0165
Full sample	66,191	0.0673**	0.0234	0.0244*	0.0114

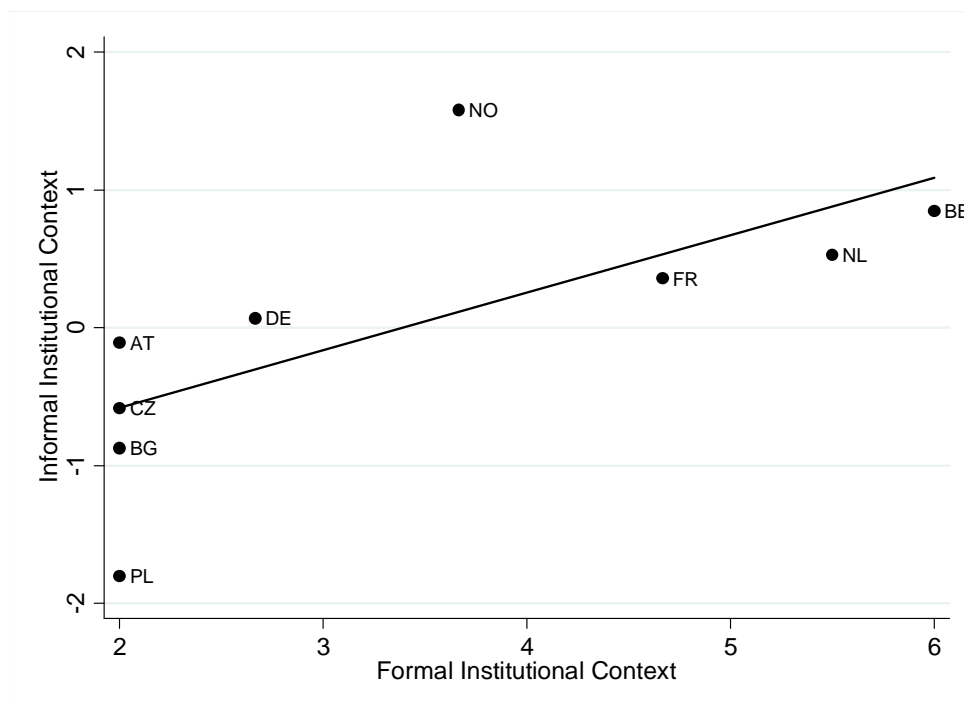
† p ≤ 0.10, *p ≤ 0.05, **p ≤ 0.01, ***p ≤ 0.001. Country-level N=9.
Source: GGS Wave 1, own calculations.

Figure 1. Average Social Well-Being (1 low – 3 high) and Depression (1 seldom – 4 most of the time) per country and union type.



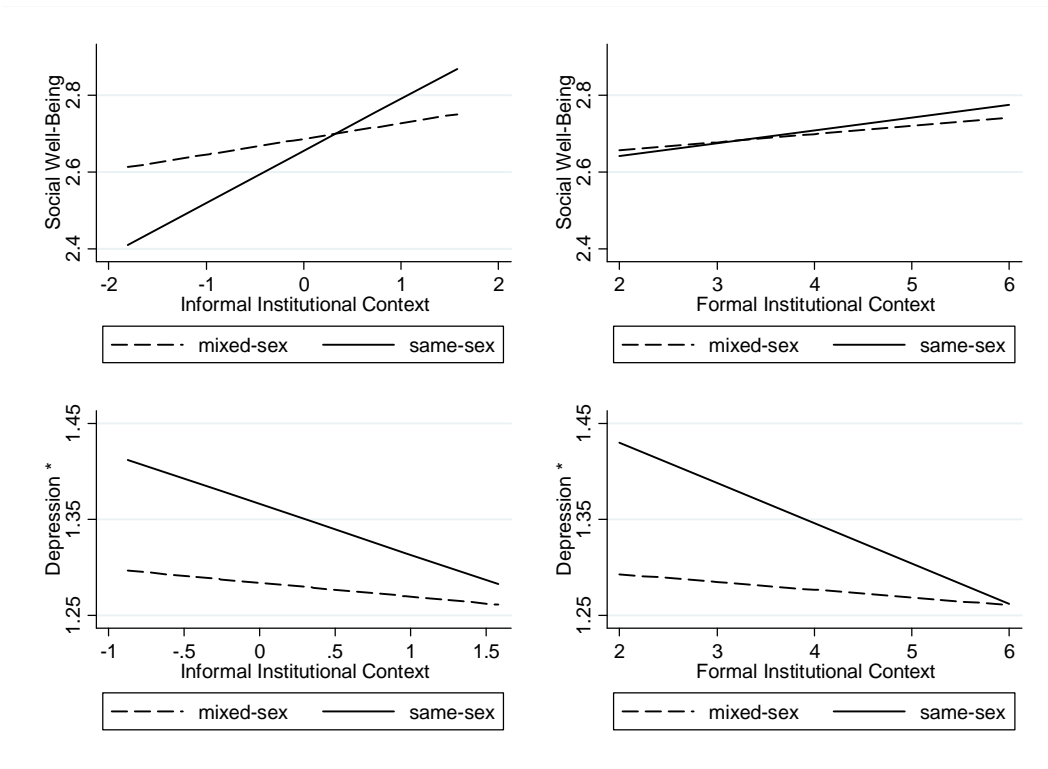
Source: GGS wave 1, own calculations.

Figure 2. The association between the two tolerance measures.



Source: ESS wave 2-6, EVS wave 3-4, ILGA 2008-14, own calculations.

Figure 3. Two-way graphs showing the relationship between the two measures of tolerance and the two measures of well-being based on fitted regression values by union type.



Source: GGS Wave 1, own calculations.

* Depression: interaction term not significant, only shown for purpose of exploring the relationship as present in the sample.

Data Sources

ESS Round 2-6: European Social Survey Round 2-6 Data (2012, 2010, 2008, 2006, 2004). Data file version 2.0. Norwegian Social Science Data Services, Norway – Data Archive and distributor of ESS data.

EVS (2011): European Values Study 2008: Integrated Dataset (EVS 2008). GESIS Data Archive, Cologne. ZA4800 Data file version 3.0.0, doi:10.4232/1.11004.

GSS Wave 1: Generations and Gender Survey Wave 1 (2004-2011). Generations and Gender Programme.

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Appendix 1: Situation for the legal formation of partnerships for same-sex couples.

Table 7. Overview of laws per country.

Country	Survey year	Married same-sex couples		Law on registered partners offering same-sex partners
		N	%	
Austria	2008/09	0	0	very few rights similar to marriage (since 2003)
Belgium	2008/10	37	55	marriage (since 2003)
Bulgaria	2004	0	0	no rights similar to marriage
Czech Republic	2004/05	9	60	some rights similar to marriage (since 2006)
France	2005	31	41	some rights similar to marriage (since 1999)
Germany	2005	64	56	most or all rights similar to marriage (since 2001)
Netherlands	2002/4	35	56	marriage (since 2001)
Norway	2007/08	24	53	most or all rights similar to marriage (since 1993)
Poland	2010/11	4	50	no rights similar to marriage
Total		204	48	

Source: GGS Wave 1 & ILGA reports on Statesponsored Homophobia 2008-2014.