Homophobia and the Transition to Adulthood: A Three Year Panel Study among Belgian Late Adolescents and Young Adults, 2008–2011

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Abstract Studies on homophobia among adolescents routinely depart from the assumption that this attitude will be continued into adulthood. However, little research has been conducted on how the transition toward adulthood actually affects homophobia. While earlier studies relied on cross-sectional observations, the present analysis makes use of the Belgian Political Panel Survey (2008–2011), tracking 2,815 respondents (52 % female, 48 % male) between the ages of 18 and 21. A conditional change model shows that while men had substantially higher levels of homophobia than women to begin with, this difference grew even larger throughout the observation period. The discrepancy between Muslim respondents and those with other religions became larger as well. Overall, the gender and religious differences already present in adolescence had become further polarized at the end of the observation period. Friendship relations with persons with a different sexual orientation, on the other hand, significantly reduced prejudice, especially among men, while the results also show that changes in the level of homophobia are related strongly to conservative views on gender roles. We conclude that groups that already display high levels of homophobia during adolescence are likely to grow even more extreme in their views in the transition to adulthood.

Keywords Homophobia · Prejudice · Adolescents · Young adulthood · Panel research · Belgium · Conditional change models · Social dominance orientation · Gender roles

Introduction

The prevalence of homophobia among adolescents has been investigated extensively in recent years, and the research indicates that the levels of homophobia in this age group tend to be quite high (Horn 2007). This form of prejudice seems to be particularly prominent among male adolescents and those with strong religious beliefs (Hooghe et al. 2010). Homophobia among adolescents is a topic of concern as it is associated with bullying behavior in the school and peer context, and has a strong adverse effect on the well-being and self-worth of homosexual adolescents (Collier et al. forthcoming; Poteat and Espelage 2007). Far less is known, however, about the impact of homophobia on the development of (young) adults’ value patterns. Some studies relate homophobia among adolescents to specific cognitive and social developmental phases (Poteat and Anderson forthcoming). Social cognitive development theory, for example, suggests a reduction in prejudice as a result of the transition to adulthood (Aboud 1988; Bigler and Liben 2007). As adolescents mature, they develop more complex cognitive skills and rely less on stereotypes. Social identity development theory, on the other hand, emphasizes the importance of shared norms and values in the development of tolerance (Tajfel and Turner 1979). A shared belief system is conducive to a sense of group membership, which in turn produces ingroup favoritism at the expense of the outgroup (in this case, a sexual minority). What both perspectives have in common is the expectation that the pattern of distribution for homophobia that typically is found among adolescents is not necessarily predictive of patterns observed among young adults.

While some research is available on this topic, most of it is based on a rather straightforward comparison between adolescents and (young) adults. Such a research design
Explaining Homophobia in Adolescence

The question whether insights into homophobia among adolescents can provide us with information about homophobia among (young) adults has received quite some attention in the recent literature. If strong relationships between homophobia during adolescence and homophobia in adulthood is found, this is an additional argument for interventions targeted at the former age group. Baker and Fishbein (1998) used a sample of adolescents in grades 7, 9, and 11, and found that while prejudice decreased among women during late adolescence, it increased among men in the same age bracket. Expanding the study to include young adult college students, Hoover and Fishbein (1999) arrived at the conclusion that sexual prejudice generally declines among young adults, which confirms the findings of an older study among 137 undergraduate and high school students by Van de Ven (1994). The idea that homophobia declines when adolescents make the transition to early adulthood received further confirmation in studies by Horn (students between ages 14 and 26) (2006) and Poteat et al. (students between ages 10 and 19) (2009). Both of these studies highlighted the fact that heterosexual young adults feel much more at ease interacting with LGB (lesbian, gay, bisexual) individuals than their adolescent counterparts.

However, it has to be borne in mind that all of the above studies were based on cross-sectional observations, which means it is uncertain whether we actually observe an intra-person development in this regard. Furthermore, there is a tendency to limit studies on young adults to college students (Horn 2006). While this might be convenient to ensure participants’ cooperation, it poses problems to draw a valid comparison between both groups. The literature convincingly has shown that respondents with higher levels of education tend to be more tolerant (Bobo and Licari 1989; van den Akker et al. 2012). Therefore, if studies among young adults are limited to college students, this inevitably will lead to the erroneous conclusion that young adults are more tolerant than adolescents.

In the literature two causal mechanisms have been suggested to explain the decline in levels of homophobia in the transition to adulthood. The first one is based on the contact hypothesis. If young adults’ social networks expand, it is likely that they will interact more often with people who have a different sexual orientation, which in turn should lead to a more tolerant attitude toward sexual diversity (Collier et al. forthcoming; Herek and Capitanio 1996; Smith et al. 2009). As stated by Sakall and Uğurlu (2002: 59), “[h]aving a homosexual friend might lead people to recognize that cultural stereotypes of homosexuals do not seem to fit”. Herek and Glunt (1993) found intergroup contact among 1,078 American adults to be a stronger predictor of tolerance toward homosexuality than demographic or psychological variables. Based on a study of 115 heterosexual university students, Hodson et al. (2009) found the negative effect of intergroup contact on sexual prejudice to be even stronger for prejudiced-prone individuals, i.e., respondents initially reporting high levels of authoritarianism and heterosexual identification. However, Heinze and Horn (2009) argued that intergroup contact itself is not sufficient to reduce prejudice, as the interaction also must occur within the context of a potential friendship.

The second causal path is more firmly rooted in developmental psychology. Earlier studies have shown that social dominance orientation has an important impact on various forms of prejudice (Whitley and Lee 2000). Social dominance orientation (SDO) assumes that hierarchies exist within society, i.e., that there is inequality among social groups (Pratto et al. 1994). As predicted by the social identity development theory, adolescents with SDO will support these hierarchies, and therefore also patterns of inequality between ingroup and outgroup members. It can be assumed that when individuals mature and enhance cognitive development, they will display less social dominance orientation, with a subsequent decline in levels of prejudice toward different groups (Asbrock et al. 2010; Poteat and Anderson forthcoming). As adults generally can be expected to be less rigid in their moral views than adolescents, this is assumed to explain at least part of the observed decline in homophobia among this age group (Horn 2006: 423).

A better understanding of how homophobia is affected by the transition to adulthood is also important in order to identify social groups with the highest level of homophobia.
Previous research convincingly has shown that a negative attitude toward homosexuality is much more prevalent among adolescent boys than among adolescent girls. This is related to the fact that there is strong social pressure on boys to adopt masculine gender roles, and these norms, in turn, promote a negative attitude toward homosexuality (Baker and Fishbein 1998; Kimmel and Mahler 2003; Kite and Whitley 1996; Lewis and White 2009; Mata et al. 2010; Poteat et al. 2009). Homophobia is also stronger among those who adhere to traditional gender roles (Black et al. 1998; Collier et al. 2012; Hoover and Fishbein 1999; O-ransky and Marecek 2009), while research also has shown that religious practice and traditions can induce homophobia (Finlay and Walther 2003; Hooghe et al. 2010; Trevino et al. 2012; van den Akker et al. 2012). A meta-analysis by Whitley (2009) found that almost all forms of religion had a negative effect on tolerance toward lesbians and gay men. With regard to marital status, unmarried persons tend to be more homophobic than married people (Black et al. 1998; Herek and Glunt 1993; Kunkel and Temple 1992). This effect might be explained partly by the larger and more diverse networks married people tend to be part of, while being in a relationship also might be associated with a more positive view on one’s own gender identity. Finally, higher educated adolescents and adolescents with highly educated parents also tend to be less prejudiced toward homosexuality (Marsiglio 1993). Thus far, research on homophobia among adolescents and on homophobia among the general, adult population have been conducted in a rather isolated manner. Investigating the effect of transition experiences on homophobia allows us to assess what are the most likely future consequences homophobia among adolescents.

The Current Study

In the current study, we investigate whether intergroup contact and conservative value orientations have an impact on homophobia in the transition to adulthood, and whether the patterns found among adolescents are predictive of the distribution we expect to find among adults. A thorough review of the literature has allowed us to formulate three hypotheses. First, we expect the level of homophobia to decline as respondents make the transition to early adulthood. Second, contact with individuals who have a different sexual identity is hypothesized to be associated with a reduction in homophobia (among those with a heterosexual orientation), especially among respondents who initially displayed high levels of homophobia. Third, conservative value orientations (with regard to gender roles and social dominance) will be associated with a rise in the level of homophobia. These hypotheses will be tested using panel data collected in Belgium, a West-European country with average levels of prejudice against LGB individuals (Štulhofer and Rimac 2009; van den Akker et al. 2012).

Data and Method

Data

We report on data from the Belgian Political Panel Survey 2008–2011 (BPPS) (Hooghe et al. 2011). In this panel survey, Belgian adolescents (from both the country’s French and Dutch language community) were questioned about their political values, attitudes and participatory behavior at the ages of 16 (in 2006), 18 (in 2008) and 21 (in 2011). The data were collected using a two-step design: First, a random school sample was drawn that was representative with regard to region and school type. Subsequently, the pupils of the selected schools completed a self-administered questionnaire during class time. In 2011 only those respondents who had participated both in 2006 and 2008 (n = 4,235) were contacted through a mail and internet survey for the third wave. Ultimately, a representative sample of 3,025 adolescents participated in the three waves of the survey. In this article, we only include the second and third wave of the BPPS as only those waves included questions on homosexuality (n = 2,815). Between both waves, respondents matured from the age of 18 to the age of 21, which implies that they left compulsory secondary education and entered either higher education or the labor market. As most panel surveys, the BPPS suffered from some panel attrition (slight overrepresentation of female respondents and respondents of the Dutch language group), but the analysis showed that the third wave of the panel still can be considered representative of the Belgian population of 21-year-olds (Hooghe et al. 2011). Subsequent analyses are weighted for language and gender (all weighting factors <1.40).

Measures

Homophobia

Homophobia was measured using a reduced version of the Homophobia Scale developed by Wright et al. (1999). The BPPS included seven items measuring both the behavioral and cognitive dimensions of homophobia, a scale that in earlier research had proven to yield reliable results (Hooghe 2011). Because we use multiple indicators to measure homophobia at two specific points in time, it is necessary to test for structural invariance (Taris 2000). If the structural invariance model holds, the latent variable measures the same latent concept over time. The analysis for strong factorial invariance (i.e., equal intercepts and factor loadings across time) showed a good model fit ($\chi^2 = 208;$$\chi^2/df = 4.00$).
df = 58; $\chi^2$/df = 3.58; CFI = 0.99; RMSEA = 0.03). We can therefore conclude that our data are suitable for panel analysis as the scale’s characteristics are stable for both states of observations. Accordingly, subsequent analyses are based on the strong factorial invariance model. In Table 1, we present the standardized factor loadings of the latent homophobia factor in 2008 and 2011. The factor loadings are estimated using Maximum Likelihood estimation in Mplus. The factor loadings for homophobia were of sufficient size and approximately the same for both measurement points. The Cronbach’s alpha was equal over time, indicating that homophobia is an internally coherent attitude over time. The items were formulated in different directions to avoid acquiescence bias. More specifically, we reversed items 4, 5, 6, and 7. The items were summed into a five-point scale, with higher scores representing higher levels of homophobia.

It should be noted that, for privacy reasons, the BPPS did not include a question about the sexual identity of the respondents (Hooghe 2011), which means that the scale includes responses from both heterosexual and homosexual adolescents. In line with Poteat and Anderson (forthcoming), however, it can be assumed that the majority of respondents have a heterosexual orientation, so the statistical impact of LGB respondents on the overall results is expected to be limited, and in the best case simply leads to a more conservative estimate of the investigated relationships.

Control Variables

Following the literature, we included relevant demographic variables in the model, such as gender (0 = Male; 1 = Female), language group (0 = Dutch; 1 = French), and parents’ educational level (factor of highest educational attainment of mother and father, $r = .54$) (Marsiglio 1993). In Belgium, education is compulsory up to the age of 18. As a consequence, differences in educational level only can be observed after the age of 18. In 2011, at the age of 21, 72 percent of the respondents were still pursuing higher education, while 28 percent had left the educational system. Therefore, we operationalized education by questioning adolescents’ educational ambition (Andrew and Hauser 2011): “I do not plan to finish secondary education”, “I will finish secondary education”, “I plan to attend higher education” and “I intend to get a university degree”. This prediction of educational goal proved to be quite powerful: of those who at the age of 18 assumed that they would continue into higher education, 73 percent did; while among those that assumed they would leave the school system after secondary education, only 16 percent pursued higher education. To have an indication of the ethnic background of the respondents, we included a dummy variable measuring the citizenship status of the parents (0 = At least one parent does not have the Belgian nationality, 1 = Both parents have the Belgian nationality). As earlier studies have shown that religion has a large impact on homophobia, two more variables were included: Religious denomination (“Not religious”, “Catholic/Christian”, “Muslim”, and “other religions”) and religious practice (frequency of attending religious services, scale from 1 to 4). Finally, we accounted for the relationship status of the respondents (“Married/Living together”, “Relationship/Not living together”, and “Single”).

Intergroup Contact

Two indicators of social integration and intergroup contact were added. We asked respondents how many good friends they had (7-point scale: 1 = None; 7 = More than 15), while intergroup contact was operationalized by measuring
the number of friends with a different sexual identity. Initially, respondents could answer on a 7-point scale (1 = None; 2 = Almost none; 3 = A few; 4 = Half of them; 5 = Many; 6 = Almost all; 7 = All of them). In the analysis, however, we merged the last four categories because of their small size.

Social Dominance Orientation and Sex Role Stereotyping

Finally, we accounted for influences of authoritarian values. We therefore included a measurement scale for social dominance orientation (SDO) and sex role stereotyping. SDO was measured using a reduced version of the 14-item SDO scale of Pratt et al. (1994). Respondents were asked to evaluate statements such as “I think it’s normal that some people get more opportunities in life than others” on a five-point Likert scale (1 = Totally disagree; 5 = Totally agree). Admittedly, a Cronbach’s alpha of .63 is somewhat low on the side, but can still be considered acceptable. The sex role stereotyping scale was measured using a five-point Likert scale (1 = Totally disagree; 5 = Totally agree) of four items (Cronbach’s alpha = .75), for example “In times of low employment, men are more entitled to a job than women” (Amato and Booth 1995) (See “Appendix” for exact wording and factor loadings). In the analysis, we account for the measurement error associated with the scales.

Method

Changes between two time points can be assessed using a change score model (Finkel 1995). The simplest version is the unconditional change score model where changes in the dependent variable are regressed on the predictors of interest. One of the assumptions of this model is that changes in the dependent variable are uncorrelated with the response at the first time point, i.e., regression fallacy (Berrington et al. 2006; Taris 2000). This is often not the case, as initial status is often correlated negatively with change: the higher the initial status, the lower the potential for growth will be (Duncan et al. 2000; Taris 2000). In our sample, changes in homophobia are indeed associated negatively with the initial level of homophobia in 2008 ($r = -.53$). A solution for this problem is to treat homophobia in 2008 as fixed. In this case, the response at the first time point is included in the model as a predictor variable. The effects of the predictors then can be interpreted as effects on changes in the dependent variable, controlling for its initial level, i.e., the effect on changes in homophobia between 2008 and 2011. This model is called a conditional change model or regressor variable model (Finkel 1995; 6; Taris 2000: 62). The models are estimated in Mplus, taking into account the measurement model of the homophobia, social dominance orientation, and sex role stereotyping scales.

Results

Evolution of Homophobia in Transition to Adulthood

In Table 1, we observed a significant decrease in homophobia between 2008 and 2011 ($t = 18.75, df = 2.81, p < 0.001$). While at first sight this seems to confirm our first hypothesis, the current data do not allow us to distinguish age and period effects. In between the two waves, not only did the respondents grow older, but the general social and political climate in Belgium also changed considerably (Stevens and Hooghe 2003). Nevertheless, a comparison of the evolution of homophobia in the BPPS with the evolution found in the European Social Survey (ESS 2012) provides a first indication of period effects.

In Fig. 1 we present the mean scores of homophobia as measured in all waves of the ESS across the Belgian sample (ESS 2012) (“Gay men and lesbians should be free to live their own life as they wish”; 0 = Strongly agree; 4 = Strongly disagree). Although the questions in the ESS and the BPPS do not use the same wording, Fig. 1 indicates that homophobia decreases significantly between 2002 and 2010. Most likely, respondents in the BPPS panel followed this general social trend, and therefore part of the decline between both observation stages of the BPPS can be attributed to period effects.

Explaining Change in Homophobia

The main goal of the present study, however, is to explain the differences in homophobia between the two waves of the survey. In Table 2, we present three conditional change models. These models represent synchronous effects (Finkel 1995). By including independent variables measured in 2011, we assume that the causal lag between these independent variables and homophobia is relatively short compared to the time elapsed between the waves of measurement (Finkel 1995: 12). In Model I, we investigate the effects of demographic and social variables on changes in homophobia. The stability effect of homophobia in 2008 on homophobia in 2011 is .57. We note that (.57–1), or −.43, is negative, indicating that adolescents who were particularly homophobic in 2008 tend to show a stronger decline in homophobia than adolescents who were initially less...
The interaction between the number of friends with a different sexual orientation is shown to reduce homophobia over time. 

In Model II we added two attitudinal variables: social dominance orientation and sex role stereotyping. Both attitudes have a significant effect on changes in homophobia, although the effect of sex role stereotyping is much stronger. The higher the level of social dominance orientation and sex role stereotyping, the more homophobic adolescents became between 2008 and 2011. More precisely, a unit increase in social dominance orientation and sex role stereotyping led to respectively a .07 (p = .028) and a .34 (p < .001) change in homophobia between 2008 and 2011, controlling for homophobia in 2008. We can conclude that homophobia is clearly related to conservative views on gender roles. The inclusion of the two attitudinal variables did not change the significance of the other predictors.

Next, we added an interaction term to the model (Model III). The interaction between the number of friends with another sexual identity and gender is highly significant (0.11, p < .001): whereas women report having more friends with a different sexual identity (mean = 1.96) than men (mean = 1.67), these friendships only seem to have a positive effect on homophobia for men. For women, having friends with a different sexual orientation did not reduce the level of homophobia between 2008 and 2011. For men, on the other hand, having friends with a different sexual orientation is shown to reduce homophobia over time.

An important caveat for this kind of research is the “regression to the mean” phenomenon. As those who initially reported extreme values on the scale (whether extremely low or extremely high) have fewer options to change their answers than those who scored in the middle (floor and ceiling effects), this might lead to skewed results. Although conditional change models already take the floor and ceiling effects into account, there are additional methods to control for this phenomenon (Taris 2000) (see Table 5 in the appendix). In this model only respondents scoring less than one standard deviation from the mean in homophobia in 2008 are included (score between 1.21 and 2.93). The correlation between the change scores of the middle group and the initial level in 2008 is only −.35, indicating some regression to the mean effects. All theoretically relevant variables in the regression analysis, negatively associated with levels of homophobia. Educational goal, parents’ citizenship, relationship status, parents’ education level, and the total number of friends have no significant effect on changes in homophobia.

In a separate analysis, we also included a measurement scale for right-wing authoritarianism, but this did not prove to have any significant effect in combination with social dominance orientation. 

Gender, religious denomination, religious practice, and having friends with a different sexual identity all have a significant effect on changes in homophobia. The negative parameter of gender (−.17, p < .001) indicates that homophobia decreases more in women than it does among men. While initially we already could observe that women have lower levels of homophobia than men, this difference grows larger during the transition to adulthood. Religion also has a strong effect on homophobia: controlling for the level in 2008, homophobia among Islamic adolescents increases more strongly compared to non-religious adolescents (.41, p < .001). The discrepancy in homophobia between Muslims on the one hand, and non-religious and Catholic/Christian respondents on the other hand increased even more in 2011. Religious practice, too, has a strong positive significant effect on changes in homophobia (.10, p < .001), when controlling for its initial level. The more often respondents attended religious services, the more homophobic they became between 2008 and 2011 in comparison with respondents who were not religiously active. In sum, we can state that the pattern observed during adolescence becomes more pronounced: while religious men already stood out because of their high levels of homophobia in 2008, this group evolves differently than the other respondents, leading to even larger differences.

Finally, we observed a longitudinal effect in line with the contact hypothesis: having friends with another sexual identity proved to reduce homophobia significantly between 2008 and 2011. In other words, each unit increase in friends with a different sexual identity is associated with a statistically significant .12 (p < .001) unit reduction in homophobia. The contact hypothesis is therefore confirmed: making friends with a different sexual orientation is
Table 2  Conditional change models of homophobia 2008–2011

<table>
<thead>
<tr>
<th></th>
<th>Model I B (SE)</th>
<th>Model II B (SE)</th>
<th>Model III B (SE)</th>
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<tbody>
<tr>
<td>Homophobia 2008</td>
<td>.57 (.02)</td>
<td>.50 (.02)</td>
<td>.50 (.02)</td>
</tr>
<tr>
<td>Language group (1 = French)</td>
<td>-.01 (.03)</td>
<td>.01 (.03)</td>
<td>.02 (.03)</td>
</tr>
<tr>
<td>Gender (1 = Female)</td>
<td>-.17 (.03)</td>
<td>-.08 (.03)</td>
<td>-.28 (.06)</td>
</tr>
<tr>
<td>Educational goal in 2008</td>
<td>-.03 (.02)</td>
<td>.02 (.02)</td>
<td>.02 (.02)</td>
</tr>
<tr>
<td>Parents’ citizenship (1 = Belgian)</td>
<td>-.02 (.04)</td>
<td>-.02 (.04)</td>
<td>-.02 (.04)</td>
</tr>
<tr>
<td>Catholic/Christian</td>
<td>.02 (.03)</td>
<td>.01 (.03)</td>
<td>.01 (.03)</td>
</tr>
<tr>
<td>Muslim</td>
<td>.41 (.10)</td>
<td>.39 (.10)</td>
<td>.40 (.10)</td>
</tr>
<tr>
<td>Other</td>
<td>-.04 (.12)</td>
<td>-.06 (.12)</td>
<td>-.07 (.12)</td>
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Religion (ref = no religion)

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<tr>
<th></th>
<th>Model I B (SE)</th>
<th>Model II B (SE)</th>
<th>Model III B (SE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationship status 2011 (ref. = married/living together)</td>
<td>[.02 (.06)]</td>
<td>[.06 (.06)]</td>
<td>[.05 (.06)]</td>
</tr>
<tr>
<td>Single</td>
<td>.02 (.06)</td>
<td>.06 (.06)</td>
<td>.05 (.06)</td>
</tr>
<tr>
<td>Relationship; not living together</td>
<td>-.09 (.05)</td>
<td>-.06 (.05)</td>
<td>-.07 (.05)</td>
</tr>
<tr>
<td>Parents’ education level</td>
<td>-.01 (.03)</td>
<td>.01 (.03)</td>
<td>.01 (.03)</td>
</tr>
<tr>
<td>Religious practice</td>
<td>.10 (.02)</td>
<td>.10 (.02)</td>
<td>.10 (.02)</td>
</tr>
<tr>
<td>Number of friends</td>
<td>.02 (.01)</td>
<td>.02 (.01)</td>
<td>.02 (.01)</td>
</tr>
<tr>
<td>Friends with other sexual identity</td>
<td>-.12 (.02)</td>
<td>-.11 (.02)</td>
<td>-.28 (.05)</td>
</tr>
<tr>
<td>Social dominance scale</td>
<td>.07 (.03)</td>
<td>.07 (.03)</td>
<td>.07 (.03)</td>
</tr>
<tr>
<td>Sex role stereotyping scale</td>
<td>.34 (.06)</td>
<td>.185***</td>
<td>.19***</td>
</tr>
</tbody>
</table>

Entries are standardized (\(\hat{\beta}\)) and unstandardized (B) maximum likelihood regression coefficients. All latent variables estimated using Mplus. N = 1,750. RMSEA Root Mean Square Error of Approximation; CFI Comparative Fit Index. Source: BPPS 2008–2011.

**Discussion**

In this manuscript, we have discussed the evolution of homophobia during the transition from late adolescence to early adulthood. In contrast to earlier studies, we relied on a representative population panel, allowing us to track the same individuals over time, while maintaining a representative sample of young adults. Although students are known to have more liberal value patterns than the average population, previous studies often relied on a student sample to assess homophobia among young adults. To avoid this potential bias, the panel study we used includes a more diverse group of individuals at the age of 21.

A first, sobering insight is the strong degree of stability between both measurements of homophobia. Between the ages of 18 and 21, the respondents made a number of important life cycle transitions. All of them left compulsory secondary education, and a large proportion of them acquired a (semi-)independent socio-economic status. More than half of all respondents in the second wave reported having a stable relationship with a partner. Despite these changes, levels of homophobia showed strong stability (Jennings and Niemi 1981). Although the average level of homophobia declined during the observation period, it should be noted that the population average in Belgium showed a similar trend during the same period.

So, while the literature indicates that part of this decline can be attributed to the maturation process of the respondents, period effects also have to be taken into account. Nevertheless, our first hypothesis, a decline in homophobia as adolescents make the transition to adulthood, does receive some support as we observe a decline between the two waves of the study. The results of the analysis, however, do not allow us to attribute this evolution to life-cycle variables.
transitions such as having a stable partner or pursuing higher education.

Our second hypothesis stated that contact with friends who have a different sexual identity would reduce feelings of homophobia. This was indeed confirmed, although we did observe a strong interaction effect: this mechanism was much more powerful among men than among women. In general, men report fewer of such friendships, which is line with previous research (Collier et al. forthcoming; Herek and Glunt 1993; Poteat et al. 2009). When men do report such friendships, however, they strongly reduce initial levels of prejudice. It could therefore be assumed that men are more dependent on these kinds of real-life experiences and encounters to challenge their pre-existing ideas and attitudes. Furthermore, we also have to take into account that the homophobia levels of the female respondents were already quite low, so that in practice the scope for further change is more limited.

This significant interaction effect challenges the self-reinforcement hypothesis of Herek and Glunt (1993). They assume that negative attitudes toward homosexuality among men decrease the likelihood that LGB individuals develop friendship ties with heterosexual men. While this holds for the number of such friendships, their effects are much more powerful. Our findings are therefore more in line with the results of Hodson et al. (2009), as they show that individuals who are prone to prejudice are particularly influenced by actual encounters (even if these encounters are rather rare, precisely because of their prejudiced attitude).

For religion, our findings indicate a growing divergence across religious groups. In line with previous research, it was found that in Belgium especially Muslim minorities display high levels of homophobia during adolescence (Hooghe 2011). Moreover, among the Muslim respondents in the panel study, the decline in homophobia was much more limited than among all other groups (including the non-religious and Christian ones), thus effectively widening the gap between Muslim minorities and the rest of the population. The idea that the differences observed during adolescence would more or less disappear as most young adults enter into a relationship and develop a more stable gender identity is clearly not supported by this study. The impact of religious denomination among adolescents proves to be strongly predictive of the distribution of homophobia among adults. While at the first observation stage all respondents were more or less equally exposed to the education system (which in general is supposed to promote tolerance among pupils), this obviously is no longer the case among young adults. This causes the discrepancy related to different religious traditions to grow even wider. From a policy perspective, the lesson to be learned here is that observations during adolescence help us predict what groups will be characterized by high levels of homophobia later on in life.

Thirdly, we assumed that changes in homophobia could be explained by social dominance orientation and traditional views on gender roles. This hypothesis received strong support, especially with regard to conservative gender roles. Even though women traditionally have lower levels of sex role stereotyping (five-point scale: mean women = 1.82; mean men = 2.31) and social dominance orientation (five point-scale: mean women = 2.45; mean men = 2.67) (Whitley and Lee 2000), the effect of these attitudes on changes in homophobia was comparable for both sexes. In contrast to the findings of Hodson et al. (2009), no interaction was found between these attitudes and the proportion of friends with a different sexual identity. The strong effect of conservative gender roles confirms the notion that homophobia is rooted firmly in a general conservative value system that rejects gender equality.

Evidently, the current study suffers from a number of limitations. As already was noted, the panel design did not allow us to distinguish between maturation and period effects. Second, we had to include all answers from the respondents, without insight into their own sexual identity. As far as we know, however, there are no school systems that would allow the sexual identity of a student population to be tracked over time. Third, it has to be taken into account that this panel design was conducted only in one cultural setting, so it remains to be investigated whether the same patterns emerge in other countries. Fourth, homophobia was only measured at two points in time. More measurement points would allow for a more detailed longitudinal analysis. Fifth, the measurement of social dominance orientation was not ideal as the reliability proved to be rather low. Nevertheless, observations did not indicate serious problems in using this scale. Moreover, we accounted for the measurement error inherent to scale formation. Finally, we found only a limited impact of individual life transitions (higher education, relationship status). It could therefore be argued that the adult respondents were still rather young, so they were still in the process of making those transitions. A follow-up study when they have finished their education, and will most likely have started a family of their own should allow us to determine whether this is indeed the case.

However, what the current analysis unequivocally shows is that there is no reason to adopt a dismissive attitude toward homophobia among adolescents. Our
results confirm the findings of earlier studies indicating that levels of homophobia decline in the transition to adulthood. However, this effect is not all that strong and previous studies might be heavily biased by the convenient assumption that college students can be considered as representative for young adults in general. Furthermore, the transition from late adolescence to young adulthood did not change the basic pattern of the prevalence of homophobia. To some extent, the opposite is true, as a kind of entrenchment seems to occur. Groups that initially have high levels of homophobia continue to stand out, which in our sample is most notably the case for people of Islamic faith. Attitudes toward homosexuality thus become more polarized during the transition toward adulthood as the leveling impact of compulsory education seems to weaken. Furthermore, the analysis also shows that (the evolution of) homophobia is strongly related to fundamental value orientations such as social dominance, or traditional views on gender roles.

Overall, this panel study does not provide any evidence for a clear distinction between late adolescence and early adulthood in terms of levels and patterns of homophobia. The educational goal of the respondents, and their relationship status had some effect, although this was rather limited or not significant at all. Our findings are therefore more in line with a continuous growth model, in which patterns already present during adolescence continue to develop, and grow even stronger. As such, the patterns observed among (early or late) adolescents can indeed be considered as highly predictive of the patterns found later on among adults. Homophobia among adolescents, therefore, is a social problem not just because of its impact on bullying behavior at school but also because it allows us to predict patterns of homophobia among adults.

### Appendix

See Tables 3, 4 and 5.

#### Table 3 Variables included in the model

<table>
<thead>
<tr>
<th></th>
<th>Min.</th>
<th>Max.</th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homophobia 2008</td>
<td>1</td>
<td>5</td>
<td>2.07</td>
<td>.86</td>
<td>2,867</td>
</tr>
<tr>
<td>Homophobia 2011</td>
<td>1</td>
<td>5</td>
<td>1.84</td>
<td>.76</td>
<td>2,969</td>
</tr>
<tr>
<td>Language group (1 = French)</td>
<td>0</td>
<td>1</td>
<td>0.36</td>
<td>.48</td>
<td>3,025</td>
</tr>
<tr>
<td>Gender (1 = Female)</td>
<td>0</td>
<td>1</td>
<td>0.52</td>
<td>.50</td>
<td>3,024</td>
</tr>
<tr>
<td>Educational goal in 2008</td>
<td>1</td>
<td>4</td>
<td>3.18</td>
<td>.74</td>
<td>2,972</td>
</tr>
<tr>
<td>Parents’ education</td>
<td>0</td>
<td>6</td>
<td>3.08</td>
<td>1.66</td>
<td>2,677</td>
</tr>
<tr>
<td>Parents’ nationality (1 = Belgian)</td>
<td>0</td>
<td>1</td>
<td>0.80</td>
<td>0.40</td>
<td>3,025</td>
</tr>
<tr>
<td>Not religious</td>
<td>0</td>
<td>1</td>
<td>0.24</td>
<td>.43</td>
<td>713</td>
</tr>
</tbody>
</table>

#### Table 4 Exploratory factor analysis of social dominance orientation and sex role stereotyping in 2011

<table>
<thead>
<tr>
<th></th>
<th>Social dominance orientation</th>
<th>Sex role stereotyping</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eigen value</td>
<td>1.73</td>
<td>2.31</td>
</tr>
<tr>
<td>Explained variance (%)</td>
<td>58</td>
<td>57</td>
</tr>
<tr>
<td>Cronbach’s alpha</td>
<td>.63</td>
<td>.75</td>
</tr>
<tr>
<td>Mean (SE)</td>
<td>2.56 (0.86)</td>
<td>2.05 (0.74)</td>
</tr>
<tr>
<td>N</td>
<td>2,964</td>
<td>2,978</td>
</tr>
</tbody>
</table>

Entries are factor loadings derived from principal component analysis. Social dominance orientation and sex role stereotyping are five-point sum-scales (1–5). Source: BPPS 2008–2011

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Table 5 Regression to the mean model

<table>
<thead>
<tr>
<th>B</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homophobia 2008</td>
<td>0.49 (0.04)</td>
</tr>
<tr>
<td>Language group (1 = French)</td>
<td>0.06 (0.03)</td>
</tr>
<tr>
<td>Gender (1 = Female)</td>
<td>-0.36 (0.06)</td>
</tr>
<tr>
<td>Educational goal in 2008</td>
<td>-0.02 (0.02)</td>
</tr>
<tr>
<td>Parents’ nationality (1 = Belgian)</td>
<td>-0.03 (0.03)</td>
</tr>
<tr>
<td>Religion (ref = no religion)</td>
<td>Catholic/Christian</td>
</tr>
<tr>
<td></td>
<td>Muslim</td>
</tr>
<tr>
<td></td>
<td>Other</td>
</tr>
</tbody>
</table>

2011

| Relationship status 2011 (ref. = married/living together) | Single | 0.04 (0.05) | 0.04 |
| | Relationship; not living together | -0.04 (0.05) | -0.04 |
| | Parents’ education | 0.036 (0.03) | 0.03 |
| | Religious practice | 0.12 (0.02) | 0.11*** |
| | Friends | 0.03 (0.01) | 0.03** |
| | Friends with other sexual identity | -0.32 (0.04) | -0.42*** |
| | Social dominance | 0.07 (0.03) | 0.08* |
| | Sex role stereotyping | 0.37 (0.05) | 0.26*** |
| | Friends with other sexual identity*gender | 0.12 (0.02) | 0.32*** |

χ² | 1580
| df | 257
| χ²/df | 6.14
| RMSEA | 0.04
| CFI | 0.93

Entries are standardized (β) and unstandardized (B) ordinary least squares regression coefficients. The model only includes respondents that were one standard deviation around the mean of homophobia in 2008. Latent variables measured as scale scores. N = 1,710. Source: BPPS 2008–2011

*p < 0.1; *p < 0.05; **p < 0.01; ***p < 0.001

References


Author Biographies

Marc Hooghe is a professor of political science at the University of Leuven (Belgium) and a visiting professor at the universities of Mannheim (Germany) and Lille (France). He publishes mainly on political socialization, political attitudes, prejudice and social capital. His previous work has been published in, e.g., Archives of Sexual Behavior, Political Behavior and Comparative Political Studies.

Cecil Meeuse is a PhD candidate at the department of political science of the University of Leuven (Belgium). She studied political science and quantitative research methods. Her main research interests are political socialization and the intergenerational transmission of attitudes and political preferences.