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Philip Schwadel University of Nebraska-Lincoln, pschwadel2@unl.edu

Christopher R. H Garneau University of Science and Arts of Oklahoma, cgarneau@usao.edu

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# The Diffusion of Tolerance: Birth Cohort Changes in the Effects of Education and Income on Political Tolerance

Philip Schwadel<sup>1</sup> and Christopher R. H. Garneau<sup>2</sup>

1 Department of Sociology, University of Nebraska, 740 Oldfather Hall, P.O. Box 880324, Lincoln, Nebraska 68588-0324; *email* pschwadel2@unl.edu.

2 Division of Social Sciences and Business, University of Science and Arts of Oklahoma, Davis Hall, Room 223, 1727 W. Alabama Avenue, Chickasha, Oklahoma 73018

#### Abstract

Political tolerance-the willingness to extend civil liberties to traditionally stigmatized groups-is pivotal to the functioning of democracy and the well-being of members of stigmatized groups. Although political tolerance has traditionally been more common among American elites, we argue that as tolerance has increased, it has also diffused to less educated and less affluent segments of the population. The relative stability of political attitudes over the life course and the socialization of more recent birth cohorts in contexts of increased tolerance suggest that this diffusion of tolerance occurs across birth cohorts rather than time periods. Using age-periodcohort models and more than three and a half decades of repeated cross-sectional survey data, we find persistent and robust across-cohort declines in the importance of both income and higher education in determining levels of political tolerance. Declines in the effects of socioeconomic status are evident with tolerance toward all five out-groups in the analysis-anti-religionists, gays and lesbians, communists, militarists, and racists-but to varying degrees. These findings fit with a model of changes in public opinion, particularly views of civil and political rights, through processes of cultural diffusion and cohort replacement.

**Keywords:** birth cohort, civil liberties, political attitudes, political tolerance, social change, social class.

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## Introduction

Limiting civil and political rights due to individual attributes that are unrelated to political processes runs counter to the assumptions of the democratic form of government (Merriam 1938; Sullivan, Piereson, and Marcus 1982). Yet Americans have historically been intolerant of stigmatized groups such as gays and lesbians, atheists, and communists, and supportive of limiting the civil rights of those groups (Edgell, Gerteis, and Hartmann 2006; Eisenstein 2006; Pettit and Sykes 2015; Schafer and Shaw 2009; Stouffer 1955). This political (in)tolerance is strongly associated with socioeconomic status (SES), both in the United States and in other nations (Katnik 2002); but the association between SES and tolerance appears to be particularly robust in the United States (Karpov 1999). The highly educated and those with higher levels of family income are considerably more likely than the less educated and those from poorer families to support extending civil liberties to stigmatized "out-groups." SES has been pivotal to theories of variation in political tolerance since Stouffer's (1955) pioneering work on the subject proposed that increases in education across birth cohorts would be the primary factor motivating greater tolerance (Davis 1975). Although SES has historically been one of the most robust predictors of political tolerance, we argue that as Americans have become more tolerant over the last few decades (Schafer and Shaw 2009), the connection between SES and political tolerance has declined.

We approach changes in the relationship between SES and political tolerance from the diffusion perspective. Americans with high levels of social and economic status are often cultural innovators (Elias 2000; Rogers 2003). These cultural innovations, however, frequently spread to other social classes. This form of stratified diffusion (Young and Willmott 1973) is common to a variety of cultural innovations (Pampel and Hunter 2012; Schwadel 2014; Wejnert 2002). Political theory contends that this process occurs across birth cohorts. Each generation or birth cohort is exposed to specific cultural, social, and political events that shape the cohort as a whole (Edmunds and Turner 2002). Political perspectives in particular are often influenced by early life events (Alwin and Krosnick 1991), which suggests a cohort-driven process of social change.

In this article, we analyze time period and birth cohort changes in the association between SES and political tolerance using hierarchical age-period-cohort models (Yang and Land 2013) and repeated crosssectional data from 1976 to 2014. We examine the changing effects of family income and college education on an overall political tolerance scale and on subscales that assess views toward five traditionally stigmatized groups: anti-religionists, communists, gays and lesbians, racists, and militarists. We find that political tolerance in general increased substantially across time periods and is relatively high among baby boom cohorts. The focal results show that the influence of SES on political tolerance is considerably attenuated across successive birth cohorts. This pattern generally holds for each of the subscales of views of specific out-groups, though the magnitude of the decline in the effect of SES varies. Along with other recent research (e.g., Pampel and Hunter 2012; Schwadel 2014), these results support the argument that cultural and attitudinal changes that originate with the upper classes tend to diffuse to the population as a whole, and that this process occurs across generations or birth cohorts.

## **Political Tolerance and Social Class**

Political tolerance is defined as the "willingness to extend civil liberties to political out-groups" (Karpov 2002:267). Political tolerance is pivotal to the proper functioning of democracy (Sullivan, Pierson, and Marcus 1982). In a tolerant society, even members of marginalized political out-groups have the ability to express their views, which encourages political participation and diversity in political perspectives. The principal of political tolerance, if not universal tolerance of all relevant groups, is essential to the democratic system of government (McClosky 1964). Tolerance is also important for individual wellbeing as the stigmatization of outgroups can lead to negative psychological consequences for those with a stigmatized identity (Goffman 1963; Lee and Craft 2002).

Since Stouffer's (1955) seminal research on tolerance, social scientists have documented Americans' acceptance of various stigmatized groups. Much of this research has focused specifically on tolerance toward gays and lesbians, atheists and anti-religionists, communists, racists, and militarists (e.g., Eisenstein 2006; Mueller 1988; Schafer and Shaw 2009; Stouffer 1955). While these groups have often experienced low levels of trust from the American public, tolerance toward these groups has increased over the past several decades (Schafer and Shaw 2009; Smith 1983). Changes in tolerance toward outgroups are often attributed to demographic shifts in the American population, particularly increases in SES (Bobo and Licari 1989; Davis 1975; Nunn, Crocket, and Williams 1978; Schafer and Shaw 2009; Schwadel and Garneau 2014; Treas 2002).

Beginning with Stouffer's (1955) and McClosky's (1964) influential work on the subject, social scientists have emphasized the robust individual-level association between SES and political tolerance. Income and class mobility both positively influence tolerance toward out-groups (Katnik 2002; Schwadel and Garneau 2014; Stouffer 1955). Breadth in social networks is thought to play a key role in these associations. SES is linked to greater diversity of social networks and more "weak ties" (Granovetter 1973; Lin 1999). Larger and more diverse social networks are in turn associated with increased tolerance and trust toward less trusted groups, in part because greater contact with outgroups results in decreased stigmatization toward members of those out-groups (Couture and Penn 2003; Putnam and Campbell 2010).

There is a great deal of research—from the 1950s to the present that shows that education is positively associated with political tolerance (e.g., Loftus 2001; Nunn et al. 1978; Stouffer 1955). Social scientists emphasize the influence of education on cognitive processes and perspectives on diversity, which lead to greater tolerance. Bobo and Licari (1989:306), for example, conclude that "education is associated with more sophisticated styles of reasoning" that promote political tolerance. In educational institutions, according to Sullivan and colleagues (1981:94), "one learns the principle that free exchange of ideas is necessary and that to be different is not necessarily to be bad and dangerous." As Katnik (2002:18) notes, "It is primarily education. . . that has the most substantial effect on political tolerance."

College education in particular is thought to influence cognitive processes and introduce students to the importance of diversity, and thus encourage greater tolerance of out-groups (Schwadel and Garneau 2014; Treas 2002). College or university education fosters less dogmatic forms of cognition (Beyerlein 2004) and produces a shift in values that elevates the importance of diversity and tolerance (Golebiowska 1995). Institutions of higher education "foster better communication of socio-cultural differences" to prepare students to function in an increasingly diverse society (Chang 2002:22). Similar to income and class mobility, college education is also associated with larger social networks and contact with a more diverse group of acquaintances (Marsden 1987), which result in greater acceptance of individuals from stigmatized groups (Couture and Penn 2003; Putnam and Campbell 2010). For many students, college is their first exposure to meaningful interactions with diverse populations (Lawson, Komar, and Rose 1998), and such exposure during formative ages can have a lasting impact on social and political perspectives (Alwin, Cohen, and Newcomb 1991; Alwin and Krosnick 1991). Whether due to social networks, style of reasoning, or other causes, the extant literature suggests that income and higher education are both strongly and positively associated with political tolerance.

## Changes in the Effects of Social Class on Political Tolerance

Although education and income are two of the most robust predictors of political tolerance, we argue that the effects of these SES indicators have declined. Cultural innovations frequently permeate class boundaries, particularly in the United States. In fact, Lamont and Lareau (1988) argue that instability in cultural markers and the need for continual cultural innovation by the upper classes is a key feature of American culture capital. Elias's (2000) work on this subject is particularly influential. Elias describes how manners, in addition to other behaviors, were cultural markers that were once used to differentiate the upper classes from other segments of society, but over time these class distinctions diminished as manners became more widespread. While new beliefs, values, and behaviors frequently originate with the upper classes, they eventually spread to other social classes. Young and Willmott (1973) term this process the Principal of Stratified Diffusion. Of course, it is also possible for cultural diffusion to occur in the opposite direction, from lower class to upper class. This has been argued in relation to fashion, for example (Field 1970), although trends in the fashion industry are still set by elite actors (Crane 1999). It may be that the direction of innovation-diffusion across social classes depends on the social, political, and economic circumstances (Sorokin 1941).

Contemporary diffusion literature portrays the highly educated and those with greater levels of income as "innovators" and "early adaptors" of cultural innovations, and the least educated and those with low levels of income as "laggards" in the process of cultural diffusion (Rogers 2003). While the highly educated and affluent may be the first to exhibit new patterns of behavior and new values, as Palloni (2001:68) explains, "In diffusion models, the behavior 'spreads' and is adopted by individuals irrespective of their socioeconomic positions." This appears to be particularly likely to occur with what are often considered the liberal values and behaviors of high-SES individuals (Pampel and Hunter 2012; Wejnert 2002). For instance, although religious apostasy or disaffiliating from religion was once largely limited to the college educated, as apostasy increased it also became just as common among less-educated Americans (Schwadel 2014). Bourdieu (1984) views this type of diffusion as a process of class emulation. Most importantly for the present research, once a critical mass of people have adopted new ideas or values, the process of diffusion may become self-sustaining (Palloni 2001; Rogers 2003), leading to a potential decline in the effects of SES as a new idea or value becomes more widely accepted (Fischer and Hout 2006). Similarly, the effects of SES on political tolerance should decline as tolerance becomes more widespread. Consequently, our first hypothesis is that the effects of income and higher education on political tolerance have declined.

Aggregate change of this sort is often the result of changes across generations coupled with the process of cohort replacement. Empirically, changes in the influence of SES on political tolerance can occur either across time periods or across birth cohorts. Cohort changes refer to changes across groups of people based on when they are born, and period changes refer to changes across points of time (e.g., years) that occur regardless of year of birth (Glenn 2005). Social change in general often occurs across birth cohorts, with changes in socialization, education, and exposure to specific cultural milieus during formative years (Edmunds and Turner 2002). According to Mannheim (1952:290), "individuals who belong to the same generation, who share the same year of birth, are endowed, to that extent, with a common location in the historical dimension of the social process." In his influential work on the subject, Ryder (1965) argued that such generation-specific socialization processes are pivotal to promoting social change. Political change in particular is often motivated by changes across birth cohorts because political perspectives are strongly influenced by late adolescence and early adult socialization and life events, and they resist change as people age (Alwin and Krosnick 1991; Alwin and McCammon 2007). Similarly, we propose that the process of cultural diffusion discussed above manifests across birth cohorts. More recent cohorts are raised in contexts of relatively widespread political tolerance. As political tolerance becomes more normative, differences in tolerance across levels of SES should diminish. Thus, our second hypothesis is that *declines in the effects of income and higher education on Americans' political tolerance occur predominantly across birth cohorts*.

## **Differences by Out-Group**

Thus far, we have focused on political tolerance as a general concept. Tolerance of out-groups, however, varies by the out-group in question. For instance, communists were an especially important political out-group during the escalation of the Cold War (Smith 1983), but they have experienced increased political tolerance since the early 1990s due to geopolitical changes related to the collapse of the Soviet Union (Schafer and Shaw 2009). The length of time that has passed since communists were popularly considered a serious threat to United States, with several birth cohorts maturing in contexts of diminished anti-communist propaganda, suggests that there has been considerable diffusion of tolerance toward communists. Therefore, our third hypothesis is that *the effects of income and education on tolerance toward communists in particular have declined precipitously across birth cohorts*.

In contrast to communists, growing tolerance toward gays and lesbians is relatively new in the United States. Despite the historic stigmatization of gays and lesbians in the United States, there has been a particularly notable increase in political tolerance toward these groups in recent years (Schafer and Shaw 2009). Compared to changes in tolerance of other groups, growth in tolerance toward gays and lesbians was more rapid and, relatedly, more reliant on period changes rather than cohort changes (Schwadel and Garneau 2014). As Anderson and Fetner (2008:324) conclude, "views about homosexuality [are] a rare exception to the age stability hypothesis." Indeed, many Americans report changing their views on homosexuality, which implies a period effect. For instance, more than one-quarter of Americans who support same-sex marriage say they changed their view on the issue (Pew Research Center 2013). Thus, unlike views of other stigmatized out-groups, we expect declines in the effects of income and education on tolerance of gays and lesbians to occur at least partially across time periods rather than birth cohorts (Hypothesis 4).

Finally, racists are one of the least tolerated out-groups in the United States. Not only are Americans relatively intolerant of racists, but, unlike most other stigmatized out-groups, tolerance of racists has remained relatively low (Schafer and Shaw 2009; Schwadel and Garneau 2014). This suggests that tolerance toward racists has not diffused across levels of SES to the same extent as tolerance of other outgroups. Consequently, we expect relatively small declines in the effects of SES on tolerance of racists (Hypothesis 5).

## Data

We use data from the 1976 to 2014 General Social Survey (GSS) to examine changes in the association between social class and political tolerance. The GSS is a nationally representative survey of noninstitutionalized American adults (Smith, Marsden, and Hout 2015). The survey has been conducted annually or biennially since 1972, although the full battery of questions about political tolerance was not added until 1976. Response rates range from 69%–80% based on Response Rate 5 as defined by the American Association for Public Opinion Research (2008). Respondents below 25 years old are deleted from the sample to avoid limiting variation in higher education and because the survey is not administered on college campuses. The final sample size is 21,681.<sup>1</sup>

After limiting the sample to respondents at least 25 years old and those with valid data on the focal variables of political tolerance, education, and family income, the sample size is 22,408. Missing data on control variables led to the deletion of 727 cases. This is primarily due to missing data on the political conservatism variable. Missing data on all control variables other than political conservatism resulted in the loss of only 160 cases.

The GSS asks respondents three questions about their views of each of the following stigmatized groups: gays and lesbians, communists, anti-religionists, racists, and militarists.<sup>2</sup> Specifically, respondents are asked if they approve of each of these groups making public speeches (yes/no), if they approve of the group teaching in colleges and universities (yes/no), and if they favor removing books by the group from public libraries (remove/do not remove). All 15 variables are recoded so the politically tolerant response is coded one (allow speeches, allow teaching, and do not remove books) and the nontolerant response is coded zero (do not allow speeches, do not allow teaching, and remove books). The primary dependent variable is an additive scale of all 15 variables, which is divided by 15 so that scores on the scale range between zero (nontolerant on all measures) and one (tolerant on all measures). Cronbach's a for the scale is .920 (descriptive statistics for all variables reported in Table 1). These items have been regularly employed in previous empirical research on political tolerance (e.g., Schafer and Shaw 2009; Schwadel and Garneau 2014). We also examine five tolerance subscales. Each subscale consists of the three variables (allow speech, allow teach, do not remove books) about a specific out-group. These out-group-specific scales are each divided by three so they range from zero to one. Cronbach's a for the out-group-specific scales ranges between .734 and .817.

The primary independent variables are age, period, birth cohort, education, and family income. Age is a continuous variable ranging from 25 to 89. Preliminary analyses reveal no nonlinear age effects. Each survey year is treated as a period. Birth cohorts are coded into five-year intervals, ranging from 1905–09 to 1980–84. Due to limited numbers of respondents at the tail ends of the cohort distribution, the oldest cohort includes all respondents born before 1905 and the most recent cohort includes all respondents born after 1984. Education is assessed with a dichotomous bachelor's degree variable. A continuous family income variable, in constant (2000) dollars, is used to measure household income. The income variable is logged to adjust for the skewed distribution. The models include controls for other attributes that previous research (e.g., Schwadel and Garneau 2014) suggests

<sup>2.</sup> The GSS also asked about views of socialists and Muslims. Unfortunately, the questions about socialists were only included in the 1972–74 surveys, and the questions about Muslims were only included in the 2008–14 surveys.

	Mean	SD	Cronbach's $\alpha$
Dependent Variables			
Political Tolerance Scale	.652	.322	.920
Anti-Religionist Scale	.673	.375	.741
Gay and Lesbian Scale	.740	.374	.817
Communist Scale	.641	.399	.784
Racist Scale	.599	.390	.734
Militarist Scale	.606	.407	.797
Independent Variables			
Bachelor's Degree	.261	-	-
Family Income (log)	10.438	.934	-
Age	47.136	15.452	-
Political Conservatism	4.102	1.391	-
Female	.536	-	-
African American	.131	-	-
White	.822	-	-
Other Race	.047	-	-
Married	.565	-	-
Children in Home	.373	-	-
South	.345	-	-
Urban	.222	-	-
Suburban	.269	-	-
Other Urban	.384	-	-
Rural	.125	-	-
Sectarian Religion	.299	-	-
Other Religion	.591	-	-
No Religion	.110	-	-

#### Table 1. Descriptive Statistics

N = 21,681

are associated with political tolerance: sex, race, marital status, children in the home, political conservatism, city size, living in the South, and both sectarian religious affiliation and no religious affiliation.<sup>3</sup>

3. Sex is a dummy variable indicating female respondents. Race is assessed with dummy variables for African American and "other race" respondents, with whites as the reference category. Dummy variables for currently married respondents and those with children under 18 living in their homes gauge household composition and family formation. Political conservatism is a seven-point scale ranging from extremely liberal to extremely conservative. Dummy variables for urban (100 largest standard metropolitan statistical areas [SMSAs]), suburban (suburbs of 100 largest SMSAs), and rural areas control for city size, with other urban areas as the reference category. A dummy variable for respondents living in the South Census Region is used to control for regional variation. Dummy variables for those with no religious affiliation, with other religious affiliates as the reference category. Sectarian affiliation is based on Smith's (1990) operationalization of religious affiliations, which was chosen over other methods (e.g., Steensland et al. 2000) because it does not conflate religious affiliations with race.

## **Analysis Technique**

Hierarchical age-period-cohort (HAPC) models are used to analyze period and cohort changes in the association between SES and political tolerance. HAPC models are random- or mixed-effects models. These models are preferable to non-nested and fixed-effects approaches for several reasons. For instance, there is the likelihood of shared random error within both periods and birth cohorts (Yang and Land 2013). Correlated error among those born at about the same time or surveyed in the same year can produce invalid statistical inference (Yang 2008), particularly underestimated standard errors and increased probability of type I error (Hox and Kreft 1994). Cohort- and period-specific error terms in HAPC models compensate for this shared error. HAPC models are also more statistically efficient than fixed-effects models when using unbalanced data that contain an unequal number of respondents in the cohort-by-period cells, which is the case in the GSS data (Yang and Land 2008). Most importantly, HAPC models allow for random slopes that model heteroscedasticity at the period and cohort level, which, for some research questions, make them preferable to fixed-effects models (Bell and Jones 2015; Fielding 2004). Indeed, random slopes for income and education are the focus of the analysis below. Recent simulation research by Reither and colleagues (2015) demonstrates that HAPC models provide reliable results when key assumptions are met. Moreover, these models have been employed in other recent research on changes in political tolerance (e.g. Schwadel and Garneau 2014) and the results are robust to alternative ways of operationalizing age, period, and cohort.

Hierarchical age-period-cohort models treat periods and cohorts as cross-classified level-2 units in a multilevel model. Individuals are the level-1 units of analysis. Age is modeled as a fixed-effects level-1 variable. Random level-2 intercepts are used to gauge period and cohort effects. The individual or level-1 equation is as follows:

Political Tolerance<sub>ijk</sub> = 
$$\beta_{ojk} + \beta_1 Age_{ijk} + \beta_2 Income_{ijk}$$
  
+  $\beta_3 Education_{ijk} + \sum_{p=12}^{p} \beta_p X_p + e_{ijk}$ 

Each individual (*i*) is nested in both a birth cohort (*j*) and a period (*k*),  $\beta_{ojk}$  is the cell mean for respondents in cohort *j* and period *k*,  $\beta_1$ ,  $\beta_2$ , and  $\beta_3$  are the individual-level fixed effects for age, income,

and education,  $e_{ijk}$  is the individual-level error term, and  $\beta_p$  represents other individual-level fixed effects (i.e., control variables). The level-2 model is as follows:

$$\beta_{\text{ojk}} = \gamma_{\text{o}} + u_{\text{oj}} + v_{\text{ok}}$$

In this equation,  $\gamma_0$  is the model intercept, which is the overall mean of political tolerance, and  $u_{0j}$  and  $v_{0k}$  are the residual random effects of cohort and period. These residual random effects can be interpreted as period-specific and cohort-specific effects (Yang and Land 2013). Random slopes are incorporated into the model as follows:

$$\beta_{2jk} = \gamma_2 + u_{2j} + v_{2k} \beta_{3jk} = \gamma_3 + u_{3j} + v_{3k}$$

In these equations,  $\gamma_2$  and  $\gamma_3$  are fixed-effects coefficients for income and education,  $u_{2j}$  and  $u_{3j}$  are the cohort-specific effects of income and education, and  $v_{2k}$  and  $v_{3k}$  are the period-specific effects of income and education. All analyses are weighted and conducted in HLM 7. Continuous variables are centered on their overall means. The results section is divided into two parts. First, we examine the general political tolerance scale. Second, we examine subscales that focus on each of the five outgroups. Figures (showing only on statistically significant [p < .05] results) highlight the key findings.

#### Results

#### Political Tolerance Scale

The results from HAPC models of the political tolerance scale are reported in Table 2. The upper half of the table reports fixed effects in the form of coefficients and standard errors for the independent variables. The lower half of the table reports random effects, specifically variance components that indicate the amount of variation in the intercept and the slopes of education and income across periods and cohorts. As expected, the fixed-effects results from Model 1 show that, all else being equal, both bachelor's degree (b = .145) and family income

	Mod	el 1	Model 2		
Fixed Effects	b	<i>S.e</i> .	b	<i>s.e</i> .	
Intercept	.668	.015***	.657	.029***	
Bachelor's Degree	.145	.005***	.171	.015***	
Family Income (log)	.044	.003***	.047	.004***	
Ageª	035	.004***	003	.003	
Female	012	.004**	010	.004*	
African American <sup>b</sup>	055	.007***	056	.007***	
Other Race <sup>b</sup>	136	.010***	138	.010***	
Married	039	.005***	038	.005***	
Children in Home	022	.005***	023	.005***	
Political Conservatism	017	.002***	017	.002***	
South	062	.005***	062	.004***	
Urban <sup>c</sup>	.015	.006**	.015	.006**	
Suburban <sup>c</sup>	.030	.005***	.029	.005***	
Rural <sup>c</sup>	052	.007***	050	.007***	
Sectarian Religion <sup>d</sup>	077	.005***	076	.005***	
No Religion <sup>d</sup>	.079	.007***	.077	.007***	
Random Effects	Variance Component		Variance Component		
Period (Intercept)	.00166***		.00016***		
Bachelor's Slope				.00015**	
Family Income Slope				.00000	
Birth Cohort (Intercept)	.00212***		.01442***		
Bachelor's Slope			.00336***		
Family Income Slope			.00012***		
Individual (level-1)		.07496	.07455		
Deviance	5,48	3	5,354+		

#### Table 2. Hierarchical Age-Period-Cohort Models of Political Tolerance Scale

Continuous variables grand-mean centered; N = 21,681

a. Coefficient and standard error multiplied by 10

b. White reference

c. Other urban reference

d. Other religions reference

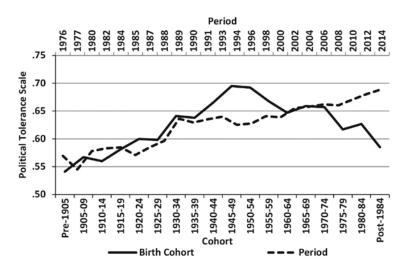
+ Addition of random slopes improves model fit (p < .001)

\*  $p \le .05$ ; \*\*  $p \le .01$ ; \*\*\*  $p \le .001$  (two-tailed test)

(b = .044) have strong, positive effects on political tolerance. Moreover, these are the two most robust predictors in the model—bachelor's degree has the largest *t*-value of any of the independent variables and family income has the second largest *t*-value (not shown). The fixed-effects results in Model 1 also show relatively low levels of political tolerance among women, nonwhites, older adults, those who are married or have children in their home, political conservatives, sectarian Christians, and those living in the South or in rural areas.

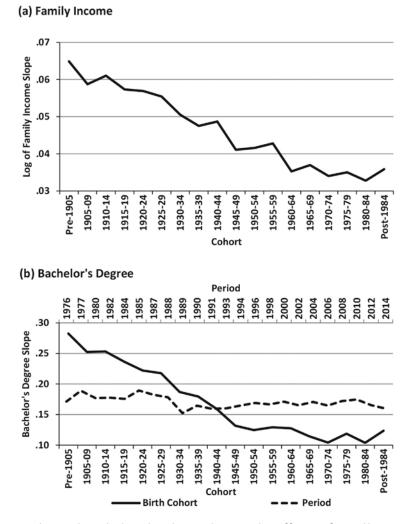
Although our focus is on changes in the effects of income and education, we also extend previous research (e.g., Schafer and Shaw 2009; Schwadel and Garneau 2014) by examining how political tolerance varies in recent cohorts and through the 2014 period. The variance components in Model 1 indicate that political tolerance varies across both periods (variance component = .00166) and birth cohorts (variance component = .00212). These period and cohort changes are depicted in Fig. 1. As the dashed line in Fig. 1 shows, political tolerance increased in a relatively linear manner from 1977 to 2014. Specifically, there was a .45 standard deviation increase in tolerance from the low point in 1977 to 2014. The solid line in Fig. 1 indicates large across-cohort differences, with baby boom cohorts-particularly those born between 1945 and 1954-being especially tolerant. This finding comports with research emphasizing the liberal values of members of the baby boom generation (e.g., Hout and Fischer 2002; Wuthnow 1976). The question remains, as political tolerance has grown across periods and varied across cohorts, how have the effects of income and education changed?

Model 2 adds random slopes for family income and bachelor's degree. The reduction in the deviance statistic signifies that the addition of the random slopes improves the model fit. The variance components



**Fig. 1.** Estimated Period and Birth Cohort Changes in Political Tolerance Scale. Figure graphs results from Model 1 in Table 2.

indicate that the slopes of both family income (variance component = .00012) and bachelor's degree (variance component = .00336) vary meaningfully across birth cohorts. The effect of bachelor's degree, but not income, also varies significantly across time periods (variance components = .00015). Figure 2 depicts significant changes in the slopes of education and family income from Model 2. As Fig. 2a shows, there is a relatively linear, across-cohort decline in the effect of family income on political tolerance (no line shown for changes in effect of income across periods because variance component is not significant). The estimated coefficient for family income for the post-1984 cohort (.036) is just over half the magnitude of the coefficient for



**Fig. 2.** Estimated Period and Cohort Changes in Effects of Family Income and Bachelor's Degree on Political Tolerance Scale. Figure graphs results from Model 2 in Table 2.

the pre-1905 cohort (.065). In the pre-1905 cohort, this equals a .75 standard deviation difference in political tolerance between those two standard deviations above the mean of income and those two standard deviations below the mean of income. In contrast, in the post-1984 cohort, there is less than a .42 standard deviation difference in political tolerance between those two standard deviations above and below the mean of income.

The solid line in Fig. 2b shows a similar, relatively linear acrosscohort decline in the effect of college education. The estimated coefficient for bachelor's degree for the pre-1905 cohort (.283) is more than twice the size of the bachelor's degree coefficient for the post-1984 cohort (.124). Having a bachelor's degree is associated with a .88 standard deviation increase in political tolerance for the pre-1905 cohort and a .38 standard deviation increase in political tolerance for the post-1984 cohort. The dashed line in Fig. 2b indicates that although there is statistically significant variation in the effect of bachelor's degree across periods, this variation is not substantively meaningful. Overall, these results show that political tolerance increased considerably across periods, but the effects of both higher education and family income declined precipitously across birth cohorts. Given the association between education and income, it is important to note that across-cohort declines in the effects of the two SES measures are not dependent on controlling for each other (see Appendix A for random effects of income not controlling for education, and random effects of education not controlling for income).

## OutGroup-Specific Models

Results from HAPC models of outgroup-specific tolerance scales are reported in Table 3. The fixed-effects results indicate that family income and bachelor's degree both have significant, positive effects on all five dependent variables. There is significant reduction in the deviance statistic in all the models in Table 3, which means the addition random slopes improve the model fit. Despite the general consistency in the effects of control variables across models, there are some interesting differences. For instance, women are relatively tolerant of gays and lesbians but relatively intolerant of communists, anti-religionists, and racists. The variance components indicate that the slope of bachelor's degree varies significantly across birth cohorts in all five models in Table 3. Cohort-based variation in the effect of bachelor's degree on the five subscales is depicted in Fig. 3a. In general, the effect of college education on tolerance declines from the pre-1905 cohort to the 1950s or 1960s cohorts, and is then relatively stable through the post-1984 cohort. The magnitude of the decline in the effect of bachelor's degree

	Gays & Lesbians		Communists		Anti-Religionists		Racists		Militarists		
Fixed Effects	b	s.e.	Ь	s.e.	b	s.e.	b	s.e.	b	s.e.	
Intercept	.740	.030***	.652	.026***	.686	.033***	.623	.016***	.594	.031***	
Bachelor's Degree	.142	.017***	.208	.014***	.176	.017***	.130	.012***	.192	.016***	
Family Income (log)	.057	.005***	.051	.006***	.050	.006***	.030	.005***	.046	.004***	
Ageª	006	.004	006	.004	004	.003	018	.003***	013	.004***	
Female	.034	.005***	033	.005***	018	.005***	039	.006***	.007	.005	
African American <sup>b</sup>	006	.008	039	.009***	064	.008***	092	.009***	077	.009***	
Other Race <sup>b</sup>	103	.012***	133	.013***	146	.012***	133	.014***	170	.014***	
Married	044	.006***	030	.006***	038	.006***	039	.006***	040	.006***	
Children in Home	030	.006***	022	.006***	023	.006***	018	.007**	020	.006**	
Political Conservatism	023	.002***	018	.002***	018	.002***	011	.002***	016	.002***	
South	077	.005***	074	.006***	069	.005***	041	.006***	050	.006***	
Urban <sup>c</sup>	.033	.007***	.018	.007*	.013	.007	.003	.008	.008	.008	
Suburban <sup>c</sup>	.051	.006***	.027	.007***	.022	.006***	.024	.007***	.024	.007***	
Rural	054	.008***	053	.009***	066	.008***	035	.009***	041	.009***	
Sectarian Religion <sup>d</sup>	107	.006***	079	.006***	076	.006***	052	.007***	066	.007***	
No Religion <sup>d</sup>	.034	.008***	.087	.009***	.095	.008***	.084	.009***	.088	.009***	
	Variance		Variance		Variance		Variance		Variance		
Random Effects	Component		Сс	Component		Component		Component		Component	
Period (Intercept)	.00	.00225***		.00054***		.00005*		.00001		.00032***	
Bachelor's Slope	.00047**		.00030		.00009		.00005		.00038*		
Family Income Slope	.00009**		.00004		.00006**		.00010*		.00005		
Birth Cohort (Intercept)	.01322***		.01060***		.01823***		.00314***		.01624***		
Bachelor's Slope	.00399***		.00251**		.00439***		.00144***		.00366***		
Family Income Slope	.00017***		.00042***		.00031***		.00005		.00001		
Individual (level-1)	.10608		.12	.12522		.10719		.13510		.13140	
Deviance	13,036+		16	5,598† 13,216†		8,216†	18,211‡		17,637+		

Table 3. Hierarchical Age-Period-Cohort Models of Tolerance of Specific Outgroups

Continuous variables grand-mean centered; N = 21,681

a. Coefficient and standard error multiplied by 10

b. White reference

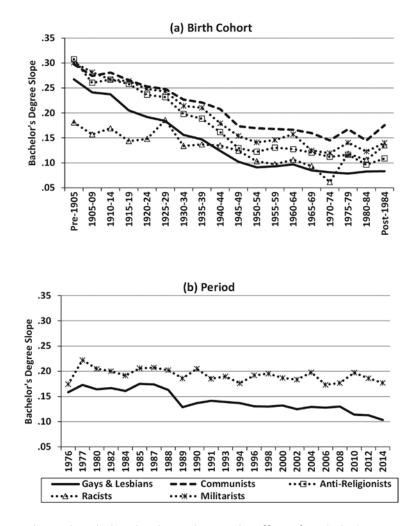
c. Other urban reference

d. Other religions reference

 $\pm$  Addition of random slopes improves model fit (p < .05)

+ Addition of random slopes improves model fit (p < .001)

\*  $p \le .05$  ; \*\*  $p \le .01$  ; \*\*\*  $p \le .001$  (two-tailed test)



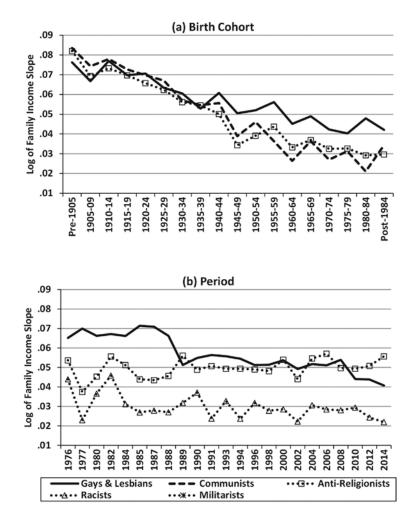
**Fig. 3.** Estimated Period and Cohort Changes in Effect of Bachelor's Degree on Tolerance of Specific Outgroups. Figure graphs results from models in Table 3.

is remarkably consistent in the models of tolerance of militarists, anti-religionists, and gays and lesbians, with the coefficients for backelor's degree declining between .16 and .20 across birth cohorts. Still, there are notable differences across the models. In particular, the decline in the effect of college education was steepest for tolerance of anti-religionists (.20 decline in coefficient across cohorts) and smallest for tolerance of racists (.05 decline in coefficient across cohorts).

As the results in Table 3 show, the slope of bachelor's degree varies significantly across periods in the models of tolerance of militarists and gays and lesbians but not in the other three models. Figure 3b depicts these statistically significant variations. As this figure shows, the effect of college education on tolerance of gays and lesbians was

relatively high in the 1970s and 1980s, with an average coefficient of .17 between 1976 and 1988. The effect of bachelor's degree declined in the 1990s and 2000s, to .10 in 2014. While there is also significant period-based variation in the effect of bachelor's degree on tolerance of militarists, Fig. 3b shows that this variation is not substantively meaningful.

Turning to income, the variance components in Table 3 indicate that the slope of family income varies significantly across birth cohorts in the models of tolerance of gays and lesbians, anti-religionists, and communists. These variations are depicted in Fig. 4a, which shows that the effect of income is remarkably similar for all three measures among the pre-1905 cohort, with coefficients between .076 and .083.



**Fig. 4.** Estimated Period and Cohort Changes in Effect of Family Income on Tolerance of Specific Outgroups. Figure graphs results from models in Table 3.

Across-cohort declines in the effects of income on tolerance of both communists and anti-religionists are also highly similar. From the pre-1905 to the post-1984 cohort, the coefficient for income declines by .049 in the model of tolerance of communists and .052 in the model of tolerance of anti-religionists. Changes in the effect of income on tolerance of gays and lesbians are robust but not quite as large, with the coefficient declining from .076 for the pre-1905 cohort to .042 for the post-1984 cohort.

Finally, the variance components indicate that the slope of family income varies significantly across periods in the models of tolerance of gays and lesbians, antireligionists, and racists. These period-based variations are depicted in Fig. 4b. Despite the statistically significant variation across periods, there is no clear pattern of change in the effect of income on tolerance of anti-religionists. Similarly, there does not appear to be an overall direction of change in the effect of income on tolerance of racists, particularly if we discount the swings in the coefficient in the first few years of the survey. In contrast, there is a notable period-based decline in the slope of income in the model of tolerance of gays and lesbians. The effect of income on tolerance of gays and lesbians declines from a high of .072 in 1985-1987 to .041 in 2014. Overall, the results from the outgroup-specific models demonstrate robust, cohort-based declines in the effect of bachelor's degree on tolerance of all five outgroups, cohort-based declines in the effect of family income on tolerance of three of the five outgroups, and period-based declines in the effects of both bachelor's degree and family income on tolerance of gays and lesbians.

### Discussion

Political tolerance is pivotal to the functioning of democracy and the well-being of members of stigmatized groups. While there has been considerable growth in tolerance toward stigmatized outgroups, researchers continue to find substantial differences in political tolerance across levels of SES (e.g., Bobo and Licari 1989; Karpov 1999; Schwadel and Garneau 2014). We investigate changes in this congruence between class stratification and support for outgroup civil liberties. In support of Hypothesis 1, the above results show large declines in the effects of SES on political tolerance. College-educated and high-income

Americans were once considerably more likely than the less educated and those with lower incomes to support the civil liberties of stigmatized outgroups. While these associations persist, they are reduced to the point where they are best described as moderate. The patterns of decline in the effects of both income and higher education are strikingly similar. Although college education has spread and become more normative in recent generations, income inequality has persisted and even increased. Thus, the diffusion of tolerance across income and education categories does not appear to be due to changes in the makeup of those demographic groups. Instead, the findings fit with a model of diffusion as a process that becomes self-perpetuating once a threshold of tolerance is achieved (Palloni 2001; Rogers 2003).

In support of Hypothesis 2, declines in the effects of SES on political tolerance occur predominantly across birth cohorts rather than time periods. This finding comports with the emphasis on early lifecourse socialization and cohort replacement in the political socialization literature (e.g., Alwin and Krosnick 1991; Alwin and McCammon 2007). Political tolerance in general increased across time periods, demonstrating a change in perspectives among the population as a whole. Nonetheless, declines in the effects of SES on tolerance rely on differences across birth cohorts. Maturing in periods of increased tolerance toward stigmatized outgroups appears to reduce the relevance of SES, though the above analysis cannot establish such a causal relationship. In contrast, among older cohorts who matured at a time when tolerance was relatively low, tolerant attitudes are disproportionately consolidated amongst high-SES Americans. This finding extends recent research that shows cohort-based declines in the "liberalizing" effects of SES on other social, political, and religious perspectives (e.g., Pampel and Hunter 2012; Schwadel 2014). Moreover, in contrast to long-standing theoretical assumptions (e.g., Davis 1975; Stouffer 1955), this finding suggests that if political tolerance is going to continue to increase, it will not do so because subsequent generations are more highly educated and thus more tolerant.

The importance of cohort replacement in explaining cultural diffusion has broader implications for social scientific research. Building on the findings in this article as well as Pampel and Hunter's (2012) analysis of cohort-based changes in the effects of SES on views of the environment, future research should investigate if other shifts in public opinion associated with class diffusion are occurring across birth cohorts. Perhaps other social and political perspectives that were traditionally associated with the middle and upper classes, such as views of marijuana (Nielsen 2010) and same-sex marriage (Sherkat et al. 2011), are also changing with younger cohorts of Americans "coming of age" in increasingly tolerant contexts. As Gans (1999:11) notes in relation to cultural choices, however, social-class convergence may be "quite selective."

The above results show that not all outgroups have experienced the same degree of diffusion of tolerance across levels of SES. In particular, the cohort-based decline in the association between higher education and tolerance of racists is relatively small, and there is no meaningful decline in the association between family income and tolerance of racists. These results support Hypothesis 5. Racists continue to be a particularly distrusted outgroup (Schwadel and Garneau 2014). Continued growth in the nonwhite proportion of the population combined with the correlation between race and SES suggest that Americans with low levels of SES may remain relatively intolerant of racists for some time. On the other hand, low- SES whites may increasingly view minorities in terms of economic competition, which may lead to increased acceptance of racism among low-SES whites.

In contrast to views of racists, tolerance of communists and antireligionists exhibit the most consistent and robust across-cohort declines in their association with SES. These results provide mixed support for Hypothesis 3. While we expected considerable diffusion in tolerance of communists due to the decades-long increase in tolerance of communists (Schafer and Shaw 2009), acceptance of anti-religionists is still a relatively recent phenomenon (Cox, Jones, and Navarro-Rivera 2015; Edgell et al. 2006). Nonetheless, there have been considerable across-cohort increases in secularism, particularly lifelong secularism (Pew Research Center 2015; Schwadel 2010). In more recent cohorts, secularity has become more common among less-educated Americans in particular (Schwadel 2014). Consequently, more recent cohorts, and especially less-educated members of those cohorts, are more likely to be exposed to secular Americans during their formative years, which may have contributed to the strong, across-cohort decline in the association between SES and tolerance of anti-religionists.

Despite the preponderance of cohort changes, there are notable period-based declines in the effects of education and income on tolerance of gays and lesbians, which supports Hypothesis 4. Rapid changes in acceptance of homosexuality (Schwadel and Garneau 2014) as well as campaigns to broaden public awareness of issues facing gay and lesbian Americans (Walters 2001) may have promoted the relatively quick, period-based diffusion in support for civil liberties for gays and lesbians across levels of SES. In contrast to cohort-based changes, however, this period-based diffusion in tolerance toward gays and lesbians may be more ephemeral, reacting to period-specific political and social occurrences. For instance, the U.S. Supreme Court recently ruled that same-sex marriage is now legal in all 50 states. Similar to previous culture "shocks," this change may produce a backlash from some Americans (Putnam and Campbell 2010), which could reverse the period- based diffusion of tolerance of gays and lesbians across levels of SES.

#### Limitations

There are notable limitations to the above analysis. For instance, the dependent variables are additive scales of tolerance toward specific stigmatized groups. We are unable to employ other measures of political tolerance such as the "least-liked" approach (Sullivan et al. 1982) or the "support for restrictive policies" approach (Davis 2007) due to lack of appropriate data (see Gibson 2013 for a review of political tolerance measurement). In regard to independent variables, data limitations prevent us from controlling for important psychological dispositions such as dogmatism and perceived group threat, both of which have implications for tolerance (Gibson 2006; Sullivan et al. 1982).

We are also limited in our ability to directly test for changes across the lifespan, or across generations within families. Despite declines in the effect of income, economic mobility may continue to influence political tolerance (Katnik 2002). Future research can employ longitudinal data to address this possibility. Additionally, we are unable to directly test the diffusion of political tolerance across social classes. Future research can address this shortcoming by focusing on changes in cultural representations of various out-groups across class-based communities. Finally, although the HAPC models employed here adjust for the shared random error within periods and cohorts, there is no "solution" to the identification problem resulting from the linear dependency between measures of age, period, and cohort (Glenn 2005). Alternative approaches to assessing period and cohort change should be pursued in future research.

#### Conclusions

Since the advent of the discipline, sociologists have focused on the prevalence and implications of class stratification. Marx in particular viewed economic stratification as the primary factor determining other features of people's lives. Indeed, contemporary research suggests that SES influences various aspects of Americans' lives, including mental health (McLeod 2013), religion (Schwadel 2016), and, of course, political opinions (Hout, Brooks, and Manza 1993). Our findings highlight one type of political opinion that has become less connected to people's place is the economic hierarchy. While class stratification has serious implications for individuals' well-being and other life circumstances, in more recent generations it is less deterministic of their views of granting civil rights to various outgroups. It remains to be seen if such diffusion is occurring with opinions on other social and political issues.

The results in this article add to the broader discussion of how attitudes and behaviors popularize across segments of the population. The findings comport with Young and Willmott's (1973) Principle of Stratified Diffusion, which predicts a weakening role of social class, particularly in predicting types of family formation. The findings also support the model of cultural diffusion proposed by Rogers (2003), where highly educated and affluent Americans are cultural "innovators" and those with lower levels of education and income are cultural "laggards" that eventually "catch up" through cultural diffusion; or, according to Bourdieu (1984), through class emulation. With regard to SES and political tolerance, however, our results suggest that cultural diffusion is not the result of individuals deciding to adopt or emulate the tolerant views of other classes, which would likely be evident in period rather than cohort effects, but is instead due to differences in socialization and cultural exposure across birth cohorts.

The diffusion of political tolerance demonstrated in the above analysis may have a positive impact on civic participation and, more generally, the functioning of American democracy (Dalton 1996; Sullivan et al. 1982). As Americans grow more comfortable allowing marginalized groups to voice their opinions, there will likely be more diversity of public opinion. In this sense, the diffusion of political tolerance can lead to greater civic participation, which is essential for a properly functioning democracy (Putnam 2000). Widespread political tolerance is also likely to decrease the stigmatization of out-groups, which could further embolden stigmatized individuals to become more politically active and vocal citizens. Broad support for the civil liberties of stigmatized groups, across social classes and potentially other important social cleavages, can thus improve the vibrancy of American democracy.

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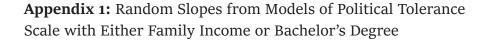
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(a) Family Income (No Bachelor's Degree)

.10 Log of Family Income Slope .09 .08 .07 .06 .05 .04 1940-44 1945-49 1945-49 1915-19 1935-39 1975-79 1980-84 Pre-1905 1905-09 1910-14 1920-24 1960-64 1965-69 1925-29 1930-34 1950-54 1955-59 1970-74 ost-1984 (b) Bachelor's Degree (No Income) Period 1993 1994 1977 1998 2000 2002 2004 2006 2008 2010 2012 2014 1976 1980 982 984 985 987 988 990 991 1996 .35 **Bachelor's Degree Slope** .30 .25 .20 .15 .10 1940-44 1945-49 1915-19 1920-24 1935-39 1950-54 1980-84 Post-1984 Pre-1905 1905-09 1910-14 1925-29 1955-59 1965-69 1970-74 1975-79 1930-34 1960-64 **Birth Cohort** Period

Based on two models that are identical to Model 2 in Table 2 except one model does not have bachelor's degree (frame a) and the other does not have family income (frame b). Variance components for slope of income (model without bachelor's degree): period = .00000 (*n.s.*), cohort = .00027 (p < .001). Variance components for slope of bachelor's degree (model without income): period = .00015 (p < .001), cohort = .00480 (p < .001).