The lasting impact of adolescence on left-right identification: Cohort replacement and intracohort change in associations with issue attitudes

Roderik Rekker

Department of Youth & Family, Utrecht University, P.O. Box 80.140, 3508, TC, Utrecht, The Netherlands

A B S T R A C T

This study examined how the ideological correlates of left-right identification in the Netherlands changed between 1980 and 2008, and whether these changes were driven by cohort replacement. Analyses on repeated cross-sectional data revealed an increasing association with immigration and a decreasing association with redistribution, secularism, and civil liberties. Cohort differences were found for cultural attitudes: Secularism was most important for voters who were adolescent between 1917 and 1960, while civil liberties were most important for the 1960–1980 cohort and immigration was relatively important for the 1980–2008 cohort. Consequently, over-time changes in the importance of cultural issues, but not redistribution, were partly driven by cohort replacement. This indicates that the left-right distinction is partly shaped by circumstances during voters' adolescent years.

© 2016 Elsevier Ltd. All rights reserved.

1. Introduction

People commonly think about politics in terms of 'left' and 'right'. For many voters, this distinction lies at the core of how they identify with politics (Freire, 2006). Not surprisingly, left-right identification is strongly associated with almost every aspect of political behavior (e.g., Knutsen, 1997). It is, for example, the strongest long-term correlate of voting behavior in many West European countries (e.g., Tillie and Fennema, 1998; Van der Brug et al., 2000; Van der Brug, 2010). But what does it mean to be left or right? The left-right distinction traditionally placed economic redistribution and cultural progressiveness against the free market and traditional values (Inglehart and Klingemann, 1976). However, its meaning has become more multifaceted in Western Europe due to the rise of new cultural issues (e.g., Kriesi et al., 2008; Van der Brug and Van Spanje, 2009). In recent decades, left-right identification has become decreasingly associated with attitudes on redistribution and increasingly linked to views on immigration (De Vries et al., 2013).

But what drives these changes in the ideological meaning of the left-right distinction? A parsimonious explanation is that voters

change their definition of left and right due to political developments such as the rise of anti-immigrant parties (De Vries et al., 2013). However, this account is controversial from a political socialization perspective. An extensive body of literature proposes that voters acquire political orientations early in life that persist throughout their adult lifespan (e.g., Krosnick and Alwin, 1989; Sears and Funk, 1999). It contradicts this view that voters would substantially change their interpretation of left and right as an adult. As such, the socialization perspective proposes that over-time changes occur primarily through the replacement of existing voters by new generations that are shaped by the political environment during their early life (e.g., Hooghe, 2004; Mannheim, 1964; Ryder, 1965; Tilley, 2005). Indeed, many studies have demonstrated how generational replacement can bring about political change (e.g., Bhatti and Hansen, 2012; Kroh, 2014; Neundorf and Niemi, 2014; Van der Brug and Kritzinger, 2012). However, it has not yet been examined if generational replacement is also responsible for the changing ideological correlates left-right identification in Western Europe.

Using 20 waves of repeated cross-sectional data, the present study therefore examined how the associations between issue attitudes and left-right identification in the Netherlands have changed between 1980 and 2008, and whether these changes were due to *cohort replacement* or *intracohort change*. Cohort

replacement means that change is driven by the replacement of voters by new generations, whereas intracohort change implies that voters change their views over time. Specifically, this study investigated these mechanisms in the associations of left-right identification with attitudes on redistribution, secularism, civil liberties, and immigration.

Associations between issue attitudes and left-right identification are important because the left-right dimension is believed to be an 'ideological super issue' (Pierce, 1999) that largely summarizes the impact of ideology on political behaviors such as voting (Marks and Steenbergen, 2002; Van der Brug et al., 2000). Disentangling cohort replacement and intracohort change is relevant because it may indicate how reversible over-time changes in the left-right distinction are. If the meaning of left and right has changed due to intracohort change, this would merely constitute a time trend that could be reversed. Contrarily, these changes may be more permanent if they are driven by cohort replacement, in which case they will likely persist until future generations come of age.

The Netherlands constitutes a particularly interesting case with regard to the changing importance of political issues. Until the 1960s, Dutch politics was characterized by strong alignments based on social class and religion (Lijphart, 1968). This 'pillarization' has since then declined at a rapid pace. Since the 1980s, Dutch politics has been characterized by a strong mobilization of anti-immigrant issues (Adams et al., 2012; Pellikaan et al., 2007). The Netherlands therefore constitutes one of the clearest examples of both the decline of traditional political alignments and the rise of new cultural issues. Furthermore, exceptionally suitable data was available for the Netherlands. De Vries, Hakhverdian, and Lancee (2013) used this data to demonstrate that the association of left-right identification with redistribution attitudes has weakened between 1980 and 2006, while its association with immigration attitudes has strengthened. Using the same data, the present study aimed to disentangle to what extent these changes were driven by cohort replacement. Furthermore, the present study added issue attitudes on secularism and civil liberties.

2. Theory and hypotheses

2.1. The changing meaning of left and right

Following the theoretical framework of Inglehart and Klingemann (1976), left-right identification can be decomposed into three components: a social component, a partisan component, and a value component. For example, a voter who identifies as rightist is more likely to belong to a higher social class (social component), support rightist parties (partisan component), and have rightist views on political issues (value component). The value component of the left-right distinction can in turn be decomposed into an economic an cultural dimension (Kriesi et al., 2008; Rekker, 2015; Van der Brug and Van Spanje, 2009). The economic dimension relates to attitudes on issues like social inequality, taxes, or social welfare. The cultural dimension captures attitudes on issues like the role of religion, law and order, and immigration. Making yet another decomposition, the cultural dimension consists of three types of issues: the cleavage between church and state (e.g., Lipset and Rokkan, 1967), the value conflict between libertarianism and authoritarianism (e.g., Inglehart, 1977; Kitschelt and McGann, 1995), and the controversy of integration versus demarcation in response to globalization (e.g., Kriesi et al., 2008).

Though it is clear that a variety of issues together define what it means to be left or right, not all issues are equally important (e.g., Freire, 2008). What issues predominate the left-right distinction can furthermore differ from one period to the next (e.g., Knutsen, 1995; Kitschelt and Hellemans, 1990; Tilley et al., 2008; Van Elsas and Van

der Brug, 2014). Over the years, new issues found their way onto the political agenda, whereas others became less significant. The clearest example of the rise of a new issue in recent West European history is probably the issue of immigration. The Netherlands began to witness a significant immigration of foreign laborers in the 1960s. At first, this development was almost absent from the political debate (Thränhardt, 2000). However, this began to change when the first anti-immigrant parties in the Netherlands were formed during the 1980s (Mudde and Holsteyn, 2000). The first electoral breakthrough of an anti-immigrant party came in 2002, when the 'Fortuyn revolution' established immigration as a prominent issue on the Dutch political agenda (Pellikaan et al., 2007).

De Vries and colleagues (2013) theorized that the rise of a new issue will be accompanied by a gradual integration of that issue into the existing left-right divide. Both voters and parties may attempt to connect the new issue to other topics, thereby integrating it into their existing ideological framework. De Vries and colleagues (2013) labeled this mechanism as *issue bundling*. Using the same dataset as the present study, De Vries and colleagues (2013) provided support for this principle by demonstrating that the association between attitudes on immigration and left-right identification in the Netherlands increased substantially between 1980 and 2006.

Since the space on the political agenda is inherently limited, De Vries and colleagues (2013) furthermore reasoned that the rise of a new issue will come at the expense of existing issues. Consequently, the left-right distinction may lose some of its existing ideological meaning as new issues arise. De Vries and colleagues (2013) labeled this process as *issue crowding out*. Demonstrating this mechanism, De Vries and colleagues (2013) found that the association of left-right identification with redistribution attitudes weakened during the same period that its association with immigration attitudes strengthened. The present study aimed to reproduce this finding, while adding the issues of secularism and civil liberties. If new cultural issues like immigration can arise at the expense of economic issues like redistribution, it seems plausible that they can also arise at the expense of existing cultural issues like secularism or civil liberties. This study's first hypothesis was therefore:

H1. The association of left-right identification with issue attitudes on immigration will have strengthened (H1a) between 1980 and 2008, while its association with attitudes on redistribution, secularism, and civil liberties will have weakened (H2b).

2.2. Impressionable years and historical periods

2.2.1. Adolescence as a formative phase

The idea that voters would substantially change their left-right identification as an adult is controversial from the perspective of political socialization. An extensive body of literature proposes that voters form persistent political orientations early in life, particularly during adolescence (e.g., Boonen et al., 2014; Hooghe et al., 2013; Hooghe and Wilkenfeld, 2008; Markus, 1979; Sears and Funk, 1999). As an adolescent, voters adopt attitudes on many political issues that they previously had no opinion on (e.g., Sears and Valentino, 1997). As they grow older, adolescents become less likely to change these attitudes (e.g., Rekker et al., 2015). Longitudinal studies on adolescents have investigated this increasing persistence by calculating correlation coefficients between respondents' initial attitudes and their attitudes numerous years later. For example, a longitudinal study on Dutch adolescents revealed that the 6-year persistence of left-right identification increased from 0.21 at age 13.5 to 0.59 at age 23 (Rekker et al., 2014a). The persistence of redistribution attitudes meanwhile increased from 0.13 at age 13.5 to 0.57 at age 23, while the persistence of

immigration attitudes increased from 0.43 to 0.69 (Rekker et al., 2015) During this formative phase, Dutch adolescents were found to bring their issue attitudes in line with their previously held left-right identification, as well as vice versa (Rekker et al., 2014b). Through this process of mutual adjustment, the explained variance in left-right identification of issue attitudes on redistribution and immigration surged dramatically from 0.6% at age 13.5—19.2% at age 23 (Rekker et al., 2014a). Further emphasizing the importance of adolescence, longitudinal studies on adults have revealed that political orientations subsequently remain stable during the adult lifespan (e.g., Alwin et al., 1991; Jennings and Markus, 1984; Jennings and Niemi, 1981). For example, left-right identification was found to possess a 17-year persistence of 0.66 among adult voters (Sears and Funk, 1999). Together, these research findings strongly suggest that left-right identification and its ideological meaning are largely determined by the time voters reach adulthood.

The observation that adolescents develop persistent attitudes (i.e., *formative phase hypothesis*) does not in itself proof that they are also susceptible to the kind of historical influences that could shape political generations (i.e., *impressionable years hypothesis*). For example, several studies have demonstrated that adolescents' attitudes are partly determined by pre-existing factors such as their social class (e.g., Glass et al., 1986), their parents' attitudes (e.g., Jennings and Niemi, 1968), their IQ (e.g., Schoon et al., 2010), or their genes (e.g., McCourt et al., 1999). However, several studies have also supported the impressionable years hypothesis that historical circumstances can shape the formation of adolescents' attitudes (Dinas, 2013; Sears and Valentino, 1997; Schuman and Rodgers, 2004; Sherrod et al., 2004; Wolak, 2009). For example, a study that followed American adolescents during a presidential election showed that the campaign importantly affected the formation of their political orientations (Sears and Valentino, 1997).

In sum, empirical evidence supports the idea that voters acquire persistent attitudes during adolescence that are partly determined by historical circumstances. This importantly implies that political change can occur through the replacement of voters by new generations. Indeed, research has demonstrated that this process drives change in many aspects of politics (e.g., Van der Brug, 2010; Walczak et al., 2012). Directly related to the present study, research on party identification in the United States indicated that its ideological correlates differ between cohorts (Stoker and Jennings, 2008). New political issues were found to be associated with party identification primarily for generations that experienced their rise during adolescence. For example, especially younger cohorts were affected when racial issues became more salient in American politics during the 1960s, whereas the party identification of older voters remained relatively stable (Carmines and Stimson, 1989).

The present study investigated cohort differences in the ideological correlates of left-right identification by classifying voters into three large cohorts based on the historical period in which they went through adolescence. Specifically, cohorts were based on the year in which voters turned 18 years old, the most formative age for political attitudes according to several studies (Bartels and Jackman, 2014; Rekker et al., 2014a; Schuman and Rodgers, 2004). Each cohort became of age during a distinct phase in Dutch political history: the period of pillarization between about 1917 and 1960, the period of cultural revolution between about 1960 and 1980, and the period of globalization between about 1980 and 2008.

2.2.2. Adolescence between 1917 and 1960: the period of pillarization

This study's oldest cohort grew up during the early days of Dutch democracy. Universal suffrage was introduced in the

Netherlands in 1917 for men and in 1919 for women. In the period that followed, Dutch politics was characterized by 'pillarization' along the lines of religion and social class (Lijphart, 1968). Three full pillars could be distinguished: Social democrats, Protestants, and Catholics. Liberals were smaller in numbers and less organized during this period. Each pillar had for example its own political party, labor union, radio station, press, schools, and youth movements. During this period, Dutch politics therefore strongly resembled the cleavage politics described by Lipset and Rokkan (1967): Parties were aligned along structural divides and voters' political preferences were intimately linked to their social class and religion.

In this context, cultural issues were strongly embedded in a cleavage between church and state (Lipset and Rokkan, 1967). Socialists strived to separate church and state, whereas Protestants and Catholics were mobilized to safeguard the position of their religion. It therefore seems likely that voters who grew up during this period developed an understanding of the left-right distinction that is intimately linked to this religious divide.

Another relevant characteristic of the Netherlands between 1917 and 1960 was the relatively low standard of living, since the country's strong wealth increase of the 1960s had yet to occur (Van Zanden, 1998). This lower prosperity may be important for political socialization, since the influential work of Inglehart (1977/2008) demonstrates that value change after 1960 was driven by a new generation that no longer had to prioritize material wellbeing. Although Inglehart focused on the rise of post-materialist values, his theory also suggests that the importance of economic concerns in the left-right divide may have decreased when prosperity increased.

2.2.3. Adolescence between 1960 and 1980: the period of cultural revolution

The pillarization of Dutch society began to decline in the 1960s (Daalder and Irwin, 1989). During this period, youths and social movements challenged traditional authority by demanding greater liberties and democratization (Kriesi, 1993). As a result of this 'cultural revolution', Dutch politics witnessed the rise of parties from the New Left such as the Pacifist Socialist Party (PSP), the Political Party of Radicals (PPR), Democrats '66 (D'66), and a New Left movement within the Labor Party (PvdA). These parties raised issues such as direct democracy, emancipation of homosexuals and women, legalization of abortion, and environmental protection (Lucardie, 1980; Van der Land, 2003). This redefined the cultural attitude dimension into one that placed democracy and civil liberties against law and order and traditional lifestyles. The authoritative work of Kitschelt and McGann (1995) labeled this new cultural dimension as a libertarian-authoritarian divide. Given the salience of these new issues between 1960 and 1980, it seems likely that voters who were socialized during this period importantly integrated this libertarian-authoritarian divide in their definition of left and right.

2.2.4. Adolescence between 1980 and 2008: the period of globalization

The cultural changes of the 1960s and 1970s were followed by yet another important transformation. Since the 1980s, Western Europe has gone through an accelerated process of globalization (Held, 1999) in the political (e.g., European integration), economic (e.g., trade and finance), and cultural domain (e.g., immigration). The immigration of foreign laborers in the Netherlands began in the 1960s. However, immigration was almost absent from political debate until the first anti-immigrant parties were founded in the 1980s (Mudde and Holsteyn, 2000; Thrändhardt, 2000): the Centre Democrats (CD) and the Centre Party '86 (CP'86). During the 1990s,

liberal party leader Frits Bolkestein was one of the first influential figures to raise the issue of immigration (Entzinger, 2003). During the 2000s, immigration became fully established on the Dutch political agenda with a decisive electoral breakthrough of anti-immigrant parties (Pellikaan et al., 2007): first by the List Pim Fortuyn (LPF) and later by Geert Wilders' Freedom Party (PVV). Alongside immigration, these parties raised other globalization related issues such as critique of European integration. This new political divide is described in the influential work of Kriesi et al. (2008) as a new cleavage between winners and losers of globalization. As such, this new controversy again redefined the cultural attitude dimension into one that placed integration versus demarcation as response to globalization. It therefore seems likely that voters who grew up during this period importantly integrated this integration-demarcation divide in their interpretation of the left-right distinction. In sum, this study's second hypothesis was postulated:

H2. Issue attitudes on secularism (H2a) and redistribution (H2b) will be most strongly associated with left-right identification for voters who were adolescent between 1917 and 1960, whereas attitudes on civil liberties will be most strongly associated with left-right identification for voters who were adolescent between 1960 and 1980 (H2c), and immigration will be most strongly associated with left-right identification for voters who were adolescent between 1980 and 2008 (H2d).

2.3. Cohort replacement and intracohort change

If these cohort differences in the ideological correlates of left-right identification indeed exist, this logically implies that over-time changes between 1980 and 2008 were at least partly driven by cohort replacement. Applying the theoretical framework of De Vries and colleagues (2013), issue bundling and issue crowding out may also be viewed as between-generation processes: Each generation may integrate new issues into the left-right distinction (i.e., issue bundling) at the expense of issues that were important for previous generations (i.e., issue crowding out). However, it is unlikely that this process has accounted for all changes in the left-right distinction, since research reveals that voters have at least some ability to change their political orientations during their adult lifespan (e.g., Dassonneville, 2013; Konzelmann et al., 2012). Therefore, this study's third hypothesis was postulated:

H3. Intracohort change will have accounted partly (H3a), but not entirely (H3b), for changes in the ideological correlates of left-right identification between 1980 and 2008.

If adult voters have indeed changed their attitudes over time, this intracohort change may not have occurred at the same pace for all cohorts. Specifically, cohorts may have gradually converged between 1980 and 2008. Seismograph theory (Prakke, 1959) argues that societal trends manifest themselves first and foremost among youths, but that older generations may eventually follow, even though they may never catch up entirely. For example, the increasing importance of immigration may be visible among younger generation first, but also become visible to some extent among older generation numerous years later. Consistent with this hypothesis, research reveals that the magnitude of cohort effects can decrease somewhat over time (Schuman and Rodgers, 2004). Drawing from seismograph theory, this study's fourth hypothesis was therefore:

H4. Cohorts will have gradually converged in the ideological correlates of left-right identification between 1980 and 2008.

3. Data and methods

3.1. Sample

This study used the 'Cultural Changes' dataset (Dutch: 'Culturele Veranderingen') from the Dutch Social and Cultural Planning Office. Starting in 1975, this repeated cross-sectional survey was administered either annually or biennially with in each year about 2000 respondents aged 16 years and older (Becker et al., 2010). Respondents were recruited using stratified probability sampling to obtain a representative sample of the Dutch-speaking population of the Netherlands. According to Becker (1993), Cultural Changes can be seen as a sample of the native Dutch population since hardly any respondents from ethnic minorities participated. The present study could only use survey years with data on left-right identification and at least one issue attitude. This resulted in an active sample of 41056 respondents who were born between 1899 and 1992 and interviewed across 20 survey years between 1980 and 2008.

3.2. Measures

3.2.1. Period, cohort, and age

This study operationalized period as a continuous variable from 1980 to 2008. Respondents were assigned a cohort based on the year in which they turned 18, which is the most formative age for political socialization according to several studies (Bartels and Jackman, 2014; Rekker et al., 2014a; Schuman and Rodgers, 2004). Three cohorts were distinguished based on the historical accounts that were discussed in the introduction: 1917–1960, 1960–1980, and 1980–2008. For example, respondents who were born between 1942 and the end of 1961 (i.e., the 'baby boom generation') were assigned to the second cohort because they reached the age of 18 during the 1960s and 1970s. Age effects were operationalized by dividing respondents into three different life phases that are commonly distinguished in developmental psychology (Arnett, 2000; Srivastava et al., 2003; Wink and Dillon, 2003): early adulthood (age 16 through 29), middle adulthood (age 30 through 64), and late adulthood (65 through 99). The distribution across cohorts was 30.6% between 1917 and 1960, 40.7% between 1960 and 1980, and 28.6% between 1980 and 2008. The distribution across life phases was 23.3% early adulthood, 61.8% middle adulthood, and 14.8% late adulthood. For all constructs in this study, descriptive statistics and bivariate correlations are displayed in Table 1.

3.2.2. Left-right identification

This study measured left-right identification using the item 'To what extend do you consider yourself left or right?' Respondents indicated their position on a 5-point scale: 'very much left' (1), 'moderate left' (2), 'neither left nor right' (3), 'moderate right' (4), and 'very much right' (5). This item resembles the typical measure of left-right identification, even though most surveys include more response categories (Kroh, 2007).

3.2.3. Issue attitudes

Issue attitudes on redistribution were measured using three items. The first item was: 'Do you think that in our country the differences between incomes are too big, about right, or too small?' The second item asked: 'Do you think the differences between high and low incomes should become much bigger, a little bit bigger, stay as they are, a little bit smaller, or much smaller?' The third item was phrased: 'There are people who own much and people who own little. Do you think these differences should become much larger, a little bit larger, stay as they are, a little bit smaller, or much smaller?' The three items for redistribution were merged into a

Table 1
Descriptive statistics and bivariate correlations (Pearson's r).

Variable	2	3	4	5	6	7	8	M	SD	T	N
1. Age	0.11***	−0.91***	−0.05***	0.06***	0.19***	0.11***	−0.09***	43.9	17.1	20	41042
2. Period		0.31***	−0.03***	−0.04***	0.12***	−0.01	−0.04***	1993.8	7.5	20	41056
3. Year of Birth			0.04***	−0.07***	−0.12***	−0.11***	−0.09***	1950.0	17.9	20	41042
4. Redistribution				0.05***	0.03***	0.02***	0.31***	0.0	1.0	19	34159
5. Secularism					−0.03***	−0.04***	0.19***	0.0	1.0	14	25352
6. Civil Liberties						0.22***	0.21***	0.0	1.0	10	18861
7. Immigration							0.18***	0.0	1.0	19	37843
8. Left-Right Identification								3.0	1.0	20	35928

Note. *p < 0.05. **p < 0.01. ***p < 0.001. Left-Right Identification had a natural standard deviation of 1 and was not standardized.

formative latent variable (e.g., Edwards and Bagozzi, 2000; Heise, 1972; Rekker, 2015). This method offers two advantages over simply calculating a sum score. First, it allows items to have differential weights to realize an optimal predictive power. Second, it allows for differential distances between response categories. Scores were obtained by first regressing left-right identification on dummy-recoded response categories of all three items across the entire sample. The predicted values were then calculated to constitute scores on the latent construct. This method essentially takes a sum score, while weighing all items and response categories such that the latent construct optimally predicts left-right identification. All items and their item-test correlations are displayed in Appendix 1.

Issue attitudes on secularism were measured using a single item: 'Some people believe politics and religion should be separated, others disagree. What do you think?' Respondents indicated their position on a 3-point scale: 'should be separated' (1), 'it depends' (2), and 'should not be separated' (3). For measuring issue attitudes on civil liberties, this study strived to include as many issues as possible that are related to the libertarian-authoritarian divide. Two items were available for a sufficient amount of survey years to be included. The first item asked: 'What we need is less laws and institutions and more brave, relentless, and dedicated leaders whom the people can have faith in.' The second item was: 'We should not primarily punish criminals, we should mostly try to change them.' For both items, respondents indicated their position on a 5-point scale ranging from 'completely agree' (1) to 'completely disagree' (5). Using the same method as for redistribution, the two items were merged into a formative latent variable that constitutes a weighted sum of all items and response categories.

Because the Cultural Changes survey lacks a more direct measure, this study used Coenders's 'support for ethnic discrimination' scale as an indicator for issue attitudes on immigration (Coenders and Scheepers, 1998; De Vries et al., 2013). This scale asked respondents whether immigrants should be discriminated in three fictional situations. An item was: 'Imagine there are two employees, who are equal in all regards except that one is Dutch and the other is a foreigner. If only one of them can get a promotion, who should it be?' The same question was asked for who should get housing in case of scarcity and who should be fired in case of layoffs. Respondents could answer with 'the foreigner', 'the Dutchman', or 'it shouldn't make a difference.' The scale score was calculated as the number of times that the respondent supported discrimination against foreigners. Although support for discrimination is a relatively indirect measure of issue attitudes on immigration, research demonstrated that this measure is valid and reliable (Coenders and Scheepers, 1998; De Vries et al., 2013). Providing further support for its validity, analyses on the 2008 data revealed a satisfactory correlation ($r = 0.44$) between this measure and a 7-item scale that directly measured issue attitudes on immigration (e.g., 'To what extent should the government be lenient in admitting people who are threatened by the political situation in their own country?').

Unfortunately, this direct measure could not be used in the analyses because it was unavailable for earlier survey years. All issue attitudes were standardized to facilitate the interpretation of parameter estimates.

3.3. Strategy of analysis

This study used regression analysis with ordinary least squares (OLS) estimation and heteroscedasticity-robust standard errors (White, 1980). For each issue, model specification proceeded in four steps. A first set of models investigated interactions between the attitudes and period in predicting left-right identification. A second set of models added interactions between the attitudes and cohort. Subsequently, a third set of models added three-way interactions between the attitudes, period, and cohort. Finally, a fourth set of models added interactions between attitudes and age. For each issue, analyses were conducted on a slightly different set of survey years due to the availability of data (see Appendix 2).

3.4. Statistical assumptions

3.4.1. Disentangling age, period, and cohort effects

Any study interested in age, period, or cohort effects faces the problem that these constructs have a perfect multicollinearity in both longitudinal and repeated cross-sectional data (Delli Carpini, 1989; Neundorf and Niemi, 2014; Stegmueller, 2014; Tilley and Evans, 2014; Yang and Land, 2013). Consequently, models that estimate all three effects are not identified unless certain constraints are imposed. A variety of methods have been proposed to disentangle age, period, and cohort effects (e.g., Dinas and Stoker, 2014; Grasso, 2014; Smets and Neundorf, 2014; Yang and Land, 2013). Each method relies on a specific assumption to identify the model. This confronts researchers with the challenge to make the smallest possible assumption given their distinct research question. The present study used a method proposed by Kritzer (1983; Pop-Eleches and Tucker, 2014) that relies on specifying effects as theoretically informed categorical variables. A model with age, period, and cohort is not identified on repeated cross-sectional data if all three constructs are specified as continuous variables. However, specifying two of the three effects as categorical variables resolves the perfect multicollinearity between the variables, thereby making the model identified. The advantage of this method is that it requires an assumption only about the structure of effects, rather than about their impact (Delli Carpini, 1989). In other words, this method is based on the assumption that the functional form of the effect of age, period, and cohort can roughly be captured by some theoretically plausible specification. An additional advantage of this approach is that it offers parsimonious analyses that closely match the theoretical framework. In this study, the operationalization of cohorts was therefore based on the historical accounts that were discussed in the introduction. Although historical processes typically lack a precise beginning or end, these accounts

propose that depillarization and the cultural revolution started roughly around 1960 (Daalder and Irwin, 1989; Kriesi, 1993) and that the process of globalization accelerated approximately since the 1980s (Held, 1999). Likewise, age was operationalized based on three specific life phases that are commonly distinguished in developmental psychology (Arnett, 2000; Srivastava et al., 2003; Wink and Dillon, 2003). This recoding into categorical variables maintained a satisfactory 84.0% of the original variance in year of birth and 76.5% of the original variance in age. Because only two of the three effects of interest have to be categorical, period could still be specified as a continuous variable. Because there is no apparent theoretical reason to expect age differences in the ideological correlates of left-right identification, age effects were added as a final step in the model specification.

3.4.2. Direction of causality

This study investigated the *association* between left-right identification and issue attitudes, rather than the *causal relation* between both constructs. Research indicates that the association between left-right identification and issue attitudes may be explained by voters adopting a left-right identification that matches their issue attitude, but also by voters reversely adjusting their issue attitudes to their left-right identification (Jæger, 2008; Pardos-Prado, 2011; Rekker et al., 2014b; Weber and Saris, 2014). Alternatively, the association may be explained by third variables (e.g., religion or social class) that influence both left-right identification and issue attitudes. This study departed from the idea that the ideological meaning of the left-right distinction and the changing salience of issues are captured by the correlational association between left-right identification and issue attitudes, regardless of the causal direction of this relation. For example, voters who were adolescent between 1960 and 1980 may have based their left-right identification on their views on civil liberties more than other cohorts, but also vice versa. Both causal directions are equally in line with this study's theoretical framework.

This interest in correlational associations is reflected in two methodological choices. First, this study specified separate models for each issue, rather than including them all in a single model. A statistical advantage of this approach was that all survey years with data on at least one issue could be used, instead of only years with data on all issues. Second, the interest in correlational associations was reflected in the deliberate exclusion of control variables from all models. An additional advantage of this exclusion was that the amount of estimated parameters was kept to a minimum, thereby contributing to power and parsimony. Controlling for third factors would instead have required a dramatic model expansion with the inclusion of not only all these variables, but also their interactions with age, period and cohort, as well as potential three-way interactions.

4. Analyses and results

4.1. The changing meaning of left and right

To examine how the ideological meaning of left and right has changed between 1980 and 2008, a first set of regression models tested interactions between issue attitudes and period in predicting left-right identification. Results revealed a significant interaction with period for attitudes on redistribution ($t(30378) = -7.73$, $p < 0.001$), secularism ($t(22324) = -3.24$, $p = 0.001$), civil liberties ($t(16829) = -2.91$, $p = 0.004$), and immigration ($t(33304) = 3.69$, $p < 0.001$). As hypothesized, the association of left-right identification with issue attitudes on immigration has strengthened between 1980 and 2008 (H1a), while its association with attitudes on redistribution, secularism, and civil liberties has weakened (H1b).

Additional analyses indicated that these linear models provided a fairly accurate depiction of period effects: Whereas the linear models had an average (across the four issues) adjusted R^2 of 5.9% in left-right identification, models in which the linear effects were replaced by a dummy variable for each survey year had a lower adjusted R^2 of 5.7%. All regression models are depicted graphically in Fig. 1 and displayed in Tables 2 and 3.

4.2. Impressionable years and historical periods

To examine cohort differences in the ideological correlates of left-right identification, a second set of models added interactions between issue attitudes and cohort. Contrasts between different cohorts were tested by changing the reference group. As expected (H2a), attitudes on secularism showed a stronger association with left-right identification for the 1917−1960 cohort compared to both the 1960−1980 cohort ($t(22310) = 4.12$, $p < 0.001$) and the 1980−2008 cohort ($t(22310) = 3.94$, $p < 0.001$). Contrary to expectations (H2b), the 1917−1960 cohort revealed no stronger association between redistribution attitudes and left-right identification compared to either the 1960−1980 cohort ($t(30364) = -0.99$, $p = 0.323$) or the 1980−2008 cohort ($t(30364) = -1.91$, $p = 0.056$). In fact, standard errors indicated that this association was almost exactly equal for all three cohorts. As hypothesized (H2c), attitudes on civil liberties revealed a stronger association with left-right identification for the 1960−1980 cohort than for both the 1917−1960 cohort ($t(16815) = 3.42$, $p = 0.001$) and the 1980−2008 cohort ($t(16815) = 3.19$, $p = 0.001$). Immigration attitudes showed the hypothesized stronger association with left-right identification for the 1980−2008 cohort compared to the 1917−1960 cohort ($t(33290) = 7.23$, $p < 0.001$), but a similar difference with the 1960−1980 cohort failed to reach statistical significance ($t(33290) = 1.11$, $p 0.265$). To examine if immigration was nonetheless the most important cultural issue for the 1980−2008 cohort, an exploratory analysis compared the importance of different issues within this cohort (formula: Paternoster et al., 1998). In line with expectations, the left-right identification of the 1980−2008 cohort showed a stronger association with attitudes on immigration compared to attitudes on both secularism ($z = 4.47$, $p < 0.001$) and civil liberties ($z = 1.98$, $p = 0.048$). The pattern that immigration was the most important cultural issue only for the 1980−2008 cohort, as well as the stronger effect of immigration for this cohort compared to the 1917−1960 cohort, provided partial support for the hypothesis (H2d) on the importance of immigration for the 1980−2008 cohort. Cohort differences in the ideological correlates of left-right identification are depicted in Fig. 2.

4.3. Cohort replacement and intracohort change

To investigate cohort replacement, the previously described interactions between cohort and attitudes were tested simultaneously. Cohort differences were found for secularism ($F(2, 22310) = 11.39$, $p < 0.001$), civil liberties ($F(2, 16815) = 8.29$, $p < 0.001$), and immigration ($F(2, 33290) = 34.13$, $p < 0.001$), but not for redistribution ($F(2, 30364) = 1.83$, $p = 0.161$). This confirmed the hypothesis (H3a), for all issues except redistribution, that cohort replacement has accounted for changes in the ideological correlates of left-right identification between 1980 and 2008. To investigate intracohort change, the interactions between attitudes and period were tested after controlling for interactions between attitudes and cohort. Results again revealed a significant interaction with period for attitudes on redistribution ($t(30364) = -7.59$, $p < 0.001$), secularism ($t(22310) = -2.19$, $p = 0.028$), civil liberties ($t(16823) = -1.98$, $p = 0.048$), and immigration ($t(33290) = 2.01$, $p = 0.045$). This confirmed the hypothesis (H3b) that intracohort
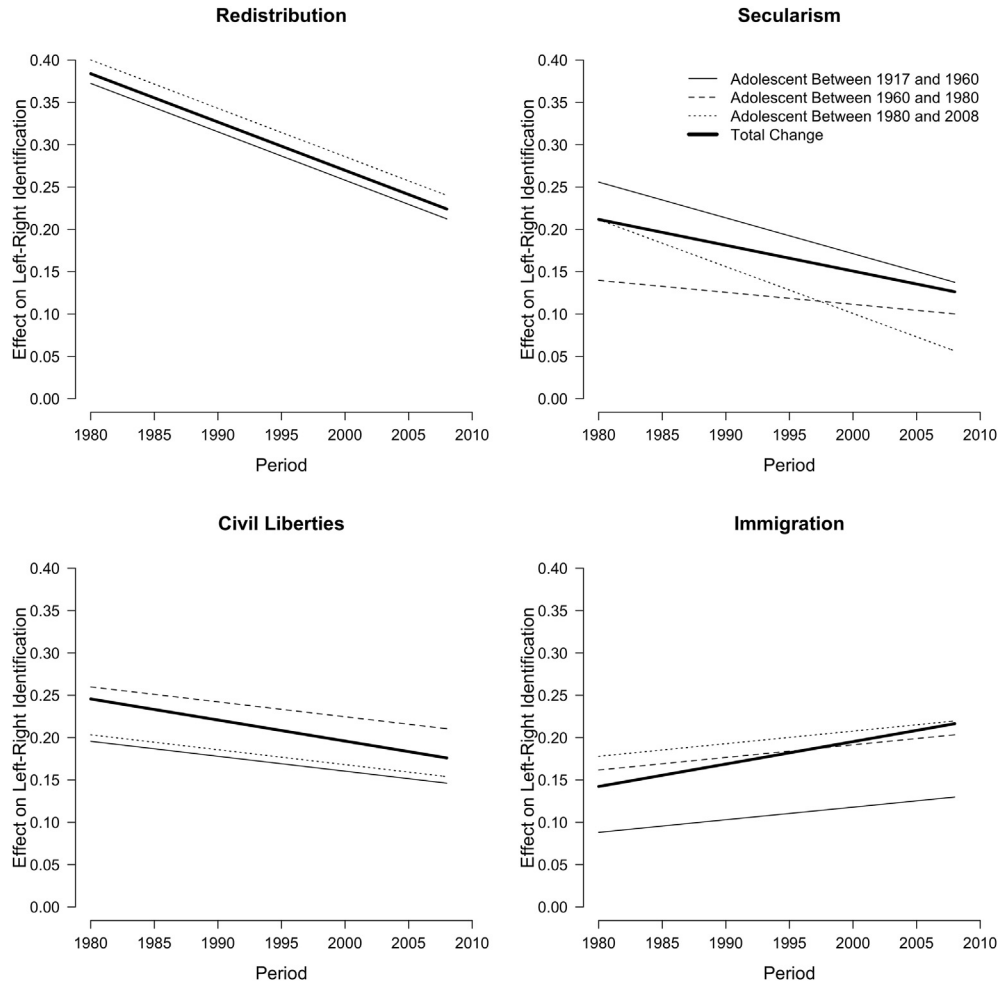
Fig. 1. The changing ideological correlates of left-right identification between 1980 and 2008, overall and for each cohort. A three-way interaction (Attitude x Period x Cohort) is depicted only for secularism, since it was non-significant for other issues.

change has partly accounted for over-time changes in the ideological correlates of left-right identification.

To disentangle the relative contribution of cohort replacement and intracohort change, the effect of period after controlling for cohort (i.e., intracohort change) was calculated as a percentage of the original effect of period (i.e., the sum of cohort replacement and intracohort change). For example, if the effect of period would be 10 before controlling for cohort, but 5 after controlling for cohort, this would indicate that cohort replacement can account for roughly 50% of the initial effect of period. This calculation revealed that over-time changes in the association between left-right identification and redistribution attitudes were for 100.0% explained by intracohort change. Contrarily, both cohort replacement and intracohort change accounted for over-time changes in the association of left-right identification with attitudes on secularism (30.0% cohort replacement), civil liberties (29.1% cohort replacement), and immigration (43.8% cohort replacement). The relative contributions of cohort replacement and intracohort change are depicted in Fig. 3.

To investigate if cohorts have converged over time in the ideological correlates of left-right identification, a third set of regression models added three-way interactions between attitudes, cohort, and period. A significant three-way interaction was found for secularism attitudes ($F(2, 22306) = 4.93$, $p = 0.007$), but not for attitudes on redistribution ($F(2, 30360) = 2.28$, $p = 0.102$), civil liberties ($F(2, 16811) = 1.39$, $p = 0.248$), and immigration ($F(2, 33286) = 1.61$, $p = 0.199$). Consequently, only secularism attitudes

supported the hypothesis (H4) that cohorts have gradually converged between 1980 and 2008. Fig. 1 depicts how the ideological correlates of left-right identification have changed between 1980 and 2008 for all three cohorts.

4.4. Disentangling age, period, and cohort effects

To determine if any of the aforementioned cohort effects were confounded by age effects, a fourth set of models added interactions between attitudes and age. Age revealed no significant interaction with issue attitudes on either redistribution ($F(2, 30360) = 1.53$, $p = 0.216$), secularism ($F(2, 22302) = 2.91$, $p = 0.054$), civil liberties ($F(2, 16811) = 0.12$, $p = 0.884$), or immigration ($F(2, 33286) = 1.22$, $p = 0.296$). Furthermore, all three interactions between cohort and issue attitudes were still significant after including these age effects in the model. This indicates that this study's findings indeed reflect the hypothesized cohort effects, rather than age effects.

5. Discussion

People commonly think about politics in terms of left and right, but what this distinction means may differ from one period to the next. This study revealed that the ideological meaning of left and right has indeed changed substantially between 1980 and 2008. During this period, left-right identification became increasingly

Table 2
Regression models for redistribution and secularism.

Dependent variable: Left-right identification							
	Issue						
	Redistribution Model 1	Redistribution Model 2	Redistribution Model 4	Secularism Model 1	Secularism Model 2	Secularism Model 3	Secularism Model 4
Period							
b	−0.003 (0.001)	−0.001 (0.001)	−0.001 (0.001)	−0.003 (0.001)	−0.001 (0.001)	−0.000 (0.002)	−0.002 (0.002)
p-value	<0.001	0.217	0.079	0.005	0.126	0.822	0.366
Attitude							
b	0.304 (0.005)	0.292 (0.010)	0.288 (0.024)	0.169 (0.007)	0.207 (0.011)	0.197 (0.013)	0.176 (0.030)
p-value	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Period*Attitude							
b	−0.006 (0.001)	−0.006 (0.001)	−0.006 (0.001)	−0.003 (0.001)	−0.002 (0.001)	−0.004 (0.002)	−0.006 (0.002)
p-value	<0.001	<0.001	<0.001	0.001	0.028	0.010	0.001
Cohort							
$b_{1960-1980}$		−0.241 (0.013)	−0.225 (0.017)		−0.216 (0.015)	−0.217 (0.017)	−0.184 (0.021)
$b_{1980-2008}$		−0.200 (0.014)	−0.171 (0.022)		−0.128 (0.018)	−0.133 (0.019)	−0.044 (0.029)
p-value		<0.001	<0.001		<0.001	<0.001	<0.001
Cohort*Attitude							
$b_{1960-1980}$		0.013 (0.013)	0.027 (0.016)		−0.060 (0.146)	−0.037 (0.017)	−0.008 (0.020)
$b_{1980-2008}$		0.028 (0.015)	0.037 (0.022)		−0.072 (0.018)	−0.062 (0.019)	−0.041 (0.029)
p-value		0.161	0.188		<0.001	0.004	0.328
Cohort*Period							
$b_{1960-1980}$						−0.000 (0.002)	−0.001 (0.002)
$b_{1980-2008}$						−0.003 (0.003)	−0.004 (0.003)
p-value						0.442	0.281
Cohort*Period*Attitude							
$b_{1960-1980}$						0.006 (0.002)	0.007 (0.002)
$b_{1980-2008}$						−0.001 (0.003)	0.001 (0.003)
p-value						0.007	0.010
Age							
$b_{MiddleAdulthood}$			0.021 (0.018)				0.078 (0.024)
$b_{LateAdulthood}$			0.048 (0.029)				0.129 (0.034)
p-value			0.240				<0.001
Age*Attitude							
$b_{MiddleAdulthood}$			−0.011 (0.018)				−0.010 (0.024)
$b_{LateAdulthood}$			0.048 (0.029)				0.042 (0.033)
p-value			0.216				0.054
Model							
Survey years	19	19	19	13	13	13	13
Respondents	30382	30372	30372	22328	22318	22318	22318
R^2	10.0%	11.1%	11.2%	3.5%	4.6%	4.6%	4.7%

Note. Coefficients are unstandardized with standard errors in parentheses. Non-significant three-way interactions between period, cohort, and issue attitudes (model 3) were omitted from the table.

associated with issue attitudes on immigration, and decreasingly linked to views on redistribution, secularism, and civil liberties. Investigating what drives these changes, this study found that secularism was most important for voters who were adolescent during the era of pillarization (1917–1960), while civil liberties were most important for voters who were socialized during the period of cultural revolution (1960–1980). Immigration was relatively important compared to other cultural issues for voters who grew up during the age of globalization (1980–2008). Consequently, over-time changes in the importance of cultural attitudes in the left-right divide were partly driven by cohort replacement. Contrarily, the decreasing importance of redistribution attitudes between 1980 and 2008 was entirely due to intracohort change, since this issue was equally important for all three cohorts. Older generations eventually followed younger generations in the decreased importance of secularism attitudes, but cohort differences in other attitudes did not reveal a similar over-time convergence.

Using the same data, this study first reproduced the finding of De Vries and colleagues (2013) that the association of left-right identification with redistribution attitudes has weakened over time, while its association with immigration attitudes has strengthened. However, the present study also revealed that this association has not only weakened for redistribution attitudes, but

also for attitudes on secularism and civil liberties. This challenges De Vries and colleagues' interpretation of their findings as a 'crowding out' of economic issues by cultural issues. Instead, the present study suggests that the rise of immigration came also, if not mostly, at the expense of older cultural issues such as secularism and civil liberties.

By revealing substantial cohort differences in the ideological correlates of left-right identification, this study provided clear support for the idea that the voters' interpretation of left and right is largely determined during their adolescent years. This finding is consistent with the observation from adolescent research that left-right identification, issue attitudes, and the association between the two are all formed during this life phase (e.g., Alwin et al., 1991; Boonen et al., 2014; Rekker et al., 2014a). Likewise, the expected linkages between issues and periods revealed that voters are susceptible to be influenced by their political environment during adolescence. Adolescents linked their left-right identification more to secularism during the pillarization period, to civil liberties during the cultural revolution period, and (more than to other issues) to immigration during the globalization period. Importantly, these historical influences still determined voters' interpretation of left and right many decades later.

However, the impact of adolescence does not appear to be equally strong for all issues. Whereas cohort differences where

Table 3
Regression models for civil liberties and immigration.

Dependent variable: Left-right identification						
	Issue					
	Civil liberties Model 1	Civil liberties Model 2	Civil liberties Model 4	Immigration Model 1	Immigration Model 2	Immigration Model 4
Period						
b	−0.006 (0.001)	−0.006 (0.001)	−0.008 (0.001)	−0.004 (0.001)	−0.003 (0.001)	−0.005 (0.001)
p-value	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Attitude						
b	0.211 (0.007)	0.176 (0.016)	0.180 (0.033)	0.179 (0.005)	0.109 (0.009)	0.136 (0.025)
p-value	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Period*Attitude						
b	−0.002 (0.001)	−0.002 (0.001)	−0.002 (0.001)	0.003 (0.001)	0.001 (0.001)	0.002 (0.001)
p-value	0.004	0.048	0.120	<0.001	0.045	0.014
Cohort						
$b_{1960-1980}$		−0.175 (0.018)	−0.127 (0.024)		−0.203 (0.013)	−0.169 (0.016)
$b_{1980-2008}$		−0.052 (0.021)	0.025 (0.031)		−0.122 (0.014)	−0.049 (0.022)
p-value		<0.001	<0.001		<0.001	<0.001
Cohort*Attitude						
$b_{1960-1980}$		0.064 (0.019)	0.061 (0.025)		0.090 (0.013)	0.076 (0.016)
$b_{1980-2008}$		0.008 (0.021)	−0.001 (0.032)		0.105 (0.015)	0.083 (0.023)
p-value		<0.001	0.001		<0.001	<0.001
Age						
$b_{MiddleAdulthood}$			0.047 (0.024)			0.063 (0.018)
$b_{LateAdulthood}$			0.129 (0.041)			0.120 (0.028)
p-value			0.006			<0.001
Age*Attitude						
$b_{MiddleAdulthood}$			−0.005 (0.023)			−0.014 (0.019)
$b_{LateAdulthood}$			−0.020 (0.042)			−0.041 (0.028)
p-value			0.884			0.296
Model						
Survey years	10	10	10	19	19	19
Respondents	16833	16823	16823	33308	33298	33298
R^2	4.7%	5.4%	5.5%	3.4%	4.4%	4.4%

Note. Coefficients are unstandardized with standard errors in parentheses. Non-significant three-way interactions between period, cohort, and issue attitudes (model 3) were omitted from the table.
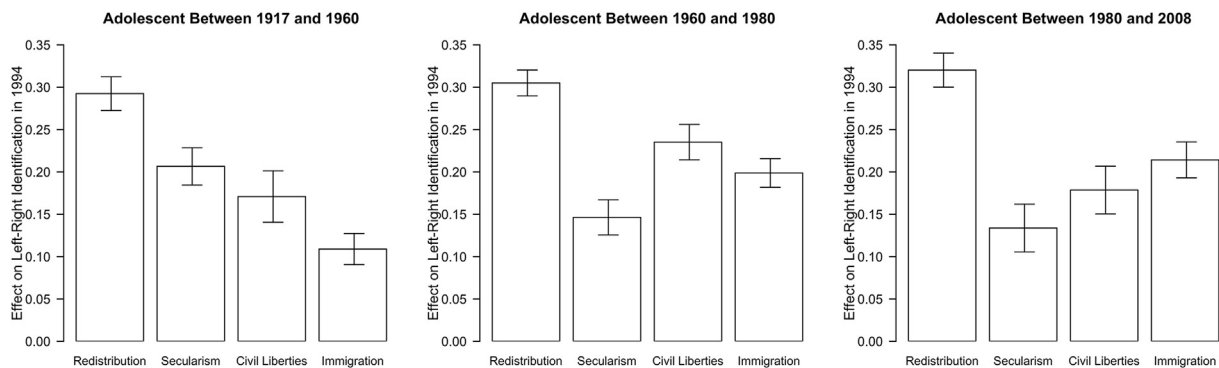

Fig. 2. The ideological correlates of left-right identification for each cohort as estimated for 1994, the midpoint of this study's timespan. Error bars depict a 95% confidence interval.

substantial for cultural issues, they were clearly and surprisingly absent for redistribution. Though this pattern was unexpected, it is certainly consistent with findings from adolescent research that cultural attitudes are characterized by an earlier and stronger development during adolescence compared to economic attitudes (Rekker et al., 2015). However, the absence of cohort differences for redistribution is more surprising in the light of Inglehart's (1977) idea that generations who grew up in greater prosperity assign a lower priority to economic concerns. The generation from before the economic growth in the Netherlands of the 1960s assigned as much importance to redistribution as later generations. This indicates that Inglehart's theory, that was intended to explain the rise of post-materialist values, cannot be applied to explain changing connections between economic issues and the left-right distinction.

Considering the profound changes between 1980 and 2008, the big question is if these trends may reverse in future decades or if they will progress even further. By disentangling cohort replacement and intracohort change, this study aimed to contribute to answering this question. The finding that over-time changes in the importance of cultural issues were largely driven by cohort replacement suggests that these changes may not be easily reversed. For example, the rise of immigration in the left-right distinction was largely accounted for by the replacement of voters from the 1917–1960 cohort, for whom this issue was less important. Given the average life expectancy in the Netherlands of 81 years (The World Bank, 2012), this process will likely continue until about the 2030s. To the extent that the rise of immigration in the left-right divide is driven by cohort replacement (about 44%), it
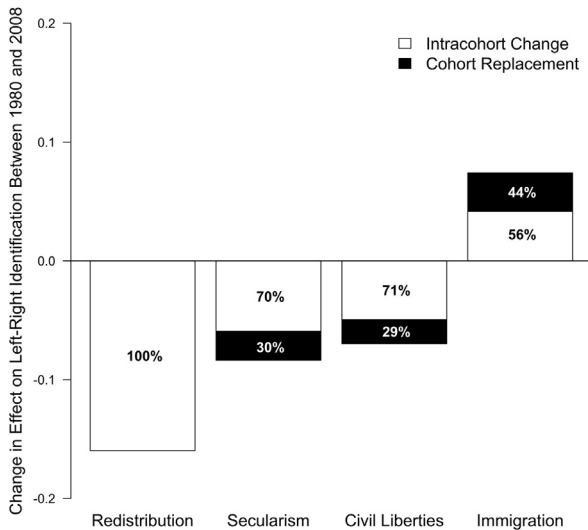
Fig. 3. Cohort replacement and intracohort change in the ideological correlates of left-right identification between 1980 and 2008.

could therefore only be reversed if new generations of adolescents assign less importance to the issue. Contrarily, the decreasing importance of redistribution in the left-right divide may be more reversible. Between 1980 and 2008, existing generations of voters appear to have deprioritized redistribution in defining left and right. This indicates that they could potentially reprioritize the issue in response to changing circumstances. Indeed, the present study ended just before the global financial crisis of 2008 (Greenglass et al., 2014). Voters may well have reprioritized economic concerns during the difficult economic years that followed.

For all issues except secularism, over-time changes between 1980 and 2008 occurred at roughly the same pace for all cohorts. This largely refutes the seismograph hypothesis that older generations can partly catch up with trends that first manifest themselves among youths. Instead, this finding underlines that cohort differences can be highly stable.

By revealing linkages between historical periods and cultural issues, this study also supported the idea that the cultural dimension of voters' attitudes is composed of three historical layers: a church-state cleavage (Lipset and Rokkan, 1967) that dates back to the era of

pillarization, a libertarian-authoritarian value conflict (Kitschelt and McGann, 1995) that can be traced back to the 1960s and 1970s, and a divide between winners and losers of the more recent globalization (Kriesi et al., 2008). Even though factor analytic studies reveal that these three types of issues can appropriately be modeled as a single cultural dimension (e.g., Kriesi et al., 2008; Rekker, 2015), this study indicated that their historical origins are nonetheless distinct.

Although this study could draw from highly suitable repeated cross-sectional data, there are some limitations that have to be considered. First, any study interested in age, period, or cohort effects must rely on some assumption to disentangle these effects (e.g., Neundorf and Niemi, 2014). For this study, this assumption was that age and cohort effects can roughly be captured by a theoretically plausible functional form. Although this is arguably the smallest assumption that could be made to identify the models, it should be noted as a limitation that the interpretation of findings as cohort effects, rather than as age effects, depends on this premise. Second, this study had to rely on a narrow measure of civil liberties and an indirect measure of immigration. The effect sizes that were found in this study might have been stronger, but probably not weaker, if better measures had been available. A third limitation is that this study investigated only a single country. Since the Netherlands is however a clear example of political changes that have occurred throughout Western Europe (Kriesi et al., 2008), it is likely that findings generalize to other countries. Future research may focus on placing this study's findings in a comparative perspective. For example, cohort patterns in the meaning of left and right may be compared based on countries differential political history. Finally, future research may also provide a more in-depth exploration of the seismograph hypothesis (i.e., that cohort differences may converge over time), since only few previous studies have explored this idea (e.g., Schuman and Rodgers, 2004).

Despite these limitations, this study clearly indicated that the left-right distinction is partly shaped by historical circumstances during voters' adolescent years. As such, this study revealed that the rise of immigration in the left-right dimension between 1980 and 2008 was driven largely (for about 44%) by generational replacement.

Appendix 1. Overview of items and item-test correlations.

Item	Item-test correlation
Left-Right Identification	
To what extend do you consider yourself left or right?	1
Redistribution	
Do you think that in our country the differences between incomes are too big, about right, or too small?	0.77
Do you think the differences between high and low incomes should become much bigger, a little bit bigger, stay as they are, a little bit smaller, or much smaller?	-0.81
There are people who own much and people who own little. Do you think these differences should become much larger, a little bit larger, stay as they are, a little bit smaller, or much smaller?	-0.83
Secularism	
Some people believe politics and religion should be separated, others disagree. What do you think?	1
Civil Liberties	
What we need is less laws and institutions and more brave, relentless, and dedicated leaders whom the people can have faith in.	-0.74
We should not primarily punish criminals, we should mostly try to change them.	0.62
Immigration	
We would like to know from you who you think should get housing in times of scarcity.	0.84
Imagine there are two employees, who are equal in all regards except that one is Dutch and the other is a foreigner. If one of them has to be fired because the company is performing poorly, who should it be?	0.84
Imagine there are two employees, who are equal in all regards except that one is Dutch and the other is a foreigner. If only one of them can get a promotion, who should it be?	0.84

Appendix 2. Availability of issue attitudes in each survey year.

	Survey year																			
	1980	1983	1985	1986	1987	1988	1989	1991	1992	1993	1994	1995	1996	1997	1998	2000	2002	2004	2006	2008
Redistribution	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Secularism	X	X	X	X	X		X	X	X	X	X		X		X					X
Civil Liberties	X	X	X					X	X				X			X		X	X	X
Immigration	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X

Note. "X" indicates that the items were administered in the survey year.

References

Adams, J., De Vries, C.E., Leiter, D., 2012. Subconstituency reactions to elite depolarization in The Netherlands: an analysis of the Dutch public's policy beliefs and partisan loyalties, 1986–98. Br. J. Political Sci. 42 (1), 81–105.

Alwin, D.F., Cohen, R.L., Newcomb, T.M., 1991. Political Attitudes over the Life Span: the Bennington Women after Fifty Years. University of Wisconsin Press, Madison.

Arnett, J.J., 2000. Emerging adulthood: a theory of development from the late teens through the twenties. Am. Psychol. 55 (5), 469–480.

Bartels, L.M., Jackman, S., 2014. A generational model of political learning. Elect. Stud. 33, 7–18.

Becker, J., 1993. . Cultural Changes 1992. SCP, Rijswijk.

Becker, J., Janssen, B., Engelen, F., Wouters, B., 2010. SCP Culturele Veranderingen 2008. Onderzoeksdocumentatie [SCP Cultural Changes 2008 Research Documentation]. SCP, Heerlen.

Bhatti, Y., Hansen, K.M., 2012. The effect of generation and age on turnout to the European Parliament — how turnout will continue to decline in the future. Elect. Stud. 31 (2), 262–272.

Boonen, J., Meeusen, C., Quintelier, E., 2014. The link between social attitudes and voting propensities: attitude-vote consistency among adolescents in Belgium. Elect. Stud. 36, 81–93.

Carmines, E.G., Stimson, J.A., 1989. Issue Evolution. Princeton University Press, Princeton, NJ.

Coenders, M., Scheepers, P., 1998. Support for ethnic discrimination in The Netherlands 1979–1993: effects of period, cohort, and individual characteristics. Eur. Sociol. Rev. 14 (4), 405–422.

Daalder, H., Irwin, G.A., 1989. Politics in the Netherlands: How Much Change? Frank Cass and Company Limited, London.

Dassonneville, R., 2013. Questioning generational replacement. An age, period and cohort analysis of electoral volatility in The Netherlands, 1971–2010. Elect. Stud. 32 (1), 37–47.

Delli Carpini, M.X., 1989. Age and history: generations and sociopolitical change. In: Sigel, R.S. (Ed.), Political Learning in Adulthood. University of Chicago Press, Chicago, pp. 11–55.

De Vries, C.E., Hakhverdian, A., Lancee, B., 2013. The dynamics of voters' left/right identification: the role of economic and cultural attitudes. Political Sci. Res. Methods 1 (2), 223–238.

Dinas, E., 2013. Opening "openness to change": political events and the increased sensitivity of young adults. Political Res. Q. 66 (4), 868–882.

Dinas, E., Stoker, L., 2014. Age-period-cohort analysis: a design-based approach. Elect. Stud. 33, 28–40.

Edwards, J.R., Bagozzi, R.P., 2000. On the nature and direction of relationships between constructs and measures. Psychol. Methods 5 (2), 155–174.

Entzinger, H., 2003. The rise and fall of multiculturalism in The Netherlands. In: Joppke, C., Morawska, E. (Eds.), Toward Assimilation and Citizenship: Immigrants in Liberal Nation-states. Palgrave, London.

Freire, A., 2006. Bringing social identities back in: the social anchors of left-right orientation in Western Europe. Int. Political Sci. Rev. 27 (4), 359–378.

Freire, A., 2008. Party polarization and citizens' left-right orientations. Party Polit. 14 (2), 189–209.

Glass, J., Bengtson, V.L., Dunham, C.C., 1986. Attitude similarity in three-generation families: socialization, status inheritance, or reciprocal influence? Am. Sociol. Rev. 51 (5), 685–698.

Grasso, M.T., 2014. Age, period and cohort analysis in a comparative context: political generations and political participation repertoires in Western Europe. Elect. Stud. 33, 63–76.

Greenglass, E., Antonides, G., Christandl, F., Foster, G., Katter, J.K., Kaufman, B.E., Lea, S.E., 2014. The financial crisis and its effects: perspectives from economics and psychology. J. Behav. Exp. Econ. 50, 10–12.

Heise, D.R., 1972. Employing nominal variables, induced variables, and block variables in path analysis. Sociol. Methods Res. 1 (2), 147–173.

Held, D., 1999. Global Transformations: Politics, Economics and Culture. Stanford University Press, Stanford.

Hooghe, M., 2004. Political socialization and the future of politics. Acta Polit. 39 (4), 331–341.

Hooghe, M., Meeusen, C., Quintelier, E., 2013. The impact of education and intergroup friendship on the development of ethnocentrism. A latent growth curve model analysis of a five-year panel study among Belgian late adolescents. Eur. Sociol. Rev. 29 (6), 1109–1121.

Hooghe, M., Wilkenfeld, B., 2008. The stability of political attitudes and behaviors across adolescence and early adulthood: a comparison of survey data on adolescents and young adults in eight countries. J. Youth Adolesc. 37 (2), 155–167.

Inglehart, R., 1977. The Silent Revolution: Changing Values and Political Styles Among Western Publics. Princeton University Press, Princeton, NJ.

Inglehart, R.F., 2008. Changing values among western publics from 1970 to 2006. West Eur. Polit. 31 (1–2), 130–146.

Inglehart, R., Klingemann, H.D., 1976. Party identification, ideological preference and the left-right dimension among Western mass publics'. In: Budge, I., Crewe, I., Farlie, D.J. (Eds.), Party Identification and Beyond: Representations of Voting and Party Competition. John Wiley, London, pp. 243–276.

Jæger, M.M., 2008. Does left-right orientation have a causal effect on support for redistribution? Causal analysis with cross-sectional data using instrumental variables. Int. J. Public Opin. Res. 20 (3), 363–374.

Jennings, M.K., Markus, G.B., 1984. Partisan orientations over the long haul: results from the three-wave political socialization panel study. Am. Political Sci. Rev. 78 (4), 1000–1018.

Jennings, M.K., Niemi, R.G., 1968. The transmission of political values from parent to child. Am. Political Sci. Rev. 62 (1), 169–184.

Jennings, M.K., Niemi, R.G., 1981. Generations and Politics. Princeton University Press, Princeton.

Kitschelt, H., Hellemans, S., 1990. The left-right semantics and the new politics cleavage. Comp. Polit. Stud. 23 (2), 210–238.

Kitschelt, H., McGann, A., 1995. The Radical Right in Western Europe: a Comparative Analysis. University of Michigan Press, Ann Arbor, MI.

Knutsen, O., 1995. Value orientations, political conflicts and left-right identification: a comparative study. Eur. J. Political Res. 28 (1), 63–93.

Knutsen, O., 1997. The partisan and the value-based component of left-right self-placement: a comparative study. Int. Political Sci. Rev. 18 (2), 191–225.

Konzelmann, L., Wagner, C., Rattinger, H., 2012. Turnout in Germany in the course of time: life cycle and cohort effects on electoral turnout from 1953 to 2049. Elect. Stud. 31 (2), 250–261.

Kriesi, H., 1993. Political Mobilization and Social Change: the Dutch Case in Comparative Perspective. Avebury, Aldershot.

Kriesi, H., Grande, E., Lachat, R., Dolezal, M., Bornschier, S., Frey, T., 2008. West European Politics in the Age of Globalization. Cambridge University Press, Cambridge.

Kritzer, H.M., 1983. The identification problem in cohort analysis. Polit. Methodol. (9), 35–50.

Kroh, M., 2007. Measuring left–right political orientation: the choice of response format. Public Opin. Q. 71 (2), 204–220.

Kroh, M., 2014. Growth trajectories in the strength of party identification: the legacy of autocratic regimes. Elect. Stud. 33, 90–101.

Krosnick, J.A., Alwin, D.F., 1989. Aging and susceptibility to attitude change. J. Personality Soc. Psychol. 57, 416–425.

Lijphart, A., 1968. Verzuiling, Pacificatie en Kentering in de Nederlandse Politiek [Pillarization, Pacification, and Turnabout in Dutch Politics]. De Bussy, Amsterdam.

Lipset, S.M., Rokkan, S., 1967. Cleavage structures, party systems and voter alignments: an introduction. In: Lipset, S.M., Rokkan, S. (Eds.), Party Systems and Voter Alignments. The Free Press, New York, pp. 1–64.

Lucardie, A.P.M., 1980. The New Left in the Netherlands (1960-1977). A Critical Study of New Left Political Ideas and Groups on the Left in the Netherlands with Comparative References to France and Germany. Queen's University, Ontario.

Mannheim, K., 1964. Das Problem der Generationen [The Generation Problem]. In: Mannheim, K. (Ed.), Wissenssoziologie [Sociology of Knowing]. Luchterhand, Berlin/Neuwied, pp. 509–565 (Original work published 1928).

Marks, G., Steenbergen, M., 2002. Understanding political contestation in the european union. Comp. Polit. Stud. 35 (8), 879–892.

Markus, G.B., 1979. The political environment and the dynamics of public attitudes: a panel study. Am. J. Political Sci. 23 (2), 338–359.

McCourt, K., Bouchard, T.J., Lykken, D.T., Tellegen, A., Keyes, M., 1999. Authoritarianism revisited: genetic and environmental influences examined in twins

reared apart and together. Personality Individ. Differ. 27 (5), 985—1014.

Mudde, C., Van Holsteyn, J., 2000. The Netherlands: explaining the limited success of the extreme right. In: Hainsworth, P. (Ed.), The Politics of the Extreme Right: from the Margins to the Mainstream. Pinter, London and New York, pp. 144—171.

Neundorf, A., Niemi, R.G., 2014. Beyond political socialization: new approaches to age, period, cohort analysis. Elect. Stud. 33, 1—6.

Pardos-Prado, S., 2011. Framing attitudes towards immigrants in Europe: when competition does not matter. J. Ethn. Migr. Stud. 37 (7), 999—1015.

Paternoster, R., Brame, R., Mazerolle, P., Piquero, A., 1998. Using the correct statistical test for the equality of regression coefficients. Criminology 36 (4), 859—866.

Pellikaan, H., de Lange, S.L., Van der Meer, T., 2007. Fortuyn's legacy: party system change in The Netherlands. Comp. Eur. Polit. 5 (3), 282—302.

Pierce, R., 1999. Mass-Elite issue linkages and the responsible party model of representation. In: Miller, W., Pierce, R., Thomassen, J., Herrera, R., Holmberg, S., Esaiasson, P., Wessels, B. (Eds.), Policy Representation in Western Democracies. Oxford University Press, Oxford, pp. 9—32.

Pop-Eleches, G., Tucker, J.A., 2014. Communist socialization and post-communist economic and political attitudes. Elect. Stud. 33, 77—89.

Prakke, H., 1959. De 'Seismograaffunctie' der Jonge Generatie [The 'Seismograph Function' of the Young Generation]. Noord-Hollandse Uitgeversmaatschappij, Amsterdam.

Rekker, R., 2015. Social cleavages, democratic representation, and measurement models. In: Conference Paper at ECPR Conference in Montréal, Canada.

Rekker, R., Keijsers, L., Branje, S., Meeus, W., 2014a. Partisanship formation in adolescence and early adulthood: adoption, persistence, and determinants. In: Conference Paper at 'Youth Politics and Society' in Leuven, Belgium.

Rekker, R., Keijsers, L., Branje, S., Meeus, W., 2014b. Michigan versus Rochester in adolescence: the dynamics of political identity and issue attitudes. In: Conference Paper at ECPR Conference in Glasgow, United Kingdom.

Rekker, R., Keijsers, L., Branje, S., Meeus, W., 2015. Political attitudes in adolescence and emerging adulthood: developmental changes in mean level, polarization, rank-order stability, and correlates. J. Adolesc. 41, 136—147.

Ryder, N.B., 1965. The cohort as a concept in the study of social change. Am. Sociol. Rev. 30 (6), 843—861.

Schoon, I., Cheng, H., Gale, C.R., Batty, G.D., Deary, I.J., 2010. Social status, cognitive ability, and educational attainment as predictors of liberal social attitudes and political trust. Intelligence 38 (1), 144—150.

Schuman, H., Rodgers, W.L., 2004. Cohorts, chronology, and collective memories. Public Opin. Q. 68 (2), 217—254.

Sears, D.O., Funk, C.L., 1999. Evidence of the long-term persistence of adults' political predispositions. J. Polit. 61 (1), 1—28.

Sears, D.O., Valentino, N.A., 1997. Politics matters: political events as catalysts for preadult socialization. Am. Political Sci. Rev. 91 (1), 45—65.

Sherrod, L.R., Quiñones, O., Davila, C., 2004. Youth's political views and their experience of September 11, 2001. J. Appl. Dev. Psychol. 25 (2), 149—170.

Smets, K., Neundorf, A., 2014. The hierarchies of age-period-cohort research: political context and the development of generational turnout patterns. Elect. Stud. 33, 41—51.

Srivastava, S., John, O.P., Gosling, S.D., Potter, J., 2003. Development of personality in early and middle adulthood: set like plaster or persistent change? J. Personality Soc. Psychol. 84 (5), 1041—1053.

Stegmueller, D., 2014. Bayesian hierarchical age-period-cohort models with time-structured effects: an application to religious voting in the US, 1972—2008. Elect. Stud. 33, 52—62.

Stoker, L., Jennings, M.K., 2008. Of time and the development of partisan polarization. Am. J. Political Sci. 52 (3), 619—635.

The World Bank, 2012. World Development Indicators: Life Expectancy at Birth, Total (Years) [Data File]. Retrieved from. http://data.worldbank.org/indicator/SP.DYN.LE00.IN.

Thrändhardt, D., 2000. Conflict, consensus, and policy outcomes: immigration and integration in Germany and The Netherlands. In: Koopmans, R., Statham, P. (Eds.), Challenging Immigration and Ethnic Relations Politics. Oxford University Press, Oxford.

Tilley, J.R., 2005. Research note: libertarian-authoritarian value change in Britain, 1974—2001. Polit. Stud. 53 (2), 442—453.

Tilley, J., Evans, G., 2014. Ageing and generational effects on vote choice: combining cross-sectional and panel data to estimate APC effects. Elect. Stud. 33, 19—27.

Tilley, J., Evans, G., Mitchell, C., 2008. Consociationalism and the evolution of political cleavages in Northern Ireland, 1989—2004. Br. J. Political Sci. 38 (4), 699—717.

Tillie, J.N., Fennema, M., 1998. A rational choice for the extreme right. Acta Polit. 3 (33), 223—249.

Van der Brug, W., 2010. Structural and ideological voting in age cohorts. West Eur. Polit. 33 (3), 586—607.

Van der Brug, W., Fennema, M., Tillie, J., 2000. Anti-immigrant parties in Europe: ideological or protest vote? Eur. J. Political Res. 37 (1), 77—102.

Van der Brug, W., Kritzinger, S., 2012. Generational differences in electoral behaviour. Elect. Stud. 31 (2), 245—249.

Van der Brug, W., Van Spanje, J., 2009. Immigration, Europe and the 'new' cultural dimension. Eur. J. Political Res. 48 (3), 309—334.

Van der Land, M.S., 2003. Tussen Ideaal en Illusie: De Geschiedenis van D66, 1966-2003 [Between Ideal and Illusion: The History of D66, 1966—2003]. Sdu Uitgevers, Den Haag.

Van Elsas, E., Van der Brug, W., 2014. The changing relationship between left-right ideology and euroscepticism, 1973—2010. Eur. Union Polit. 16 (2), 194—215.

Van Zanden, J.L., 1998. Economic History of the Netherlands 1914-1995: a Small Open Economy in the 'Long' Twentieth Century, vol. 1. Routledge, New York.

Walczak, A., Van der Brug, W., De Vries, C., 2012. Long- and short-term determinants of party preferences: inter-generational differences in western and east central Europe. Elect. Stud. 31 (2), 273—284.

Weber, W., Saris, W.E., 2014. The relationship between issues and an individual's left—right orientation. Acta Polit. 50 (2), 193—213.

White, H., 1980. A heteroskedasticity-consistent covariance matrix estimator and a direct test for heteroskedasticity. Econometrica 48 (4), 817—838.

Wink, P., Dillon, M., 2003. Religiousness, spirituality, and psychosocial functioning in late adulthood: findings from a longitudinal study. Psychol. Aging 18 (4), 916—924.

Wolak, J., 2009. Explaining change in party identification in adolescence. Elect. Stud. 28 (4), 573—583.

Yang, Y., Land, K.C., 2013. Age—Period—Cohort Analysis: New Models, Methods, and Empirical Applications. CRC Press. Taylor & Francis Group, Boca Raton.