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# Electoral change through generational replacement: An age-period-cohort analysis of vote choice across 21 countries between 1948 and 2021

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People's generation may have become one of the core predictors of their vote choice. This study examines this hypothesis across 21 Western established democracies between 1948 and 2021. An age-period-cohort analysis on 258 national election surveys ( $N = 462.084$ ) reveals that the most recent generations are much less likely to vote for the major right-wing party in two-party systems. In multi-party systems, the gradual decline of Christian democratic parties has been largely driven by the generational replacement of pre-WW2 cohorts. Social democratic and conservative parties may face a challenge in future decades because their support is particularly low among the most recent generations whereas liberal, socialist, and particularly green parties stand to gain from generational replacement. Far-right parties have been least popular among voters who came of age during the 1930s and 1940s. A small life-cycle effect points out that people over the age of 65 vote slightly more conservative.

## KEYWORDS

electoral change, APC, generational differences, generations, aging

## 1 Introduction

On June 23, 2016, 64% of British voters over the age of 65 voted to leave the European Union whereas 71% of those under 25 voted “remain” (YouGov, 2016). A year later, the Conservative party obtained 69% of the votes among citizens over 70, compared to only 19% among those under 20 (YouGov, 2017). This so-called “youthquake” sparked a renewed interest in youth and generational differences among scholars and pundits (e.g., [The Guardian, 2017](#); [Sloam and Henn, 2018](#)). Similar divides have since become visible in many other countries. Across Western democracies, differences between young and older voters have surged to record levels during the 2010s (see also [Figure 1](#)). It has therefore been suggested that citizens' generation may have become one of the core predictors of their vote choice ([Norris and Inglehart, 2019](#); [Fisher, 2020, 2022](#)), perhaps rivaling (or even replacing) classic social-demographic factors such as religion or social class. If this is the case, the electoral fortunes of political parties could shift in the coming decades. To the extent that vote choice reflects people's generation, rather than their current age, parties that attract young voters stand to gain from generational replacement, whereas parties with an aging support base could face a gradual decline.



However, this conclusion is still speculative because few studies have disentangled generational differences from the effect of aging. The few studies on vote choice that used “age-period-cohort analysis” (APC) were case studies of one or a few countries (e.g., Goerres, 2008; Tilley and Evans, 2014; Fisher, 2020, 2022; Lisi et al., 2021). Previous research has also been restricted to a limited timespan by, for example, lacking data from before the year 2000 (e.g., Maggini, 2016; Lisi et al., 2021) or from after 2010 (e.g., Tilley and Evans, 2014). To fill this void, the present study combines 258 national election studies ( $N=462,084$ ) that were conducted between 1948 and 2021 across 21 countries in North America, Western Europe, and Australia (see Table 1 for an overview). Specifically, this investigation disentangles age, period, and cohort differences in electoral support for eight party families as categorized by ParlGov (Döring et al., 2022): social democratic, Christian democratic, conservative, green, liberal, far-right, communist/socialist, and agrarian parties. Moreover, the major left-wing and right-wing parties in two-party systems are examined separately because they may be subject to distinct generational dynamics. For each party family, this study provides both a pooled cross-country analysis and an inter-country comparison.

## 2 Theory and hypotheses

### 2.1 The origins of generational differences in vote choice

There are two reasons why people who belong to the same generation can be characterized by district electoral behavior, which persists across different periods and life phases. First, citizens who were born during the same period share important *socialization* experiences because people form their most fundamental political orientations as an adolescent or young adult (Rekker et al., 2015,

2019; Neundorff and Smets, 2017). After this formative period, citizens' core political values and identities often change remarkably little during the rest of their adult lifespan (Converse, 1969; Sears and Funk, 1999). Historical events during people's formative years can, therefore, leave a lasting impression on the way they view politics (Sears and Valentino, 1997; Bartels and Jackman, 2014). Such events include voters' first few elections, during which they form voting habits and party attachments (Dinas, 2014). By repeatedly choosing the same party, people can develop a psychological identification that makes them less likely to change their vote (Jennings and Markus, 1984; Meredith, 2009; Gomez, 2013; Dinas, 2014). When a party was successful during the formative years of a particular generation, it may therefore still benefit from its loyalty even many decades later (Tilley and Evans, 2014). Moreover, the electoral fortunes of political parties can be affected by generational differences in how people think about issues and what issues they prioritize (Rekker, 2016; Van der Brug and Rekker, 2021; Jocker et al., 2024).

A second source of generational differences lies in the *composition* of birth cohorts. Compared to earlier generations, newer cohorts are more ethnically diverse, highly educated, and secular (Norris and Inglehart, 2007, 2019; Pew Research Center, 2014). Such compositional differences can be even more pronounced among those who turn out to vote. Whereas earlier cohorts generally came out to vote regardless of their educational level, young voters are considerably less likely to turn out when they are low educated (Rekker, 2018a; Schäfer et al., 2020). Parties that mobilize mainly less educated voters may, therefore, face the double challenge that there are fewer of them among newer cohorts, while they are also less likely to turn out. Although this study's hypotheses are informed by such theories about generational socialization and composition, it should be emphasized that the analyses will not test or disentangle the various explanatory mechanisms. Instead, this study aims to describe and compare the

total magnitude of generational differences across countries, as well as their role in electoral change.

The following paragraphs will theorize how generational differences in socialization and composition may affect electoral support for each party family. This study distinguishes between seven generations as popularized by Pew Research (Strauss and Howe, 1991; Dimock, 2019): the pre-WW1 generation (born before 1910), the greatest generation (1910–1927), the silent generation (1928–1945), baby boomers (1946–1964), generation X (1965–1980), millennials (1981–1996), and generation Z (born after 1996). Of course, there are many ways to classify generations and every categorization is to some extent arbitrary and artificial. This study therefore includes robustness checks with alternative classifications. Nonetheless, the Pew-taxonomy has some important merits. First, the formative period of each generation coincides with significant historical events that may have influenced its socialization such as WW2 for the greatest generation, the “cultural revolution” of the 60 and 70s for baby boomers, or 9/11 for millennials. Moreover, research shows that people to some extent recognize and identify with labels such as “boomer” or “millennial” (Munger, 2022). Finally, the growing popularity of the Pew-taxonomy among both scholars and the general public indicates that it could become a common language that facilitates consistency, comparability, and ultimately progress in generational research.

The 21 countries in this study each have their own unique history, which means the composition and socialization of the Pew-generations can differ greatly in some important respects. For example, both world wars play an important role in this generational taxonomy, even though some examined countries were neutral during these conflicts. Likewise, some nations are relatively new democracies (e.g., Spain, Portugal, and Greece), which means the oldest generations in these countries have had a distinct political socialization. Nonetheless, there may also be important commonalities that generations share across many countries, such as the “baby boom” after WW2 or the rise of globalization and environmental concerns in the late 20st century. For each party family, this study’s hypotheses are based on such shared characteristics of generations in various countries. These hypotheses are first tested in a pooled cross-country analysis, which offers great advantages in terms of statistical power and the ability to distinguish larger generational patterns that may exist across countries (e.g., new generations shifting to green parties) from periodical fluctuations (e.g., the success of one particular green party in one specific election). To what extent generational differences in vote choice are indeed similar across countries, however, remains an empirical question that is subsequently examined in an inter-country comparison. This comparison is exploratory in nature because no *a priori* hypotheses are postulated about differences between countries.

## 2.2 Major parties in two-party systems

Since the 1960s, American research has documented how support for the Democratic and Republican party differs between birth cohorts. These differences have often been interpreted as historical imprints of which party was dominant during each cohort’s formative period. Americans who came of age during the 1930s were, for example, labeled the “New Deal generation” because they were still

more likely to identify with the Democratic party several decades later (Campbell et al., 1960; Converse, 1976). Later studies furthermore identified a “Reagan generation” due to heightened support for the Republican party among people who were socialized during the 1980s (Norpoth, 1987; Green et al., 2002; Ghitza et al., 2023). Research on the British case similarly reveals that voters who came of age during the Conservative dominance of 1930, 1950, and 1980s have been more likely to support this party (Butler and Stokes, 1974; Thorburn, 1977; Tilley, 2002; Goerres, 2008; Tilley and Evans, 2014; Shorrocks, 2016; Whiteley, 2023).

In addition to such non-cumulative fluctuations, generational differences in two-party systems can also take the form of a monotonic shift from one major party to the other. A first reason to expect such a process lies in the changing demographic composition of the electorate. Since the baby boomers, each successive generation has been more highly educated, ethnically diverse, and secular (Pew Research Center, 2014; Norris and Inglehart, 2019). These demographic changes may hurt the electoral fortunes of major right-wing parties in two-party systems, which importantly depend on white, religious, and (particularly in recent elections) lower educated voters (Suls and Kiley, 2016; YouGov, 2017). A second reason why newer generations may have moved away from the right lies in value change. Even after accounting for composition, newer cohorts take more progressive positions on core issues such as moral questions, immigration, and European unification (Rekker, 2018b; Twenge and Blake, 2021; Lindskog and Oskarson, 2022).

The empirical case for an incremental shift from right to left in two-party systems is, however, still inconclusive. An age-period-cohort analysis of British election studies from 1964 to 2010 found no indication of a monotonic generational shift away from the Conservative party (Tilley and Evans, 2014). A similar APC-study on American election studies from 1952 to 2016 concluded that generational differences used to be remarkably small, but that this changed when the millennial generation emerged in the early 21st century with unprecedented levels of support for the Democratic party (Fisher, 2020, 2022). Despite these mixed findings, this study hypothesizes an incremental generational shift based on well-established differences in composition and values:

*H1:* In two-party systems, each successive generation since the baby boomers is more likely than the one that came before it to vote for the major left-wing party and less likely to vote for the major right-wing party.

## 2.3 Social democratic, Christian democratic, and conservative parties in multi-party systems

Whereas shifts between left and right are of particular interest in two-party systems, most transfers of vote share in multi-party systems take place between parties within the same ideological camp (Van der Meer et al., 2015; Rekker and Rosema, 2019). Over the past decades, Western European multi-party systems have been characterized by a process of electoral fragmentation in which traditionally dominant parties lost ground to new challengers (Ford and Jennings, 2020). In the Netherlands, for example, the combined vote share of the social

democrats (PvdA) and Christian democrats (CDA) reached over 80% in the 1950s, but by 2021, this number had fallen to 15%. Such traditionally dominant parties include most (though not all) social democratic and Christian democratic parties, as well as a many conservative parties. Although liberal parties have also been historically dominant in some countries, these parties are considered separately in this article (see section 2.5) because they may be characterized by distinct generational patterns.

There are several reasons why support for traditionally dominant parties may have declined not only over time, but also across generations. Like in two-party systems, the dominance of some parties during a particular period may have left an imprint on young voters. Drawing from the Dutch example, voters who first entered the electorate during the 1950s may have developed early voting habits and attachments to the then dominant social democratic and Christian democratic parties. In many countries, citizens who grew up during this period may also have been socialized with the idea that one should “automatically” vote for one of the cleavage parties based on one’s place in society. Until roughly the 1960s, Western European politics was characterized by “frozen party systems” (Lipset and Rokkan, 1967). Elections were often highly stable during this period because citizens’ vote choice could be predicted almost perfectly by their position on structural cleavages (Franklin, 1992). Even many decades later, traditional cleavage parties may therefore still enjoy a support base among those who learned at a young age that their vote ought to reflect, for example, their social class or religion (Van der Brug and Rekker, 2021). This loyalty to traditional cleavage parties may, however, have eroded among newer generations that grew up with a new cultural cleavage (Kriesi et al., 2008; Hooghe and Marks, 2018) and more often base their vote choice on new cultural issues such as immigration (Jocker et al., 2024). Moreover, Christian democratic parties may be less popular among newer generations because of secularization (Norris and Inglehart, 2007), whereas conservative parties may be eroded by the aforementioned shift toward progressive values.

Previous studies on vote choice and generational differences in a multi-party context have focused on a limited number of countries. Case studies on Germany found that support for the Christian democratic CDU/CSU peaked very early with the pre-WW1 cohort, whereas support for the social democratic SPD culminated a few generations later with the baby boomers and then declined among subsequent cohorts (Goerres, 2008; Steiner, 2022). A study on four Southern European countries found a generational decline in support for mainstream parties in Italy, but not in Greece, Portugal, or Spain (Lisi et al., 2021). Another study found no evidence that newer generations are less likely to vote for traditionally dominant parties in Ireland (Quinlan, 2015). Taking a slightly different approach, a cross-country study on 10 Western European multi-party systems examined generational differences in the relative electoral support for old cleavage parties compared to new challengers within the left and right bloc (Mitteregger, 2024). This study found that more recent cohorts are more likely to choose green parties over social democratic parties or far-right parties over Christian democratic and conservative parties. Despite these mixed findings, the present study hypothesizes a generational decline in support for social democratic, Christian democratic, and conservative parties in multi-party systems. Because the decline of cleavage politics started roughly during the formative years of the

baby boomers (Franklin, 1992), the second and third hypothesis are formulated as follows:

*H2:* In multi-party systems, baby boomers are less likely than earlier generations to support social democratic, Christian democratic, and conservative parties.

*H3:* In multi-party systems, baby boomers are more likely than later generations to support social democratic, Christian democratic, and conservative parties.

## 2.4 Green parties

A party family that may gain from generational replacement is that of green parties. Many green voters are nonreligious and highly educated (Van Haute, 2016), which suggests that green parties may have been strengthened by the secularization and educational expansion among newer cohorts. Another potential driver of green party support lies in intergenerational value change. Inglehart (1977) demonstrated that baby boomers are more likely than earlier cohorts to prioritize “postmaterialist” issues such as environmental protection over “materialist” issues such as economic growth. Generation X could, in turn, be more likely to vote for green parties than baby boomers. Because green parties have been established since the 1980s (Van Haute, 2016), generation X is the first cohort that has had the opportunity to develop green voting habits during its formative years. Even higher levels of green party support may be found among later cohorts. Compared to all earlier generations, millennials are ideologically closer to green parties because of their outspoken progressive attitudes about cultural issues such as immigration and European unification (Rekker, 2018b). Moreover, millennials also seem to weigh such cultural issues more heavily in their vote choice (Van der Brug and Rekker, 2021). Generation Z, in turn, holds even more culturally progressive values than millennials and, moreover, appears to be exceptionally concerned about climate change (Lorenzini et al., 2021). Empirical studies on the German case indicate that baby boomers are, indeed, more likely to vote for Die Grünen than earlier generations, but find no evidence that this support has increased further among later generations (Goerres, 2008; Klein, 2009; Steiner, 2022). A cross-country study on 11 Western European countries, however, found that the latest generations are also more likely to support green parties than baby boomers (Lichtin et al., 2023). The fourth hypothesis is therefore formulated as follows:

*H4:* Starting with the baby boomers, each successive generation is more likely than the one that came before it to vote for a green party.

## 2.5 Liberal parties

Another party family that could benefit from generational replacement is that of liberal parties. Liberal parties are a diverse party family in terms of ideology (e.g., conservative vs. progressive) and



position in the party system (e.g., major center-right parties vs. small newcomers). Something most liberal parties have in common is, however, that they attract a relatively secular and highly educated electorate (Close and Van Haute, 2019). Like green parties, liberal parties may therefore have benefitted from generational changes in demographic composition such as secularization and educational expansion. Even conservative liberal parties (e.g., the Dutch VVD) may, therefore, be characterized by fundamentally different generational patterns than other mainstream right parties such as Christian democratic or conservative parties.

Liberal parties may also have been strengthened by intergenerational value change, albeit in a somewhat different way than green parties. For liberal voting, the most important gap could exist between, on one side, the baby boomers and all earlier generations and, on the other side, generation X and all later cohorts. During the 1980s, the economic policy of many countries was characterized by conservative reforms. Research indicates that citizens who came of age during or after this period are more economically conservative than earlier generations (Grasso et al., 2019). The 1980s was also the period in which globalization started to take off. More than earlier generations, people who came of age since the 1980s have therefore become familiar with globalization during their impressionable years. Possibly as a result, generation X and later cohorts are more supportive of globalization, immigration, and European unification (Down and Wilson, 2013; Rekker, 2018b). This combination of fiscal conservatism and progressive cosmopolitanism matches well with the ideological profile of most (albeit not all) liberal parties. The aforementioned study on the German case, however, found no indication that the popularity of the FDP differs between generations (Steiner, 2022). Nonetheless, the fifth hypothesis is postulated as follows for theoretical reasons:

*H5: Generation X and later cohorts are more likely to vote for liberal parties than baby boomers and earlier generations.*

## 2.6 Far-right, communist/socialist, and agrarian parties

The ParlGov classification furthermore distinguishes far-right, communist/socialist, and agrarian parties. For these families, it is not quite clear what generational differences should be expected. On the one hand, these types of parties may have benefitted from the hypothesized decline of traditionally dominant parties among more recent generations. If leftist voters in newer cohorts are less loyal to social democratic parties, this may for example expand the electoral potential of socialist parties. Likewise, far-right parties may have benefitted from a generational decline in loyalty to conservative and Christian democratic parties among rightist voters. Moreover, the vote choice of recent cohorts seems to depend more on attitudes about cultural issues such as immigration and European unification (Van der Brug and Rekker, 2021), which may have strengthened far-right parties due to their emphasis on such matters.

On the other hand, there are also reasons to expect that support for far-right and communist/socialist parties may have declined over generations. Regarding demographic composition, both types of parties attract relatively low educated voters (Guth and Nelsen, 2021)

and may therefore be eroded by the educational expansion among recent cohorts. In terms of value change, the shift toward progressive cosmopolitanism among newer cohorts may hurt the electoral fortunes of far-right parties, whereas the shift toward economic conservatism (Grasso et al., 2019) could weaken socialist parties. The empirical evidence on this matter is, once again, limited and mixed. A study on the German case revealed no clear main effect of generation on support for either the AfD or Die Linke (Steiner, 2022). Likewise, a cross-country study on the European Social Survey found no generational differences (without controlling for aging) in support for far-right parties (Schäfer, 2022). A case study on France, however, found that young French are most likely to vote for the Front National (Gougou and Mayer, 2013). The present study therefore examines far-right, communist/socialist, and agrarian parties without *a priori* hypotheses:

*RQ1: Does support for far-right, communist/socialist, and agrarian parties differ across generations?*

## 2.7 Life-cycle differences in vote choice

Young voters can differ from older people not only because they belong to a different generation, but also because they are in a different stage of their life. Most notably, folk wisdom has long held that people become more conservative as they grow older. The scholarly literature is, however, divided over this question. Compelling theoretical arguments have been made both for and against the existence of a strong relation between aging and conservatism and both accounts are supported by empirical evidence. On one side of this debate, it has been reasoned that people could become more conservative as they age because of changing life priorities, economic interests, and psychological needs. People may, for example, lose some idealism during middle adulthood because work and family responsibilities shift their attention to more immediate personal concerns (Peterson et al., 2020). Many people also accumulate financial resources as they grow older and progress in their professional career, which could steer their economic interests toward fiscal conservatism. Psychologically, aging has been related to personality changes that often go together with conservatism such as an increasing conscientiousness and a decreasing openness to new experiences (Cornelis et al., 2009; Gerber et al., 2010; Specht, 2017). Corroborating this line of thought, some studies have indeed pointed out that aging makes people more likely to vote for the Conservative party in Britain (Tilley and Evans, 2014), as well as for conservative and Christian democratic parties in Germany and Norway (Geys et al., 2022; Steiner, 2022).

Another strand of literature has, contrarily, focused on the degree of attitude change across the lifespan, regardless of its direction. Dating back to the classic works of Campbell et al. (1960) and Converse (1969), scholars have reasoned that voters become increasingly loyal to their preferred party as they spend more time participating in the electoral process. This idea has been corroborated unambiguously by an extensive body of research (Alwin and Krosnick, 1991; Hobbs, 2019). As people age and repeatedly vote for the same party, they become more likely to identify with that party and less likely to switch their vote (Meredith,

2009; Gomez, 2013; Dinas, 2014). Although this growing attitude stability does not preclude the possibility that aging also makes people more conservative, it does suggest that any shift toward conservatism at a later age should be limited in magnitude (Peterson et al., 2020). Indeed, some studies found no significant relation between aging and conservatism after controlling for generation (Tilley, 2005; Goerres, 2008). Reconciling both perspectives on aging, another study found that only very few liberals become conservative as they grow older, but that an even smaller number of conservatives becomes liberal (Peterson et al., 2020). Given these mixed findings, the present study examines life-cycle differences without *a priori* hypotheses:

RQ2: *Is aging associated with increasing support for major right-wing parties in two-party systems and Christian democratic or conservative parties in multi-party systems?*

This study investigates generational and life-cycle differences while fully accounting for all general period effects, all country differences, and all country-specific period effects. This means that factors such as over-time changes in the electoral system or the supply side of parties are fully accounted for. Moreover, this study includes an exploratory analysis on the extent to which over-time changes in the electoral fortunes of party families can be accounted for by generational replacement. This study does not, however, theorize or test hypotheses about period effects. There is already an extensive literature on electoral change over time, such as the decline of social democracy (e.g., Abou-Chadi and Wagner, 2020) or the rise of the far right (e.g., Lazaridis et al., 2016), which is why this examination instead focuses on generational and life-cycle differences.

## 3 Methods

### 3.1 Data

This study combines all available national election studies from 21 Western established democracies (see Table 1). These surveys were administered after first-order elections: the presidential elections in the United States and the legislative elections in parliamentary systems. Because France has a semi-presidential system, election surveys from both parliamentary elections (until 2002) and the first round of the presidential elections (from 2002 onwards) could be included depending on data availability. The pooled dataset includes 258 surveys that were conducted between 1948 and 2021. Because this study examines vote choice, respondents could not be included in the analyses if they had abstained from voting or if they had a missing value on either age or vote choice. Removing these respondents resulted in a sample size of  $N=462,082$ . Election studies from new democracies (i.e., post-1989) and non-Western countries were not included because the rationale to expect generational differences may not apply equally to such contexts. Research on former communist countries has, for example, identified distinct generational patterns that fall outside the scope of this study (Dinas and Northmore-Ball, 2020).

To enable cross-country analyses, respondents' vote choice was classified into 10 party families using the ParlGov-categorization (Döring et al., 2022): major left (in two-party systems), major right (in two-party systems), social democratic, Christian democratic, conservative, green/ecologist, liberal, far right, communist/socialist, and agrarian. This

taxonomy is based on time-invariant scores derived from several expert surveys on party positions. This study refers to ParlGov's "right-wing parties" with the more specific label "far-right parties" (Mudde, 2019). Major left-wing and right-wing parties in two-party systems (Australia, Britain, and the United States) are categorized separately because of their distinct hypotheses. The British Labor party, for example, features as a social democratic party in the original ParlGov-classification but it is recategorized as a major left-wing party for the specific hypotheses of this study. Because New Zealand replaced its first-past-the-post electoral system with a more proportional system in 1996, it is analyzed as a two-party system until the election of 1993 and as a multi-party system thereafter. Despite its majoritarian electoral system, Canada is treated as a multi-party system because it never reached the level of two-party dominance seen in Australia, New Zealand, the United Kingdom, or the United States (Paun, 2011). Finally, two additional changes are made to the ParlGov-categorization: the Portuguese PSD is reclassified as a conservative party because its time-invariant categorization as liberal does not match well with the examined period and the True Finns party is recategorized from agrarian to far right (see Arter, 2010). Appendix 1 provides an overview of the 10 largest parties in each family that together account for 81% of all observations.

### 3.2 Strategy of analysis

The hypotheses are tested using logistic regression analyses in which respondents' vote choice for each party family features as the dependent variable. For the model on green parties, a value of "1" on the dependent variable, for example, indicates that the respondent voted for a green party, whereas a value of "0" indicates that the respondent casted a vote for any other party or a blank vote in an election in which a green party contested. This means that 156 out of the 258 available elections surveys are included in the analysis on green parties, because no green party participated in the remaining 102 elections. The models are estimated using maximum likelihood with standard errors that are robust to clustering within the 258 elections. The analyses were not weighted because weights are not available for every election survey. A study on the German case, however, found identical generational differences in vote choice before and after weighting the data (Steiner, 2022).

Control variables are not included due to a lack of synchronized measures across all election surveys and because this study aims to capture the combined effect of generational composition and socialization. Controlling for compositional variables such as education would, instead, produce estimates of generational differences that only reflect socialization effects while keeping composition constant. Importantly, the omission of control variables cannot create omitted variable bias in APC-models because age, period, and cohort are fully exogenous variables. In what time people live or when they were born is, for example, not determined by their educational level but rather the other way around. By adding educational level as a control variable, the model would therefore control for a potential *mediator* rather than a potential *confounder* (e.g., MacKinnon et al., 2000; Spector and Brannick, 2011) and, as a result, the estimates would reflect the *direct effect* rather than the *total effect* of generation. To ensure sufficient statistical power, a country was excluded from the country comparison if less than 500 respondents were available who voted for a particular party family.

TABLE 1 Overview of examined election surveys.

Country	Election studies	Type of elections	Period	Elections	N
Australia	Australian Election Study	House of Representatives	1987–2019	12	23,867
Austria	Austrian National Election Study	Nationalrat	2008–2019	4	2,898
Belgium	Belgian National Election Study; CSES	Kamer van volksvertegenwoordigers	1991–2019	7	17,017
Canada	Canadian Election Study	House of Commons	1965–2019	17	35,499
Denmark	Danish National Election Study	Folketinget	1971–2019	17	31,161
Finland	Voter Barometer; Finnish National Election Study	Suomen eduskunta	1972–2019	12	21,318
France	French Election Study	Assemblée nationale; Président (first round)	1958–2017	9	16,996
Germany	German Longitudinal Election Study	Bundesrat	1949–2021	20	26,905
Greece	Hellenic National Election Study	Vouli ton Ellinon	2009–2015	5	3,465
Iceland	Icelandic National Election Study	Alþingi	1983–2017	11	13,187
Ireland	Irish National Election Study	Dáil Éireann	2002–2016	4	4,925
Italy	Italian National Election Studies	Camera dei deputati	1972–2018	11	14,914
Netherlands	Dutch Parliamentary Election Studies	Tweede Kamer der Staten-Generaal	1971–2021	16	25,601
New Zealand	New Zealand Election Study	New Zealand House of Representatives	1975–2020	14	32,661
Norway	Norwegian Election Study	Stortinget	1957–2017	15	23,700
Portugal	Portuguese Election Study	Assembleia da República	2002–2019	5	5,536
Spain	Spanish Election Study	Congreso de los Diputados	1982–2019	12	39,687
Sweden	Swedish National Election Studies	Riksdagen	1956–2018	20	33,788
Switzerland	Swiss Election Studies	Nationalrat	1971–2019	12	25,109
United Kingdom	British Election Study	House of Commons	1964–2019	16	33,378
United States	American National Election Studies	President of the United States	1948–2020	19	30,472
<i>Total:</i>			<i>1948–2021</i>	<i>258</i>	<i>462,084</i>

A well-known issue in age-period-cohort analysis is that its three components have a perfect multicollinearity (i.e., age = period – cohort) and that APC-models are, therefore, not identified unless certain assumptions are made. This study uses an identification strategy that is known as the “constrained variables method” (Thijs et al., 2021). As originally proposed by Mason et al. (1973) and Kritzer (1983), this strategy identifies APC-models by imposing a theoretically informed functional form. A model is generally identified when either a very strong assumption is made about the form of one effect, or when moderately strong assumptions are made for two of the three APC-components (Bell, 2020).

Following the latter approach, this study uses a theoretically informed categorization to model age and cohort effects. Cohort

effects are modeled based on the aforementioned seven generations from the Pew-taxonomy (Dimock, 2019). Because this categorization coincides with important historical events (e.g., WW2 or 9/11) that may have shaped people during their formative years, generational differences may exist primarily between these seven generations. For age effects, the theoretical specification draws from the fact that developmental psychologists typically distinguish four life phases with distinct levels of psychological development and life priorities (e.g., Arnett, 2000; Srivastava et al., 2003): adolescence (under age 22), early adulthood (22–29), middle adulthood (30–64), and late adulthood (age 65 and over). Many studies have corroborated that life-cycle effects on political orientations generally follow these four life phases with strong levels of political learning and attitude change during

adolescence and early adulthood, relative stability during middle adulthood, and then some shifts (sometimes in the opposite direction) during late adulthood (e.g., Converse, 1969; Dassonneville, 2016; Hobbs, 2019; Geys et al., 2022). This knowledge about what life-cycle differences typically look like can be leveraged to identify the APC-models. By constraining the effects of cohort and age, all period effects could be estimated freely. This was achieved by estimating a dummy variable for each country-election combination. These country-election dummies fully account for both period effects and country differences, as well as for all country-specific period effects.

Although the constrained variables method is one of the oldest APC-strategies, recent methodological contributions emphasize that it is still preferable over more recent mechanical solutions (Fosse and Winship, 2019; Bell, 2020). In a review of this approach, Thijs et al. (2021) argue that the constrained variables method is appropriate when the constraints can be grounded in theory or research findings and when the results are robust across models with different constraints. To verify the latter condition, this study includes robustness checks with alternative parameterizations of age and cohort.

## 4 Analyses and results

### 4.1 Generational differences

The pooled cross-country analyses are displayed in Table 2 and depicted in Figure 2. A hypothesis is considered confirmed when two conditions are satisfied: (1) that the *F*-test for the joint significance of all generation dummies is significant and (2) that there are significant contrasts in the hypothesized direction between the expected cohorts. For the country comparison, the results are exhibited in Appendix 4 and summarized in Table 3 with a graphical representation of some examples in Figure 3. For major parties in two-party systems, the results unambiguously confirm the hypothesis (H1) that each successive generation since the baby boomers would be more likely to vote for the major left-wing party and less likely to vote for the major right-wing party. Whereas the differences between generation X and earlier cohorts are still small, the effect size becomes very strong with the millennials and generation Z. Moreover, hypothesis 1 is consistently confirmed for each of the four examined countries. The magnitude of generational differences in the United Kingdom stands out compared to the United States and New Zealand (see Figure 3), whereas the Australian case combines a strong generational decrease in support for the major right-wing party with only a modest increase for the major left-wing party.

The results for social democratic, Christian democratic, and conservative parties in multi-party systems are generally as expected. As hypothesized (H2), baby boomers are less likely than earlier generations to support Christian democratic and conservative parties but, contrary to expectations, their support for social democratic parties resembles earlier cohorts. The country comparison reveals that this pattern is fairly, but not uniformly, consistent across countries: H2 is rejected in 12 out of 18 instances for social democratic parties, confirmed in eight out of 11 cases for Christian democratic parties, and confirmed in eight out of 14 countries for conservative parties. For more recent generations, the results on social democratic, Christian democratic, and conservative parties are more consistently in line with expectations. As expected (H3), later generations are less likely than baby boomers to

support social democratic and conservative parties. This pattern is also significant for Christian democratic parties, albeit with a smaller effect size. Whereas the hypothesis expected a distinction between baby boomers and all newer cohorts, the sharpest discontinuity for conservative parties was instead found between generation X and millennials. The country comparison reveals a highly consistent pattern for social democratic parties with support for H3 in 15 out of the 18 countries. Notably, the only three multi-party systems where social democracy is not declining among the most recent generations are all Anglo-Saxon: Canada, New Zealand, and Ireland. The results on H3 for Christian democratic and conservative parties are clearly less consistent across countries with support for the hypothesis in, respectively, five out of 11 and eight out of 14 cases.

The results for green parties show some of the strongest generational differences in this study. As hypothesized (H4), every generation is more likely to vote for a green party than the one that came before it. This monotonic increase, however, exists across all seven cohorts whereas the expectation was that it would have started with the baby boomers. The country comparison reveals a very consistent pattern for H4: baby boomers have been more likely to vote for green parties than earlier generations in all 13 cases and this support increased further with subsequent generations in all countries except Canada, Denmark, and Germany.

The size of generational differences in support for liberal parties turns out to be quite modest, but their shape is almost precisely as expected. As hypothesized (H5), generation X and later cohorts are more likely to vote for liberal parties than baby boomers and earlier generations. Some caution is, however, warranted in generalizing this cross-country average to specific cases because the country comparison reveals support for H5 in only six out of the 14 countries. This cross-country variation for liberal parties is unsurprising given the diversity of this party family. Nonetheless, a decrease across generations in liberal party support is found only in Switzerland, which indicates that liberal parties are generally immune to the generational decline that characterizes the other old party families in multi-party systems.

Three additional party families are examined without hypotheses. For far-right parties, the results reveal quite similar levels of support across generations with two notable exceptions: support for the far right has clearly been highest among generation X and lowest among the greatest generation. Two countries that stand out are France and Spain, where millennials and generation Z are notably more likely to vote for, respectively, the Rassemblement National and Vox than earlier cohorts. The finding on the French case is in line with earlier studies that found strong support for Front National among young voters (Perrineau, 1996; Mişcoiu, 2005; Gougou and Mayer, 2013), which indicates that this party has been popular among youth both before and after the it abandoned some of its most extreme positions (Mişcoiu, 2020). For communist/socialist parties, the results reveal a rather strong and incremental generational increase in support. Specifically, support for communist/socialist parties seems to have increased with the baby boomers and then again with the millennials. Although the increase among baby boomers was consistently found across countries, the increase among millennials seems to have been driven mainly (but not exclusively) by Southern European parties that mobilized young people during the eurozone crisis such as Syriza and Podemos (see Appendix 4H). For agrarian parties, the results show no meaningful cohort differences with only a small decrease in support between the silent generation and the baby boomers.



TABLE 2 Pooled cross-country analyses.

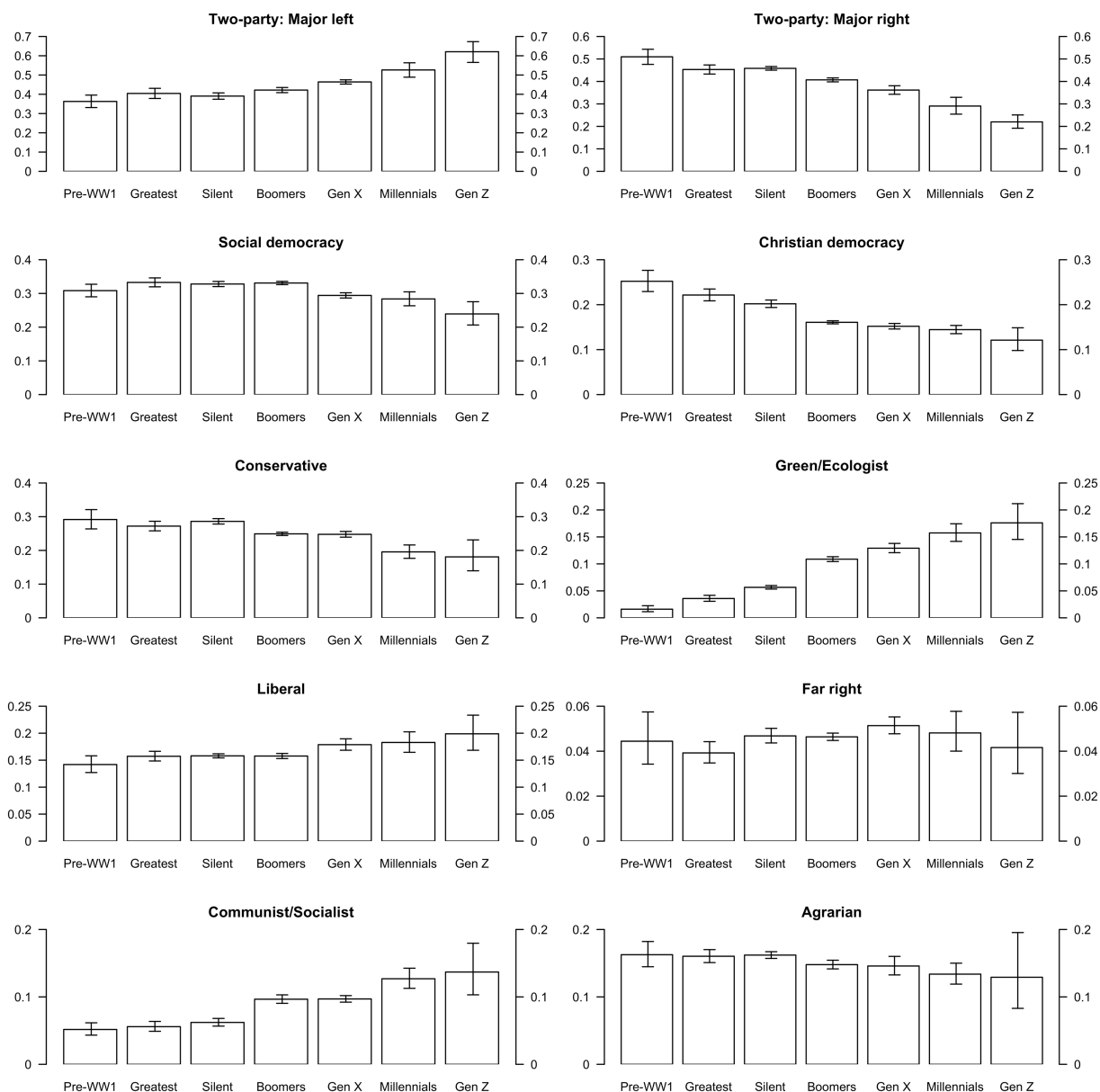
	Two-party: Major left	Two-party: Major right	Social democracy	Christian democracy	Conservative
Generation (ref= Boomers, 1946–1964)					
Pre-WW1 (before 1910)	−0.25 (0.06)***	0.41 (0.08)***	−0.10 (0.05)*	0.57 (0.06)***	0.22 (0.08)**
Greatest (1910–1927)	−0.07 (0.05)	0.19 (0.05)***	0.01 (0.03)	0.40 (0.04)***	0.12 (0.04)**
Silent (1928–1945)	−0.13 (0.03)***	0.21 (0.03)***	−0.01 (0.02)	0.28 (0.03)***	0.19 (0.03)***
Generation X (1965–1980)	0.17 (0.04)***	−0.19 (0.04)***	−0.17 (0.02)***	−0.07 (0.03)*	−0.01 (0.03)
Millennials (1981–1996)	0.42 (0.10)***	−0.52 (0.09)***	−0.22 (0.06)***	−0.13 (0.04)**	−0.31 (0.07)***
Generation Z (after 1996)	0.80 (0.13)***	−0.89 (0.08)***	−0.45 (0.10)***	−0.33 (0.12)**	−0.41 (0.16)*
Joint <i>p</i> -value	<0.001	<0.001	<0.001	<0.001	<0.001
Age (ref= Middle adults, 30–64)					
Late adolescents (under 22)	−0.02 (0.06)	−0.04 (0.06)	−0.03 (0.04)	−0.08 (0.05)	0.07 (0.05)
Early adults (22–29)	0.04 (0.04)	−0.06 (0.04)	−0.01 (0.02)	−0.10 (0.03)***	−0.01 (0.03)
Late adults (over 64)	−0.06 (0.03)	0.11 (0.04)*	−0.03 (0.02)	0.17 (0.03)***	0.13 (0.03)***
Joint <i>p</i> value	0.097	0.014	0.381	<0.001	<0.001
Period					
Country-election dummies	Yes	Yes	Yes	Yes	Yes
Model					
Number of elections	52	52	225	154	186
Number of respondents	94,813	94,813	409,139	271,248	353,904
	Green/ Ecologist	Liberal	Far right	Communist/ Socialist	Agrarian
Generation (ref= Boomers, 1946–1964)					
Pre-WW1 (before 1910)	−2.01 (0.19)***	−0.12 (0.07)	−0.04 (0.14)	−0.67 (0.10)***	0.11 (0.09)
Greatest (1910–1927)	−1.19 (0.10)***	−0.00 (0.05)	−0.17 (0.07)*	−0.59 (0.07)***	0.10 (0.06)
Silent (1928–1945)	−0.71 (0.04)***	0.00 (0.03)	0.01 (0.04)	−0.48 (0.04)***	0.11 (0.04)**
Generation X (1965–1980)	0.19 (0.03)***	0.15 (0.03)***	0.11 (0.04)**	0.00 (0.05)	−0.02 (0.04)
Millennials (1981–1996)	0.43 (0.05)***	0.18 (0.06)**	0.04 (0.10)	0.31 (0.10)**	−0.12 (0.06)
Generation Z (after 1996)	0.56 (0.11)***	0.28 (0.10)**	−0.11 (0.17)	0.39 (0.19)*	−0.16 (0.25)
Joint <i>p</i> value	<0.001	<0.001	<0.001	<0.001	0.001
Age (ref= Middle adults, 30–64)					
Late adolescents (under 22)	0.15 (0.06)*	−0.01 (0.04)	0.16 (0.09)	0.05 (0.07)	0.13 (0.06)*
Early adults (22–29)	0.16 (0.04)***	−0.02 (0.03)	0.03 (0.05)	0.11 (0.04)**	−0.01 (0.04)
Late adults (over 64)	−0.25 (0.04)***	−0.00 (0.03)	−0.07 (0.05)	−0.28 (0.05)***	0.08 (0.04)
Joint <i>p</i> value	<0.001	0.933	0.034	<0.001	0.057
Period					
Country-election dummies	Yes	Yes	Yes	Yes	Yes
Model					
Number of elections	156	194	119	160	73
Number of respondents	301,864	353,593	211,281	282,745	124,876

Logistic regression coefficients with cluster-robust standard errors in parentheses. \**p* < 0.05; \*\**p* < 0.01; \*\*\**p* < 0.001. All models include country-election dummies that fully account for both period effects and country differences, as well as for all country-specific period effects.

## 4.2 Life-cycle differences

Whereas the *F*-tests reveal generational differences for each of the 10 party families, life-cycle effects only reach statistical significance in six instances. In line with the idea that people become more conservative with age, the results show that late adults (age > 64) are more likely than

younger people to vote for major right-wing parties in two-party systems and conservative parties in multi-party systems. However, this finding is arguably not substantively meaningful given the very small effect size (see Figure 4). Somewhat larger life-cycle differences were found for Christian democratic parties, with the highest level of support among late adults and the lowest levels among adolescents and early adults. The results reveal the



**FIGURE 2** Generational differences in the probability to vote for each party family. The y-axis depicts the predicted probability, as estimated by a logistic regression model, that a respondent voted for a given party family (1) rather than for any other party or casting a blank vote (0) in an election in which this party family contested. All models (displayed in Table 2) control for life-cycle differences and include country-election dummies that fully account for both period effects and country differences, as well as for all country-specific period effects.

most pronounced life-cycle differences for communist/socialist and green parties, for which support is clearly highest among adolescents and early adults and distinctly lower among late adults. The findings furthermore indicate that people become slightly less likely to vote for far-right parties as they grow older, which is the only exception to the general pattern that aging is associated with a shift to the right. No significant life-cycle differences were found for social democratic parties, liberal parties, agrarian parties, or major left-wing parties in two-party systems.

### 4.3 Robustness checks

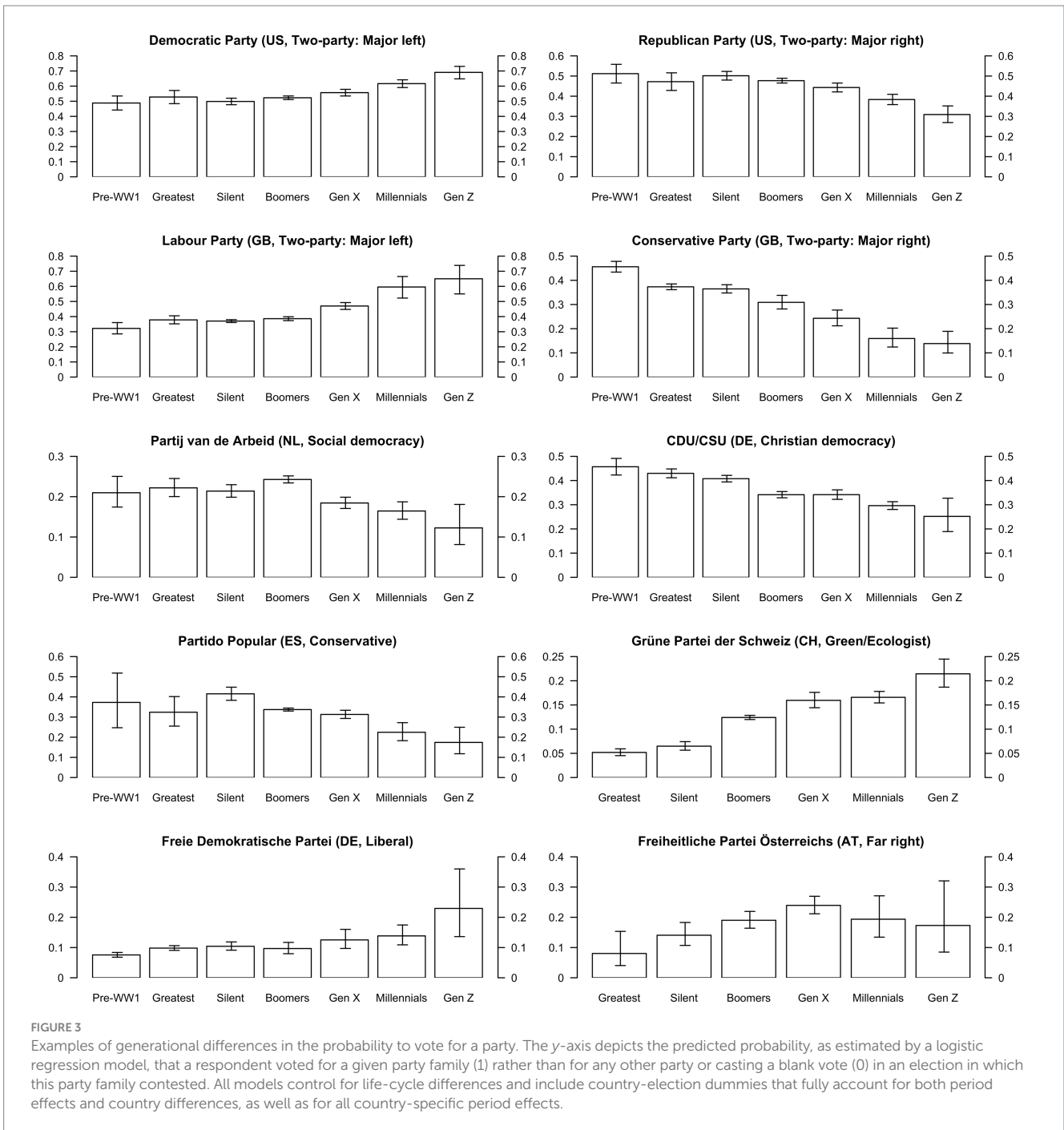
This study includes two robustness checks with alternative parameterizations of the APC-models. For the first robustness check,

the original identification strategy is maintained of imposing moderately strong assumptions on the functional form of age and cohort effects. The categorization from the main analysis is, however, replaced by an alternative that is also theoretically defensible. For cohort effects, the Pew-taxonomy is replaced by a historical categorization that was proposed by Grasso (2014). The age effects in this robustness check are modeled by taking the natural logarithm of age minus 11. Drawing from Bartels and Jackman’s (2014) Bayesian model of political learning, this parameterization of aging assumes that learning starts around the age of 12 and then continuous as a function of percentage-wise increases in political experience. In this model, a voter’s first election should, for example, have the same impact as the next two and the four thereafter. A panel study corroborated that such a logarithmic function can accurately describe

TABLE 3 Country comparison.

	AU	GB	US	NZ	AT	BE	CA	CH	DE	DK	ES	FI	FR	GR	IE	IS	IT	NL	NO	PT	SE
H1a: In two-party systems, each successive generation since the baby boomers is more likely to vote for the major left-wing party.	+	+	+	+																	
H1b: In two-party systems, each successive generation is less likely to vote for the major right-wing party.	+	+	+	+																	
H2a: In multi-party systems, baby boomers are less likely to vote for a social democratic party than earlier generations.				+	+	-	-	-	-	+	-	+	-	-	-	-	-	-	+	-	+
H2b: In multi-party systems, baby boomers are less likely to vote for a Christian democratic party than earlier generations.					-	+		+	+	-				+	-		+	+	+		+
H2b: In multi-party systems, baby boomers are less likely to vote for a conservative party than earlier generations.				-		-	+			+	+	+	+		+	+	-	-	-	+	-
H3a: In multi-party systems, later generations are less likely to vote for a social democratic party than baby boomers.				-	+	+	-	+	+	+	+	+	+	+	-	+	+	+	+	+	+
H3b: In multi-party systems, later generations are less likely to vote for a Christian democratic party than baby boomers.					-	+		-	+	-				-	+		-	+	-		+
H3c: In multi-party systems, later generations are less likely to vote for a conservative party than baby boomers.				+		+	+			-	+	-	+		+	+	-	-	+	-	-
H4: Starting with the baby boomers, every generation is more likely to vote for a green party than the one that came before it.	+			+		+	+	+	-	-		+	+			+	-	+			+
H5: Generation X and later generations are more likely to vote for liberal parties than earlier generations.		-		-		+	-	-	+	-	+	-				-	-	+	+		+

Based on the analyses in Appendix 4. "+": Hypothesis confirmed. "-": Hypothesis not confirmed.



young people’s attitude formation (Rekker et al., 2015). As displayed in Appendix 2, this robustness check yields the same generational patterns as the original analysis with only some (mostly minor) changes in effect size. The estimates for life-cycle differences did not change fundamentally either, but they now reach statistical significance for social democratic parties, whereas they are no longer significant for conservative and far-right parties.

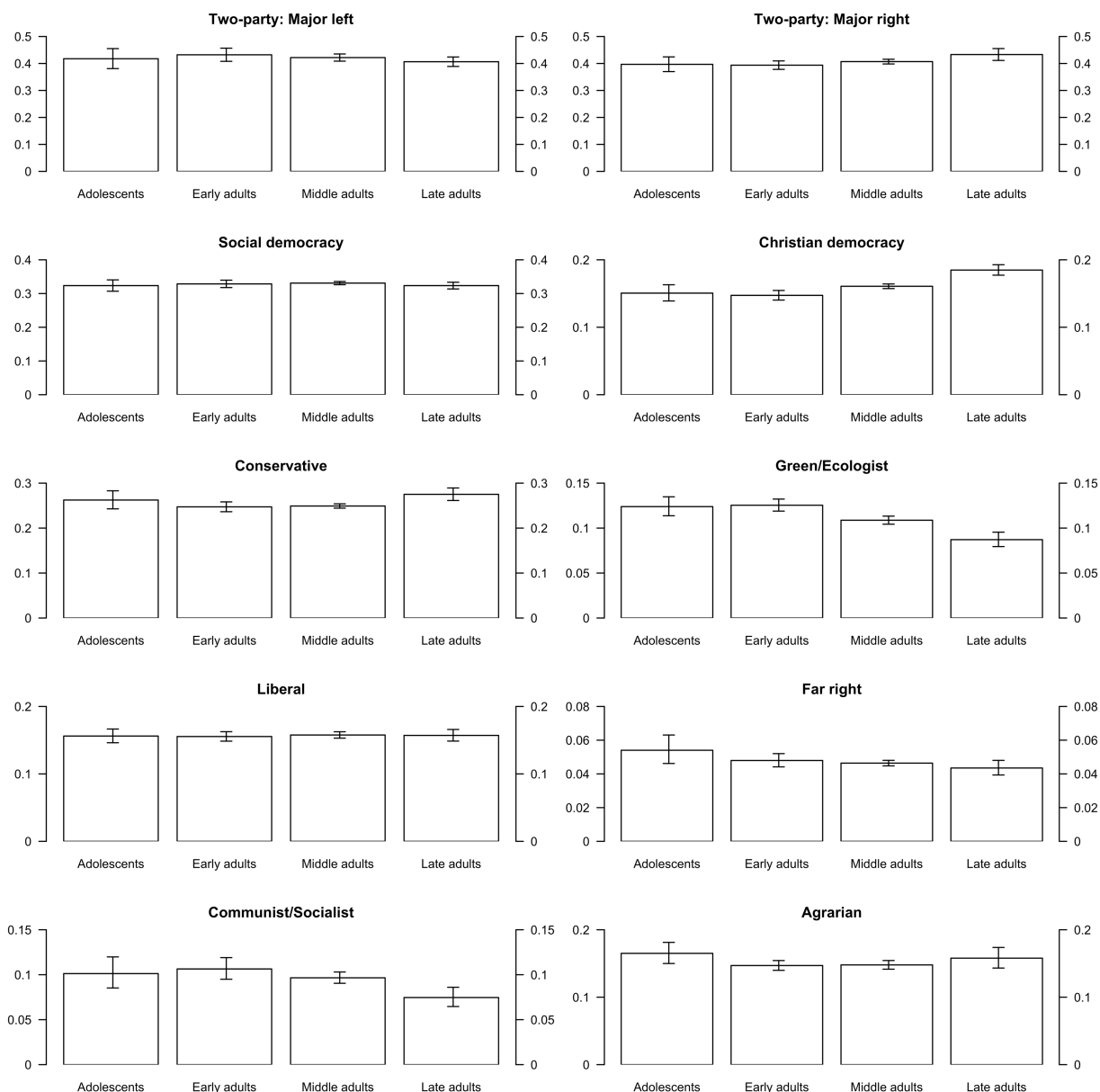
Instead of imposing moderately strong constraints on two of the three components, an APC-model can also be identified by completely omitting one component (Bell, 2020). Accordingly, the second robustness check omits age effects to enable free estimates of both period and cohort effects. To ensure sufficient statistical power for each category, the sample is divided into 20 cohorts with equal sample

size. The purpose of this analysis is to verify that there are no sharp discontinuities within, as opposed to between, the seven generations from the Pew-taxonomy. The results in Appendix 3 confirm that no such discontinuities exist and again reveal the same generational patterns as the original analysis.

#### 4.4 Electoral change through generational replacement

Generational replacement can drive electoral change when those who enter the electorate vote differently than those they replace. Based on the cross-country distribution in the dataset (not including

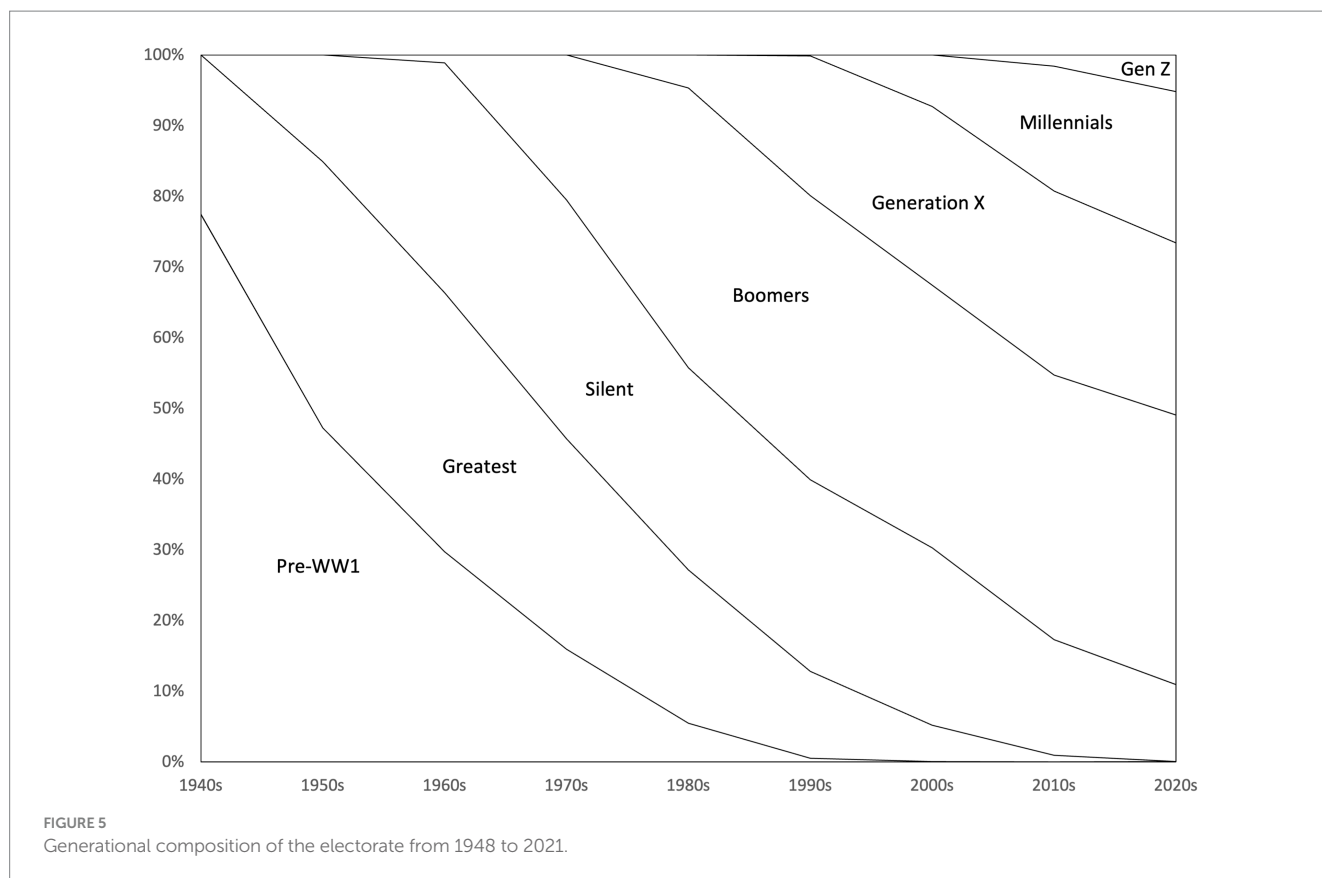




**FIGURE 4** Life-cycle differences in the probability to vote for each party family. The y-axis depicts the predicted probability, as estimated by a logistic regression model, that a respondent voted for a given party family (1) rather than for any other party or casting a blank vote (0) in an election in which this party family contested. All models (displayed in Table 2) control for generational differences and include country-election dummies that fully account for both period effects and country differences, as well as for all country-specific period effects.

abstainers), Figure 5 portrays how the generational composition of the electorate has evolved since the 1940s. This evolution provides a basis for the interpretation of Figure 6, which depicts electoral change before and after accounting for generational replacement. The solid line in this graph represents period effects from a model that only includes country dummies, whereas the dashed line portrays the time trend after adding age and cohort effects. For Christian democratic and green parties, the solid line is clearly steeper than the dashed line, which indicates that the time trend is partly accounted for by generational replacement. Green parties have steadily increased their vote share as every new cohort has been more likely to support them than the one before it, whereas Christian democratic parties have

gradually been eroded by the replacement of pre-WW2 cohorts that started in the mid-1960s. Although generational replacement has so far not been a major driver of electoral change for the other party families, Figures 2, 5 indicate that this could be about to change. In the coming decades, the relevant gap will be the one between baby boomers and the generations that replace them. This could eventually pose a challenge for parties that lack support among the most recent generations, such as major right-wing parties in two-party systems, social democratic parties, and conservative parties. Green parties and major left-wing parties in two-party systems, contrarily, stand to gain from generational replacement as well as many (but not all) liberal and communist/socialist parties.



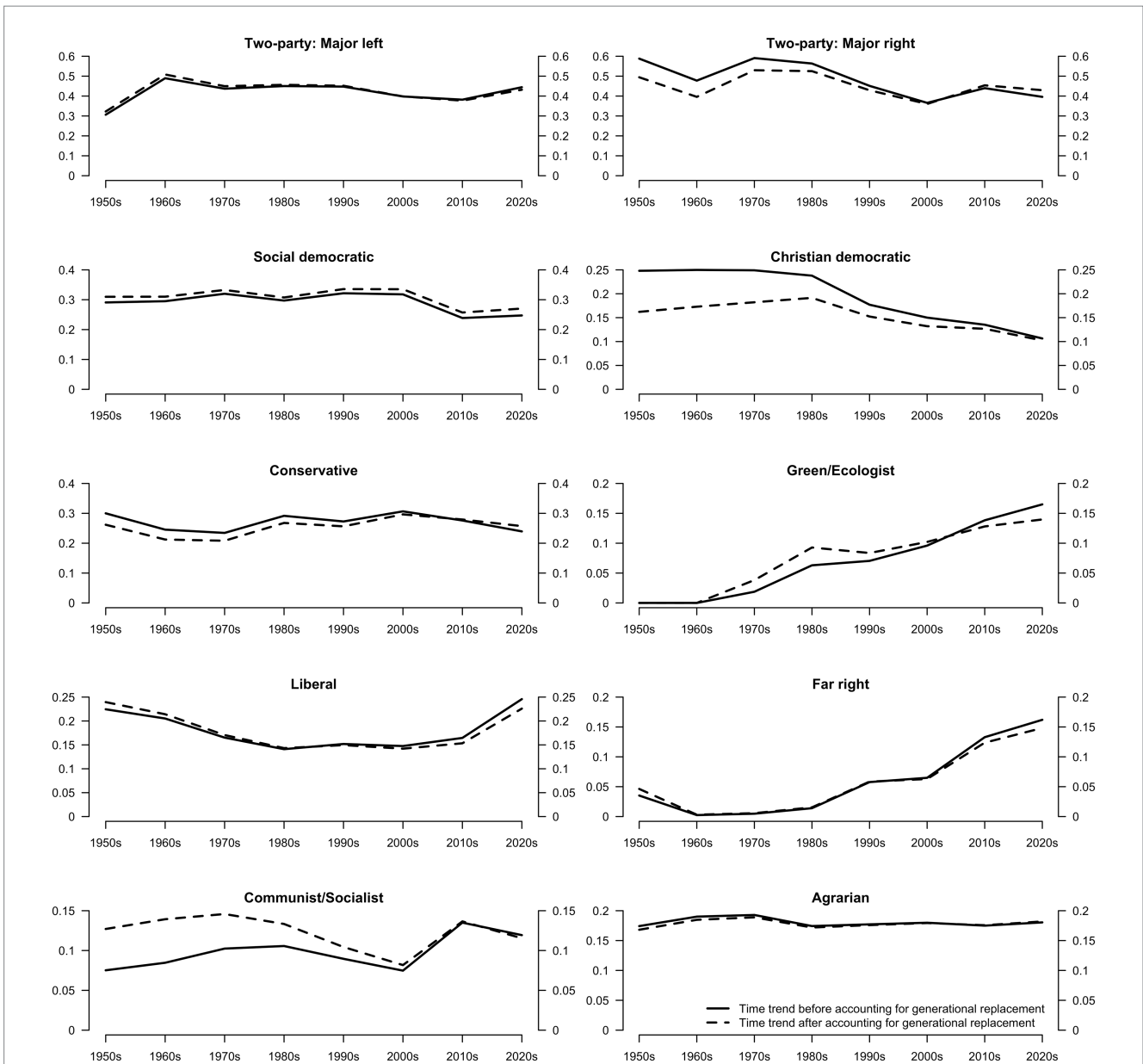
To further illustrate the rise of this generational divide, [Figure 1](#) depicts the association between generation and vote choice in every decade (across countries and for the four most populous nations), as indicated by the adjusted  $R$ -squared from a linear regression model in which the dependent variable is respondents' year of birth and the independent variables are a set of dummy variables representing which of the 10 party families a respondent voted for. The figure shows that generational differences in vote choice surged during the 1970 and 1980s as baby boomers entered the electorate and then—after a temporary decrease—increased to record levels when millennials and generation Z came of age in the 21st century. The comparison in [Appendix 5](#) reveals that this rising trend in the 21st century is quite consistent across countries: the association between generation and vote choice was stronger in the 2010s than in the 1990s in 13 of the 17 countries with data on both decades (exceptions: Belgium, Italy, the Netherlands, and Sweden).

## 5 Discussion

People's generation may have become one of the core predictors of their vote choice. This study examined this hypothesis across 21 Western established democracies between 1948 and 2021 by conducting an age-period-cohort analysis on 258 national election surveys. For two-party systems, the results revealed that each successive generation since the baby boomers has been more likely than the one before it to vote for the major left-wing party and less likely to vote for the major right-wing party. Like a recent case study on the United States ([Fisher, 2020, 2022](#)), this study demonstrated that

the magnitude of these generational differences increased strongly with the emergence of the millennials, while adding the finding that this increase has continued with generation Z. The strongest monotonic shift from right to left was found for the United Kingdom where, after controlling for aging, the vote share of the Conservative party has been 3.3 times larger among the pre-WW1 generation compared to generation Z (see [Figure 3](#)). This contradicts the findings of another APC-analysis on British election surveys that found no such pattern ([Tilley and Evans, 2014](#)). The discrepancy may be explained by the fact that this earlier study was restricted to the period before 2010, whereas the present investigation could include more recent cohorts and the period after the Brexit-referendum.

For multi-party systems, this study found a clear generational decline of social democratic, Christian democratic, and conservative parties. The shape of this decrease, however, varies between these three traditionally dominant party families. Christian democratic parties were considerably more popular among pre-WW2 generations than among baby boomers, but their decline among newer generations has been modest. Conversely, social democratic parties had equally high levels of support among pre-WW2 generations and baby boomers, but their popularity decreased substantially among more recent cohorts. As such, this study found no evidence that generational replacement has played an important role in the electoral decline of social democratic parties up until 2021 (see [Figure 6](#)), but the results do indicate that generational replacement could deepen the “crisis of social democracy” ([Keating and McCrone, 2013; Bandau, 2023](#)) in multi-party systems over the coming decades as baby boomers are replaced by newer cohorts. Conservative parties in multi-party systems show yet another pattern, with a decrease among baby



**FIGURE 6**  
Electoral change before and after accounting for generational replacement. The y-axis depicts the predicted probability, as estimated by a logistic regression model, that a respondent voted for a given party family (1) rather than for any other party or casting a blank vote (0) in an election in which this party family contested.

boomers and then another decline among millennials. The party family that has benefited most from the generational decline of traditionally dominant parties is clearly that of green parties. The results also point out that liberal and communist/socialist parties are most popular among the newest cohorts but, compared to green parties, this increase is less strong and less consistent across countries.

Although no hypothesis was postulated for far-right parties, the analysis yielded some notable results for this party family. Newer cohorts did not appear systematically more or less likely to vote far right, which challenges Norris and Inglehart’s (2019) thesis that the rise of authoritarian populism in the early 21st century was fueled by a “cultural backlash” among older generations. Norris and Inglehart (2019) demonstrate that the oldest cohorts are most likely to embrace authoritarian values and parties, but the present study indicates that

this may not translate to far-right voting because these same generations are also most loyal to traditionally dominant parties. The finding that far-right support has been highest among generation X could, therefore, be explained by the combination of this cohort being less loyal to traditionally dominant parties than older generations and simultaneously less culturally progressive than newer cohorts. The distinct lack of enthusiasm for the far right among the greatest generation may, in turn, be related to the fact that it came of age between 1928 and 1945 and hence experienced the rise and fall of fascism during its formative years. Consistent with this explanation, this pattern has been most pronounced in Austria and Germany (see Appendix 4G).

Regarding life-cycle differences, one strand of literature has argued that people become increasingly conservative with age (e.g.,

Cornelis et al., 2009), whereas another strand has pointed out that voters typically develop a strong loyalty to their preferred party over the years (e.g., Converse, 1969). Like a previous investigation by Peterson et al. (2020), this study found support for both accounts by demonstrating that life-cycle effects on vote choice are small and inconsistent but that, where they do exist, aging is typically associated with a shift from left to right. The results, however, also revealed two exceptions to this general pattern: life-cycle effects had a more substantial magnitude for green parties and communist/socialist parties and people seem to become less—rather than more—likely to vote for a far-right party as they grow older. Because many parties in these three families are relatively new and radical, both exceptions could be related to the fact that the youngest voters are most likely to support new parties and perhaps also most receptive to radical ideologies (Rekker et al., 2015; Rekker, 2022).

Whereas previous examinations of generational differences in vote choice were all case studies on one or a few countries, this study had to make some trade-offs to achieve its goal of including as many parties, countries, and time periods as possible. For example, cross-country categorizations of parties cannot always capture the specific situation in each country. This study found a combination of differences and similarities across countries, which emphasizes the need for both case studies, cross-country analyses, and country comparisons. Specifically, the results yielded highly consistent generational patterns for major left-wing and right-wing parties in two-party systems, as well as for green parties and social democratic parties. The findings, however, differed more across countries for Christian democratic, conservative, far-right, and particularly liberal parties.

This study took two overarching questions as a starting point: Has citizens' generation become a core predictor of their vote choice and could generational replacement become a major driver of electoral change? Based on the results, both questions can generally be answered in the affirmative. Differences between young and older voters surged to record levels during the 2010s (see Figure 1) and this study pointed out that these differences are driven much more by generational divides than by life-cycle effects. Moreover, the results demonstrated that this recent widening of the gap between young and old was driven by the distinct electoral behavior of millennials and generation Z. The results also indicate that generational replacement could become a more important driver of electoral change than it has been in the past. Until now, generational replacement has played a major role only for Christian democratic and green parties. The stark differences between generation Z and baby boomers, however, suggest that generational replacement could change the electoral fortunes of many more parties in the coming decades. Two-party systems could shift to the left as new generations take over, while social democratic and conservative parties in multi-party-systems may lose vote share to liberal, socialist, and particularly green parties. If and when this change will materialize ultimately depends on young people's willingness to turn out in elections and on parties' ability to reinvent themselves for new generations.

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## Data availability statement

This study analyzed publicly available datasets. The data can be retrieved from the repositories of the election studies.

## Ethics statement

Ethical approval was not required for the study involving human data in accordance with the local legislation and institutional requirements. The analysis was carried out using publicly available survey data.

## Author contributions

RR: Conceptualization, Formal analysis, Funding acquisition, Writing – original draft.

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## Conflict of interest

The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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## Supplementary material

The Supplementary material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/fpos.2024.1279888/full#supplementary-material>

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