

Cohort differences in the development of civic engagement during adolescence

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Abstract

Investigating whether changing societal circumstances have altered the development of civic engagement, this study compared developmental changes from mid- to late adolescence (i.e., age 15–18) across two cohorts of representative Swiss samples (born in 1991, $N = 1258$, $M_{age\ T1} = 15.30$, 54% female, 33% migration background representing diverse ethnicities; born in 2000, $N = 930$, $M_{age\ T1} = 15.32$, 51% female; 33% migration background).

Findings from latent multigroup models revealed similar levels in attitudes about social justice in both cohorts, remaining stable over time. Adolescents reported lower levels of political efficacy and informal helping in the cohort born in 2000. Both aspects slightly increased during adolescence. Informal helping had a steeper increase in the 1991 compared to the 2000 cohort, suggesting developmental differences between cohorts.

KEY WORDS

adolescence, civic engagement, cohort differences

Over the past decades, social and cultural change has been omnipresent, such as sharp increases in social inequality, globalization, and migration (OECD, 2019b). When looking at the Western world, prominent features of change are the expansive cultural individualization, encompassing the quest for self-fulfillment (Buchmann & Eisner, 1997; Taylor, 1992) and the changing structure of the life course exemplified in the delayed transition to adulthood (Buchmann & Kriesi, 2011; Flanagan & Levine, 2010; Wray-Lake et al., 2017b). Moreover, the advent of new (social) media, spurring increased

media use, has altered the means of civic participation (Chrysochoou & Barrett, 2017).

These societal changes may have influenced adolescents' development of how they evaluate social inequalities, engage in daily activities that benefit the common good, and perceive the functioning of the political system. These aspects of civic engagement reflect contributions toward social and political issues and toward the community (Amnå, 2012; Sherrord, 2015; Zaff et al., 2011). To understand whether social change has altered the development of civic engagement in adolescence, longitudinal research based on cohorts is necessary. While longitudinal research on civic development across adolescence is scarce (e.g., Finlay & Flanagan, 2013; Grütter & Buchmann, 2021; Lerner et al., 2014; Wray-Lake & Shubert, 2019; Wray-Lake et al., 2014; Zaff et al., 2011), it is even scarcer for the role of *historical change* on *developmental change* in civic engagement across

Abbreviations: APA, American Psychological Association; CFI, comparative fit index; CI, confidence interval; FIML, full information maximum likelihood; MAR, missing at random; MI, measurement invariance; MLR, maximum likelihood with robust standard errors; RMSEA, root mean square error of approximation; SEM, structural equation model; SRMR, standardized root mean square residual; TLI, Tucker-Lewis index.

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adolescence. One such study, although focusing on the transition to adulthood (i.e., age 18–26), is by Wray-Lake and colleagues (2017b), examining historical changes in the development of community service across this life stage. They report increase across historical time and developmental decline during the transition to adulthood. The long term-panel study by Jennings and Stoker (2004) on three generations, repeatedly measuring civic engagement and social trust as participants grew older, included a national U.S. sample of high school seniors in 1965 (i.e., Baby Boomer Generation). They were followed through the adult years, up to age 50, and compared with their parent generation (i.e., Long Civic Generation) and their child generation (i.e., Generation X). The study revealed both cohort and life-cycle effects in social trust and civic engagement across the three generations. Taken together, the two longitudinal studies, each based on several cohorts, allow for separating normative developmental change (i.e., developmental effects) from changes in the societal context relevant for the historical period of growing up (i.e., cohort effects).

For *adolescence*, research on the role of historical change for civic engagement was based on repeated cross-sectional data for a given adolescent age, mostly age 18, studying the increase or decrease of civic engagement across cohorts (e.g., Syvertsen et al., 2011; Twenge et al., 2012). Findings generally show a decline in adolescents' civic engagement in more recent times, except for community services. Barber and Ross's (2018) international study, comparing civic attitudes of 14-year olds in 1999 and 2009 in 16 countries, is a telling example of how macro-level features and their change structure the environment in which adolescents form civic attitudes (see also Chryssochoou & Barrett, 2017; Lerner et al., 2014).

Taken together, several research gaps become apparent. The few studies on cohort differences in the development of civic engagement focused on the transition to adulthood to the detriment of *adolescence*. Hence, little is known whether civic development across adolescence changes over historical time. Evidence on the role of historical change for civic developmental change is mostly limited to community service and volunteering, covering only a small segment of what may be conceived as civic engagement. Also, most empirical evidence is for the United States, eclipsing contexts with different macro-level features and societal change patterns, likely to differently affect civic developmental patterns in adolescence across historical time. Finally, prior research has not specified how different facets of societal change may correlate with developmental patterns of change in civic engagement.

This study aims to address these research gaps by comparing civic development from age 15 to age 18 in two cohorts born almost 10 years apart (1991 and 2000, respectively) in Switzerland, thereby focusing on changing societal circumstances in this context during the period of interest. We argue that increasing inequality, growing

cultural individualization, shifts in the structure of the life course, and the proliferation of new media may have altered the developmental trajectories of civic engagement across the two cohorts under study. Thereby, we assume that social change has altered both, the relative level of civic engagement and the developmental patterns from mid- to late adolescence.

Civic engagement and its development during adolescence

Civic engagement has been defined as a set of values, beliefs, attitudes, skills, and behaviors that individuals need to participate in the community; involving prosocial and political contributions to the common good; and being located outside the immediate environment of family and friends (Amnå, 2012; Sherrod & Lauckhardt, 2009). Recent work that investigated adolescents at earlier ages voiced concerns of solely focusing on civic behaviors in the form of political contributions and argued for including components other than political behavior, as adolescents' opportunities to contribute to society through political participation are limited by legal restrictions and begin to form based on reflections about social issues (e.g., Flanagan & Levine, 2010; Metzger et al., 2018). Moreover, there may be multiple ways in how adolescents can civically engage, which not only show different developmental trends in adolescence (e.g., Zaff et al., 2011), but are also differently related to civic engagement in adulthood (e.g., Amnå, 2012; Lerner et al., 2014). Hence, civic engagement is best understood as a multidimensional construct, reflecting various correlated components that capture adolescents' engagement (e.g., Amnå, 2012; Grütter & Buchmann, 2021; Wray-Lake et al., 2017a).

Based on previous work using such a multidimensional approach to examine civic engagement in adolescence (e.g., Metzger et al., 2018; Wray-Lake et al., 2017a), this study investigated developmental and historical change in three distinct, but related components of civic engagement, assuming that together the three components would represent correlated factors of a multidimensional construct. The specific components were *attitudes about social justice, informal helping, and political efficacy beliefs*. While there may be many other components that could be investigated, the current study focused on these three as they involve different sociocognitive components. Our focus captures Sherrod's (2015) conceptualization of civic engagement as a form of social-cognitive development, whereby social cognitions are expressed as social involvement within the community or the larger social context. Moreover, the three components include different spheres of reasoning about civic engagement (Amnå, 2012), with attitudes about social justice reflecting societal considerations, informal helping reflecting community-oriented considerations, and political

efficacy reflecting political and institutional considerations, which are accessible to a wide range of youth, independent of the historical context.

Components of civic engagement: attitudes about social justice, informal helping, and political efficacy beliefs

Adolescence reflects a formative period for the development of civic engagement as adolescents increasingly become aware of social issues and political institutions (Flanagan & Levine, 2010). Such considerations are captured as *attitudes about social justice*, defined as considerations of equal rights, opportunities, and obligations to benefit society at large (Hoskins et al., 2015; Ruck et al., 2019). They provide an important basis for later civic engagement and predict volunteering and political participation in young adults (Neufeind et al., 2014). *Informal helping* captures adolescents' intentions to volunteer in everyday forms of helping (Metzger et al., 2018) and therefore reflects important opportunities to practice citizenship, in which adolescents express interest and welfare for others (Sherrod, 2015). Volunteering in the form of informal helping is equally available to adolescents, even if opportunities for structured volunteering are not yet available (Metzger et al., 2018). *Political efficacy beliefs* encompass external control beliefs about the responsiveness of the political system and its institutions (Beaumont, 2010). These beliefs capture adolescents' understanding and reflection of the political system, which are predictive of later civic engagement and political interest (Torney-Purta et al., 2008).

Normative developmental changes during adolescence

When studying developmental changes in civic engagement across adolescence, previous research assumed a pattern of normative growth, which is based on concomitant normative age-related development in cognitive and socioemotional competencies, as well as increased autonomy and identity exploration (Wray-Lake et al., 2014). This age-related change implies that civic engagement would increase with adolescents growing older during this developmental period. Moreover, in line with the multidimensional conceptualization of civic engagement, prior work on civic development during adolescence suggests different trajectories for different components. For example, Zaff et al. (2011) documented modest and gradual changes for all components of civic engagement, although with different rates of change. In addition, cross-sectional work by Wray-Lake et al. (2017a) showed higher levels of informal helping and political beliefs among high school students than among younger age groups, while there were no such differences

for social responsibility values (i.e., based on a multidimensional model with correlated components of civic engagement). However, most of this previous work was based on U.S. samples; thus, insights from other contexts are needed.

Based on the normative growth hypothesis (Wray-Lake et al., 2014), we specified confirmatory hypotheses regarding *developmental changes* from mid to late adolescence. Specifically, we assumed that *there would be increases in attitudes about social justice, informal helping, and political efficacy beliefs across developmental time*. Importantly, this study also investigated whether there were *historical changes between cohorts*, and whether *developmental changes differed between cohorts*.

Social change and cross-cohort differences in the development of civic engagement

Cohort differences in the development of civic engagement during adolescence are likely to be associated with sociohistorical change, as the changing "chronosystem" exposes individuals to novel ecological settings (Bronfenbrenner, 2005). When growing up, members of different cohorts encounter altered conditions as they move through Bronfenbrenner's concentric circles of developmental influences, shaping the evolution of civic engagement (Sherrod, 2015). Hence, this study discusses several societal change factors that may have altered adolescents' development of civic engagement across cohorts. When comparing cohorts, it is essential to garner evidence whether the construct had the same meaning for adolescents across historical time, such that a potential decline could not be confused with a different meaning of civic engagement (Barber & Ross, 2018). Thus, we examined whether the structure of this construct remained stable over time. If the same meaning is attached to the construct across cohorts and does not change within the cohorts over time, systematic changes in civic engagement across cohorts can be studied (Putnick & Bornstein, 2016).

A prominent feature of social change since the late 20th century is the *increase in social inequality* observed worldwide as well as in Switzerland, although to a lesser degree. Respective manifestations in this country are the growing demands to the middle class, with which 80% of the Swiss population identify, facing increasing living costs relative to their income growth (OECD, 2019b). Moreover, their income also grows at a much slower rate compared to the richest 10% of citizens (OECD, 2019b). The already large share of residents with migration background in the 1990s has steadily increased over the past two decades (Federal Statistical Office, 2021), whereby those from the Balkans, Turkey, or low-income countries outside Europe feel disadvantaged and show lower subjective well-being than other immigrant groups (Federal Statistical Office, 2019).

Another feature is the increasing trend toward *cultural individualization* in Western societies, including Switzerland, attributing ever-increasing social and cultural importance to the individual as a social actor (Buchmann & Eisner, 1997; Greenfield, 2013; Twenge et al., 2012). The cultural imagery associated with individualization emphasizes individual self-expression and self-realization (Giddens, 1991). In Switzerland, the cultural trend toward growing individualization manifests itself, for example, in the greater emphasis young people of more recent cohorts attribute to the value of being autonomous and independent compared to their counterparts in earlier cohorts (Golder et al., 2020).

A widely discussed feature of social change in the Western world is the *changing structure of the life course*. This is particularly apparent with regard to the delayed transition to adulthood (Buchmann & Kriesi, 2011; Flanagan & Levine, 2010; Jennings & Stoker, 2004; Twenge & Park, 2019; Wray-Lake et al., 2017b). Postponement of adult roles in Switzerland is rampant in the second decade of the 21st century, with young people leaving the parental home on average three years later and having higher rates of pursuing tertiary education, completing education later compared to their counterparts in the last decade of the 20th century (Rausa, 2016). Family formation is also occurring later with the share of women older than 30 years at the birth of the first child raising from 42.6% in 1990 to 72.5% in 2019 (Federal Statistical Office, 2020).

Finally, over the past two decades, the broad dissemination of *social media* has altered the public discourse; Switzerland included (Humprecht et al., 2020). Social media provide great opportunities to people, particularly adolescents, to connect and communicate both locally and globally (Chrysochoou & Barrett, 2017). They have also become an important source of news consumption (Geers, 2020), whereby users are free to post contents in these media and share them. However, assessing the quality and truthfulness of the posted information and identifying “fake news” has become increasingly difficult (Humprecht et al., 2020). In Switzerland, the trend among 16- to 25-year olds to increasingly use a myriad of social media channels has accelerated in the second decade of the 21st century, with social media as the primary source of news consumption to the detriment of traditional media (Golder et al., 2020).

We argue that these four facets of social change are not equally relevant for shaping, across cohorts, the level and developmental gradient of the three civic components of interest. For the sake of parsimony, we will discuss, for each civic component, those facets that we deem most relevant. Importantly, while the co-occurrence of potential changes in civic development with changes in the societal context may be indicative of social change, it does not infer causation (Twenge & Park, 2019). Moreover, as little is known regarding potential cohort differences in developmental patterns of

civic engagement across adolescence, these hypotheses were of an explorative nature.

Attitudes about social justice

The findings of a recent international study on adolescents’ reasoning about social justice suggest that their consideration for gender and ethnic equality has increased in some European countries, including Switzerland (Barber & Ross, 2018). As potential correlates, a more salient political discourse of women’s rights with structural changes in education and the workforce (Pampel, 2011) and increasing immigration and migration have been discussed (Schulz et al., 2010). In addition, there has been an increased focus on the discussion of social issues, such as persistent social inequality, globalization, and climate change in education (Torney-Purta et al., 2015). This is also reflected in Switzerland with Swiss schools paying greater attention to multicultural education and to increasing adolescents’ social justice development (Biedermann et al., 2009).

When considering developmental changes, recent work has shown that adolescents become increasingly aware of structural factors that limit social participation, particularly of minority groups (e.g., Flanagan et al., 2014). Thus, with age, adolescents become more critical of how wealth is distributed in society, reflecting higher attitudes about social justice (Ruck et al., 2019). It is possible that the increasing salience of unequal opportunities for certain social groups and increasing educational focus on social inequality may have altered the development of adolescents’ attitudes about social justice from mid- to late adolescence. With respect to Switzerland, despite the high level of wealth in this country, Swiss adolescents may have become more sensitive to relative inequality such that adolescents of more recent cohorts may show higher increases in their attitudes about social justice. Taken together, emphasizing educational and structural changes, we assumed a *higher level and steeper increase of social justice attitudes in the more recent cohort relative to the cohort born in 1991*.

Informal helping

Rare findings on cohort differences in the development of volunteering (i.e., community service) have pointed to a developmental decline during the transition to adulthood (Wray-Lake et al., 2017b). Explanations for this developmental pattern are delayed life-course transitions (Flanagan & Levine, 2010; Flanagan et al., 2009; Jennings & Stoker, 2004; Wray-Lake et al., 2017b) and cultural individualization (Twenge et al., 2012). From the perspective of life-course theory, postponement of adult roles in more recent cohorts translates into delaying civic involvement,

as one's roles and connections to the community are far from being stabilized (Flanagan & Levine, 2010; Wray-Lake et al., 2017b). While adolescents are still rather far away from making these role transitions, they nevertheless anticipate that, by observing older peers, assuming responsibilities of adult life involves an increasingly prolonged period. Adolescents in more recent cohorts remain longer in the suspense of the adolescent years, prioritizing issues related to educational attainment, romantic relationships, and exploring the world over stable commitment to the common good (Twenge & Park, 2019). As recent cohorts in Switzerland are aware of the striking changes in the timing of assuming adult roles, they may also be likely to adjourn the development of civic orientations and engagement for the common good.

Moreover, exposure to an increasingly individualized culture goes along with a growing emphasis on independence and individual self-expression that may also go hand in hand with a modicum of self-centeredness (Twenge et al., 2012). This could deflect young people in more recent cohorts away from communal values incorporating helping others. Growing individualization and delayed role-transitions may translate into both, lower levels of informal helping at a given age in adolescence and slower increases over time. Overall, we assumed a *lower level and flatter increase of informal helping in the more recent cohort*.

Political efficacy beliefs

The broad dissemination of social media is likely to have an impact on political efficacy beliefs (Humprecht et al., 2020). Research pointed to the promotion of young people's action capacities (Jennings & Zeitner, 2003), fostering so-called participatory politics that entail interactive, peer-based acts to influence public issues like circulating political news or mobilizing one's network (Cohen et al., 2012). This may give young people new ways to promote social and political change by breaking down barriers to political leaders. With adolescents in more recent cohorts having more opportunities to partake in participatory politics, their political efficacy beliefs may have become stronger.

However, frequent social media users are not well equipped to detect online disinformation (Humprecht et al., 2020), rendering it more difficult for these adolescents to distinguish truth from falsehood. Trust in public institutions may therefore be decreasing (Twenge et al., 2014) and making representative politics less transparent, ultimately affecting the perceived efficacy of political systems. Although adolescents attribute lower credibility to social media compared to classic media (Schwaiger, 2020), they increasingly turn to social media as the main source of news consumption. Online disinformation may thus grow, reducing the transparency of the political process (Schwaiger & Oehmer, 2020).

These opposing trends lead us to advance *competing hypotheses*. The growing opportunities for participatory politics facilitated by social media may give a boost to political efficacy beliefs of adolescents in the more recent cohort. This would result in *a higher level and a steeper increase of political efficacy beliefs in the more recent cohort*. Conversely, the specter of online disinformation, omnipresent in social media, may undercut the transparency of the political process and erode political efficacy beliefs. This would result in *a lower level and a flatter increase of political efficacy beliefs in the more recent cohort*.

METHOD

Participants and design

The data are from the longitudinal *Swiss Survey of Children and Youth* (COCON), an ongoing multicohort panel study aiming to better understand the developmental interplay between characteristics of the social context and individual competencies from childhood to young adulthood. The data of two cohorts were used: the earlier cohort ($N = 1258$, born in 1991) and the more recent cohort ($N = 930$, born in 2000). Each cohort is based on a representative sample for the German- and French-speaking parts of Switzerland, drawn in a two-step sampling procedure. In the first step, communities, stratified by economic and social characteristics and population size, were selected. In the second step, households were randomly drawn from official community registers. The response rate of those households was 63% for the 1991 cohort and 78% for the 2000 one. To control for potential biases related to non-response, all analyses included a sampling weight.

In the cohort-sequential design, the participants of the earlier cohort were assessed at age 15 (2006), 18 (2009), and 21 (2012). The participants of the more recent cohort were interviewed regularly between age 6 (2006) and 18 (2018). Since the comparison of the two cohorts was based on the available data, this study compared data of both cohorts that were collected when the participants were 15 and 18 years old (i.e., 2006–2009 vs. 2015–2018), referred to as T1 and T2. For the earlier cohort (born in 1991), there were 1258 adolescents at T1 (54% females, $M_{age\ T1} = 15.30$ years, $SD_{age\ T1} = 0.21$ years) and 952 participants at T2 ($M_{age\ T1} = 18.49$ years, $SD_{age\ T1} = 0.22$ years). In the more recent cohort (born in 2000), there were 930 participants at T1 (51% females, $M_{age\ T1} = 15.32$ years, $SD_{age\ T1} = 0.20$ years) and 792 at T2 ($M_{age\ T1} = 18.30$ years, $SD_{age\ T1} = 0.21$ years). When considering ethnicity and minority group status in the current study context, 16% did not possess the Swiss passport and 33% of the adolescents had a migration background (origins were former Yugoslavia: 24%, Italy: 19%, France: 11%, Portugal: 9%, Germany: 7%, others: 30%) in the 1991 cohort. For the adolescents of

the 2000 cohort that remained in the sample until the age of 15, 8% did not possess the Swiss passport, and 33% of the participants had a migration background (origins were Italy: 23%, Germany: 13%, France: 7%, former Yugoslavia: 12%, Spain: 6%, Portugal: 5%, others: 34%). Regarding parental education, in 31% of the 1991 cohort respective in 37% of the 2000 cohort, at least one parent held a university degree.

This study meets the ethical standards of the APA and the study's adherence to the Human Research Act was monitored by the national funding agency. Before each interview, caregivers provided their informed consent (i.e., written consent for the first survey wave, followed by detailed written information and oral consent before each subsequent survey wave). In addition, oral assent of the adolescent was requested and they were able to withdraw from the study at any time. All participants were interviewed by trained research assistants in face-to-face interviews in their homes or in a quiet place of the adolescent's choice. After completing each interview, participants received a small gift.

Information regarding sample attrition and missing data analysis is reported in the online Appendix S1. In sum, the results showed that, for the earlier cohort, adolescents from parents with higher education (odds ratio = 1.53, $p = .002$) were more likely to remain in the study, while adolescents with a migration background (odds ratio = 0.59, $p < .001$) and boys (odds ratio = 0.73, $p < .001$) were significantly less likely to participate in the second assessment. For the more recent cohort, overall children from parents with higher educational backgrounds (odds ratio = 1.55, $p < .001$) were more likely to remain in the sample from the very first survey until 12 years later. When looking at the study attrition between the assessment times relevant for the current study (i.e., when participants of the younger cohort were 15- and 18-years old), the likelihood to remain in the sample was related to being a Swiss citizen (odds ratio = 2.40, $p = .011$). Therefore, we concluded that Missing at Random (MAR; i.e., the missingness was related to observed variables) was supported (see Enders, 2010 for an in depth discussion) and we accounted for missing data with full maximum-likelihood estimation (method: FIML) in *Mplus* 8.2 (Muthén & Muthén, 2017).

Measures

Civic engagement

All measures were drawn from existing longitudinal surveys on the development of civic engagement (i.e., the "German Youth Survey," Gille et al., 2006; the longitudinal study "Learning Processes, Educational Careers and Psychosocial Development in Adolescence and Young Adulthood," Baumert et al., 1996; and the "Young Adult Survey in Switzerland," Grob & Maag Merki, 2001).

Attitudes about social justice (ASJ) were assessed with five items, and three items were from the German Youth Survey (Gille et al., 2006): "It is important to reduce social inequalities.", "It is important to be fair to others.", "It is important to treat everybody equally." Two items were from the project of Grob and Maag Merki (2001): "Wealth should be divided equally worldwide, even if I need to abstain from certain luxury goods.", "It is an important task of the government to support people in need, such as people with disabilities or unemployed people." All items, except the first three items were rated on a six-point scale (1 = totally disagree, 6 = totally agree). These three items were standardized from their original scale (1 = not important at all, 10 = extremely important) to range from 1 to 6 in order to have all variables on the same metric (Little, 2013).

Informal helping (IH) was operationalized with two items: "I volunteer to help carry heavy luggage up the stairs for any elderly or frail person.", "If a mother needs help to get on the bus or train with her baby stroller, I offer help.", 1 = totally disagree, 6 = totally agree (Grob & Maag Merki, 2001).

Political efficacy beliefs (PE) were measured with three items: "If things should change, one needs to personally act, rather than relying on politics.", "If you disagree with politics, one has to become personally active.", "Just talking about politics is useless, one also needs to act.", 1 = totally disagree, 6 = totally agree (Baumert et al., 1996). To have all components of civic engagement coded in the same direction (i.e., higher values reflect higher engagement), all items of this scale were recoded.

Control variables

We controlled for *gender*, *SES*, *Swiss nationality*, and *migration background* at all time points. SES was assessed by parents' highest education (1 = at least one parent has completed a university degree). Swiss nationality was operationalized by whether adolescents possessed a Swiss passport. Participants' migration background revealed whether adolescents indicated other than the Swiss nationality or additional nationalities to the Swiss one.

Data analytic approach

Cohort differences were investigated with longitudinal multigroup structural equation models. Before testing the hypotheses, a few steps were necessary to create a reliable measurement model across time (i.e., differences between the two measurement occasions at age 15 and 18 within each cohort) and cohort (i.e., differences between the two cohorts). First, we tested whether our measures had the same meaning for the different measurement occasions

and cohorts; that is, whether they were invariant across developmental time (i.e., from age 15: T1 to age 18: T2) and cohort (i.e., across the cohort born in 1991 and 2000). Measurement invariance reveals the consistency with which the constructs of interest were measured over the measurement occasions and across cohorts; therefore, it is a necessary requirement for conducting reliable multigroup analyses with multiple measurement occasions (Little, 2013; Putnick & Bornstein, 2016). Measurement invariance is tested with a set of confirmatory factor analyses, whereby different levels of invariance are investigated by imposing different equality constraints on the constructs under investigation (for details, see the supplementary file S2). Since we investigated mean-level differences and changes in this study, scalar invariance was a requirement. Scalar invariance requires the intercepts (i.e., means) to be constrained over measurement occasions and across cohorts. If this condition holds, one can assume that the mean differences in the items across measurement occasions and cohorts are due to mean differences in their respective latent factors (Brown, 2015).

To compare the models with different constraints, we calculated the $\Delta\chi^2$ tests using the Satorra–Bentler scaled method (Satorra & Bentler, 2010) and the Δ CFI, Δ RMSEA, and Δ SRMR tests. As the $\Delta\chi^2$ test is sensitive to sample size and minor model misspecifications, we additionally considered Δ CFI with a threshold of $\leq .01$, Δ RMSEA with a threshold of $\leq .15$, and Δ SRMR with a threshold of $\leq .015$ (Chen, 2007). Δ RMSEA with a threshold of $\leq .15$, and Δ SRMR with a threshold of $\leq .015$ (Chen, 2007). In all measurement models, the longitudinal residuals were allowed to correlate between the two measurement times. The models were conducted with the multigroup option in MPLUS (Muthén & Muthén, 2017).

After establishing measurement invariance, we checked whether our assumed conceptualization of civic engagement as multidimensional construct with correlated factors fit the data of both cohorts well. To test our hypotheses of age and cohort differences, we first investigated whether there were significant differences in the latent means by comparing a model in which we constrained all latent means to be zero to our final measurement model (Little, 2013). If none of the means were significantly different from each other, the models would fit the data equally well and no further analyses were necessary. From the significant $\Delta\chi^2$ test, it became apparent that the model in which the latent means were freely estimated fitted the data significantly better. Next, in order to compare the latent means across measurement occasion and cohort, we fixed the latent mean of the first measurement occasion (i.e., age 15) in the more recent cohort (i.e., born in 2000) to 0 (see Figure 1a). We decided to use this cohort as a reference group to contrast changes from this cohort to the earlier one. Thus, the model (i.e., Model 1, Figure 1a) revealed latent mean differences relative to the first measurement occasion of the more recent cohort (Kline, 2011). This approach allowed us to consider differences in each component of civic engagement at age

15 between the two cohorts. In addition, the model included the within-time comparisons (i.e., differences between age 15 and 18) for both cohorts.

As we were specifically interested in developmental differences over time between the two cohorts, we specified latent difference scores for each component of civic engagement in a second model (i.e., Model 2, see Figure 1b). Latent difference score models consist of two latent random factors: Intercept (i.e., initial level at age 15) and slope (i.e., developmental change from age 15 to 18). Both factors are represented with a mean and variance component. This means that intra-individual development (i.e., mean component: mean-level changes across the sample) and inter-individual differences in development (i.e., variance component: differences in the change between individuals) can be modeled simultaneously (McArdle, 2009). Consistent with the previous approach, we chose the latent mean of the first measurement occasion and the more recent cohort as a reference in order to identify the model (see Figure 1b). Therefore, within the more recent cohort, the latent difference score for each component of civic engagement revealed whether developmental changes from age 15 to 18 years were significant, above and beyond the initial value at age 15. Thereby, the intercept (i.e., mean at age 15) in the earlier cohort was relative to the mean at age 15 of the more recent cohort, which revealed differences at age of 15 between cohorts. Similarly, the latent difference score of the 1991 cohort was relative to the latent difference score of the 2000 cohort, whereby this coefficient revealed whether developmental changes (i.e., from age 15 to 18) were significantly different between the two cohorts. Hence, this was the coefficient of interest to test the specific hypotheses regarding different developmental changes in the two cohorts. In this model (i.e., Model 2), we regressed the latent difference score on the latent intercept (i.e., the initial value at age 15). By including this path, we accounted for the probability that change depends on the initial level (Little, 2013; McArdle, 2009). To be able to compare the two latent difference scores, these paths were constrained to be equal across cohorts. Again, to make sure that these specific regression paths did not statistically differ between the two cohorts, we first compared a model in which these regression paths were freely estimated to a model in which they were constrained.

Taken together, this modeling approach is comparable to a pre-post comparison with two groups, where an autoregressive model is specified in which the autoregressive paths are constrained to be equal across groups. In this model, both latent means in one group serve as a reference; at the first measurement point, for the initial differences between groups, and at the second measurement point, for the change in one group relative to the change in the other group (e.g., see Kline, 2011). In this study, we chose the same approach; however, we used latent difference scores instead of autoregressive paths as these specifically model inter-individual differences in intra-individual change. Thereby, the latent difference score model acknowledges that not

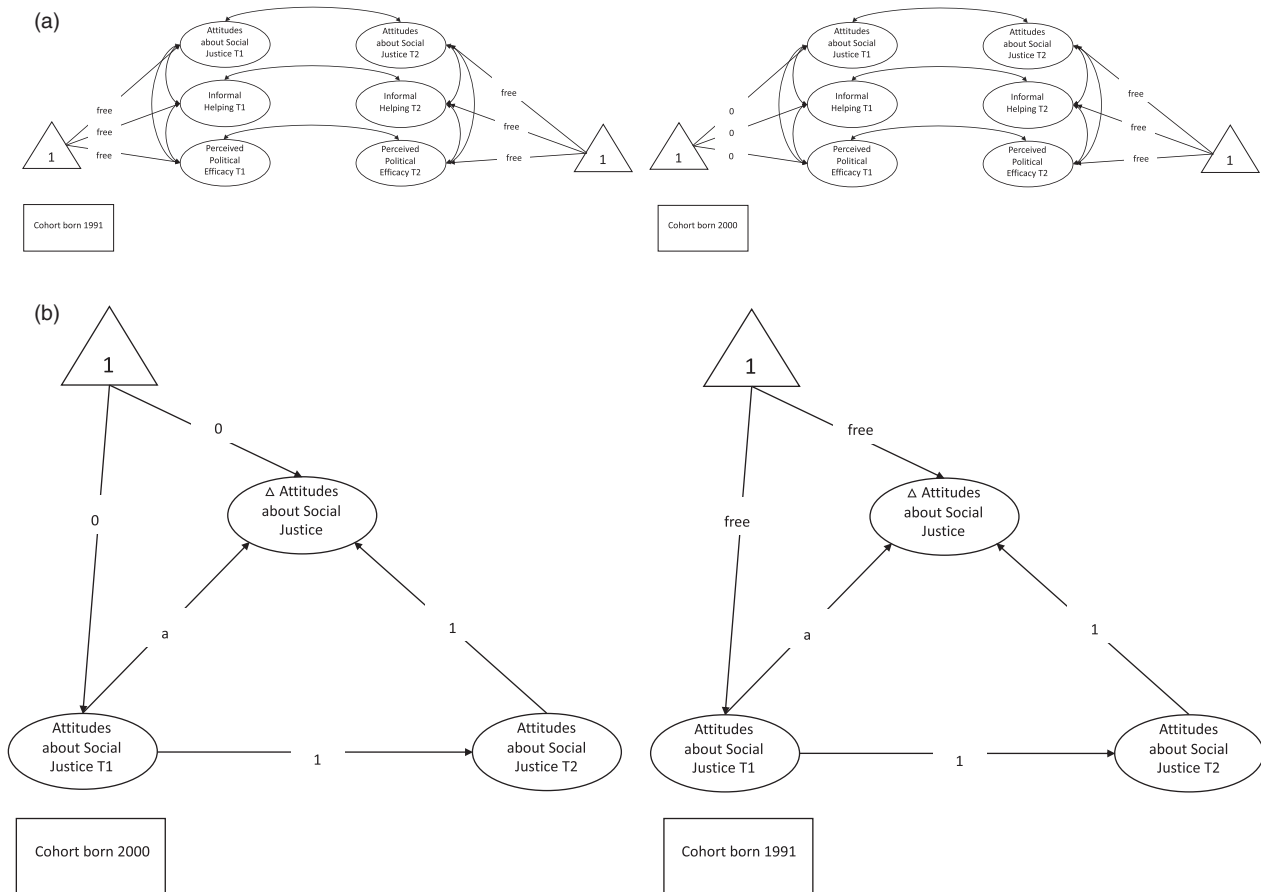


FIGURE 1 (a) Measurement model of civic engagement with specified mean comparisons across time and cohorts (Model 1); (b) Comparison of mean-level changes from mid- to late adolescence between cohorts with latent difference scores (Model 2; for simplicity, only one component of the model is shown here)

all adolescents changed in the same way within cohorts (McArdle, 2009). Moreover, the model allowed constraining the latent difference scores to equality in order to compare specific developmental changes from age 15 to 18 between cohorts. This means that, in a last step, we compared model fits in which we constrained the latent change parameters to be equal across cohorts in order to have additional evidence for significant differences between cohorts.

We also included the control variables in our second model in order to enhance the robustness of our assumptions. We included these control variables as predictors for each latent variable (also the latent difference scores) at each time point. In order to keep the model parsimonious, the final model only included significant relations of a given construct with the control variables (following recommendations by Little, 2013).

In all models, we used full information maximum likelihood (FIML) estimation with robust standard errors (i.e., MLR) to account for missing data and because we included a sampling weight in all analyses (i.e., to control for potential biases due to nonresponse; Muthén & Muthén, 2017). We evaluated the models based on the Satorra-Bentler scaled χ^2 difference test, their comparative fit index and the Tucker-Lewis Index (i.e., CFI & TLI; acceptable

fit $\geq .90$), their root mean square error of approximation (RMSEA; acceptable fit $< .08$) with the 90% confidence interval and with their standardized root-mean-square residual (SRMR; acceptable fit $< .08$; Little, 2013).

RESULTS

Measurement invariance across developmental time and cohort

In a stepwise procedure, we investigated measurement invariance for each component of civic engagement by using a set of confirmatory factor analyses. First, we tested for metric and scalar MI across measurement occasions, which is referred to as time (i.e., age 15 to age 18) and then added the invariance across cohorts (i.e., the cohorts born in 2000 and 1991) to it. As the two cohorts were born 9 years apart, this procedure allowed for a careful test of whether our measures fit the data across cohorts, separately from knowing its fit across time. For scalar invariance, the intercepts of the indicators are set to be equal over time (e.g., τ_1 at T1 = τ_1 at T2 = τ_1), whereby these constraints can be additionally extended

across cohorts (e.g., τ_1 at T1 & C1 = τ_1 at T1 & C2 = τ_1 at T2 & C1 = τ_1 at T2 & C2). For procedure details of identifying the measurement model and testing MI, see the Supplementary File S2.

The findings of the MI analyses (see Table 1) revealed that for political efficacy beliefs, the criteria for scalar invariance across time and cohort were met. For attitudes about social justice and informal helping, partial scalar invariance was established across time and cohort (i.e., if one or more intercepts cannot be constrained to equality; Little, 2013). For these two components of civic engagement, scalar invariance was found over time (i.e., from age 15 to 18 in each cohort), but not across both, time and cohort. Therefore, in each construct, one item was freely estimated across cohort, but not time. Across time and cohort, all indicators showed positive and statistically significant factor loadings on their intended latent factor (for details see the supplementary file, Table S3).

Civic engagement in the 1991 and 2000 cohorts: conceptual model

First, the overall multigroup model (i.e., Model 1, see Figure 1a) had a good fit: $\chi^2(191) = 385.62$, $p < .001$, CFI = .95, TLI = .93, RMSEA = .03 [90% CI: .03–.04, $p = 1.00$], SRMR = .04. Furthermore, by considering the $\Delta\chi^2$ contribution of each group, it became apparent that the model had a slightly better fit for the more recent ($\Delta\chi^2$ contribution = 162.20) than the earlier cohort ($\Delta\chi^2$ contribution = 223.42), although fitting the data well in both cohorts. We, therefore, concluded that our conceptualization of civic engagement as multidimensional factor model was not conceptually different between the two cohorts. For both cohorts, the model showed moderate within-time correlations between the components (see Table 2).

Cohort differences in civic engagement during mid- to late adolescence: level and development

To better understand the mean levels and development of each component of civic engagement in the two cohorts, we first plotted the estimated latent means (based on Model 1) for each of the three components of civic engagement at each measurement occasion (i.e., age 15 and 18) for each cohort (revealing cohort differences at age 15 and 18, see Figure 2) and for each cohort separately at both measurement occasions (revealing developmental differences in each cohort, see Figure 3). Latent means are also reported in Table 1.

As for cohort differences (see Figure 2), both informal helping and perceived political efficacy, had higher levels in the earlier cohort born 1991 than in the more recent cohort born in 2000. In contrast, attitudes about social justice had, except for informal helping at age 18

in the earlier cohort, the highest level in both cohorts. When inspecting developmental change (i.e., from age 15 to 18) in each cohort (see Figure 3), attitudes about social justice remained stable in both cohorts, while perceived political efficacy slightly increased from mid- to late adolescence in both cohorts. Lastly, the figure shows that informal helping increased in both cohorts but had a steeper slope in the 1991 cohort than in the 2000 cohort.

Latent mean comparisons: level

To test whether these differences were significant, we computed a model in which all latent means were constrained to be 0 (which would equal 0 differences between all means). This model did not fit the data well ($\chi^2(200) = 765.16$, $p < .001$, CFI = .84, TLI = .81, RMSEA = .05 [90% CI: .05–.06, $p = 0.36$], SRMR = .09). Most importantly, with nine additional degrees of freedom, the χ^2 difference of 379.54 test was highly significant. We concluded that there were significant cohort differences in the mean-level of the constructs. All latent mean differences with their effect sizes are reported in Table 3 (Model 1).

In line with our hypotheses of developmental changes from mid- to late adolescence, results revealed significant increases in informal helping and perceived political efficacy in both cohorts from age 15 to 18. However, there was only partial support for the normative growth hypothesis, as there was no significant developmental increase in attitudes about social justice. Moreover, the latent mean comparisons showed significant differences between the two cohorts at age 15 for informal helping and perceived political efficacy, but not for attitudes about social justice. Thus, the findings did not support our hypothesis that attitudes about social justice would be higher in the more recent cohort, but they were in line with the assumption of a lower level of informal helping in the more recent cohort. When considering the competing hypotheses regarding political efficacy beliefs, these findings supported the assumption of lower levels in the more recent cohort. When looking at the effect sizes of the hypothesized differences (latent Cohen's d), most effects were small to medium.

Latent difference score comparisons: development

Next, we tested our hypotheses of developmental differences between cohorts with the latent difference score model (i.e., Model 2). The assumptions here were first a steeper increase in attitudes about social justice in the more recent cohort; second, we assumed a steeper increase in informal helping in the earlier cohort; and third, we specified competing hypotheses regarding political efficacy beliefs (i.e., assuming a flatter or steeper increase in the earlier cohort).

TABLE 1 Measurement Invariance across time (i.e., age 15–18) and cohort (i.e., born in 2000 vs. 1991)

	χ^2 (df)	CFI	RMSEA [90% CI]	SRMR	MC	S-B $\Delta \chi^2$ (Δdf), <i>p</i>	Δ CFI	Δ RMSEA	Δ SRMR
Attitudes about social justice									
1. Configural	17.023 (10)	.993	.025 [.001, .045]	.021					
2. Metric (time)	26.356 (14)	.988	.028 [.010, .045]	.043	2 vs. 1	9.329 (4), <i>p</i> = .053	.005	.003	.022
3. Scalar (time)	33.889 (18)	.985	.028 [.013, .042]	.043	3 vs. 2	7.534 (4), <i>p</i> = .110	.003	.0	.0
4. Metric (time and cohort)	26.906 (16)	.989	.025 [.005, .041]	.046	4 vs. 2	0.784 (2), <i>p</i> = .676	.001	.003	.003
5. Scalar (time and cohort)	72.741 (22)	.951	.046 [.034, .058]	.045	5 vs. 4	53.181 (6), <i>p</i> < .001	.038	.021	.001
6. Partial scalar (time and cohort)	38.461 (21)	.983	.028 [.013, .041]	.046	6 vs. 4	14.430 (5), <i>p</i> = .029	.006	.003	.0
Informal helping									
1. Configural	0.998 (2)	1.000	.000 [.000, .049]	.010					
2. Metric (time)	0.998 (2)	1.000	.000 [.000, .049]	.010	2 vs. 1	0	0	0	0
3. Scalar (time)	12.999 (4)	.990	.000 [.019, .074]	.022	3 vs. 2	14.672 (2), <i>p</i> = .001	.010	0	.012
4. Metric (time and cohort)	0.998 (2)	1.000	.000 [.000, .049]	.010	4 vs. 2	0	0	0	0
5. Scalar (time and cohort)	77.941 (5)	.923	.115 [.094, .139]	.053	5 vs. 4	81.296 (3), <i>p</i> < .001	.067	.115	.043
6. Partial scalar (time and cohort)	12.998 (4)	.990	.045 [.019, .074]	.022	6 vs. 4	14.670 (2), <i>p</i> = .001	.010	.045	.012
Political efficacy beliefs									
1. Configural	13.906 (10)	.993	.019 [.000, .040]	.017					
2. Metric (time)	15.297 (14)	.998	.009 [.000, .031]	.021	2 vs. 1	1.787 (4), <i>p</i> = .775	.005	.010	.004
3. Scalar (time)	20.388 (18)	.996	.011 [.000, .030]	.025	3 vs. 2	5.173 (4), <i>p</i> = .270	.002	.002	.004
4. Metric (time and cohort)	15.918 (16)	1.000	.000 [.000, .028]	.022	4 vs. 2	0.645 (2), <i>p</i> = .724	.002	.009	.003
5. Scalar (time and cohort)	26.017 (22)	.993	.013 [.000, .029]	.028	5 vs. 4	5.653 (6), <i>p</i> = .463	.007	.013	.006

Note: df = degrees of freedom. CFI = Comparative fit index. RMSEA = Root mean square error of approximation. SRMR = Standardized root mean square residual. MC = model comparison. S-B $\Delta \chi^2$ = Santora-Bentler scaled χ^2 difference test. Δ CFI = Change in CFI. Δ RMSEA and Δ SRMR were computed by subtracting the CFI value of the more constrained model from the null-model (see MC).

TABLE 2 Correlations, variances, and estimated latent means based on the measurement model, separately for each cohort and each time point

	Time 1 (age 15)			Time 2 (age 18)		
	Attitudes about Social Justice	Informal helping	Perceived political efficacy	Attitudes about social justice	Informal helping	Perceived political efficacy
Cohort born in 2000						
Informal helping _{T1}	0.41 ^{***}					
Perceived political efficacy _{T1}	0.48 ^{***}	0.35 ^{***}				
Attitudes about social justice _{T2}	0.61 ^{***}	0.26 ^{***}	0.28 ^{***}			
Informal helping _{T2}	0.30 ^{***}	0.67 ^{***}	0.29 ^{***}	0.38 ^{***}		
Perceived political efficacy _{T2}	0.32 ^{***}	0.13 [†]	0.65 ^{***}	0.43 ^{***}	0.31 ^{***}	
Mean	5.13	4.53	4.68	5.17	4.78	4.84
Var	1	1	1	1.09	0.75	0.95
Cohort born in 1991						
Informal helping _{T1}	0.44 ^{***}					
Perceived political efficacy _{T1}	0.63 ^{***}	0.24 ^{***}				
Attitudes about social justice _{T2}	0.52 ^{***}	0.24 ^{***}	0.14 [*]			
Informal helping _{T2}	0.31 ^{***}	0.61 ^{***}	0.18 [*]	0.45 ^{***}		
Perceived political efficacy _{T2}	0.32 ^{***}	0.21 ^{**}	0.43 ^{***}	0.38 ^{***}	0.28 ^{***}	
Mean	5.16	4.89	4.86	5.16	5.21	4.98
Var	1.25	1.58	1.97	1.64	0.92	1.58

Note.: The fixed factor method was used to set the scale of the latent constructs. Latent means were expressed as the average of all items at a given time and cohort, which were estimated by using the formula $\tau_{ij} + (\alpha_j * \lambda_{ij})$ (Little, 2013). Standardized correlations are reported.

† $p < .10$.

* $p < .05$; ** $p < .01$; *** $p < .001$.

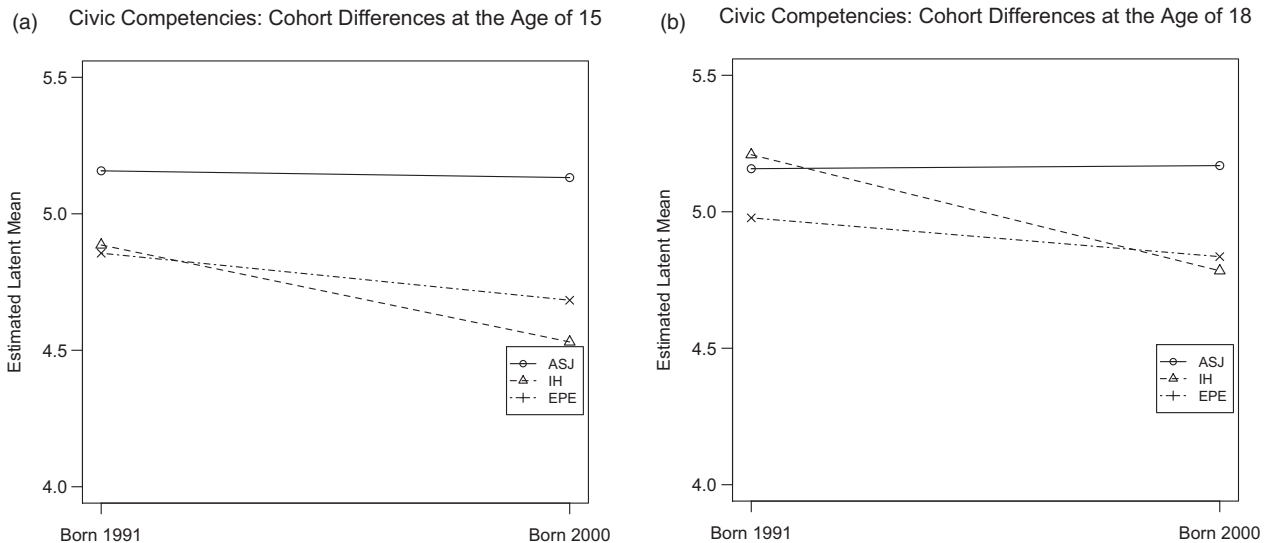


FIGURE 2 Differences between the two cohorts in the components of civic engagement at age of 15 and 18 years (i.e., ASJ, attitudes about social justice; EPE, perceived political efficacy; IH, informal helping), based on the multi-group model including the hypothesized latent mean differences (Model 1). Latent means were expressed as the average of all items of a given construct at a given time and for a given cohort, which were estimated by using the formula $\tau_{ij} + (\alpha_j * \lambda_{ij})$; as we used factor coding, the latent means that we estimated with this formula were in the original scale of the construct, which would equal the scaling revealed when using effects coding (see Little, 2013)

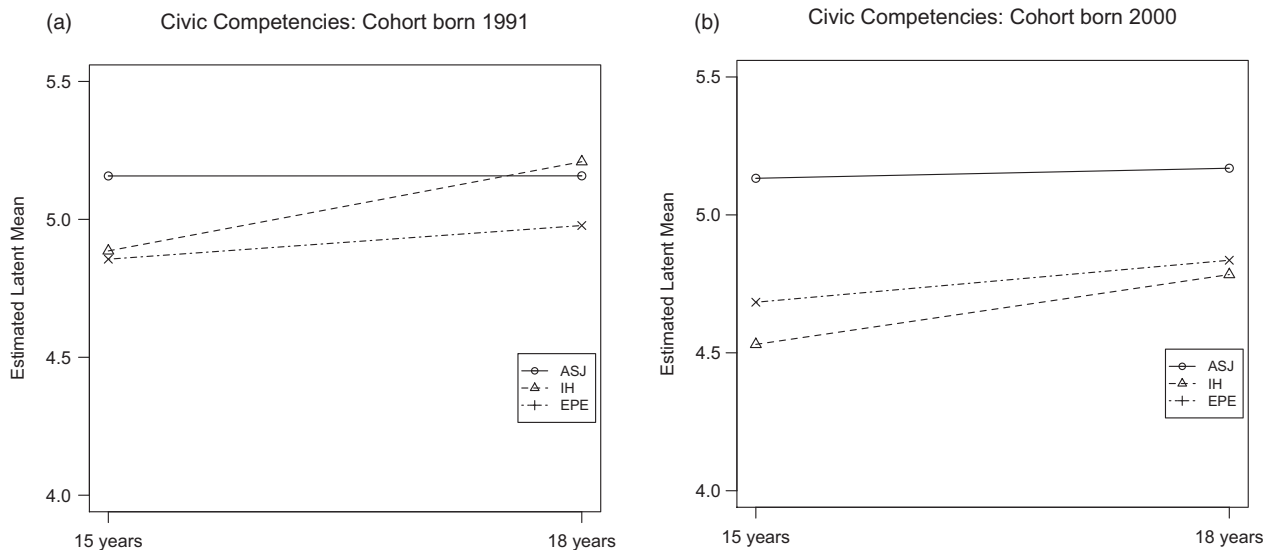


FIGURE 3 Development of the components of civic engagement from 15 to 18 years for both cohorts (i.e., ASJ, attitudes about social justice; EPE, perceived political efficacy; IH, informal helping), based on the multi-group model including the hypothesized latent mean differences (Model 1). Latent means were expressed as the average of all items of a given construct at a given time and for a given cohort, which were estimated by using the formula $\tau_{ij} + (\alpha_j * \lambda_{ij})$; as we used factor coding, the latent means that we estimated with this formula were in the original scale of the construct, which would equal the scaling revealed when using effects coding (see Little, 2013)

The hypothesized model fit the data well, $\chi^2(209) = 489.92$, $p < .001$, CFI = .92, TLI = .91, RMSEA = .04 [90% CI: .03–.04, $p = 1.00$], SRMR = .05. When entering control variables, the model fit was, $\chi^2(297) = 587.78$, $p < .001$, CFI = .93, TLI = .92, RMSEA = .03 [90% CI: .03–.03, $p = 1.00$], SRMR = .05. Contrary to our hypothesis, the results (see Table 3, Model 2) showed no significant developmental differences between the two cohorts in attitudes about social justice. However, findings revealed that adolescents in the 1991 cohort had a steeper increase in informal helping and political efficacy

beliefs than adolescents in the 2000 cohort. To have additional evidence for these effects, we compared model fits in which we constrained the latent change parameters to be equal across cohorts. In these comparisons, only the model in which informal helping was constrained to equality revealed a Δ CFI > 0.1 ; thus, supporting our hypothesis, we concluded that the two cohorts differed in change from mid-to late adolescence in informal helping, whereby the earlier cohort had a higher increase over time than the more recent cohort. Regarding changes in perceived political efficacy,

TABLE 3 Comparisons of latent cohort means at age of 15, 18 and of the change over time from age 15 to 18

	Attitudes about social justice		Informal helping		Perceived political efficacy	
	Estimate (SE)	<i>d</i>	Estimate (SE)	<i>d</i>	Estimate (SE)	<i>d</i>
Model 1						
C1: Age 18 vs. 15	0.088 (0.050)		0.368 (0.042) ^{***}	0.39	0.378 (0.064) ^{***}	0.38
C2: Age 18 vs. 15	0.001 (0.059)		0.470 (0.052) ^{***}	0.42	0.303 (0.077) ^{***}	0.23
Age 15: C2 vs. C1	-0.085 (0.069)		0.759 (0.077) ^{***}	0.66	0.428 (0.086) ^{***}	0.34
Age 18: C2 vs. C1	-0.172 (0.076) [*]	-0.14	0.861 (0.075) ^{***}	0.93	0.353 (0.086) ^{***}	0.31
Model 2						
C2: latent Δ score	0.064 (0.067)		0.533 (0.061) ^{***}	0.75	0.415 (0.072) ^{***}	0.42
Latent Δ score on construct	-0.463 (0.050) ^{***}		-0.496 (0.035) ^{***}		-0.518 (0.060) ^{***}	
Variance latent Δ score C1	0.764 (0.131) ^{***}		0.435 (0.069) ^{***}		0.679 (0.136) ^{***}	
Variance latent Δ score C2	1.273 (0.199) ^{***}		0.553 (0.087) ^{***}		1.186 (0.241) ^{***}	

Note: C1, cohort 1, born in 2000; C2, cohort 2, born in 1991.

Model 1: Multigroup model including the hypothesized latent mean differences across development and between cohorts (see Figure 1a). For the sake of completeness, we also report latent mean differences between cohorts at age 18.

Model 2: Latent difference score model with equal slopes of T1 on Δ , including the control variables gender, migration background, and Swiss nationality (see Figure 1b).

We report Cohen's *d* for latent variables which is calculated by dividing the group mean difference by the pooled within-group standard deviation which is derived from the latent factor variances from each group and adjusted for group size (see Little, 2013).

* $p < .05$; ** $p < .01$; *** $p < .001$.

there was not enough evidence in the current data to make the same conclusion. Hence, none of the competing hypotheses could be supported.

Inspecting control variables, significant gender differences emerged in both cohorts for attitudes about social justice at T1 (C1T1: $\beta = -0.289$, $SE = 0.034$, $p < .001$, C2T1: $\beta = -0.283$, $SE = 0.041$, $p < .001$), and for changes over time (C1 Δ : $\beta = -0.095$, $SE = 0.037$, $p = 0.011$; C2 Δ : $\beta = -0.192$, $SE = 0.042$, $p > .001$), whereby boys expressed lower levels in this component than girls and increased less from age 15 to 18 than girls. In the earlier cohort, boys also reported lower levels for informal helping at T1 (C2T1: $\beta = -0.136$, $SE = 0.037$, $p < .001$). For nationality and migration background, results differed slightly between cohorts. In the more recent cohort, adolescents with a migration background expressed higher levels of social justice at the age of 15 (C1T1: $\beta = 0.134$, $SE = 0.034$, $p < .001$), and adolescents without Swiss nationality expressed higher levels of informal helping (C1T1: $\beta = 0.167$, $SE = 0.025$, $p < .001$) than adolescents with a Swiss passport. In the earlier cohort, there was only a significant effect of nationality on informal helping at the age of 15 (C2T1: $\beta = 0.097$, $SE = 0.039$, $p = .013$), whereby adolescents without Swiss nationality reported higher levels.

DISCUSSION

The findings of this study contribute to developmental theory of civic engagement by disentangling developmental changes in various components of civic

engagement from changes across historical time. The study not only provides further evidence to the limited longitudinal work on civic development during adolescence, but also allowed for a comparison of development in civic engagement from mid- to late adolescence in two cohorts. It thus contributes to the scarce body of longitudinal cohort studies in this field. Finally, this study was conducted for Switzerland, thus providing rare evidence of cohort differences in the development of civic engagement components during adolescence for a societal context other than the United States.

Cross-cohort consistence in the conceptualization of civic engagement

Based on previous work that included some of the civic components used here (e.g., Grütter & Buchmann, 2021; Metzger et al., 2018; Wray-Lake et al., 2017a), this study assumed that the three components, attitudes toward social justice, informal helping, and political efficacy beliefs, would form a multifaceted construct of civic engagement. Extending this prior work, the findings suggest that civic engagement can be assessed reliably as a multidimensional construct during mid- and late adolescence, even across two cohorts born nearly 10 years apart. The aim was to provide a systematic comparison across multiple components, acknowledging that adolescents born in different time periods might not have the same opportunities to become civically active. Being one of the first studies comparing

civic developmental change between different cohorts of adolescents, it was essential to have a measure that captures aspects relevant to adolescents growing up in different time periods (Barber & Ross, 2018). The study established measurement invariance for all components of the multidimensional model of civic engagement, not only across development (i.e., from age 15 to 18) but also across cohorts (i.e., historical time). Thus, observed differences in mean-levels were unlikely to emerge because of changes in how specific items related to the underlying construct, nor because of a different understanding of the item content, nor due to assigning different meaning to the rating scale. Importantly, this allowed for a fine-grained analysis of differences in civic engagement between mid- and late adolescence, between adolescents who experienced different historical times, and between developmental change from mid- to late adolescence in two cohorts born 10 years apart.

Although such a multidimensional approach has the advantage of studying different developmental trends in different components of adolescents' civic engagement, it must be noted that the conceptualization of civic engagement of this study is limited to the three components. To date, there is not yet a consensus for the specific components of civic engagement (e.g., Amnå, 2012; Wray-Lake et al., 2017a) and for each study, there would be more ways to express civic engagement that a single study could capture. Hence, the current findings must be interpreted with regard to the three components under investigation.

Differences in the development of civic engagement: the role of social change and normative developmental change

This study longitudinally examined two adolescent cohorts of the same age range in Switzerland, arguing that they were exposed to different societal environments (i.e., historical time; Twenge et al., 2012). This design helps disentangle developmental change from changes due to cohort effects (i.e., social change). When age is held constant, differences can be ascribed to differences between cohorts (Neundorf & Niemi, 2014). Our findings attest to both, the role of social change and normative developmental trends in the development of civic engagement from mid- to late adolescence.

Normative developmental change in civic engagement

The normative growth hypothesis (Wray-Lake et al., 2014) assumes that, as adolescents show gains in abstract thinking, reasoning skills, perspective taking, autonomy, and identity exploration when growing older, adolescent civic engagement and their precursors exhibit

continuous, gradual upward change. Based on this assumption and limited previous findings of a normative developmental increase in civic engagement (e.g., Grütter & Buchmann, 2021; Wray-Lake et al., 2014, 2017a; Zaff et al., 2011), we expected growth in all three components of civic engagement. The results only partially supported this assumption: While *informal helping* and *political efficacy beliefs* significantly increased in both cohorts from age 15 to 18, there was no developmental increase in *attitudes about social justice*. For *informal helping* and *political efficacy beliefs*, our findings provide additional evidence from a new context (i.e., Switzerland) that increases in these two components of civic engagement may increase in concert with normative developmental changes in other areas (see above) across adolescence. Concerning such normative precursors, more longitudinal research capturing a wider age range and focusing on specific developmental competencies of civic engagement could provide additional insights.

Regarding developmental changes in *attitudes about social justice*, findings have been inconsistent and may differ depending on the specific aspect under consideration, such as adolescents' understanding or reasoning about social inequalities. Across adolescence, individuals increasingly consider structural obstacles as barriers to social justice and develop a more complex understanding of poverty (Flanagan et al., 2014); however, important developmental steps may already occur at earlier phases of adolescence. For example, recent research shows that early adolescents perceived lower social inequalities and were less likely to prefer egalitarian societies as compared to mid- and late adolescents (Barreiro et al., 2019). As the current study was limited to adolescents' perceived importance of social justice, future work would benefit from a more systematic investigation of adolescents' developing understanding and evaluation of social justice from early to late adolescence.

Cohort differences in civic engagement in mid-adolescence

Based on an extensive literature review on changes in the social context from the 1990s to 2018, we derived specific assumptions on how these changes might be reflected in cohort differences in civic engagement. Regarding mid-adolescence, we assumed higher levels of attitudes about social justice, lower levels of informal helping, and either lower or higher levels of political efficacy beliefs in the more recent as compared to the earlier cohort.

Contrary to our expectations, there were no cohort differences with regard to *attitudes about social justice*. Youth were equally concerned with issues of social justice in 1991 and 2000, whereby this finding is in line with previous work pointing to stable political attitudes across generations of young adults (Jennings &

Stoker, 2004). However, it contrasts recent work, showing that adolescents in Switzerland increased their support for racial and ethnic diversity (Barber & Ross, 2018). It must be noted that, although the measure of the current study included fair and equal treatment of others, it also focused on a fair distribution of wealth. As previously explained, attitudes about social justice are itself a multifaceted construct (e.g., Ruck et al., 2019), whereby different aspects may show different patterns of change (Barber & Ross, 2018). Moreover, on the basis of low general inequality in Switzerland, recent changes in income distributions may be less salient to youth and may not result in changes of perceived inequality. Compared to other European countries, Swiss adults were less skeptical of inequalities (Niehues, 2014).

For *informal helping*, the mean levels were significantly lower in the more recent cohort. This finding aligned with our assumptions that social change toward postponement of adult roles and an increasingly individualized culture may have deflected adolescents in the more recent cohort from communal values, such as helping others (Golder et al., 2020). The changing developmental context for civic engagement in Switzerland has been pronounced in the realm of the changing structure of the life course with the postponement of adult roles in the private sphere of life in particular (i.e., marriage and childbirth) (Federal Statistical Office, 2020; Rausa, 2016).

Lastly, the significantly lower mean level of *political efficacy beliefs* in the more recent cohort supports the competing hypothesis stating that online disinformation due to the strong increase in social media consumption and concomitant decrease in information gathering from the classic and more credible media would undercut political transparency and thus erode political efficacy beliefs. Findings for media consumption trends (2010 to 2020) among 12- to 19-year-old adolescents in Switzerland confirm this pattern of media usage (Bernath et al., 2020). The alternative hypothesis that growing opportunities for participatory politics empowered by social media would give a boost to political efficacy beliefs of adolescents in the recent cohort is thus eclipsed.

Social change in the development of civic engagement during adolescence

A key element of the present study was to test whether *developmental change* in the three components of civic engagement from mid- to late adolescence was significantly different across cohorts. Thus, an important contribution of this study was to investigate whether social change would be associated with change patterns across later adolescence. Importantly, we assumed that the increase for attitudes about social justice would be *steeper*

in the more recent cohort, while it would be *flatter* for informal helping. Concerning political efficacy beliefs, the competing hypotheses assumed either steeper or flatter increase. While there were no significant differences for *attitudes about social justice* and not enough evidence for significant developmental differences in *political efficacy beliefs*, the findings supported the assumption of a *flatter* increase in *informal helping* in the more recent cohort.

Previous cohort comparisons on similar components like informal helping focused on the transition to adulthood, studying historical changes in the development of community service (Wray-Lake et al., 2017b) or membership in voluntary organizations and volunteer work (Jennings & Stoker, 2004). The findings of these two studies showed developmental declines for all cohorts from late adolescence to early adulthood, explaining this decline by opportunity structures provided by educational institutions, which no longer hold after completing education (Jennings & Stoker, 2004). Additionally, the findings were embedded in explanations of delayed transition into adulthood (Wray-Lake et al., 2017b).

The current study extends these scarce previous findings by focusing on an earlier developmental phase and by examining a form of volunteering more readily available to adolescents (i.e., informal helping). Focusing on adolescents, we assumed that *anticipated* changes in the timing of adult life roles would be associated with developmental changes in civic engagement. A potential explanation for the flatter increase in informal helping in the more recent cohort may thus stem from adolescents' anticipation of the prolonged period of adolescence when issues related to educational attainment or romantic relationships could be more salient in the more recent compared to the earlier cohort. In addition, a more individualized culture may promote increasing concern for the self, likely to manifest itself in a propensity toward self-centeredness. Such a shift may have lowered the importance of communal engagement during adolescence, thus resulting in a flatter increase in informal helping from mid- to late adolescence in the more recent cohort.

Taken together, these results suggest that developmental change in civic components across cohorts may be partly related to social change. However, developmental differences between cohorts applied to informal helping only. Future research may thus compare longer periods between cohorts to provide an integral picture on social change in civic development that contributes to developmental changes above and beyond normative age effects.

Demographic differences in civic engagement between cohorts

The covariates revealed some interesting differences between the two cohorts. First, while boys at age 15 expressed lower levels of informal helping in the earlier

cohort than girls, there was no such difference in the more recent cohort. Previous work (e.g., van der Graaff et al., 2018) pointed to gender differences in prosocial behavior and discussed gender-specific socialization processes that may foster prosocial development in girls (e.g., showing nurturance and caring). Thus, prosocial actions may be more consistent with gender stereotypes for girls than for boys. With regard to differences between cohorts, this trend may have become weaker as a consequence of increasing considerations for gender equality in European countries, including Switzerland (Barber & Ross, 2018).

In addition, adolescents with a migration background expressed higher levels in attitudes about social justice in the more recent cohort at age 15, while this was not the case for the earlier cohort. As these attitudes reflected desire for egalitarian treatment in this study, this finding aligns with recent work on critical consciousness, assuming that this component may be higher for marginalized adolescents (Heberle et al., 2020). As some groups with migration background face higher educational disadvantages in Switzerland (OECD, 2019a) and as the discourse on social justice has become more salient in Swiss schools (Biedermann et al., 2009), these adolescents' desire for social justice may have become more salient. Future research may shed more light on specific mechanisms that could explain these findings.

Limitations

As noted, this study cannot make any causal assumptions about how differences in the three civic engagement components relate to facets of social change; instead, we describe changes that might correlate with these differences. To pinpoint the role of social change aspects for cohort differences in the development of civic engagement across adolescence, future studies could travel the challenging avenue of cross-national comparison. This requires cross-country availability of reliable and valid measures of the social change features of interest. Selecting countries differing in these features and including appropriate controls for confounders, such studies would help understand how societal circumstances are related to civic engagement development in adolescence. They would be demanding, as comparable measures of civic engagement components across countries were required as well.

In addition to the macro-level changes, there may also be more proximal influences on adolescent civic development, not discussed in this work (e.g., peers, parents, teachers; e.g., Wray-Lake & Sloper, 2016). Thus, future work could investigate whether societal changes would be reflected in changes in the more proximal social context, ultimately affecting civic development. For example, changes in the political discourse and parent initiatives could influence whether schools adopt more

democratic and participatory school climates, positively predicting civic engagement (Torney-Purta et al., 2008). As outlined in the ecological theory by Bronfenbrenner (2005) and the relational developmental systems meta-theory (Lerner et al., 2014), adolescents are not simply exposed to their social context, but also seek different contexts and contribute to their changes. To analyze such complex dynamic systems and generalize findings across contexts, longitudinal data on civic development from multiple social contexts and cohorts are needed with assumptions on broad indicators of civic engagement in order to capture specific developments and changes.

Regarding the developmental change investigated, we only focused on mean-differences and thus cannot make assumptions about variation in civic development, whereby recent work highlighted different trajectories in civic development during adolescence (e.g., Wray-Lake & Shubert, 2019; Zaff et al., 2011). For testing such assumptions, we would need more than two measurements in each cohort, which would also enable us to look at different patterns of change in different cohorts. Relatedly, more cohorts would help control for potential confounders between cohort and period effects (i.e., specific events that may have transpired in these particular years and shaped adolescents' civic engagement). Lastly, our measure of informal helping only consisted of two items that were based on adolescents' self-reports. Here, our findings would need to be replicated with a more comprehensive measure, which ideally also included additional assessments from peers, parents, or teachers.

CONCLUSION

Taken together, this study advances developmental civic theory in adolescence by offering novel insights in how change in the social circumstances to which adolescents are exposed are associated with different levels of civic engagement in mid-adolescence and lower developmental increases in informal helping in the more recent cohort. Given that there were no developmental cohort differences in the other two components, we concluded that adolescent civic development may have a strong normative component.

While additional evidence is needed, the conclusions drawn from this study may help design intervention studies. To counteract the decreasing trend for informal helping from mid- to late adolescence in the more recent cohort, higher education may emphasize more prosocial and community values, which are often treated as a side-issue in order to focus on academic achievement. The results also provide additional areas for educational practice. As adolescents already express high levels of justice considerations for social inequality, a focus on this issue may not further strengthen this aspect but could rather build on the high level to discuss other complex social issues (e.g., climate change, discrimination).

Lastly, as the results of this study show lower levels of political efficacy, this aspect may be an important educational focus to further promote civic engagement, particularly in Swiss adolescents.

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REFERENCES

- Amná, E. (2012). How is civic engagement developed over time? Emerging answers from a multidisciplinary field. *Journal of Adolescence, 35*, 611–627. <https://doi.org/10.1016/j.adolescence.2012.04.011>
- Barber, C., & Ross, J. (2018). Cross-cohort changes in adolescents' civic attitudes from 1999 to 2009: An analysis of sixteen countries. *Child Indicators Research, 11*, 681–703. <https://doi.org/10.1007/s12187-017-9452-0>
- Barreiro, A., Arsenio, W. F., & Wainryb, C. (2019). Adolescents' conceptions of wealth and societal fairness amid extreme inequality: An Argentine sample. *Developmental Psychology, 55*, 498–508. <https://doi.org/10.1037/dev0000560>
- Baumert, J., Roeder, P. M., Gruehn, S., Heyn, S., Köller, O., Rimmel, R., Schnabel, K.-U., & Seipp, B. (1996). Bildungsverläufe und psychosoziale Entwicklung im Jugendalter (BIJU): Methoden und Anwendungen empirischer pädagogischer Forschung. In K.-P. Treumann, G. Neubauer, R. Möller, & J. Abel (Eds.), *Methoden und Anwendungen empirischer pädagogischer Forschung* (pp. 170–180). Waxmann.
- Beaumont, E. (2010). Political agency and empowerment: Pathways for developing a sense of political efficacy in young adults. In L. R. Sherrod, J. Torney-Purta, & C. A. Flanagan (Eds.), *Handbook of research on civic engagement in youth* (Vol. 84, pp. 525–558). John Wiley & Sons, Inc. <https://doi.org/10.1002/9780470767603.ch20>
- Bernath, J., Suter, L., Waller, G., Külling, C., Willems, I., & Süß, D. (2020). JAMES—Jugend, Aktivitäten, Medien—Erhebung Schweiz. Zürcher Hochschule für Angewandte Wissenschaften. https://www.zhaw.ch/storage/psychologie/upload/forschung/medie/psychologie/james/2020/ZHAW_Bericht_JAMES_2020_de.pdf
- Biedermann, H., Konstantinidou, T. L., Oser, F., & Widorski, D. (2009). ICCS 2009—internationale Studie zur politischen Bildung: Ergebnisse aus der Feldstudie in der Schweiz. DGfE Sektionstagung: Empirische Bildungsforschung, Koblenz/Landau.
- Bronfenbrenner, U. (2005). *Making human beings human: Bioecological perspectives on human development*. Sage Publications Ltd.
- Brown, T. A. (2015). CFA with equality constraints, multiple groups, and mean structures. In T. A. Brown (Ed.), *Confirmatory factor analysis for applied research* (pp. 236–319). The Guilford Press.
- Buchmann, M., & Eisner, M. (1997). The transition from the utilitarian to the expressive self: 1900–1992. *Poetics, 25*, 157–175. [https://doi.org/10.1016/S0304-422X\(97\)00014-4](https://doi.org/10.1016/S0304-422X(97)00014-4)
- Buchmann, M., & Kriesi, I. (2011). Transition to adulthood in Europe. *Annual Review of Sociology, 37*, 481–503. <https://doi.org/10.1146/annurev-soc-081309-150212>
- Chen, F. F. (2007). Sensitivity of goodness of fit indexes to lack of measurement invariance. *Structural Equation Modeling: A Multidisciplinary Journal, 14*, 464–504. <https://doi.org/10.1080/10705510701301834>
- Chrysochoou, X., & Barrett, M. (2017). Civic and political engagement in youth: Findings and prospects. *Zeitschrift Für Psychologie, 225*, 291–330. <https://doi.org/10.1027/2151-2604/a000315>
- Cohen, C. J., Kahne, J., Bowyer, B., Middaugh, E., & Rogowski, J. (2012). *Participatory politics: New media and youth political action*. Mills College School of Education.
- Federal Statistical Office. (2019). Wie geht es den Personen mit Migrationshintergrund in der Schweiz? Neuchâtel, <https://www.bfs.admin.ch/bfs/de/home/statistiken/kataloge-datenbanken/publikationen.assetdetail.10307945.html>
- Federal Statistical Office. (2020). Durchschnittsalter der verheirateten Frauen bei Geburt des ersten Kindes nach Staatsangehörigkeit. Neuchâtel, <https://www.bfs.admin.ch/bfs/de/home/statistiken/bevoelkerung/geburten-todesfaelle/fruchtbarkeit.assetdetail.14347670.html>
- Federal Statistical Office. (2021). Bilan de la population résidente permanente étrangère, 1951 à 2020. Neuchâtel, <https://www.bfs.admin.ch/bfs/de/home/statistiken/bevoelkerung/stand-entwicklung/bevoelkerung.assetdetail.18344339.html>
- Finlay, A. K., & Flanagan, C. (2013). Adolescents' civic engagement and alcohol use: Longitudinal evidence for patterns of engagement and use in the adult lives of a British cohort. *Journal of Adolescence, 36*, 435–446. <https://doi.org/10.1016/j.adolescence.2013.01.006>
- Flanagan, C. A., Kim, T., Pykett, A., Finlay, A., Galloway, E. E., & Pancer, M. (2014). Adolescents' theories about economic inequality: Why are some people poor while others are rich? *Developmental Psychology, 50*, 2512–2525. <https://doi.org/10.1037/a0037934>
- Flanagan, C., & Levine, P. (2010). Civic engagement and the transition to adulthood. *The Future of Children, 20*, 159–179. <https://doi.org/10.1353/foc.0.0043>
- Flanagan, C., Levine, P., & Settersten, R. (2009). *Civic engagement and the changing transition to adulthood*. Boston: CIRCLE report and College for Citizenship and Public Service, Tufts University.
- Geers, S. (2020). News consumption across media platforms and content: A typology of young news users. *Public Opinion Quarterly, 84*, 332–354. <https://doi.org/10.1093/poq/nfaa010>
- Giddens, A. (1991). *Modernity and self-identity: Self and society in the late modern age*. Stanford University Press.
- Gille, M., Sardei-Biermann, S., Gaiser, W., & de Rijke, J. (2006). *Jugendliche und junge Erwachsene in Deutschland: Lebensverhältnisse, Werte und gesellschaftliche Beteiligung 12- bis 29-Jähriger* (1st ed.). Schriften des Deutschen Jugendinstituts, Jugendsurvey 3. VS Verlag für Sozialwissenschaften.
- Golder, L., Jans, C., Burgunder, T. H., Rötheli, V., Bohn, D., & Rey, R. (2020). CS Jugendbarometer 2020: Die politisierte Jugend bekennt Farbe (pp. 1–37). gfs.bern. https://www.gfsbern.ch/wp-content/uploads/2020/09/203116_cs_jugendbarometer_2020_gelayoutet.pdf
- Greenfield, P. M. (2013). The changing psychology of culture from 1800 through 2000. *Psychological Science, 24*, 1722–1731. <https://doi.org/10.1177/0956797613479387>
- Grob, U., & Maag Merki, K. (2001). *Überfachliche Kompetenzen: Theoretische Grundlegung und empirische Erprobung eines Indikatorensystems*. Lang.
- Grütter, J., & Buchmann, M. (2021). Civic competencies during adolescence: Longitudinal associations with sympathy in childhood. *Journal of Youth and Adolescence, 50*, 674–692. <https://doi.org/10.1007/s10964-020-01240-y>
- Heberle, A. E., Rapa, L. J., & Farago, F. (2020). Critical consciousness in children and adolescents: A systematic review, critical assessment, and recommendations for future research. *Psychological Bulletin, 146*, 525–551. <https://doi.org/10.1037/bul0000230>
- Hoskins, B., Saisana, M., & Villalba, C. M. H. (2015). Civic competence of youth in Europe: Measuring cross national

- variation through the creation of a composite indicator. *Social Indicators Research*, 123, 431–457. <https://doi.org/10.1007/s11205-014-0746-z>
- Humprecht, E., Esser, F., & Van Aelst, P. (2020). Resilience to online disinformation: A framework for cross-national comparative research. *International Journal of Press/Politics*, 25, 493–516. <https://doi.org/10.1177/1940161219900126>
- Jennings, M. K., & Stoker, L. (2004). Social trust and civic engagement across time and generations. *Acta Politica*, 39, 342–379. <https://doi.org/10.1057/palgrave.ap.5500077>
- Jennings, M. K., & Zeitner, V. (2003). Internet use and civic engagement: A longitudinal analysis. *Public Opinion Quarterly*, 67, 311–334. <https://doi.org/10.1086/376947>
- Kline, R. B. (2011). *Principles and practice of structural equation modeling*, 3rd ed. Guilford Press.
- Lerner, R. M., Wang, J., Champine, R. B., Warren, D. J. A., & Erickson, K. (2014). Development of civic engagement: Theoretical and methodological issues. *International Journal of Developmental Science*, 8, 69–79. <https://doi.org/10.3233/DEV-141310>
- Little, T. D. (2013). *Longitudinal structural equation modeling. Methodology in the social sciences*. Guilford Press.
- McArdle, J. J. (2009). Latent variable modeling of differences and changes with longitudinal data. *Annual Reviews*, 60, 577–605. <https://doi.org/10.1146/annurev.psych.60.110707.163612>
- Metzger, A., Alvis, L. M., Oosterhoff, B., Babskie, E., Syvertsen, A., & Wray-Lake, L. (2018). The intersection of emotional and sociocognitive competencies with civic engagement in middle childhood and adolescence. *Journal of Youth and Adolescence*, 47, 1663–1683. <https://doi.org/10.1007/s10964-018-0842-5>
- Muthén, L. K., & Muthén, B. O. (2017). *Mplus user's guide: Statistical analysis with latent variables*, 8th ed. Muthén & Muthén.
- Neufeind, M., Jiranek, P., & Wehner, T. (2014). Beyond skills and structure: Justice dispositions as antecedents of young citizens' volunteering and political participation. *Journal of Community and Applied Social Psychology*, 24, 278–295. <https://doi.org/10.1002/casp.2166>
- Neundorf, A., & Niemi, R. G. (2014). Beyond political socialization: New approaches to age, period, cohort analysis. *Electoral Studies*, 33, 1–6. <https://doi.org/10.1016/j.electstud.2013.06.012>
- Niehuus, J. (2014). Subjective perceptions of inequality and redistributive preferences: An international comparison. http://www.relooney.com/NS3040/000_New_1519.pdf
- OECD (2019a). *The road to integration: Education and migration (OECD Reviews of Migrant Education)*. OECD Publishing. <https://doi.org/10.1787/d8ceec5d-en>
- OECD. (2019b). *Under pressure: The squeezed middle class*. OECD Publishing. <https://doi.org/10.1787/689afed1-en>
- Pampel, F. (2011). Cohort change, diffusion, and support for gender egalitarianism in cross-national perspective. *Demographic Research*, 25, 667–694. <https://doi.org/10.4054/DemRes.2011.25.21>
- Putnick, D. L., & Bornstein, M. H. (2016). Measurement invariance conventions and reporting: The state of the art and future directions for psychological research. *Developmental Review*, 41, 71–90. <https://doi.org/10.1016/j.dr.2016.06.004>
- Rausa, F. (2016, December). Die Jungen in der Schweiz. *Demos Newsletter*, 2, 1–12. <https://www.bfs.admin.ch/bfs/en/home/statistics/population.assetdetail.1600865.html>
- Ruck, M. D., Mistry, R. S., & Flanagan, C. A. (2019). Children's and adolescents' understanding and experiences of economic inequality: An introduction to the special section. *Developmental Psychology*, 55, 449. <https://doi.org/10.1037/dev0000694>
- Satorra, A., & Bentler, P. M. (2010). Ensuring positiveness of the scaled difference chi-square test statistic. *Psychometrika*, 75, 243–248. <https://doi.org/10.1007/s11336-009-9135-y>
- Schulz, W., Ainley, J., Fraillon, J., Kerr, D., & Losito, B. (2010). *ICCS 2009 international report: Civic knowledge, attitudes, and engagement among lower-secondary school students in 38 countries*. International Association for the Evaluation of Educational Achievement.
- Schwaiger, L. (2020). Mediale Lebenswelten junger Schweizerinnen und Schweizer. In fög—Forschungszentrum Öffentlichkeit und Gesellschaft/Universität Zürich (Eds.). *Jahrbuch Qualität der Medien 2020* (pp. 89–100). Schwabe Verlag.
- Schwaiger, L., & Oehmer, F. (2020). Einstellungen gegenüber Medien. In Forschungszentrum Öffentlichkeit und Gesellschaft/Universität Zürich (Eds.). *Jahrbuch Qualität der Medien 2020* (pp. 145–151). Schwabe Verlag.
- Sherrod, L. R. (2015). Recognizing civic engagement as a critical domain of human development. *Research in Human Development*, 12, 312–318. <https://doi.org/10.1080/15427609.2015.1068040>
- Sherrod, L. R., & Lauckhardt, J. (2009). The development of citizenship. In R. M. Lerner, & L. Steinberg (Eds.), *Handbook of adolescent psychology: Contextual influences on adolescent development* (Vol. 2, 3rd ed., pp. 372–408). John Wiley & Sons.
- Syvertsen, A. K., Wray-Lake, L., Flanagan, C. A., Wayne Osgood, D., & Briddell, L. (2011). Thirty-year trends in U.S. adolescents' civic engagement: A story of changing participation and educational differences. *Journal of Research on Adolescence*, 21, 586–594. <https://doi.org/10.1111/j.1532-7795.2010.00706.x>
- Taylor, C. (1992). *The ethics of authenticity*. Harvard University Press.
- Torney-Purta, J., Cabrera, J. C., Roohr, K. C., Liu, O. L., & Rios, J. A. (2015). Assessing civic competency and engagement in higher education: Research background, frameworks, and directions for next-generation assessment. *ETS Research Report Series*, 2015, 1–48. <https://doi.org/10.1002/ets2.12081>
- Torney-Purta, J., Wilkenfeld, B., & Barber, C. (2008). How adolescents in 27 countries understand, support, and practice human rights. *Journal of Social Issues*, 64(4), 857–880. <https://doi.org/10.1111/j.1540-4560.2008.00592.x>
- Twenge, J. M., Campbell, W. K., & Carter, N. T. (2014). Declines in trust in others and confidence in institutions among American adults and late adolescents, 1972–2012. *Psychological Science*, 25, 1914–1923. <https://doi.org/10.1177/0956797614545133>
- Twenge, J. M., Campbell, W. K., & Freeman, E. C. (2012). Generational differences in young adults' life goals, concern for others, and civic orientation, 1966–2009. *Journal of Personality and Social Psychology*, 102, 1045–1062. <https://doi.org/10.1037/a0027408>
- Twenge, J. M., & Park, H. (2019). The decline in adult activities among US adolescents, 1976–2016. *Child Development*, 90, 638–654. <https://doi.org/10.1111/cdev.12930>
- Van der Graaff, J., Carlo, G., Crocetti, E., Koot, H. M., & Branje, S. (2018). Prosocial behavior in adolescence: Gender differences in development and links with empathy. *Journal of Youth Adolescence*, 47, 1086–1099. <https://doi.org/10.1007/s10964-017-0786-1>
- Wray-Lake, L., Metzger, A., & Syvertsen, A. K. (2017a). Testing multidimensional models of youth civic engagement: Model comparisons, measurement invariance, and age differences. *Applied Developmental Science*, 21, 266–284. <https://doi.org/10.1080/10888691.2016.1205495>
- Wray-Lake, L., Rote, W. M., Benavides, C. M., & Victorino, C. (2014). Examining developmental transitions in civic engagement across adolescence: Evidence from a national U.S. sample. *International Journal of Developmental Science*, 8, 95–104. <https://doi.org/10.3233/dev-14142>
- Wray-Lake, L., Schulenberg, J., Keyes, K. M., & Shubert, J. (2017b). The developmental course of community service across the transition to adulthood in a national U.S. sample. *Developmental Psychology*, 53, 2397–2408. <https://doi.org/10.1037/dev0000377>
- Wray-Lake, L., & Shubert, J. (2019). Understanding stability and change in civic engagement across adolescence: A typology approach. *Developmental Psychology*, 55, 2169–2180. <https://doi.org/10.1037/dev0000772>
- Wray-Lake, L., & Sloper, M. A. (2016). Investigating general and specific links from adolescents' perceptions of ecological assets to their civic actions. *Applied Developmental Science*, 20, 250–266. <https://doi.org/10.1080/10888691.2015.1114888>

Zaff, J. F., Kawashima-Ginsberg, K., Lin, E. S., Lamb, M., Balsano, A., & Lerner, R. M. (2011). Developmental trajectories of civic engagement across adolescence: Disaggregation of an integrated construct. *Journal of Adolescence*, *34*, 1207–1220. <https://doi.org/10.1016/j.adolescence.2011.07.005>

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