Learning from the Past: How History Education Shapes Support for Extreme Ideology

Luca Braghieri and Sarah Eichmeyer*

October 9, 2024

[Click here for the most recent version]

Abstract

Can teaching the history of authoritarian regimes built on extreme ideology lastingly reduce support for those ideologies? We examine this question by leveraging a natural experiment in a large German state where the senior high school history curriculum exogenously alternated covering, across cohorts, the communist German Democratic Republic and fascist Nazi Germany. Survey data collected around twelve years post-graduation from over 2,000 former students reveals that studying the GDR rather than the Nazi regime increases knowledge about the GDR (by 0.19 sd units) and reduces support for extreme left-wing ideology (by 0.10 sd units). Such treatment does not increase support for extreme right-wing ideology, except in more right-leaning regions.

1. Introduction

A growing body of research shows that political propaganda can be effective in spreading extremist ideologies (Adena et al., 2015; Yanagizawa-Drott, 2014; Selb and Munzert, 2018; Wang, 2021). Such ideologies can undermine the foundations of democracy and, in the most severe cases, precipitate the rise of authoritarian and totalitarian regimes (Fitzpatrick, 2001; Shirer, 1960).

How can democratic societies equip citizens with the means to critically evaluate the benefits and drawbacks of extreme ideologies? A long-standing theory suggests that education might play a crucial role in this process (Dahl, 1971). The teaching of history, in particular, is often touted as a promising way of ensuring that citizens be aware of the dangers of political extremism: by exposing the atrocities perpetrated by historical regimes committed to extreme ideologies, a history education might help citizens become better judges of the possible pitfalls of extremist political programs (Carl, 2009). In the words of philosopher George Santayana: "Those who cannot remember the past are condemned to repeat it" (Santayana, 1905). Despite the intuitive appeal of this argument, it is not clear whether and the extent to which history education can have a lasting effect on support for extreme ideology, as students might simply forget or fail to internalize the lessons of history.[1] The absence of credible empirical evidence on the topic hampers society's ability to make informed choices in education policy, for instance about the balance between humanities and STEM subjects in the curriculum.

In this paper, we provide direct evidence that in-depth learning about an authoritarian regime in high school history can lastingly reduce support for extremist political views aligned with the ideology of that regime. Our empirical strategy couples quasi-experimental variation in the topics covered in the last two years of the high school history curriculum in the German state of Lower Saxony with data from a survey of our design administered to more than 2000 respondents in 2023-2024 ($\sim$ twelve years after high school graduation).

---

[1]When synthesizing the empirical literature on the recent rise in support for populist radical parties, many of which are built on extreme ideology, Guriev and Papaioannou voice a related concern on the empirical front by stating: "[...] most research on the causes of populism focuses on factors that promote it; much less work exists on what prevents or slows its rise. [...] Does [...] education protect societies from populism?" (Guriev and Papaioannou, 2022).

1

The German state of Lower Saxony offers an ideal setting to address our research question. As part of a reform to centralize the final high school exam (Abitur), the education ministry in Lower Saxony decided that the topics covered by the history curriculum in the last two years of high school – referred to henceforth as senior high school – would rotate on a cohort-to-cohort basis.[2] The rotation in topics was such that the 2011 and 2012 graduating cohorts covered the history of the German Democratic Republic (GDR) but not that of the National Socialist (Nazi) regime, whereas the two cohorts before (2009 and 2010) and the two cohorts after (2013 and 2014) covered the history of the Nazi regime but not that of the GDR. The rotation in topics in senior high school history provides quasi-experimental variation in coverage of a left-wing vs. right-wing historical authoritarian regime that we can leverage for causal identification.

The "sandwich" rotation scheme, in which the two GDR-history cohorts are wedged in the middle of four Nazi-history cohorts, motivates our baseline empirical specification to estimate causal effects. Specifically, we employ a simple OLS model that regresses our outcomes of interest on a dummy for belonging to one of the GDR-history cohorts. The identifying assumption is that absent the rotation in history topics, the outcomes of individuals in the 2011-2012 graduating cohorts would not have deviated from the linear time trend established by the 2009-2010 and 2013-2014 graduating cohorts. The main threat to identification involves non-smooth time trends in political attitudes across cohorts, for instance due to cohort-specific common shocks that are unrelated to the topics covered in the last two years of high school history. We address such threat to identification by employing, as a robustness check, a difference-in-differences specification on a sample of respondents that also includes individuals from west-German states other than Lower Saxony.

We document three main results. First, we report effects on knowledge, measured by respondents' scores on two knowledge quizzes: one about the GDR and one about the Nazi regime. We find that studying the GDR rather than the Nazi regime in senior high school leads to a lasting increase in knowledge about the GDR regime, while only marginally

---

[2]For instance, the cohort graduating high school in 2012 was exposed to three topics in the last two years of high school history: the German Democratic Republic, Europe in the 15th century, and U.S. industrialization. Conversely, the cohort graduating in 2013 covered: the 1929 world economic crisis, Spanish colonialism, and Nazi Germany.

decreasing knowledge about the Nazi regime. Specifically, we find that, compared to the counterfactual of studying the Nazi regime in senior high school, studying the GDR regime induces individuals in the 2011 and 2012 graduating cohorts to answer, on average, 0.33 more questions correctly (out of 7) on the GDR quiz. This represents a statistically significant increase of around 7% relative to the mean, or 0.19 sd units. Conversely, the same treatment induces students to know only marginally less (-2%) about the history of the Nazi regime, an effect that is statistically indistinguishable from zero. This result is consistent with virtually all students studying the Nazi regime, but not the GDR regime, already in junior high school.

Our second main result focuses on support for extreme left-wing and extreme right-wing ideology. We measure each outcome through a pre-registered index that captures agreement with key pillars of each ideology, as well as support for the furthest right-wing or left-wing party in Germany. We find that, on average, covering the GDR regime rather than the Nazi regime in senior high school decreases support for extreme left-wing ideology by 0.10 standard deviation units. Conversely, we find that, on average, the effects on extreme right-wing ideology are statistically indistinguishable from zero.

Our third main result is that the null average effect on support for extreme right-wing ideology masks important heterogeneity. Specifically, foregoing coverage of Nazi Germany in senior high school and, instead, studying the GDR regime leads to relatively greater support for extreme right-wing ideology for respondents who grew up in regions with relatively higher vote shares for the extreme right-wing party AfD. This result is consistent with a degree of substitutability, within the production function of extreme ideology, between history education and the degree of inoculation that one naturally receives as a function of the political leanings in one's childhood environment. Specifically, if a person's formative adolescent environment does not provide much inoculation against an extreme ideology, then history education can partly compensate.

Our last piece of analysis aims to dig deeper into some of the mechanisms behind our results. Specifically, the effects we find on our indices of support for extreme ideology could be driven by knowledge of the history of the GDR and Nazi regimes, especially an understanding of the possible negative consequences of implementing extreme political programs, or by propaganda, which, following the Oxford English Dictionary, we define as "information,

especially of a biased or misleading nature, used to promote a political cause or point of view" (Oxford, 2024). We present evidence that our results operate, at least in part, through knowledge. First, we document strong negative correlations between knowledge of the GDR (NS) regimes and support for extreme left-wing (right-wing) ideology. Second, we estimate individual-level treatment effects using causal forests and show that the estimated effects on knowledge and ideology are strongly negatively correlated at the individual level. This is consistent with the idea that increased knowledge about the GDR (Nazi) regime mitigates support for extreme left-wing (right-wing) ideology. The third piece of evidence rests on the following logic: if our negative result on support for extreme left-wing ideology was primarily driven by propaganda, we would expect such propaganda to be more zealously conducted by right-wing teachers than by left-wing teachers. In contrast, we find that the effects of covering the GDR regime as opposed to the Nazi regime in senior high school are not significantly heterogeneous by respondents' perceptions of their high school history teacher's political leaning.[3]

Overall, the main policy implication that emerges from this paper is that teaching the history of an authoritarian regime founded on extremist ideology is at least partially effective at inoculating people against the lure of that ideology. Furthermore, the heterogeneity results suggest that regions with a relatively higher baseline level of support for an extreme ideology require more extensive history instruction to achieve the same degree of inoculation as other regions. Our results also inform the debate about the relative amount of time that the school curriculum should devote to the humanities and to STEM subjects. Specifically, advocates for the humanities often argue that subjects like history play a crucial role in forming well-rounded, informed citizens who can participate constructively in the democratic process (American Academy of Arts & Sciences, 2013; Nussbaum, 2010). We lend empirical support to this claim by showing that education in history can reduce support for extreme ideology and that, as a consequence, it might have a stabilizing effect on democracy.

This paper contributes to the literature on the determinants of political attitudes (Adena et al., 2015; Bai, Jia and Wang, 2023; DellaVigna et al., 2014; Durante, Pinotti and Tesei, 2019;

---

[3]Of course, proxying teachers' political leaning by the respondents' perceptions thereof is imperfect because one's curriculum might affect such perceptions.

Enikolopov, Petrova and Zhuravskaya, 2011; Grosfeld et al., 2024; Guriev and Papaioannou, 2022; Wang, 2021, and more). To the best of our knowledge, ours is the first paper to provide causal evidence on the role of humanities education in shaping attitudes away from extreme ideology. The closest paper to ours is the one by Cantoni et al. (2017). By leveraging the staggered introduction across Chinese provinces of a reform to the high school politics curriculum designed by the Chinese Communist Party with explicit propagandist intents, the authors find that the reform was successful in shaping students' attitudes in favor of the regime. Our paper complements the work of Cantoni et al. (2017) in three main ways. First, Cantoni et al. (2017) study short-to-medium term effects ($\sim$ 4 years after high school graduation), whereas we study medium-to-long term effects ($\sim$ 12 years after high school graduation). Second, our results yield unique insights into the production function of ideology, especially concerning how schooling and the political leaning in one's childhood environment interact in that production function. Third, Cantoni et al. (2017) study the effects of an avowedly propagandist curriculum in an authoritarian country (China), whereas we study the effects of an avowedly non-propagandist curriculum in a liberal democracy (Germany).[4,5] The stark differences in curriculum content and political economy context render extrapolation of the findings from the authoritarian setting to that of a liberal democracy challenging. Specifically, i) from a theoretical standpoint, the persuasiveness of the education curriculum depends crucially on the political economy context;[6] ii) a politically motivated curriculum reform might be particularly effective at shaping attitudes when, as in the case of China, it is part of an efficient and multi-pronged propagandist strategy that operates on the backdrop of a powerful censorship apparatus.

---

[4]According to the main author of the politics textbook that was adopted in Chinese high schools after the reform, the textbook was designed to "unequivocally uphold the correct political and ideological point of view" (Cantoni et al., 2017). Conversely, the German education guidelines, set forth in the Beutelsbach Consensus, contain, as one of their three core principles, an "indoctrination ban." Such principle explicitly holds that "it is not permissible to catch students off-guard, by whatever means, for the sake of imparting desirable opinions" (Reinhardt, 2016).

[5]In line with the explicit goals of the two reforms, our text analysis of the content and tone of the Chinese textbooks considered in Cantoni et al. (2017) and of the German textbooks considered in this paper reveals that the former are highly propagandist, whereas the latter are much more neutral. See Appendix D for details.

[6]For instance, the credibility of messages is determined by the receiver's beliefs about the sender's incentives (Crawford and Sobel, 1982), and the incentives of authoritarian regimes and liberal democracies when choosing the education curriculum are starkly different. See, for instance, Testa (2018) for a model that describes the unique incentives of authoritarian regimes when choosing curriculum content.

This paper also relates to the broader literature on the effects of and returns to education (see Hanushek, Machin and Woessmann, 2023*a,b*, for reviews). Education has been shown to affect beliefs about science and career choices (Arold, 2024), social preferences (Girardi et al., 2024); national and regional identity (Clots-Figueras and Masella, 2013; Bandiera et al., 2019; Blanc and Kubo, 2024; Carlitz et al., 2024; Fouka, 2020), economic development (Cantoni and Yuchtman, 2013), religiosity (Arold, Woessmann and Zierow, 2023; Bazzi, Hilmy and Marx, 2023), financial decision-making (Bernheim, Garrett and Maki, 2001), and more (Ash, Chen and Naidu, 2023; Costa-Font, Garcia-Hombrados and Nicinska, 2024; Fuchs-Schuendeln and Masella, 2016). We contribute to the literature on the effects of and returns to education by highlighting an important political economy externality of education, namely the fact that the teaching of history can reduce support for extremist ideologies and, thus, be a stabilizing force for democracies. A separate contribution to this literature is to document the fact that knowledge of the topics covered in high school history is retained many years (~ 12) after high school graduation.

The rest of the paper is organized as follows: Section 2 sets the stage by providing information about the curriculum reform that we exploit for identification, Section 3 describes our data collection and survey design, Section 4 introduces our empirical strategy and details our identifying assumptions, Section 5 presents the results and robustness checks, Section 6 discusses mechanisms, and Section 7 concludes.

2. Setting

We exploit a natural experiment that took place in the German state of Lower Saxony. With a population of 8 million, Lower Saxony is the 4th largest state in the country, and, being located in the northwest of Germany, it was never part of the GDR. Politically, Lower Saxony is broadly representative of other western German states, leaning slightly left-of-center (see Figure A.1 for party vote shares in the 2021 national elections).

2.1 Reform and Rotation Scheme

A key feature of the German education system is that education is administered at the state rather than the federal level; thus, states have extensive freedom to implement idiosyncratic reforms. In 2006, Lower Saxony implemented one such reform to centralize its high school exit examination (Abitur). Specifically, before the reform, the final high school exam varied across schools in Lower Saxony; conversely, ever since the reform went into effect, all graduating students from Lower Saxony are given the same final exam written by the Lower Saxony Ministry of Education. The exam covers material taught in the last two years of high school and is highly relevant for university enrollment. Specifically, the Abitur exam accounts for one-third of a student's high school GPA, which, in turn, is the primary and often sole criterion used for university admissions.

As part of the reform, the education ministry in Lower Saxony decided that the topics covered in the senior high school history curriculum would rotate on a cohort-to-cohort basis. Such rotation scheme is the natural experiment that we exploit for identification purposes. In private communication, a leading member of the committee that developed the new history curriculum explained to us that the rotation scheme was chosen for two main reasons. First, because it allows for the coverage of a wide variety of historical topics, albeit across rather than within graduating cohorts.[7] Second, it limited the burden on the committee to draft new high school exit exam questions on the same topics year after year.

As part of the rotation scheme, every high school graduating cohort was assigned 3 historical topics that would appear in the final high school exam. Each topic was to be covered in one of the semesters (~ 4.5 months) leading up to the exam.[8] Our recruitment efforts focus on the six graduating cohorts between 2009 and 2014, all of which were subject to the rotation scheme implemented after the reform.

As shown in Table 1, which displays the topics covered by each of the cohorts, the rotation

---

[7]For instance, the committee wanted to avoid a situation in which, "all German educated people were arbitrarily familiar with China and no one knew anything about India, the Islamic Middle East, sub-Saharan Africa or Japan."

[8]A separate reform, implemented for cohorts graduating in 2012 or later, reduced the duration of schooling from 13 to 12 years. In the robustness section, we demonstrate that our results do not change when controlling for whether a respondent was in the 12 or 13 years of schooling regime.

in topics was such that the 2011 and 2012 graduating cohorts covered the extreme left-wing communist regime of the German Democratic Republic but not the extreme right-wing fascist regime of National Socialism, whereas the two cohorts before and the two cohorts afterward covered the Nazi regime but not the GDR regime. Although students studied additional topics alongside either the Nazi or GDR regime, such variation should not be of significant concern because the outcomes we measure are specifically designed to capture attitudes towards the extreme right-wing and left-wing ideologies that underpinned the Nazi and GDR regimes.[9,10]

It is worthwhile highlighting two additional features of the education system in Lower Saxony that can help with the interpretation of our results. First, the curriculum before senior high school did not rotate across cohorts. Second, Lower Saxony, just like all other 15 states in Germany, features binding curriculum guidelines that mandate covering the history of Nazi Germany before senior high school, in 9th or 10th grade (Standing Conference of Ministers of Education and Culture in Germany, 2005). Thus, we should expect virtually every person in our sample to have been exposed to the history of National Socialism before senior high school.

2.2   Curriculum Content

Since the exams were designed and administered centrally, and since the topics rotated annually, the education ministry in Lower Saxony needed to provide detailed guidelines to history teachers about the specific content to cover for each given cohort. This information is publicly available in an archive maintained by the ministry (Ministry of Education and Culture of Lower Saxony, 2024), which we reproduce in Appendix C.1. In short, as far as the Nazi regime is concerned, teachers were required to cover the ideological roots of National

---

[9]Starting in 2013, teachers could select, in each semester, an additional topic out of a list of eight. Such topics, however, did not appear on the final high school exam. Three out of twenty-four bonus topics related to the history of the GDR. Thus, some members of the 2013-2014 graduating cohorts might have had some limited exposure to the history of the GDR in senior high school. We can assess the degree to which that is the case by studying the topics that survey respondents recall covering in the last two years of high school as shown in Section 5.1.

[10]The rotation scheme was also implemented in related subjects such as German literature and, to a lesser extent, politics-economics. In both cases, the rotation in topics appears orthogonal to the variation related to extreme left-wing and right-wing ideology we study in this paper. See Appendix C.4 for a detailed description of the topics rotation in these other subjects.

Socialism (antisemitism, Social Darwinism, anti-parliamentarism, and nationalism), the establishment of the dictatorship (e.g. the "enabling act" of 1933 and the "Führer principle"), and the themes of collaboration, resistance, and persecution/genocide of European Jews. As far as the GDR regime is concerned, teachers were required to cover the GDR's early period (suppression of democratic movement in 1953, construction of the wall, and societal consequences), the crisis of the 1980s (demise of the economy, state repression of opposition, and the SED's response to Perestroika), and the peaceful revolution of 1989.[11] It is unlikely that teachers strayed substantially from the ministry's guidelines because the final high school exam featured only the topics that were explicitly mentioned in the guidelines. We verified that this is indeed the case by collecting the exams administered to the graduating cohorts from 2009 to 2014 (see Appendix C.3).

We provide further details about the content of the curricula covering the GDR and Nazi regimes by analyzing the textbooks that students in our sample were taught from and used when preparing their final high school exam. Specifically, the largest educational publishing company in Germany – Ernst Klett Verlag – produced textbooks tailored to the exact curriculum guidelines set forth by the Lower Saxony Ministry of Education. Klett's effort yielded a $\sim$ 70-page-long textbook for each topic listed in Table 1. We digitized the textbooks on the GDR and Nazi Germany and provide a summary of each chapter in Appendix C.2. We also created a database with the characteristics of each of the textbooks' exhibits (texts, photos, graphics, etc.). We find that, of all the textual exhibits (henceforth "articles"), 51% is historical source material (such as historical newspaper articles, letters, and transcripts of speeches) that dates to before or during a given regime's period of existence (+ five years), and 35% constitutes editorial pieces from the textbooks' editing historians.[12]

As shown in Appendix D, text analysis reveals that the editorial pieces in the German textbooks exhibit a largely factual and neutral tone. Such tone reflects the Beutelsbach Consensus, a set of guidelines that have served as a foundation for education in history and politics in Germany since 1976. According to the Consensus, education should not involve political indoctrination (Reinhardt, 2016). In fact, the first of the three core principles of the

---

[11]For a brief summary of the key ideological differences between the GDR and Nazi regimes, see Appendix G.
[12]The remainder constitutes non-editorial pieces from more than five years after the end of the regime.

consensus is known as the "indoctrination ban," which states that "It is not permissible to catch students off-guard, by whatever means, for the sake of imparting desirable opinions, thereby hindering them from 'forming an independent judgment.' This is the difference between political education and indoctrination. Indoctrination is incompatible with the role of a teacher in a democratic society and the generally accepted objective of making students capable of independent responsibility and maturity (Mündigkeit)."[13]

The Beutelsbach Consensus stands in stark contrast with the avowedly propagandist Chinese reform analyzed by Cantoni et al. (2017), where the stated objective of the author of the politics textbook adopted after the reform was to "unequivocally uphold the correct political and ideological point of view" (Cantoni et al., 2017). In line with that, a text-analysis-based comparison of the Chinese textbooks from Cantoni et al. (2017) and the German textbooks used in this paper reveals a much stronger propagandist orientation in the Chinese textbooks. Specifically, as shown in Appendix D, GPT 4o assigns the German textbooks a propaganda score of 10 out of 100 and the Chinese textbooks from Cantoni et al. (2017) a propaganda score of 85 out of 100.[14]

3. Data

The main dataset we employ to address our research question consists of a survey of our design administered to over 2,000 people in the second half of 2023 and the first half of 2024. In this section, we describe our recruitment strategy, the structure of the survey, how we construct our outcome variables, and the characteristics of the recruited sample. All these elements were pre-specified in a pre-analysis plan (EGAP registry ID 20230713AA).[15] We describe any deviations from the pre-analysis plan in Appendix J.

---

[13]Translation by Reinhardt (2016).

[14]See Appendix D for the detailed text analysis.

[15]The pre-analysis plan is available at https://osf.io/dg9v6/

10

3.1   Recruitment

Our recruitment efforts targeted individuals who graduated from high school in Lower Saxony between the years of 2009 and 2014.[16] We employed four separate channels to recruit participants: letters in the mail, advertisements on social media, emails through high school alumni networks, and invitations through a survey panel provider. The bulk of our sample (78%) was recruited through letters in the mail; the remainder of our sample is evenly split between the other three recruitment channels.[17] Together, the four strategies allowed us to obtain a sample of 2,146 individuals, which corresponds to 83% of the sample we pre-specified in our pre-analysis plan.[18] Additional details about our recruitment strategy can be found in Appendix H.

3.2   Survey Design

After consenting to participate in our survey, participants were first asked detailed questions eliciting their support for extreme left-wing and right-wing ideology, and, second, questions eliciting their factual knowledge of the history of National Socialism and the GDR. Next, we asked participants whether they recalled the topics they covered in the last two years of high school history class and elicited whether they recalled *ever* having covered the Nazi and GDR regimes in school. In the last section of the survey, we elicited participants' demographic characteristics. We purposefully elicited socio-political attitudes first—before asking any questions about the GDR and the Nazi regimes— to obfuscate our research goals and minimize demand effects. Appendix I contains our survey instrument.

The survey's median completion time was 29 minutes. Upon survey completion, partici-

---

[16]Since our targeting was imperfect, we recruited 115 respondents from the graduation cohorts 2008 and 2015. We decided to include them in the main sample because their history curriculum in senior high school covered the Nazi regime but not the GDR regime and because we wanted to get a bit closer to the sample size specified in our pre-analysis plan.

[17]We began recruiting via Meta ads and alumni networks between July and September 2023. Given limited success with those strategies, we started recruiting by sending letters in the mail in January 2024. Lastly, in February-March 2024, we completed our recruitment by inviting participants through a survey panel provider.

[18]We expected recruitment for this project to be challenging, so we explicitly highlighted in the pre-analysis plan the possibility of falling short of our desired target due to logistical constraints. We fell short of the pre-specified sample size despite recruiting as large a sample as possible given our budget constraint from each of the four sampling channels described above.

pants received a 10 Euro gift card redeemable at many online stores, including Amazon.de. To ensure the anonymity of our participants' responses, we made sure that the outcome survey was separate from, and not linkable to, any of the respondents' personal information. We also made sure to inform participants, during the consent process, that their answers would be completely anonymous.

3.3 Construction of the Outcome Variables

To assist the reader, Table A.1 presents a detailed overview of all the outcome variables in our paper. The precise construction of the outcome variables, as well as the grouping of those variables into primary, secondary, and tertiary outcomes, was pre-specified in our pre-analysis plan.

Primary Outcomes We pre-specified four primary outcomes that we refer to in our tables and figures as "*Knowledge GDR Regime*", "*Knowledge Nazi regime*", "*Index Support Extreme Left*", and "*Index Support Extreme Right*". Our first two primary outcomes, *Knowledge GDR Regime* and *Knowledge Nazi regime*, are obtained by summing each participant's number of correct answers to a knowledge quiz about the GDR and to one about the Nazi regime, respectively. Each quiz contained 7 multiple-choice questions with four answer options each, only one of which is correct. The quizzes elicit knowledge of the pillars of each regime's ideology, as well as knowledge of key historical figures and events related to the GDR and National Socialism. Appendix I.1 presents a list of all our knowledge quiz questions. To reduce the probability of cheating by looking up answers on the Internet, we decided not to incentivize the knowledge quiz. Despite the lack of incentives, respondents answered the knowledge quiz carefully: on average, they answered 4.86 (4.81) questions about the GDR (NS) regime correctly out of 7, a rate of correct answers significantly higher than chance.[19]

Our remaining primary outcomes are an index of attitudes towards extreme left-wing ideology (*Index Support Extreme Left*) and an index of attitudes towards extreme right-wing ideology (*Index Support Extreme Right*). Each index comprises two types of survey questions: i) agreement with statements aimed at capturing the pillars of the communist ideology

---

[19]Had participants selected random answers, they would have obtained, on average, 1.75 points.

embraced by the GDR and of the fascist ideology embraced by the Nazi regime, and ii) attitudes towards and support for far-left and far-right political parties in Germany. We describe the two types of survey questions in turn.

Six of the statements about the pillars of left-wing and right-wing ideology were drawn from the manifestos of the current furthermost left political party in Germany, the Linke, and the current furthermost right political party, the Alternative für Deutschland or AfD.[20] When presenting those statements to participants, we did not reveal their provenance, thus hoping to obtain a measure that is less susceptible to being influenced by participants' opinions about the Linke and AfD parties themselves.[21] The other statements were drawn from existing surveys, such as the German General Social Survey, the Allensbach Institute Survey, and the Leipzig Mitte Studies, or designed by ourselves. The full list of statements is shown in Appendix I.2. For each statement, respondents indicated their level of agreement on a 7-point Likert scale ranging from completely disagree to completely agree.

The second type of survey questions entering our indices elicited attitudes towards the Linke and the AfD using a mix of incentivized and non-incentivized measures. The incentivized measures included: i) two willingness-to-accept elicitations, implemented via Becker-DeGroot-Marshak mechanisms, to authorize a five Euro donation to each party, and ii) a decision to anonymously support a petition requesting the expulsion of party members of the Linke and the AfD who were previously affiliated with the East German secret police (Stasi) and the Neo Nazi movement, respectively. The non-incentivized measures consisted of two standard "feeling thermometer" questions, which elicit attitudes towards the Linke and the AfD on a 100-point Likert scale.

In the construction of the index of extreme left-wing (right-wing) ideology, the respondents' answers are always oriented in such a way that larger values indicate greater support for left-wing (right-wing) views/parties. We construct each index as a simple average of its standardized components.[22] By combining outcomes into indices, we aim to i) obtain higher

---

[20]The Linke is the heir of the GDR's ruling party (SED); the AfD exhibits a degree of affinity with National Socialism as discussed in Klikauer (2020).

[21]We see this as an interesting methodological innovation, as we have not come across something like this before.

[22]We pre-specified both equal weights and inverse-covariance weights. We use the former for our main specification and show robustness to using the latter in our robustness section.

13

precision in the face of measurement error present in individual outcomes, and ii) assuage concerns about multiple hypothesis testing and about cherry-picking outcome variables. Table A.1 presents a detailed description of the components of each index.

Figure A.2 shows that our index measures correlate strongly with respondents' self-placement on a left-right scale: the correlation coefficients are -0.53 and 0.72, respectively. Furthermore, both indices display a smooth linear relationship with the left-right scale self-placement measure. These findings suggest that the indices meaningfully capture respondents' political attitudes towards extreme left-wing and right-wing ideology.

Secondary and Tertiary Outcomes As Shown in Table A.1, we consider each individual outcome featured in the *Index Support Extreme Left* and *Index Support Extreme Right* as a secondary outcome. We also include an index of attitudes towards antisemitism as a secondary outcome. Our tertiary outcomes are described in Appendix E.

3.4 Sample and Balance

Our main sample includes all 2,146 individuals who: i) meet the targeting criteria described in Section 3.1, ii) completed the section of the survey that elicits support for extreme left-wing and right-wing ideology, and iii) were not flagged as low quality respondents. Participants were flagged as low quality respondents if either they entered a high school graduation year that is inconsistent with the reported year of birth or they were in the bottom 5% in terms of survey duration.[23,24] Figure A.3 shows the geographic distribution of respondents' municipalities of origin (defined as the municipality in which a participant obtained her high school degree), highlighting the fact that we achieved broad and even geographic coverage. We also aimed to recruit evenly across all graduation years. Our recruitment efforts, however,

---

[23]When calculating the threshold τ to identify participants in the bottom 5% of survey duration, we ignore the responses of participants recruited through the survey panel provider. This is because the quality of those participants is, across the two quality measures above, much lower than that of respondents recruited through the other channels. When assigning our low quality flags, we apply threshold τ described above also to the participants recruited through the survey panel provider, thus screening out relatively more of them. In the robustness section, we present our baseline results for the full sample: the coefficients are less stable, but the results are qualitatively the same.

[24]We also recruited a sample of 870 high school graduates from all other states in western Germany for the difference-in-differences robustness check. The screening criteria for this sample are identical to those for Lower Saxony.

were more successful among individuals from the younger cohorts. Specifically, we recruited 386 individuals from the 2009-2010 cohorts, 837 individuals from the 2011-2012 cohorts, and 923 individuals from the 2013-2014 cohorts. Throughout our analysis, we reweigh observations to give equal weights to each of the three sets of graduating cohorts.[25]

Table 2 compares the demographic characteristics of our sample to those of representative samples of German high school graduates in the same age group who participated in the German General Social Survey (GGSS, 2021). Overall, our sample is close to representative in terms of first moments of observable characteristics, including overall political leaning, albeit with slightly higher college graduation rates and higher income. When interpreting our results, it is worthwhile keeping in mind that both our sample and German high school graduates in general achieve relatively high socio-economic status and levels of education. For instance, around 80% of our sample has a college degree.[26]

Table 3 presents balance checks on observable characteristics comparing respondents who studied the GDR regime in senior high school to respondents who studied the Nazi regime. We find balance across most of the immutable respondent characteristics we elicit, such as age, gender, and degree of urbanicity of the municipality in which a respondent went to high school. We also find balance with respect to respondents' choice of major in high school, as well as the time they took to complete the survey. We find small imbalances with respect to education, income, and employment status, with those belonging to the GDR curriculum cohorts being slightly more educated, higher income, and more likely to be employed. We return to this slight imbalance in the robustness section where we show that controlling for these characteristics does not meaningfully affect our results. Despite the slight imbalances on specific variables described above, an F-test of joint significance suggests that the demographic characteristics in the GDR cohorts and the Nazi cohorts are overall balanced.

---

[25]As discussed in Section 4, reweighing observations is required by the logic of our baseline identification strategy.

[26]The high college graduation rate is consistent with the fact that the German education system involves early tracking: individuals who go to high school are very likely to attend college.

4.   Empirical Strategy

Measuring the causal effect of covering the GDR regime rather than the Nazi regime on students' long-term political attitudes requires estimating a counterfactual for the attitudes that the 2011-2012 graduating cohorts would have held had they studied the Nazi rather than the GDR regime. Since the 2011 and 2012 cohorts are sandwiched between cohorts that studied the Nazi regime, namely the 2009-2010 cohorts and the 2013-2014 cohorts, a straightforward counterfactual candidate for the outcomes of the 2011-2012 cohorts is the average of the outcomes of the 2009-2010 cohorts and the 2013-2014 cohorts – that is, a linear interpolation.

This empirical approach amounts to a simple weighted least squares regression of an individual-level outcome on an indicator for whether the individual belongs to one of the cohorts that studied the GDR rather than the National-Socialist regime, with weights ensuring that each set of graduating cohorts (2009-2010, 2011-2012, and 2013-2014) is weighed equally in the regression. The regression specification is given by:

$$y_i = \beta_0 + \beta_1 \, C_i^{11,12} + \mathbf{X_i'} \cdot \boldsymbol{\beta_2} + \varepsilon_i, \tag{1}$$

where y_i is one of our primary, secondary, or tertiary outcome variables for respondent i, $C_i^{11,12}$ is an indicator that equals one if the respondent belongs to the 2011 or 2012 graduating cohorts, $\mathbf{X_i}$ is a vector of controls, and ε_i is an idiosyncratic error term. For transparency and simplicity, our baseline specification only controls for recruitment channel fixed effects. Alongside the baseline specification, we also present results with no controls at all, as well as with additional controls for fixed, immutable characteristics, namely gender and municipality of origin.

The identifying assumption is that absent the rotation in topics covered in the last two years of the high school history curriculum, the outcomes of individuals in the 2011-2012 graduating cohorts would not have deviated from the linear time trend established by the 2009-2010 and 2013-2014 graduating cohorts. The main threat to identification involves non-smooth time trends in political attitudes across cohorts, for instance due to cohort-specific

16

common shocks that are unrelated to the topics covered in senior high school history. In Section 5.6, we address this threat to identification by employing a difference-in-differences empirical strategy in which one dimension of variation is the respondents' graduating cohort and the other captures whether the respondent went to high school in Lower Saxony or in another west-German state where the high school history curriculum did not rotate. The main advantages of our baseline identification strategy over the difference-in-differences approach are transparency, power, and consistency with our pre-analysis plan. Specifically, our baseline strategy allows us to present most of our results graphically as raw means, it is better powered than the difference-in-differences, and, partly for the two reasons above, it is the main strategy we specified in our pre-analysis plan.

A related but separate threat to identification is an imbalance in selection into the survey. In Section 3.4, we presented a balance check showing that respondents belonging to cohorts that studied the GDR regime are quite similar in terms of observable characteristics to those who studied the Nazi regime. As discussed, we also present, in the robustness section, specifications that control for the characteristics that, according to Table 3, were unevenly distributed across treated and control cohorts.

5.   Results

In this section, we present results obtained using our baseline empirical strategy. We present a robustness check employing the difference-in-differences specification in Section 5.6.

5.1   Recall of Topics Covered in History Class

We begin by estimating the effects of the curriculum variation on the topics that respondents recall covering in history class in school. This exercise has two purposes. First, it serves as a manipulation check or "first stage" to test whether the pattern of recall of our respondents is consistent with the curriculum variation we study. Second, it highlights the importance of thinking about the extensive margin effect of covering the GDR rather than the Nazi regime in the last two years of high school history on having *ever* covered those topics in school.

Figure 1 shows that our participants' memories are consistent with the rotation in topics:

17

the raw mean recall rate of having covered the GDR (NS) topic in senior high school is substantially larger (smaller) among those cohorts whose senior high school curriculum included the GDR rather than the Nazi regime. In terms of magnitudes, reported in Table 4 based on our baseline regression specification, we find that, for both the GDR and Nazi regimes, having been assigned one topic instead of the other leads to a 19-20 percentage point increase in recalling having covered that topic in senior high school—see columns (1) and (3).[27]

In contrast to the symmetric effects found on recall of topics covered in senior high school, we document striking differences in terms of the extensive margin effect of recalling having *ever* covered a given topic in school. The extensive margin effects are presented in columns (2) and (4) of Table 4. Consistent with Lower Saxony's guidelines for history education, which mandate covering the Nazi regime in either 9th or 10th grade, we find a negligible (2pp) decrease of being in the 2011-2012 graduating cohorts on the extensive margin of recalling having ever covered the Nazi regime, from a baseline of 99%. Conversely, we find a 13pp increase of being in the 2011-2012 graduating cohorts on the extensive margin of recalling having ever covered the GDR regime, from a baseline of 78%. The latter result is consistent with the fact that, in Lower Saxony, there is no mandate to cover the GDR regime in junior high school. The takeaway of this exercise is to highlight the fact that virtually everyone in our sample studied the Nazi regime at some point in school independently of their graduating cohort, whereas a sizeable fraction of our sample was exposed to information about the GDR for the first and only time in their school careers *because* of the rotation in topics we exploit for identification.

5.2 Knowledge

Our first substantive result shows that the curriculum variation led to knowledge differences that persist more than 10 years after high school graduation. Figure 2 shows the evolution

---

[27]Since the ministry documentation makes us confident that the reform was implemented everywhere in Lower Saxony, we attribute any mismatch between the rotation in topics and our participants' memory to the latter being imperfect. Such memory imperfections are not too surprising in light of the fact that, although it might be relatively easy to recall whether or not one studied a certain topic in high school, it might be challenging to remember when exactly.

of the raw mean knowledge scores across graduating cohorts, separating the early Nazi curriculum cohorts (2009-2010), the GDR curriculum cohorts (2011-2012), and the late Nazi curriculum cohorts (2013-2014). The figure shows that the 2011-2012 cohorts' average quiz score about the history of the GDR departs starkly from the trend line; conversely, their average quiz score about the history of the Nazi regime does not. Thus, we find evidence that studying the GDR rather than the Nazi regime in senior high school leads to a long-lasting increase in knowledge about the GDR and to a marginal decrease in knowledge about the Nazi regime.

Table 5 presents analogous results in table form using our baseline empirical strategy. Consistent with Figure 2, the table shows that cohorts who studied the GDR rather than the Nazi regime in senior high school exhibit greater knowledge about the GDR even 10-15 years after the end of high school. Our treatment effect estimate is 0.33 points in the knowledge quiz, or 7% relative to the mean. In contrast, we find a much smaller in absolute terms, and not consistently statistically significant, negative effect of -0.12 points on knowledge about the Nazi regime, corresponding to a reduction of 2% relative to the mean. Figure A.4 plots results for each individual knowledge quiz question, showing remarkable consistency in the signs of the effects across questions.

As shown in Appendix B, the knowledge results are consistent with a simple model in which the returns in the production function that maps years of coverage of a regime in history class to knowledge exhibit diminishing marginal returns. Specifically, as discussed in the previous section, virtually all participants studied the National Socialist regime before senior high school; thus, the marginal effect of forgoing coverage of the Nazi regime in senior high school on knowledge of the Nazi regime is relatively small. Conversely, many individuals were exposed to the history of the GDR regime for the first time as a result of the curriculum rotation, thus yielding substantial effects on knowledge of the GDR.

One might be worried about differential tendencies to look up solutions online by curriculum type and quiz topic. If our results were explained by such differential tendencies, we would expect respondents from the 2011-2012 cohorts to exhibit slower response times to the GDR quiz and faster response times to the Nazi quiz. As shown in Table A.3, we find the opposite. The differential pattern in response time aligns with findings in the literature

19

suggesting that faster response times are indicative of greater certainty in one's answers (Card et al., 2024).

5.3 Attitudes

Our main result is that the curriculum variation leads to differences in attitudes vis-à-vis extreme ideology that persist more than 10 years after high school graduation. Figure 3 shows the evolution of the raw mean ideology scores across graduating cohorts, separating the early Nazi curriculum cohorts (2009-2010), the GDR curriculum cohorts (2011-2012), and the late Nazi curriculum cohorts (2013-2014). As for the results on knowledge, we find that the mean support for extreme left-wing ideology among the 2011-2012 graduating cohorts departs starkly from the trend line. Specifically, the mean support for extreme left-wing ideology among those cohorts is substantially below the mean support for extreme left-wing ideology among the preceding and the subsequent cohorts, both of which studied the Nazi regime. In contrast, support for extreme right-wing ideology among the 2011-2012 cohorts closely tracks the linear time trend obtained by interpolating the means of the cohorts that covered the Nazi curriculum in senior high school.

Column 2 of Table 6 presents regression results using our baseline empirical strategy and preferred specification. The table shows that studying the GDR regime rather than the Nazi regime in the last two years of high school history: i) reduces support for extreme left-wing ideology by 10% of a standard deviation unit (Panel A), and ii) does not significantly affect support for extreme right-wing ideology (Panel B). To put the effect size on the index of extreme left-wing ideology in perspective, we compare it to the difference between the average ideological positions on the index of individuals in our sample who identify as left-wing and as right-wing. The observed treatment effect on the index of extreme left-wing ideology corresponds to 11% of such ideological gap. Thus, the result implies that covering the GDR regime as opposed to the Nazi regime during the final two years of high school history effectively narrows the left-wing vs. right-wing gap in support for extreme left-wing ideology by approximately 11%.

The other columns in Table 6 show that the results are robust to the exclusion of fixed effect for the recruitment channel, as well as to the inclusion of controls for immutable baseline

characteristics such as gender and municipality of one's high school (columns 1 and 3-5). The results are also robust to controlling for socio-economic variables that Table 3 showed were not perfectly balanced across the GDR and Nazi cohorts, including college degree status, employment status, and income (see Table A.5). It is worthwhile noting that these variables can in principle be affected by treatment and, thus, might bias the estimates.

Figure 4 shows results for each component of our two indices separately. As far as the index of support for extreme left-wing ideology is concerned, the components that exhibit the starkest point estimates are the statement that a planned economy would work better than the prevailing decentralized one, the statement that the government should guarantee jobs, and the statement that Germany should move away from a capitalist system and towards a communist one. The index of support for extreme right-wing ideology does not exhibit any significant component.

To further benchmark our findings, we follow DellaVigna and Gentzkow (2010) and calculate the persuasion rate of studying the GDR rather than the Nazi regime in senior high school on each statement comprised in our indices of extreme ideology. To this end, we first binarize each outcome into a dummy for disagreeing with the statement and then calculate the persuasion rate, which is defined as the GDR curriculum ("treatment") effect on the binarized outcome scaled by the agreement rate among the Nazi curriculum ("control") cohorts. Figure A.5 plots the results. We find an average persuasion rate of 6% (0%) towards disagreement with extreme left-wing (right-wing) ideology. The average persuasion rate for extreme left-wing ideology ranks around the 40th percentile among the ones reported in DellaVigna and Gentzkow (2010), which capture (short-term) persuasion among consumers, voters, donors, and investors.

To investigate which parts of the distribution of attitudes are driving the effects, we plot the cumulative density function of each index, separately by curriculum type, in Figure A.6. The figure suggests that effects manifest across the entire distribution of support for extreme left-wing ideology and that they are particularly pronounced in the part of the distribution exhibiting greater support for such ideology.

We detect no statistically significant effects on antisemitic attitudes (our other secondary outcome; see Figure A.7), and on any of our tertiary outcomes (see Figure A.8).

5.4 Political Environment in Youth as Key Mediating Factor

We next investigate how the broader political context in which individuals are raised mediates the effects of history education on political attitudes. Specifically, we focus on the baseline degree of support, in one's formative adolescent environment, for extreme left-wing and right-wing ideology. Ex-ante, the mediating effects of the political environment in one's youth are unclear. On the one hand, individuals growing up in regions with a high baseline level of support for an extreme ideology might internalize that ideology and be less receptive to the lessons of history (henceforth, we refer to this theory as the "deaf ears" hypothesis). On the other hand, individuals from such regions might be less knowledgeable about the pitfalls of the extreme ideology that is prevalent in their environment, and, as a result, might be more responsive to history education about authoritarian regimes that implemented that ideology (henceforth, we refer to this theory as the "eye opener" hypothesis).

As per our pre-analysis plan, we proxy the baseline degree of support for extreme left-wing (right-wing) ideology by the current vote share, in the municipality where the respondent went to high school, for the leftmost (rightmost) party in Germany: the Linke (AfD).[28]

As shown in Figure 5, our findings are consistent with the "eye opener", rather than the "deaf ears" hypothesis, with results being particularly striking in the case of extreme right-wing ideology (shown in panel B). Specifically, while the effect of studying the GDR rather than the Nazi regime is zero in the full sample, it becomes positive, statistically significant, and substantial in magnitude (up to ~ 0.3 sd units) when we restrict our attention to the subset of individuals from municipalities with relatively high vote shares for the AfD. Thus, in municipalities with a high baseline level of support for extreme right-wing ideology, forgoing studying the Nazi regime in the last two years of high school is very consequential, in that it substantially reduces the mitigating effect of history education on support for extreme right-wing ideology.

The relationship between vote shares for the Linke and support for extreme left-wing ideology, albeit more muted, is consistent with the same story. Specifically, studying the GDR

---

[28]We use current vote shares, based on the most recent national parliamentary election in 2021, rather than historical ones, because the AfD did not yet exist when most participants in our study went to high school.

rather than the Nazi regime in senior high school has weakly stronger effects in municipalities that, in our sample, have relatively higher vote shares for the Linke.[29]

As shown in Appendix B, the heterogeneous treatment effects above are consistent with a model in which schooling and the natural inoculation that one receives as a function of the political leanings in one's formative adolescent environment are substitutes in the production function of extreme ideology. Specifically, regions with relatively lower vote shares for the AfD (Linke) are already to some extent inoculated against extreme right-wing (left-wing) ideology. Thus, in those regions, the effects of covering the Nazi (GDR) regimes in senior high school history on support for that ideology are relatively small. Conversely, regions with relatively higher vote shares for the AfD (Linke) are not as well inoculated against extreme right-wing (left-wing) ideology. Thus, in those regions, the effects of covering the Nazi (GDR) regimes in senior high school history on support for that ideology are relatively large.

5.5   Heterogeneous Treatment Effects: Interacted Specification

To test for heterogeneity in treatment effects on attitudes more systematically, we employ the following empirical model:

$$y_i = \gamma_0 + \gamma_1 C_i^{11,12} \times Z_i + \gamma_2 C_i^{11,12} + \gamma_3 Z_i + \mathbf{X_i'} \cdot \boldsymbol{\gamma_4} + \nu_i, \tag{2}$$

where Z_i is a given margin of heterogeneity, standardized to mean 0 standard deviation 1 if the original measure is non-binary and kept as an indicator variable otherwise, and ν_i is an idiosyncratic error term. Following our preferred baseline specification, we control for recruitment channel fixed effects, captured by $\mathbf{X_i}$. The margins of heterogeneity we specified in our pre-analysis plan are local political environment in respondents' youth (as discussed in the previous section), intensity of history education, educational attainment, parents' political ideology, exposure to socialism through one's parents, distance to the former GDR border, teacher political ideology, and high school curriculum of one's spouse.[30] See Table A.2 for a

---

[29]See the next section for statistical tests.

[30]To keep the survey brief, we only elicited whether and when a respondent's spouse received their high school degree; we did not elicit the state in which a respondent's spouse got their high school degree and whether the spouse took the history track, hence spousal GDR curriculum exposure is measured with noise.

detailed definition of each margin of heterogeneity.

Consistent with the results from the sub-sample analysis in the previous section, we find significant heterogeneity in treatment effects as a function of the political environment in one's youth. Specifically, as shown in Figure A.9, foregoing studying the Nazi regime in senior high school and, instead, studying the GDR regime leads to a relatively larger increase in support for extreme right-wing ideology in municipalities with a relatively higher vote share for the AfD. This holds for virtually all components of the index of extreme right-wing ideology, including the incentivized ones. The effects on support for extreme left-wing ideology are directionally consistent with the idea that the effects of covering a particular regime in senior high school history are stronger in municipalities with higher baseline support for the ideology of that regime but more muted and not statistically significant.

We do not find significant results on the other margins of heterogeneity that we pre-specified, except for exposure to socialism through one's parents (see Figure A.10).[31] Ex-ante, the direction of the heterogeneous treatment effects by exposure to socialism through one's parents are ambiguous: if parents hailing from the former GDR or USSR have a sharply critical view of those regimes, then we would expect smaller treatment effects among their children because they would already be to some extent inoculated against extreme left-wing ideology. If, conversely, parents hailing from the former GDR or USSR hold more positive or nostalgic views of the past – a relatively common phenomenon termed "Communist nostalgia" and in the case of the GDR colloquially referred to as "Ostalgie" (Banchelli, 2006) – then, we would expect more negative treatment effects. Our findings of a stronger negative effect of the GDR curriculum on support for extreme left-wing ideology among those with more direct exposure to socialism align more with the latter interpretation.

5.6 Robustness

Difference-in-Differences   As discussed in Section 4, the main threat to identification in our baseline empirical strategy involves non-smooth time trends in political attitudes across cohorts, for instance due to cohort-level common shocks that are unrelated to the topics

---

[31] As discussed in more detail in section Section 6, we do not find heterogeneity in curriculum effects by teacher ideology.

covered in the last two years of high school history (e.g., experiencing the financial crises in one's most impressionable years). We address such threat to identification by employing a difference-in-differences empirical strategy where one dimension of variation tracks high school graduation year and the other tracks having gone to high school in Lower Saxony or in some other western German state. By expanding the sample to include a control group of individuals who graduated high school between 2009 and 2014, but who went to high school in western German states not subject to the curriculum variation, the difference-in-differences allows us to net out any cohort-level shocks as well as any non-smooth age effects.

To employ our difference-in-differences specification, we recruited, through the same channels as for the main sample from Lower Saxony, a sample of 870 respondents who went to high school in western German states other than Lower Saxony. Table A.4 shows balance across observable characteristics.

To estimate treatment effects, we use a standard difference-in-differences specification of the following form:

$$y_i = \gamma_0 + \gamma_1 C_i^{11,12} \times LS_i + \gamma_2 C_i^{11,12} + \gamma_3 LS_i + \mathbf{X_i'} \cdot \boldsymbol{\gamma_4} + \phi_i, \tag{3}$$

where LS_i denotes an indicator for having graduated from a high school in Lower Saxony, $C_i^{11,12}$ is an indicator variable that equals one if the respondent graduated from high school in 2011 or 2012, and ϕ_i is an idiosyncratic error term. For our preferred specification, we again only include recruitment channel fixed effects in the set of controls $\mathbf{X_i}$. We apply weights such that all cohorts within a region are weighted equally.[32]

Including a control group from outside of Lower Saxony allows us to difference out any common, western-Germany-wide differences in outcomes across cohorts that are unrelated to the history curriculum variation in Lower Saxony. Thus, under the assumption that Lower Saxony follows a trend in outcomes that is parallel to that of the other western German states—an assumption that we provide evidence for in an event study specification—we can attribute the remaining differences in attitudes and beliefs across cohorts to the difference in

---

[32]We group the 9 western German control states into five geographical regions such that each region has at least 100 observations.

the history curriculum.[33]

To assess the parallel trends assumption, we present an event study figure in Figure A.11, based on the following slightly amended version of Equation (3):

$$y_i = \psi_0 + \sum_{s \in \{(11,12),(13,14)\}} [\delta_s C_i^s \times LS_i + \psi_s C_i^s] + \psi_1 LS_i + \mathbf{X_i'} \cdot \boldsymbol{\psi_2} + \phi_i. \tag{4}$$

The figure shows the estimates of $\delta_{(11,12)}$ and $\delta_{(13,14)}$, which measure the deviations from the baseline (i.e. '09 and '10 graduating cohorts) difference in outcomes between respondents from Lower Saxony and the other states in the two subsequent graduating cohorts. Reassuringly, we find that, for both the indices of extreme left-wing and right-wing ideology, the estimate of $\delta_{(13,14)}$ is statistically indistinguishable from zero, assuaging concerns about the parallel trends assumption.

For the index of extreme left-wing ideology, we find that the estimate of $\delta_{(11,12)}$ is strictly negative. This suggests that individuals from Lower Saxony who covered the GDR rather than the Nazi regime in the last two years of high school history exhibit less support for extreme left-wing ideology compared to the counterfactual in which their attitudes and those of individuals who went to high school in other west-German states had evolved along parallel trends. We find no such pattern for the index of extreme right-wing ideology.

Table 7 shows the results from the difference-in-differences specification in Equation (3). Consistent with the results from our baseline specification outlined in Section 5.3, we estimate a negative, statistically significant effect of having studied the GDR on support for extreme left-wing ideology, and we estimate a null effect on support for extreme right-wing ideology. The magnitude of the former effect is 19% of a standard deviation, thus slightly larger than the magnitude of our baseline estimate, which is around 10-12%.

Additional Robustness Checks   We run a battery of additional robustness checks for our main results. They include tests of robustness to i) controlling for the years of schooling received (see footnote 8), ii) omitting cohort weights in the regression, iii) constructing inverse-

---

[33]An alternative strategy involves treating high school graduates from Lower Saxony who did not select the history track as a control group. However, since every student needs to take at least two hours of history lessons a week no matter their track choice, non-history majors get "treated" too, even though to a lesser extent.

covariance weighted rather than equally weighted indices, iv) testing for social desirability bias, and v) including participants flagged as low quality respondents. We present results for the first three analyses in Table A.8, and find that they are in line with those from our baseline analysis. We present results for iv) in Table A.9, finding no evidence for the presence of differential stigma or social desirability bias by curriculum type. We present analysis v) in Table A.7, where we show that the inclusion of low quality respondents produces estimates that, albeit less stable, paint the same picture as our baseline results. See Appendix F for a more detailed description of the analysis presented in this section.

6. Mechanisms: Knowledge vs. Propaganda

Our final analysis aims to shed some light on the mechanisms behind our main findings. In particular, the observed average effects on the index of support for extreme left-wing ideology may stem from greater knowledge about the GDR, especially an understanding of the possible negative consequences of implementing extreme left-wing political programs, or from propaganda, which, following the Oxford English Dictionary, we define as "information, especially of a biased or misleading nature, used to promote a political cause or point of view" (Oxford, 2024). In this section, we present evidence that our results are likely to operate, at least in part, through knowledge. These results dovetail with the text analysis from Appendix D, which showed that the German textbooks that covered the GDR and Nazi regimes appear to be fairly neutral in tone and content.

The first piece of evidence is merely suggestive but quite striking: we document strong negative correlations between knowledge of the GDR (NS) regimes and support for extreme left-wing (right-wing) ideology. In particular, Figure A.12 shows binned scatter plots of support for extreme left-wing (right-wing) ideology and knowledge of the GDR (NS) regime, as measured by our quiz. As shown in Table A.10, the negative relationship holds even after controlling for various potential confounds.

The second piece of evidence improves on the first: we employ a causal forest to calculate individual-level treatment effects on knowledge and on support for extreme ideology, and

27

then we correlate them.[34] Panel A (B) of Figure A.13 presents binned scatter plots of the estimated individual-level treatment effects on knowledge of the GDR (Nazi) regime and on support for extreme left-wing (right-wing) ideology. Both panels show a clear negative relationship between treatment effects on knowledge and ideology. Specifically, individuals who exhibit larger positive treatment effects on knowledge of the GDR regime tend to exhibit more marked decreases in support for extreme left-wing ideology (a one sd unit increase in the former is associated with a -0.21 sd unit decrease in the latter). Similarly, individuals who exhibit larger negative treatment effects on knowledge of the Nazi regime tend to exhibit more marked increases in support for extreme right-wing ideology (a one sd unit decrease in the former is associated with a 0.56 sd unit increase in the latter). The negative correlation between treatment effects on knowledge and ideology is consistent with the idea that increased knowledge mitigates ideological extremism, and provides further support to the notion that our treatment operates at least partly through the acquisition of knowledge, rather than through propaganda.

The third piece of evidence is based on the following logic: if the negative results on support for extreme left-wing ideology were primarily driven by propaganda, we would expect such propaganda to be more zealously conducted by right-wing teachers than by left-wing teachers. In contrast, as shown in Figure A.10 we find that the effects of covering the GDR regime as opposed to the Nazi regime in senior high school are not significantly heterogeneous by a respondent's perception of her high school history teacher's political ideology. Of course, relying on participants' perceptions of their teachers' political ideology is imperfect, because being exposed to the history of the GDR as a result of the rotation in topics covered in senior high school might affect participants' perceptions of their teachers' ideologies. Table A.11 partially assuages such concern by showing that participants' perceptions of their high school history teacher's political leaning are not meaningfully affected by the curriculum rotation.

---

[34]A causal forest estimates heterogeneous treatment effects for each individual based on baseline covariates. This involves predicting the difference between the expected outcomes under treatment and control conditions for each individual. The estimated individual-level treatment effects for both knowledge and ideology were derived separately using the same covariates.

7. Conclusion

This study shows that covering the history of an authoritarian regime in school can significantly and lastingly reduce support for the extremist ideology associated with that regime. Specifically, by analyzing the effects of a curriculum reform in Lower Saxony that generated quasi-exogenous variation in the topics covered in the history curriculum, we found that studying the German Democratic Republic rather than National Socialism in the last two years of high school history reduced support for extreme left-wing ideology, without bolstering support for extreme right-wing ideology. We also found that schooling and the political leaning of one's childhood environment interact in the production function of ideology: the higher the degree of support for an extreme ideology in one's childhood environment, the more schooling is needed to counter-balance it. These results highlight the critical role of political economy externalities in curriculum design and contribute to ongoing discussions about the optimal balance between humanities and STEM subjects within educational systems.

References

Adena, Maja, Ruben Enikolopov, Maria Petrova, Veronica Santarosa, and Ekaterina Zhuravskaya. 2015. "Radio and the Rise of the Nazis in Prewar Germany." *Quarterly Journal of Economics*, 130.

AfD. 2016. "Manifesto for Germany. The Political Program of the Alternative for Germany." German version: `https://www.afd.de/wp-content/uploads/2018/01/Programm_AfD_Online-PDF_150616.pdf`; English version: `https://www.afd.de/wp-content/uploads/2017/04/2017-04-12_afd-grundsatzprogramm-englisch_web.pdf`; last accessed 8 May 2023.

AfD. 2021. "Program of the AfD for the 2021 National Election Campaign." German version (no official English translation exists): `https://www.afd.de/wp-content/uploads/2021/06/20210611_AfD_Programm_2021.pdf`; last accessed 8 May 2023.

Allensbach Institute Survey. 2022. "IfD Survey 12059 - September 2022." `https://www.ifd-allensbach.de/fileadmin/kurzberichte_dokumentationen/FAZ_September2022_Entscheidung.pdf`.

American Academy of Arts & Sciences. 2013. *The Heart of the Matter: The Humanities and Social Sciences for a Vibrant, Competitive, and Secure Nation.* Cambridge, MA.

Anderson, Michael L. 2008. "Multiple Inference and Gender Differences in the Effects of Early Intervention: a Reevaluation of the Abecedarian, Perry Preschool, and Early Training Projects." *Journal of the American Statistical Association*, 103(484): 1481–1495.

Anti-Defamation League Survey. 2007. "Attitudes Toward Jews and the Middle East in Six European Countries." `https://www.adl.org/sites/default/files/European_Attitudes_Survey_July_2007_1.pdf`.

Arold, Benjamin W. 2024. "Evolution vs. Creationism in the Classroom: The Lasting Effects of Science Education." *Quarterly Journal of Economics, Forthcoming.*

Arold, Benjamin W., Ludger Woessmann, and Larissa Zierow. 2023. "Can Schools Change Religious Attitudes? Evidence from German State Reforms of Compulsory Religious Education." Working Paper.

Ash, Elliott, Daniel L. Chen, and Suresh Naidu. 2023. "Ideas Have Consequences - The Impact of Law and Economics on American Justice." Working Paper.

Bai, Ying, Ruixue Jia, and Runnan Wang. 2023. "Ideas Mobilize People: The Diffusion of Communist Ideology in China." NBER Working Paper No. 30947.

Banchelli, Eva. 2006. *Taste the East: Linguaggi e forme dell'Ostalgie.* Sestante, Bergamo.

Bandiera, Oriana, Myra Mohnen, Imran Rasul, and Martina Viarengo. 2019. "Nation-building Through Compulsory Schooling during the Age of Mass Migration." *The Economic Journal*, 129.

Bazzi, Samuel, Masyhur Hilmy, and Benjamin Marx. 2023. "Religion, Education, and the State." *National Bureau of Economic Research Working Paper Series*, 27073.

Bernheim, B. Douglas, Daniel M. Garrett, and Dean M. Maki. 2001. "Education and saving: The long-term effects of high school financial curriculum mandates." *Journal of Public Economics*, 80(3): 435–465.

Blanc, Guillaume, and Masahiro Kubo. 2024. "French." *Working paper.*

Cantoni, Davide, and Noam Yuchtman. 2013. "The political economy of educational content and development: Lessons from history." *Journal of Development Economics*, 104.

Cantoni, Davide, Yuyu Chen, David Y. Yang, Noam Yuchtman, and Jane Zhang. 2017. "Curriculum and Ideology." *Journal of Political Economy*, 125(2): 338–392.

Card, David, Stefano DellaVigna, Chenxi Jiang, and Dmitry Taubinsky. 2024. "Understanding Expert Choices Using Decision Time." Working Paper.

Carl, Arend E. 2009. "The value of History as a school subject in an age of science and technology." *Yesterday & Today*, 4.

Carlitz, Ruth, Ameet Morjaria, Joris M. Mueller, and Philip Osafo-Kwaako. 2024. "State-Building in a Diverse Society." *Review of Economic Studies, Conditionally Accepted.*

Clots-Figueras, Irma, and Paolo Masella. 2013. "Education, Language and Identity." *Economic Journal*, 123.

Comparative Study of Electoral Systems. 2023. "CSES Module 5 - July 25 2023 version." doi:10.7804/cses.module5.2023-07-25.

Costa-Font, Joan, Jorge Garcia-Hombrados, and Anna Nicinska. 2024. "Long-lasting effects of indoctrination in school: Evidence from the People's Republic of Poland." *European Economic Review*, 161(January).

Crawford, Vincent P., and Joel Sobel. 1982. "Strategic Information Transmission." *Econometrica*, 50.

Dahl, Robert A. 1971. *Polyarchy: Participation and opposition.* New Haven:Yale University Press.

Decker, Oliver, Johannes Kiess, Julia Schuler, Barbara Handke, and Elmar Brähler. 2019. "The Leipzig Authoritarianism Study 2018: Methodology, Results, and Long-Term Changes. In: The Dynamics of Right-Wing Extremism within German Society. Escape into Authoritarianism."

DellaVigna, Stefano, and Matthew Gentzkow. 2010. "Persuasion: Empirical Evidence." *Annual Review of Economics*, 2.

DellaVigna, Stefano, Ruben Enikolopov, Vera Mironova, Maria Petrova, and Ekaterina Zhuravskaya. 2014. "Cross-border media and nationalism: Evidence from Serbian radio in Croatia." *American Economic Journal: Applied Economics*, 6.

Die Linke. 2011. "Program of the DIE LINKE Party." German version: https://www.die-linke.de/fileadmin/download/grundsatzdokumente/programm_formate/programm_der_partei_die_linke_erfurt2011_druckfassung2020.pdf; English version: https://www.die-linke.de/fileadmin/download/grundsatzdokumente/programm_englisch/englisch_die_linke_programm_erfurt.pdf; last accessed 8 May 2023.

Durante, Ruben, Paolo Pinotti, and Andrea Tesei. 2019. "The Political Legacy of Entertainment TV." *American Economic Review*, 109(7).

Enikolopov, Ruben, Maria Petrova, and Ekaterina Zhuravskaya. 2011. "Media and Political Persuasion: Evidence from Russia." *American Economic Review*, 101(7).

Fitzpatrick, Sheila. 2001. *The Russian Revolution.* Oxford University Press.

Fouka, Vasili. 2020. "Backlash: The Unintended Effects of Language Prohibition in U.S. Schools after World War I." *The Review of Economic Studies*, 87.

Fuchs-Schuendeln, Nicola, and Paolo Masella. 2016. "Long-Lasting Effects of Socialist Education." *Review of Economics and Statistics*, 93(3): 428–441.

GGSS. 2018. "German General Social Survey - ALLBUS 2016 of the Leibniz-Institut für Sozialwissenschaften." https://doi.org/10.4232/1.12837.

GGSS. 2021. "German General Social Survey - ALLBUS 2021 of the Leibniz-Institut für Sozialwissenschaften ." https://doi.org/10.4232/1.14151.

Girardi, Daniele, Sai Madhurika Mamunuru, Simon D. Halliday, and Samuel Bowles. 2024. "Does studying economics make you selfish." *Southern Economic Journal*, 90(3): 792–814.

Grosfeld, Irena, Etienne Madinier, Seyhun Orcan Sakalli, and Ekaterina Zhuravskaya. 2024. "Independent Media, Propaganda, and Religiosity: Evidence from Poland." *American Economic Journal: Applied Economics. Forthcoming.*

Guriev, Sergei, and Elias Papaioannou. 2022. "The Political Economy of Populism." *Journal of Economic Literature*, 60.

Hanushek, Eric A., Stephen Machin, and Ludger Woessmann. 2023*a*. *Handbook of the Economics of Education.* Vol. 6, North-Holland.

Hanushek, Eric A., Stephen Machin, and Ludger Woessmann. 2023*b*. *Handbook of the Economics of Education.* Vol. 7, North-Holland.

Klikauer, Thomas. 2020. *Alternative für Deutschland: The AfD: Germany's New Nazis or another Populist Party?* Liverpool University Press.

Ministry of Education and Culture of Lower Saxony. 2024. "Archive of Centralized Senior High School Curricula." https://nibis.de/archiv-zentralabitur-vor-2022_16074; last accessed 26 February 2024.

Mätzing, Heike Christina, Michael Ploenus, Volker Sinemus, and Reinhard Sturm. 2010. *Zusammenbruch der DDR und deutsche Einheit.* Ernst Klett Verlag.

Nussbaum, Martha C. 2010. *Not For Profit: Why Democracy Needs the Humanities.* Princeton University Press.

Oxford. 2024. *English Dictionary.* Oxford University Press.

Reinhardt, Sibylle. 2016. "The Beutelsbach consensus." *Journal of Social Science Education*, 15.

Santayana, George. 1905. *The Life of Reason: Or the Phases of Human Progress.* Charles Scribner's Sons.

Selb, Peter, and Simon Munzert. 2018. "Examining a Most Likely Case for Strong Campaign Effects: Hitler's Speeches and the Rise of the Nazi Party, 1927–1933." *American Political Science Review*, 112(4).

Shirer, William M. 1960. *The Rise and Fall of the Third Reich.* Simon and Schuster.

Standing Conference of Ministers of Education and Culture in Germany. 2005. "Teaching about National Socialism and the Holocaust: Report from the Secretariat of the Standing Conference of Ministers of Education and Culture based on a state survey." https://www.kmk.org/fileadmin/Dateien/pdf/Bildung/AllgBildung/Zusammenfassung-Holocaust-November-05_01.pdf; last accessed 03 May 2024.

Testa, Patrick A. 2018. "Education and propaganda: Tradeoffs to public education provision in nondemocracies." *Journal of Public Economics*, 160.

Wang, Tianyi. 2021. "Media, Pulpit, and Populist Persuasion: Evidence from Father Coughlin." *American Economic Review*, 111(9).

Wunderer, Dr. Hartmann. 2007. *Ideologie und Herrschaft des Nationalsozialismus.* Ernst Klett Verlag.

Yanagizawa-Drott, David. 2014. "Propaganda and Conflict: Evidence from the Rwandan Genocide." *Quarterly Journal of Economics*, 129.

Tables

Table 1: History Curriculum by Graduation Year

Graduation Year	Topic 1	Topic 2	Topic 3
2009	Imperialism	Middle Ages	**Nazi Regime**
2010	**Nazi Regime**	China 1850-1949	French revolution
2011	French revolution	Soviet Union -1917,1945-	**GDR Regime**
2012	**GDR Regime**	15th century Europe	U.S. industrialization
2013	1929 World economic crisis	Spanish colonialism	**Nazi Regime**
2014	Roman Republic	Spanish colonialism	**Nazi Regime**

Notes: This table lists the topics covered in the senior high school history curriculum in Lower Saxony by high school graduation year. The rotation scheme for the '13-'14 cohorts was different from the one for the '09-'10 and '11-'12 cohorts along two minor dimensions. First, the '13-'14 cohorts also covered a short topic in the fourth semester, which, among the previous cohorts, was entirely reserved for exam preparation. The short topic was about national remembrance days (specifically, January 27th in Germany—the Day of Remembrance for the Victims of National Socialism, commemorating the liberation of Auschwitz on January 27th 1945—and October 12th in Spain—commemorating the discovery of the Americas by Christopher Columbus on October 12th 1492). Second, the '13-'14 cohorts covered, in each of the first three semesters, an additional bonus topic selected by the school from a list of eight topics. The bonus topic was *not* part of the material that appeared on the final high school exam. Three out of twenty-four bonus topics related to the history of the GDR. Thus, some members of the '13-'14 graduating cohorts might have had some limited exposure to the history of the GDR in senior high school. We can assess the degree to which that is the case by studying the topics that survey respondents recall covering in the last two years of high school as shown in Section 5.1. Source: Ministry of Education and Culture of Lower Saxony (2024).

Table 2: Summary Statistics and Representativeness

	Our Sample	GGSS Sample
Age	30.60	30.63
Male	0.43	0.46
College	0.80	0.74
Income	33914.16	25024.57
Employed	0.89	0.84
Self-place L-R scale	4.36	4.34
N	2,146	566

Notes: This table presents summary statistics (means) for our main analysis sample in column (1), and statistics for high school graduates from Germany of the same age—26 to 35—based on data from a nationally representative survey, the German General Social Survey (GGSS, 2021), in column (2). For the latter sample, we rely on the two most recent available waves (2018 and 2021) and apply the supplied survey weights. For the former, we restrict the sample to the main analysis sample described in Section 3 and apply probability weights that weigh each of the three graduating cohort groups ('09-'10, '11-'12, '13-'14) equally. The variable "Self-place L-R scale" elicits respondents' self-placement on a 10-point scale from 1 (Left) to 10 (Right). The formulation of the question was the same in our survey and the GGSS survey.

Table 3: Balance Test on Observables

Variable	(1) Curriculum: GDR Mean/(SE)	(2) Curriculum: Nazi Mean/(SE)	(1)-(2) Pairwise t-test P-value
Age	30.56 (0.04)	30.54 (0.09)	0.51
Male	0.49 (0.02)	0.46 (0.02)	0.26
College degree	0.81 (0.01)	0.76 (0.01)	0.03**
Net personal income	34707.95 (683.66)	32803.61 (607.47)	0.05**
Employed	0.90 (0.01)	0.87 (0.01)	0.01**
History major	0.33 (0.02)	0.34 (0.02)	0.65
Municipality urban	0.18 (0.01)	0.19 (0.01)	0.63
Municipality rural	0.29 (0.02)	0.29 (0.01)	0.97
Survey duration (minutes)	34.33 (0.61)	33.56 (0.51)	0.49
F-test of joint significance (P-value)			0.17
Number of observations	730	1154	1884

Notes: This table presents a balance test for participants who completed the demographics section of our survey. The sample size is smaller than that of our main impact evaluation sample (which comprises 2,146 individuals), because the demographics section was at the end of our survey and, thus, was more subject to attrition. Columns (1) and (2) show means and standard errors for each characteristic listed in the table rows, separately for the two types of treated cohorts: those who covered the GDR regime in senior high school, and those who covered the Nazi regime. Column (3) shows the p-value from a pairwise t-test testing for a difference between the means of the two curriculum groups after residualizing on recruitment-channel fixed effects. Probability weights that weigh each of the three graduating cohort groups ('09-'10, '11-'12, '13-'14) equally are applied everywhere.

Table 4: Curriculum Effects on Recall of History Topics Covered in School

| | Recalls Cov. GDR | | Recalls Cov. Nazi Regime | |
| | (1) | (2) | (3) | (4) |
	In Senior HS	Ever	In Senior HS	Ever
GDR Curriculum	0.20***	0.13***	-0.19***	-0.02***
	(0.02)	(0.02)	(0.02)	(0.01)
Mean	0.37	0.78	0.77	0.99
Observations	1,970	1,970	1,970	1,970

Notes: This table explores the effect of covering the GDR regime rather than the Nazi regime in senior high school on student recall. Specifically, it presents estimates of coefficient β_1 from Equation (1) for the different outcomes listed in columns (1) through (4). We include recruitment channel fixed effects and apply probability weights that weigh each of the three graduating cohort groups ('09-'10, '11-'12, '13-'14) equally (see Section 4 for details). The outcomes are constructed from the answers to a survey question asking participants to indicate whether the history of the GDR (NS) regime was covered in middle school, junior high school, and senior high school. Outcomes in columns (1) and (3) are dummies that equal one if the respondent selected senior high school for the given topic. Outcomes in columns (2) and (4) are dummies that equal one if the respondent selected at least one between middle school, junior high school, and senior high school for the given topic. "Mean" refers to the mean outcome in the leave-out group: respondents belonging to cohorts whose senior high school curriculum included the Nazi regime (but not the GDR regime). Robust standard errors are reported in parentheses. The sample is restricted to the subset of the main analysis sample described in Section 3 that answered the questions about recall, which came towards the end of the survey.

Table 5: Curriculum Effects on Knowledge

Panel A:	Knowledge GDR Regime				
	(1)	(2)	(3)	(4)	(5)
GDR Curriculum	0.38***	0.33***	0.35***	0.36***	0.31***
	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)
Recr. Channel FE	No	Yes	No	No	Yes
Gender FE	No	No	Yes	No	Yes
Municipality FE	No	No	No	Yes	Yes
Mean	4.67	4.67	4.67	4.67	4.67
Observations	2,010	2,010	2,010	2,010	2,010

Panel B:	Knowledge Nazi Regime				
	(1)	(2)	(3)	(4)	(5)
GDR Curriculum	-0.08	-0.12*	-0.11	-0.11	-0.16**
	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)
Recr. Channel FE	No	Yes	No	No	Yes
Gender FE	No	No	Yes	No	Yes
Municipality FE	No	No	No	Yes	Yes
Mean	4.85	4.85	4.85	4.85	4.85
Observations	2,010	2,010	2,010	2,010	2,010

Notes: This table explores the effect of covering the GDR regime rather than the Nazi regime in senior high school on knowledge of the GDR and Nazi regimes. Specifically, it presents estimates of coefficient β_1 from Equation (1), where we apply probability weights that weigh each of the three graduating cohort groups ('09-'10, '11-'12, '13-'14) equally (see Section 4 for details). The outcome variables are the scores on the GDR and Nazi knowledge quizzes. For a detailed description of the outcome variables see Table A.1. Column (1) estimates Equation (1) without including controls, thus allowing for a straightforward comparison with Figure 2. Columns (2), (3), (4), and (5) estimate Equation (1) including different combinations of fixed effects. Column (2), our preferred specification, includes recruitment channel fixed effects; column (3) includes gender fixed effects; column (4) includes municipality fixed effects, and column (5) includes sample, gender, and municipality fixed effects. "Mean" refers to the mean outcome in the leave-out group: respondents belonging to cohorts whose senior high school history curriculum included the Nazi regime (but not the GDR regime). Robust standard errors are reported in parentheses. The sample is restricted to the subset of the main analysis sample described in Section 3 that completed the knowledge section of the survey, which came after the attitudes section.

Table 6: Curriculum Effects on Ideology

Panel A:	Index Support Extreme Left				
	(1)	(2)	(3)	(4)	(5)
GDR Curriculum	-0.12**	-0.10**	-0.10**	-0.11**	-0.09**
	(0.04)	(0.04)	(0.04)	(0.05)	(0.04)
Recr. Channel FE	No	Yes	No	No	Yes
Gender FE	No	No	Yes	No	Yes
Municipality FE	No	No	No	Yes	Yes
Mean	-0.00	-0.00	-0.00	-0.00	-0.00
Observations	2,146	2,146	2,146	2,146	2,146

Panel B:	Index Support Extreme Right				
	(1)	(2)	(3)	(4)	(5)
GDR Curriculum	-0.03	-0.01	-0.04	-0.03	-0.03
	(0.05)	(0.05)	(0.04)	(0.05)	(0.05)
Recr. Channel FE	No	Yes	No	No	Yes
Gender FE	No	No	Yes	No	Yes
Municipality FE	No	No	No	Yes	Yes
Mean	0.00	0.00	0.00	0.00	0.00
Observations	2,146	2,146	2,146	2,146	2,146

Notes: This table explores the effect of covering the GDR regime rather than the Nazi regime in senior high school on support for extreme left-wing and right-wing ideology. Specifically, it presents estimates of coefficient β_1 from Equation (1), where we apply probability weights that weigh each of the three graduating cohort groups ('09-'10, '11-'12, '13-'14) equally (see Section 4 for details). The outcome variables are the indices of extreme left-wing and right-wing ideology. For a detailed description of the outcome variables see Table A.1. Column 1 estimates Equation (1) without including controls, thus allowing for a straightforward comparison to Figure 3. Columns 2, 3, 4, and 5 estimate Equation (1) including different combinations of fixed effects. Column 2, our preferred specification, includes recruitment channel fixed effects; column 3 includes gender fixed effects; column 4 includes municipality fixed effects, and column 5 includes sample, gender, and municipality fixed effects. For individuals with missing information on gender, we impute the value to the median of the cohort they belong to. For individuals with missing information on municipality, we create a separate category that we include in the municipality fixed effects. "Mean" refers to the mean outcome in the leave-out group: respondents belonging to cohorts whose senior high school curriculum covered the Nazi rather than the GDR regime. Robust standard errors are reported in parentheses. The sample is restricted to the main analysis sample described in Section 3.

Table 7: Curriculum Effects on Ideology: Difference-in-Differences Results

Panel A:	Index Support Extreme Left			
	(1)	(2)	(3)	(4)
'11-'12 Cohort ×	-0.19**	-0.22**	-0.19**	-0.22**
Lower Saxony	(0.09)	(0.09)	(0.09)	(0.09)
Gender FE	No	Yes	No	Yes
State FE	No	No	Yes	Yes
Recr. Channel FE	Yes	Yes	Yes	Yes
Observations	3,016	3,016	3,016	3,016

Panel B:	Index Support Extreme Right			
	(1)	(2)	(3)	(4)
'11-'12 Cohort ×	0.04	0.07	0.03	0.06
Lower Saxony	(0.10)	(0.09)	(0.10)	(0.09)
Gender FE	No	Yes	No	Yes
State FE	No	No	Yes	Yes
Recr. Channel FE	Yes	Yes	Yes	Yes
Observations	3,016	3,016	3,016	3,016

Notes: This table explores the effect of covering the GDR regime rather than the Nazi regime in senior high school on support for extreme left-wing and right-wing ideology. Specifically, it presents estimates of coefficient γ_1 from Equation (3), where we apply probability weights that weigh each of the three graduating cohort groups ('09-'10, '11-'12, '13-'14) equally (see Section 4 for details) in each region cluster. The outcome variables are the indices of extreme left-wing and extreme right-wing ideology. For a detailed description of the outcome variables see Table A.1. Columns (1), (2), (3), and (4) estimate Equation (3) including different combinations of fixed effects. Column (1), our preferred specification, includes recruitment channel fixed effects; column (2) includes gender fixed effects; column (3) includes municipality fixed effects, and column (4) includes sample, gender, and municipality fixed effects. Robust standard errors are reported in parentheses. The sample includes both respondents in the main analysis sample described in Section 3 and respondents who graduated in the years 2009 through 2014 from high school in other states in western Germany (i.e., states that were never part of the GDR).
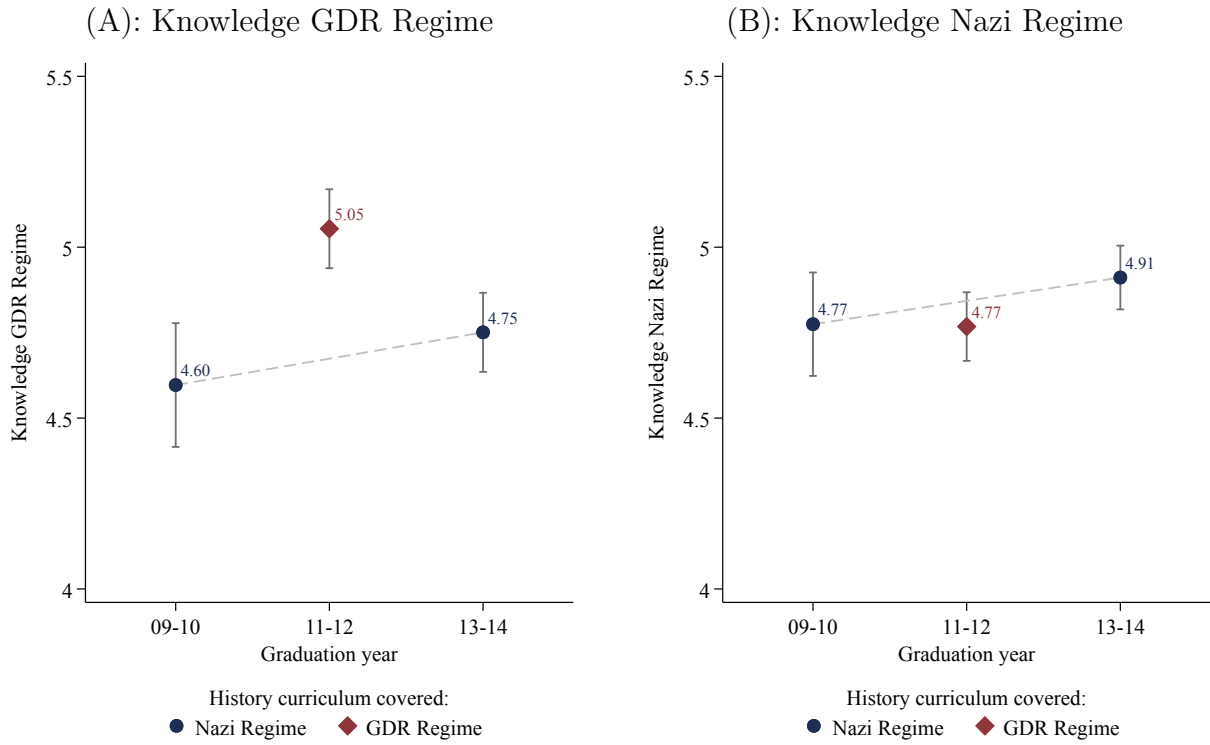
Figures

Figure 1: Mean Recall of Topics Covered in Senior High School Across Graduation Years
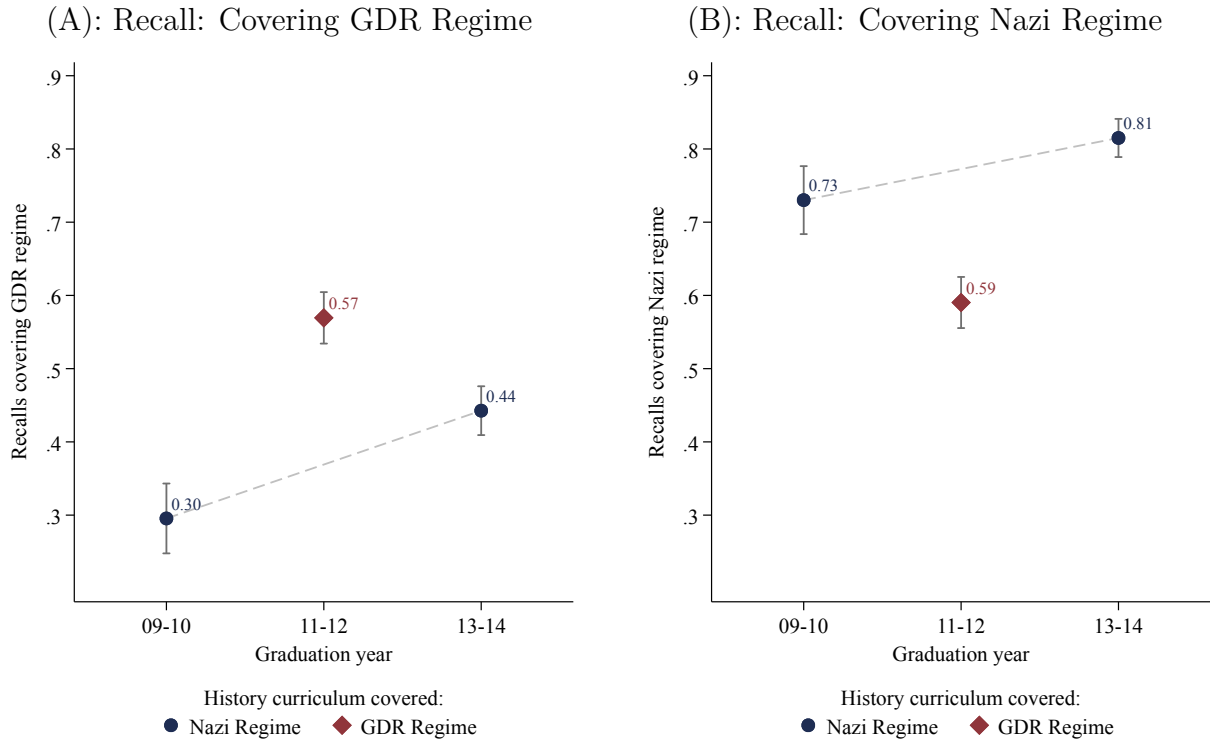
(A): Recall: Covering GDR Regime
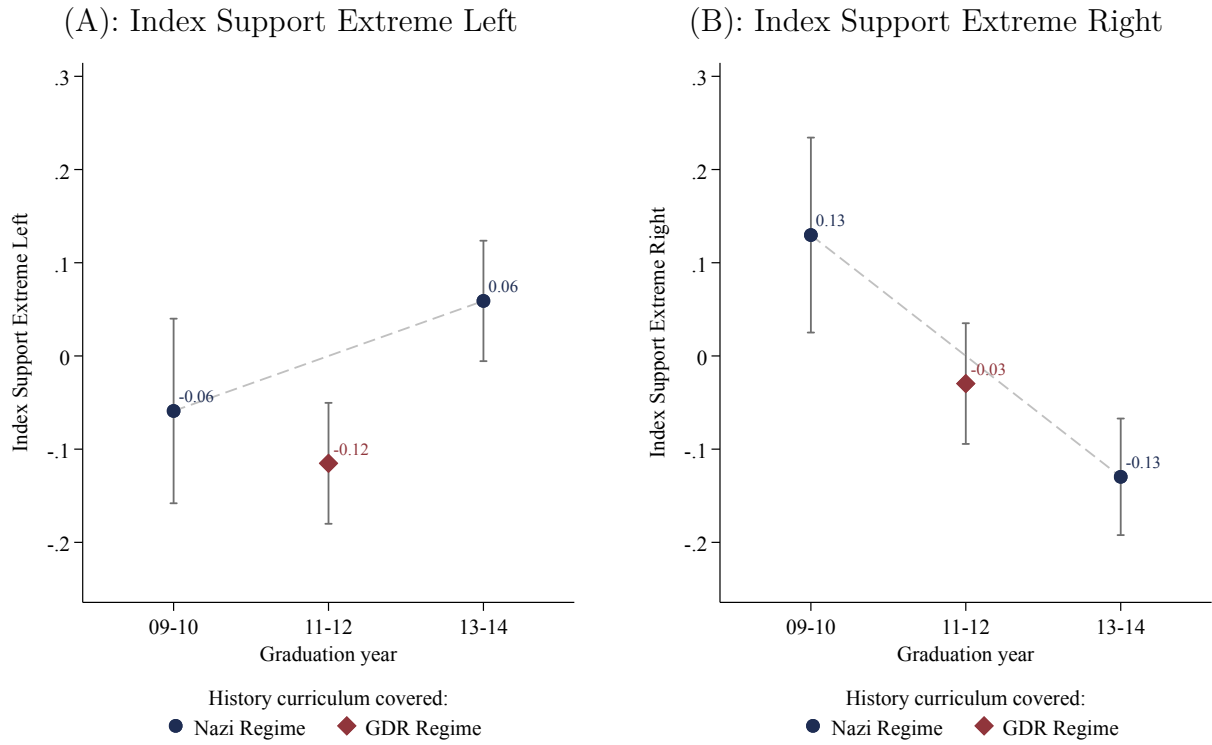
(B): Recall: Covering Nazi Regime

Notes: This figure explores the effect of covering the GDR regime rather than the Nazi regime in senior high school on whether respondents recall having covered a given topic in those high school years. Specifically, it shows the average raw recall rates for the GDR (NS) topic separately for respondents belonging to the graduating cohorts of 2009-2010, 2011-2012, and 2013-2014. At the respondent level, recall is measured as a dummy that equals one for individuals who, when asked to recall all periods in school in which they covered a given topic, responded that they covered the topic in senior high school. The bars represent 95% confidence intervals. The sample is restricted to the subset of the main analysis sample described in Section 3 that completed the questions about recall.

Figure 2: Mean Knowledge Across Graduation Years

(A): Knowledge GDR Regime
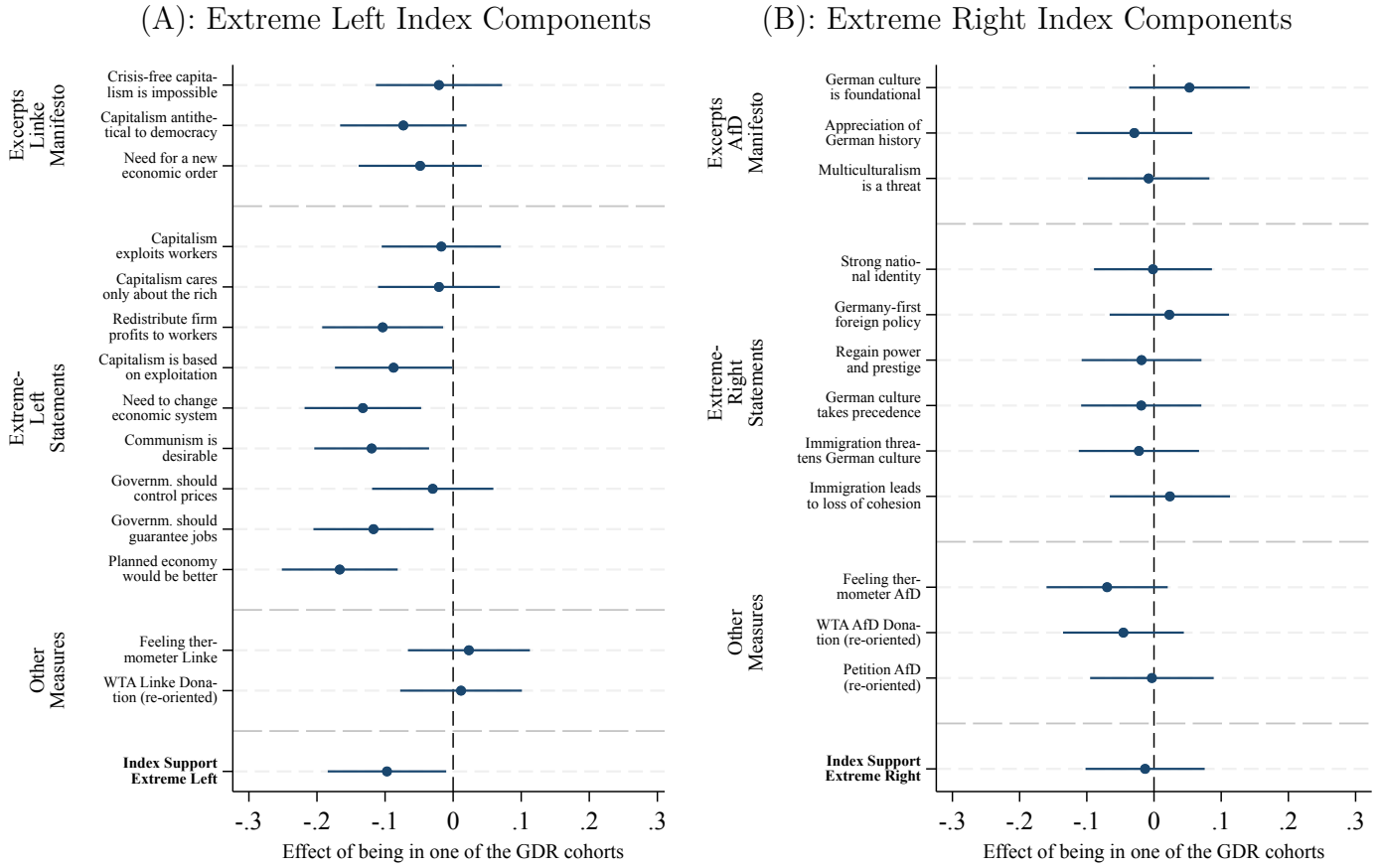

(B): Knowledge Nazi Regime

Notes: This figure explores the effect of covering the GDR regime rather than the Nazi regime in senior high school on knowledge of the GDR (NS) regime. Specifically, it shows the average raw score on the GDR (NS) knowledge quiz separately for respondents belonging to the graduating cohorts 2009-2010, 2011-2012, and 2013-2014. For a detailed description of the outcome variables see Table A.1. The bars represent 95% confidence intervals. The sample is restricted to the subset of the main analysis sample described in Section 3 that completed the knowledge section of the survey.

Figure 3: Mean Ideology Across Graduation Years

(A): Index Support Extreme Left

(B): Index Support Extreme Right

Notes: This figure explores the effect of covering the GDR regime rather than the Nazi regime in senior high school on support for extreme left-wing (right-wing) ideology. Specifically, it shows the average raw level of the index of support for extreme left-wing (right-wing) ideology separately for respondents belonging to the graduating cohorts 2009-2010, 2011-2012, and 2013-2014. For a detailed description of the outcome variables see Table A.1. The bars represent 95% confidence intervals. The sample is restricted to the main analysis sample described in Section 3.

## Figure 4: Curriculum Effects for Each Index Component

(A): Extreme Left Index Components

(B): Extreme Right Index Components

Notes: This figure explores the effect of covering the GDR regime rather than the Nazi regime in senior high school on support for extreme left-wing (right-wing) ideology. Specifically, it presents estimates of coefficient β_1 from Equation (1), where we apply probability weights that weigh each of the three graduating cohort groups ('09-'10, '11-'12, '13-'14) equally (see Section 4 for details). The estimates are from our preferred specification, which includes recruitment-channel fixed effects. The outcome variables are the indices of extreme left-wing and extreme right-wing ideology, as well as their components. For a detailed description of the outcome variables see Table A.1. All outcomes are standardized so that, for participants in the graduating cohorts who studied the Nazi regime, they have a mean of zero and a standard deviation of one. The bars represent 95% confidence intervals. Standard errors are robust. The sample is restricted to the main analysis sample described in Section 3.

Figure 5: Heterogeneous Treatment Effects by Vote Share for Extreme Parties

(A): Support Extreme Left-Wing Ideology & Linke Vote Share

(B): Support Extreme Right-Wing Ideology & AfD Vote Share
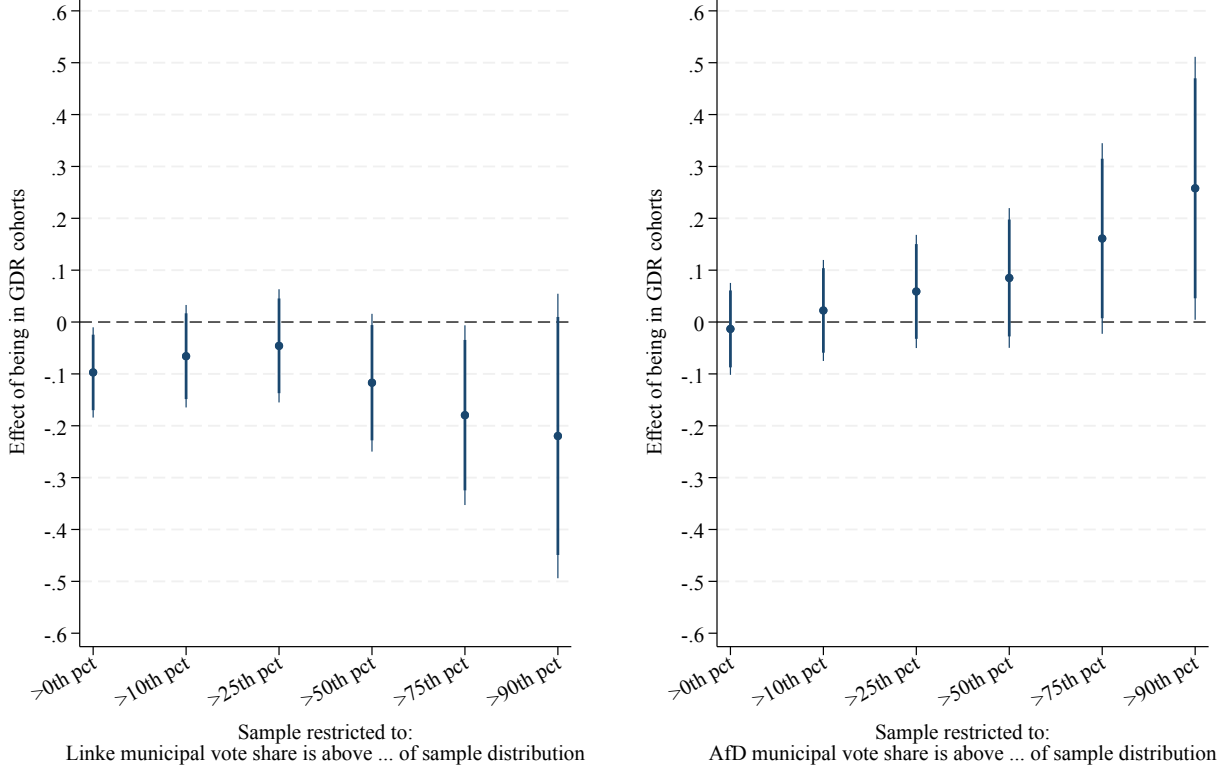
Notes: This figure explores the degree to which the effects of studying the GDR rather than the Nazi regime in senior high school on support for extreme left-wing (right-wing) ideology depend on the municipality-level vote shares for the leftmost (rightmost) party in Germany: the Linke (AfD). Specifically, Panel A (Panel B) restricts attention to subsamples of participants who went to high school in municipalities with progressively higher and higher vote shares for the Linke (AfD). Vote shares are based on the results of the 2021 national parliamentary election. Dots present estimates of coefficient β_1 from Equation (1), where we apply probability weights that weigh each of the three graduating cohort groups ('09-'10, '11-'12, '13-'14) equally (see Section 4 for details). The estimates are from our preferred specification, which includes recruitment-channel fixed effects. The outcome variables are the indices of extreme left-wing and extreme right-wing ideology. For a detailed description of the outcome variables see Table A.1. Thick (thin) bars represent 90% (95%) confidence intervals. Standard errors are robust. The samples on which treatment effects are estimated are subsets of the main analysis sample described in Section 3. For example, the fourth data point from the left in Panel A is estimated using the subset of participants from the main analysis sample who hail from municipalities where the share of votes for the Linke is above the median in our main analysis sample.

Appendix

Table of Contents

A. Appendix Tables and Figures

A.1 Appendix Tables

Table A.1: List of Primary, Secondary, and Tertiary Outcomes

Variable	Description
Treatment Variable	
$C^{11,12}$	Indicator for belonging to the 2011 or 2012 graduating cohort (i.e. the cohorts that, in Lower Saxony, studied the GDR rather than the NS regime).
Primary Outcomes	
Knowledge GDR	Number of factual knowledge questions (out of 7) about the GDR that were answered correctly. Based on 7 multiple choice questions with four answer options and one correct answer each. See Appendix I.1 for the list of questions.
Knowledge NS Regime	Number of factual knowledge questions (out of 7) about the NS regime that were answered correctly. Based on 7 multiple choice questions with four answer options and one correct answer each. See Appendix I.1 for the list of questions.
Index left-wing ideology	The index is constructed as follows: i) we standardize all variables listed under **Secondary Outcomes: Left-wing ideology** (see below) so that, for participants in the graduating cohorts who studied the Nazi regime, they have a mean of 0 and a standard deviation of 1 (and, when applicable, reorient them such that larger values mean larger support for left-wing cause/party); ii) we take a simple average of the standardized variables; iii) we re-standardized the average so that, for participants in the graduating cohorts who studied the Nazi regime, it has a mean of 0 and a standard deviation of 1.

Index right-wing ideology	The index is constructed as follows: i) we standardize all variables listed under **Secondary Outcomes: Right-wing ideology** (see below) so that, for participants in the graduating cohorts who studied the Nazi regime, they have a mean of 0 and a standard deviation of 1 (and, when applicable, reorient them such that larger values mean larger support for right-wing cause/party); ii) we take a simple average of the standardized variables; iii) we re-standardized the average so that, for participants in the graduating cohorts who studied the Nazi regime, it has a mean of 0 and a standard deviation of 1.

Secondary Outcomes: Left-wing ideology

Far-left ideas (12 outcomes)	12 questions in total, each eliciting agreement with extreme left-wing ideology related to capitalism, communism, the working class, and economic policy. The first three statements were taken from the far-left party's (Die Linke) election program. For each statement, respondents state the extent to which they disagree or agree with the statement on a 7-point Likert-scale. See Appendix I.2 for the English translation of each statement.
Far-Left Party Agreement	To measure the respondent's attitude towards the far-left party (Die Linke), we use the standard "feeling thermometer" question: "Thinking about the last year, how warm or cold have you felt towards Die Linke?". It is elicited on a 0-100 slider scale.
Far-Left Party Donation	Minimum willingness-to-accept (WTA) to authorize a 5 Euro donation to the far-left (Die Linke) party. Implemented through the BDM-mechanism.

Secondary Outcomes: Right-wing ideology

Far-right ideas (9 outcomes)	9 questions in total, each eliciting agreement with extreme right-wing ideology related to German culture, values, identity, the legacy of the Holocaust, nationalism, and immigration. The first three statements were taken from the far-right party's (AfD) election program. For each statement, respondents state the extent to which they disagree or agree with the statement on a 7-point Likert-scale. See Appendix I.2 for the English translation of each statement.

Far-Right Party Agreement	To measure the respondent's attitude towards the far-right party (AfD), we use the standard "feeling thermometer" question: "Thinking about the last year, how warm or cold have you felt towards the AfD?". It is elicited on a 0-100 slider scale.
Far-Right Party Donation	Minimum willingness-to-accept to authorize 5 Euro donation to the far-right (AfD) party. Implemented through the BDM-mechanism.
Party Petition	Respondents decide which petition to anonymously support form a set of two petitions. Petition 1 calls to expel a former neo Nazi party (NPD) affiliate from the AfD; Petition 2 calls to expel a former informant of the GDR ministry of state security ("Stasi")—the state security service of East Germany—from Die Linke. Respondents can support at most one petition. Aggregate results are communicated to the two parties to ensure incentive compatibility.

Secondary Outcomes: Antisemitism

Antisemitism	The index is constructed as follows: i) we standardize all the antisemitism variables (see Appendix I.3 for the English translation of each statement about antisemitism) so that, for participants in the graduating cohorts who studied the Nazi regime, they have a mean of 0 and a standard deviation of 1 (and, when applicable, reorient them such that larger values indicate a greater degree of antisemitism); ii) we take a simple average of the standardized variables; iii) we re-standardized the average so that, for participants in the graduating cohorts who studied the Nazi regime, it has a mean of 0 and a standard deviation of 1. For each statement, respondents state the extent to which they disagree or agree with the statement on a 7-point Likert-scale.

Tertiary Outcomes

Left-Right Scale	Answer to the survey question (on 1-10 Likert scale) "Many people use the terms "left" and "right" when referring to different political attitudes. Below is a scale, running from left to right. When you think of your own political views, where would you rank those views on this scale?".

Feeling Thermometer: Other parties (4 outcomes)	For each of the major centrist parties, namely Social Democratic Party (SPD) [center-left], Alliance 90/The Greens [center to center-left], Free Democratic Party (FDP) [center to center-right], and Christian Democratic Union (CDU) [center-right], we measure the respondent's attitude using the standard "feeling thermometer" question (on a 0 to 100 slider scale): "Thinking about the last year, how warm or cold have you felt towards [party name]?"
Political Participation	Dummy that equals one if the respondent reported having voted in the 2021 parliamentary election.
Self-Reported Vote (6 outcomes)	Based on a respondent's self report of which party they voted for in the 2021 parliamentary election, for each of the six major parties (SPD, CDU, Alliance 90/Greens, FDP, Die Linke, AfD), we construct a dummy that equals one if a respondent reported voting for this party (and zero otherwise).
Narrative about Rise of Populism	Free text response to the following question: "Over the past two decades, populist parties have gained increasing support in Europe. Two different points are often cited as the main causes of this development. One view says that rising support for populist parties is primarily a reaction to rising economic inequality and to the rise of a class of people that is perceived to have captured political and economic power. Others believe that increasing support for populist parties is primarily a racism-fueled reaction to increasing immigration. Which of these two often-mentioned points do you think is more crucial to the growth of populist movements and views, and how do you justify your choice?" The answers is hand-coded into stronger support for inequality narrative, even support for both narratives, and stronger support for immigration narrative.

Notes: This table presents the definition and construction our our main treatment variable, as well as the definitions and constructions of our primary, secondary, and tertiary outcome variables.

Table A.2: Heterogeneity Margins

Variable	Description
Intensity of history education	Distinguishes between individuals who took the intense six hours per week history track vs. those who did not (taking 2-4 hours of history a week).
Educational attainment	Is measured in two ways: high school GPA, and a dummy for having a university degree.
Childhood political environment	Is measured in two ways: vote share of the far-right political party in the municipality in which the respondent's high school is located; vote share of the far-left political party in the municipality in which the respondent's high school is located.
Exposure to socialism	Is measured in two ways: reporting at least one parent having been born in the GDR or the Soviet Union; distance to the former border with the GDR from the municipality in which the respondent's high school is located.
Parent political ideology	Is based on a respondent's placement of their parents' political leaning on a 10-point left-right scale.
Teacher political ideology	Is based on a respondent's placement of their history teacher's political leaning on a 10-point left-right scale.
Spousal Curriculum Match	Is defined as reporting having a spouse who graduated from high school in a year whose history curriculum matches that of the respondent; individuals who don't have a spouse, whose spouse did not graduate from high school, or whose spouse graduated before 2008 or after 2015 are excluded from the analysis.

Notes: This table describes the pre-specified heterogeneity margins that we analyze in Section 5.4. The second column details how we construct each variable. Non-binary variables get standardized to mean 0 and standard deviation 1, based on all respondents from cohorts who studied the Nazi regime in senior high school.

Table A.3: Curriculum Effects on Quiz Response Time

Panel A:	Average Response Time GDR Quiz				
	(1)	(2)	(3)	(4)	(5)
GDR Curriculum	-1.88*	-2.22**	-1.76*	-1.91*	-1.99*
	(0.97)	(0.97)	(0.96)	(1.05)	(1.04)
Recr. Channel FE	No	Yes	No	No	Yes
Gender FE	No	No	Yes	No	Yes
Municipality FE	No	No	No	Yes	Yes
Mean	26.87	26.87	26.87	26.87	26.87
Observations	2,010	2,010	2,010	2,010	2,010

Panel B:	Average Response Time Nazi Quiz				
	(1)	(2)	(3)	(4)	(5)
GDR Curriculum	1.61	1.10	1.64	1.40	1.17
	(1.46)	(1.44)	(1.47)	(1.47)	(1.46)
Recr. Channel FE	No	Yes	No	No	Yes
Gender FE	No	No	Yes	No	Yes
Municipality FE	No	No	No	Yes	Yes
Mean	36.08	36.08	36.08	36.08	36.08
Observations	2,010	2,010	2,010	2,010	2,010

Notes: This table explores the effect of covering the GDR regime rather than the Nazi regime in senior high school on average response time on the quizzes about the GDR and Nazi regimes. Specifically, it presents estimates of coefficient β_1 from Equation (1), where we apply probability weights that weigh each of the three graduating cohort groups ('09-'10, '11-'12, '13-'14) equally (see Section 4 for details). Columns (2), (3), (4), and (5) estimate Equation (1) including different combinations of fixed effects. Column (2), our preferred specification, includes recruitment channel fixed effects; column (3) includes gender fixed effects; column (4) includes municipality fixed effects, and column (5) includes sample, gender, and municipality fixed effects. "Mean" refers to the mean outcome in the leave-out group: respondents belonging to cohorts whose senior high school history curriculum included the Nazi regime (but not the GDR regime). Robust standard errors are reported in parentheses. The sample is restricted to the subset of the main analysis sample described in Section 3 that completed the knowledge section of the survey, which came after the attitudes section.

Table A.4: Balance Table: Difference-in-Differences Analysis

	(1) Age	(2) Male	(3) College degree	(4) Net annual pers. income	(5) Employed	(6) Survey duration
'11-'12 Cohort × Lower Saxony	-0.09 (0.17)	-0.04 (0.05)	-0.06 (0.04)	-1631.50 (2010.91)	0.00 (0.03)	-0.84 (1.59)
Mean	30.71	0.41	0.72	33304.75	0.88	32.32
Observations	2,681	2,681	2,681	2,681	2,681	2,681

Notes: This table presents balance tests on observable characteristics for our DiD analysis. Specifically, it shows the interaction coefficient estimate obtained from a regression of a given characteristic listed in the column header on a dummy for Lower Saxony, a dummy for belonging to the '11-'12 graduating cohorts, and their interaction (that is, it shows coefficient γ_1 from our DiD specification Equation (3)). In line with our preferred specification, we also control for recruitment channel fixed effects. Standard errors are shown in parentheses. The sample includes both respondents in the main analysis sample described in Section 3 and respondents who graduated from high school in other states in western Germany in the same years. It further restricts to participants who completed the demographics section of our survey. Probability weights that weigh each of the three graduating cohort groups ('09-'10, '11-'12, '13-'14) equally in each region cluster are applied everywhere.

Table A.5: Results with Controls for Socio-Economic Status

Panel A:	Index Support Extreme Left					
	(1)	(2)	(3)	(4)	(5)	(6)
GDR Curriculum	-0.12**	-0.10**	-0.10**	-0.11**	-0.09**	-0.08*
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
College	No	Yes	No	No	Yes	Yes
Employed	No	No	Yes	No	Yes	Yes
Income	No	No	No	Yes	Yes	Yes
Recr. Channel FE	No	No	No	No	No	Yes
Observations	2,146	2,146	2,146	2,146	2,146	2,146

Panel B:	Index Support Extreme Right					
	(1)	(2)	(3)	(4)	(5)	(6)
GDR Curriculum	-0.03	-0.02	-0.04	-0.03	-0.03	-0.02
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
College	No	Yes	No	No	Yes	Yes
Employed	No	No	Yes	No	Yes	Yes
Income	No	No	No	Yes	Yes	Yes
Recr. Channel FE	No	No	No	No	No	Yes
Observations	2,146	2,146	2,146	2,146	2,146	2,146

Notes: This table explores the effect of covering the GDR regime rather than the Nazi regime in senior high school on support for extreme left-wing and right-wing ideology. Specifically, it presents estimates of coefficient β_1 from Equation (1), where we apply probability weights that weigh each of the three graduating cohort groups ('09-'10, '11-'12, '13-'14) equally (see Section 4 for details). The outcome variables are the indices of extreme left-wing and extreme right-wing ideology. For a detailed description of the outcome variables see Table A.1. Column (1) estimates Equation (1) without including controls. Columns (2) through (6) estimate Equation (1) including different combinations of controls. "College" and "Employed" are dummy variables for having a university degree and being employed, respectively, while "Income" denotes the log of 1 plus net annual personal income. For individuals with missing information on income, education, or employment status, we impute the value to the median of the cohort they belong to. Robust standard errors are reported in parentheses. The sample is restricted to the main analysis sample described in Section 3.

Table A.6: Knowledge Results Including Low Quality Responses

Panel A:	Index Support Extreme Left				
	(1)	(2)	(3)	(4)	(5)
GDR Curriculum	0.44***	0.31***	0.41***	0.39***	0.29***
	(0.08)	(0.07)	(0.07)	(0.08)	(0.07)
Recr. Channel FE	No	Yes	No	No	Yes
Gender FE	No	No	Yes	No	Yes
Municipality FE	No	No	No	Yes	Yes
Mean	4.52	4.52	4.52	4.52	4.52
Observations	2,328	2,328	2,328	2,328	2,328

Panel B:	Index Support Extreme Right				
	(1)	(2)	(3)	(4)	(5)
GDR Curriculum	-0.00	-0.12*	-0.02	-0.05	-0.15**
	(0.07)	(0.06)	(0.07)	(0.07)	(0.06)
Recr. Channel FE	No	Yes	No	No	Yes
Gender FE	No	No	Yes	No	Yes
Municipality FE	No	No	No	Yes	Yes
Mean	4.65	4.65	4.65	4.65	4.65
Observations	2,328	2,328	2,328	2,328	2,328

Notes: This table shows results from the same specification as in Table 5. The only difference is that they are based on the larger sample of all respondents who completed the sections on attitudes towards extreme left-wing and right-wing ideology, irrespective of whether we flag them as low quality responses.

Table A.7: Ideology Results Including Low Quality Responses

Panel A:	Index Support Extreme Left				
	(1)	(2)	(3)	(4)	(5)
GDR Curriculum	-0.17***	-0.12***	-0.16***	-0.15***	-0.11***
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Recr. Channel FE	No	Yes	No	No	Yes
Gender FE	No	No	Yes	No	Yes
Municipality FE	No	No	No	Yes	Yes
Mean	0.00	0.00	0.00	0.00	0.00
Observations	2,479	2,479	2,479	2,479	2,479

Panel B:	Index Support Extreme Right				
	(1)	(2)	(3)	(4)	(5)
GDR Curriculum	-0.08*	-0.02	-0.08**	-0.07	-0.03
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Recr. Channel FE	No	Yes	No	No	Yes
Gender FE	No	No	Yes	No	Yes
Municipality FE	No	No	No	Yes	Yes
Mean	-0.00	-0.00	-0.00	-0.00	-0.00
Observations	2,479	2,479	2,479	2,479	2,479

Notes: This table shows results from the same specification as in Table 6. The only difference is that they are based on the larger sample of all respondents who completed the sections on attitudes towards extreme left-wing and right-wing ideology, irrespective of whether we flag them as low quality responses.

Table A.8: Additional Robustness Checks

	Index Supp. Extr. Left			Index Supp. Extr. Right		
	(1) Yrs of schooling control	(2) No prob. weights	(3) Inv.cov. weighted index	(4) Yrs of schooling control	(5) No prob. weights	(6) Inv.cov. weighted index
GDR Curriculum	-0.12***	-0.14***	-0.09**	-0.01	0.02	-0.03
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.05)
Observations	2,146	2,146	2,146	2,146	2,146	2,146

Notes: This table presents a battery of robustness checks for our main results on support for extreme left-wing and right-wing ideology. Columns (1) and (4) include a control for whether a respondent graduated high school in grade 12 (instead of 13). Columns (2) and (5) estimate Equation (1) without the probability weights that weigh each of the three graduating cohort groups ('09-'10, '11-'12, '13-'14) equally (see Section 4 for details). Columns (3) and (6) employ as outcome variables indices of extreme left-wing and right-wing ideology that are constructed using the inverse covariance weighing procedure introduced in Anderson (2008). Robust standard errors are reported in parentheses. The sample is restricted to the main analysis sample described in Section 3.

Table A.9: Testing for Differential Stigma/Social Image Concerns

	(1) Acceptable GDR regime goodsides	(2) Acceptable Nazi regime good sides	(3) Researcher Ideology
GDR Curriculum	0.025	-0.038	-0.062
	(0.049)	(0.049)	(0.050)
N	1968	1968	1925

Notes: This table explores the effect of covering the GDR regime rather than the Nazi regime in senior high school on stigma for supporting extreme left-wing and right-wing ideology and on perceptions of the researchers' ideology. Specifically, it presents estimates of coefficient β_1 from Equation (1), where we apply probability weights that weigh each of the three graduating cohort groups ('09-'10, '11-'12, '13-'14) equally (see Section 4 for details). We control for recruitment channel fixed effects. All outcomes are standardized to mean 0 and sd 1 in the Nazi curriculum cohorts. The outcomes in columns (1)-(2) are based on the response to a question asking how acceptable it is to say that the GDR and the Nazi regime, respectively, also had good sides (on a 7-point scale). The outcome in column (3) is based on respondents' perceptions of the researchers' ideology on a 7-point left-right scale. Robust standard errors are reported in parentheses. The sample is restricted to the subset of the main analysis sample described in Section 3 who answered the questions about stigma and researcher ideology, which came towards the end of the survey.

Table A.10: Association Between Knowledge and Ideology

	(1) Index Support Extreme Left	(2) Index Support Extreme Right
Knowledge GDR	-0.25**	-0.22**
	(0.10)	(0.10)
Knowledge NS	0.18	-0.53***
	(0.12)	(0.12)
Observations	2,010	2,010

Notes: This table explores the relationship between our indices of extreme left-wing and right-wing ideology and knowledge of the GDR and Nazi regimes. Specifically, it displays coefficients from an OLS regression of our indices of support for extreme ideology on our knowledge quiz scores, as well as controls. For interpretability, knowledge scores are measured as the percent of questions answered correctly and hence span from 0 (no correct answer) to 1 (all seven questions answered correctly). The controls (not shown) include fixed effects for the recruitment channel and the municipality of origin, as well as controls for college degree and gender. The sample is restricted to the subset of the main analysis sample described in Section 3 that completed the knowledge section of the survey.

Table A.11: Student Perceptions of Teacher and Parent Political Leaning

	(1) Teacher L-R	(2) Parents L-R
GDR Curriculum	-0.072	-0.027
	(0.049)	(0.050)
N	1919	1919

Notes: This table explores the effect of covering the GDR regime rather than the Nazi regime in senior high school on respondents' perceptions of their history teacher's and their parents' ideology. Specifically, it presents estimates of coefficient β_1 from Equation (1), where we apply probability weights that weigh each of the three graduating cohort groups ('09-'10, '11-'12, '13-'14) equally (see Section 4 for details). We control for recruitment channel fixed effects. All outcomes are standardized to mean 0 and sd 1 in the Nazi curriculum cohorts. Outcomes are based on respondents' perceptions of their senior high school history teacher's and their parents' ideology on a 10-point left-right scale. Robust standard errors are reported in parentheses. The sample is restricted to the subset of the main analysis sample described in Section 3 who answered the questions about teacher and parent ideology, which came towards the end of the survey.

A.13

A.2 Appendix Figures

Figure A.1: Party Vote Shares in Lower Saxony vs. Elsewhere
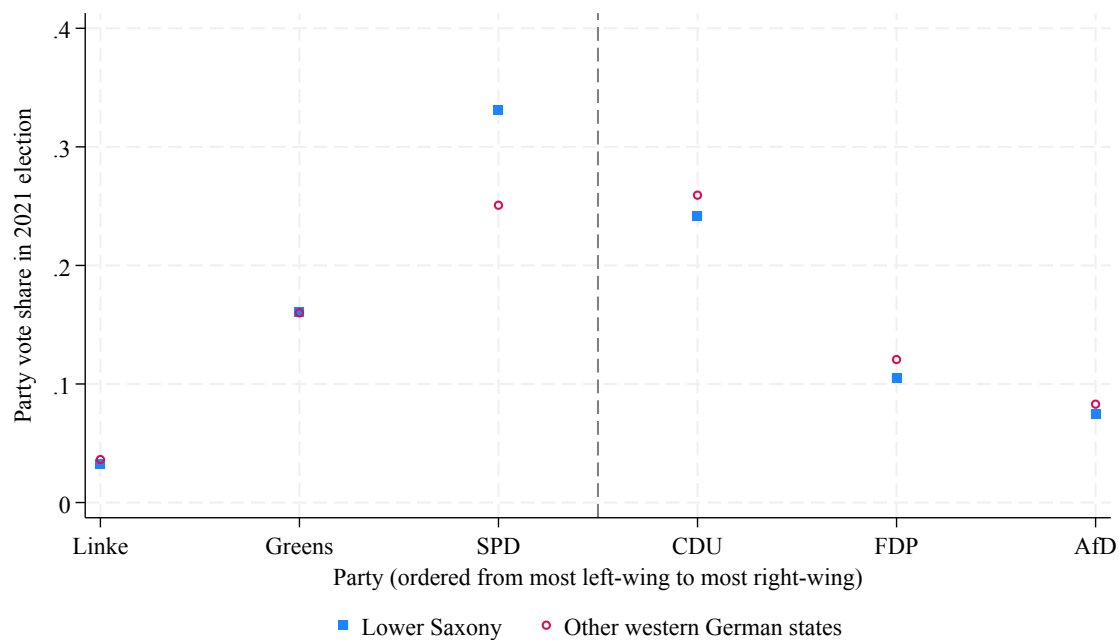
Notes: This figure presents the vote shares received by each of the six main parties in Germany's 2021 national parliamentary elections. Vote shares are shown separately for the state of Lower Saxony and for the other states in western Germany (i.e., states that were never part of the GDR).

Figure A.2: Correlation between Ideology Indices and Self-Placement on Left-Right Scale
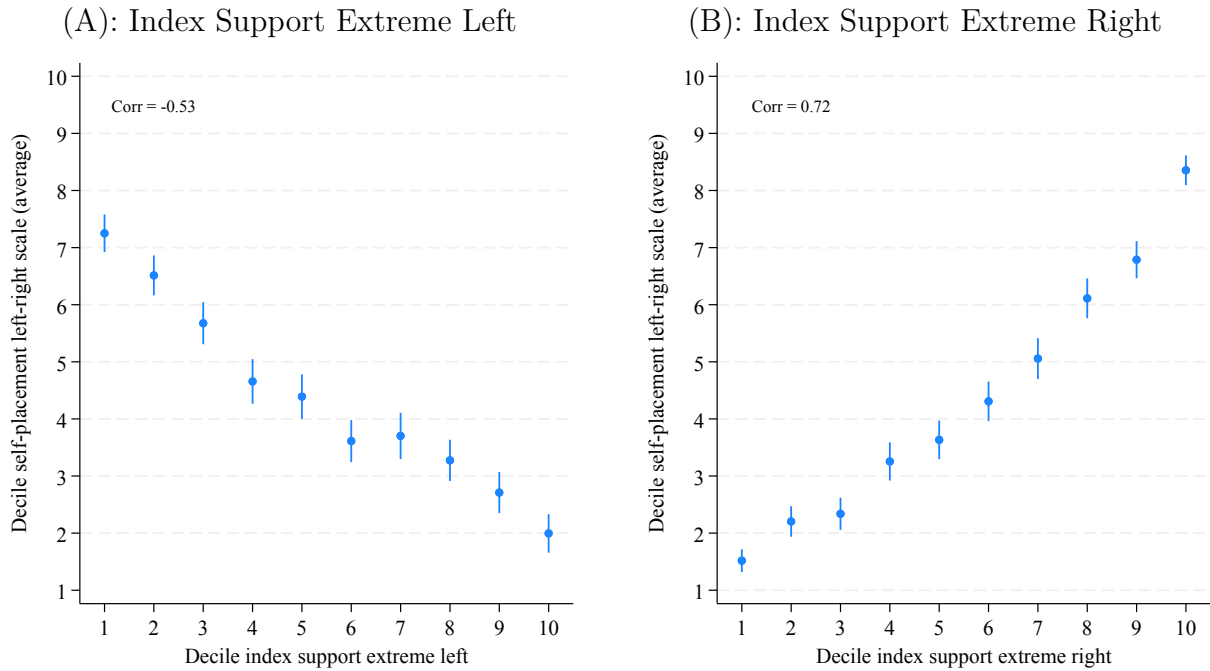
(A): Index Support Extreme Left

(B): Index Support Extreme Right

Notes: This figure explores the relationship between our indices of extreme left-wing and right-wing ideology and participants' self-placement on a left-right ideological scale. Specifically, Panel A (Panel B) shows the self-placement of respondents on a 10-point left-right scale on the vertical axis, averaged across respondents within each decile of the index of support for extreme left-wing (right-wing) ideology listed on the horizontal axis. To aid comparability of the two scales, respondents' raw self-placement on the left-right scale is converted into deciles as well. Pearson's correlation coefficients between the raw measures are displayed in the top-left corner of each panel. The sample is restricted to the main analysis sample described in Section 3.

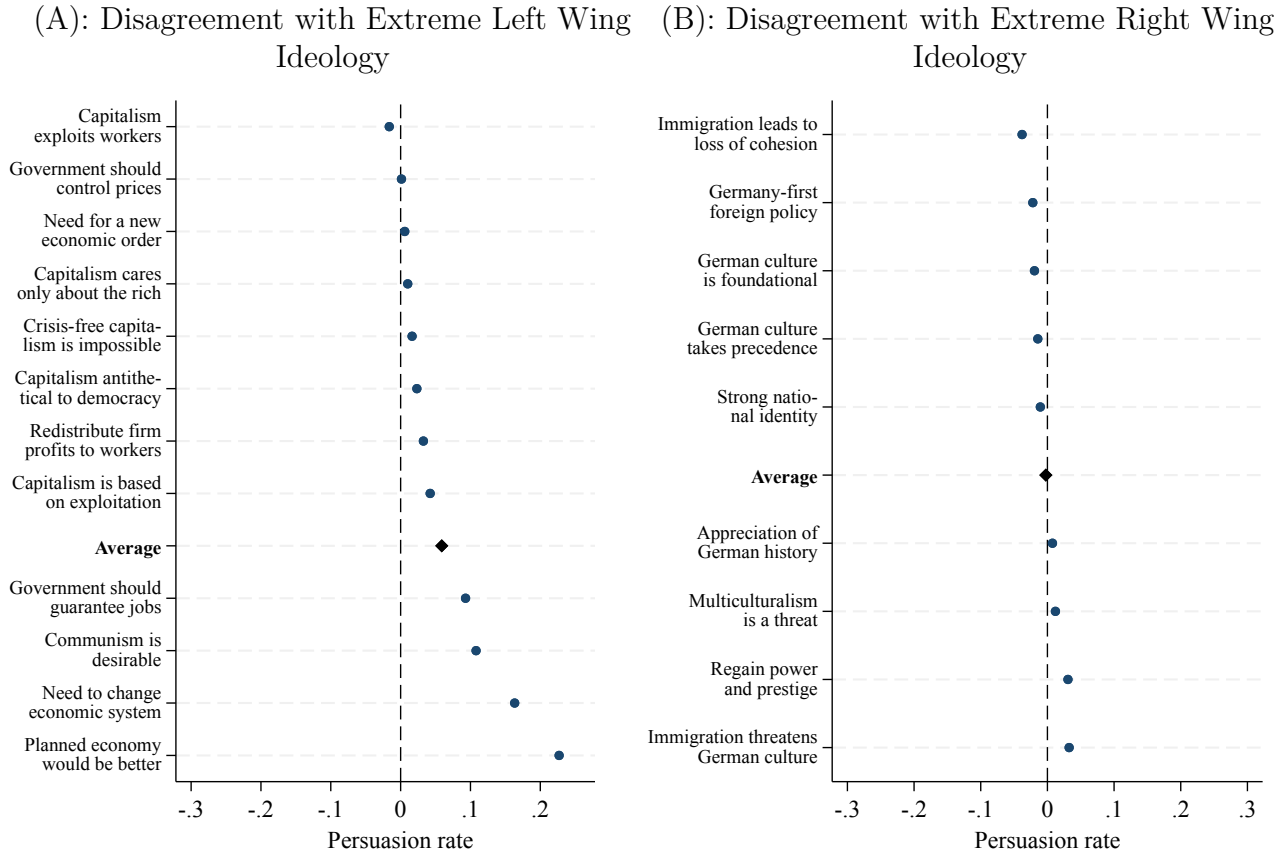Figure A.3: Geographic Distribution of Respondents
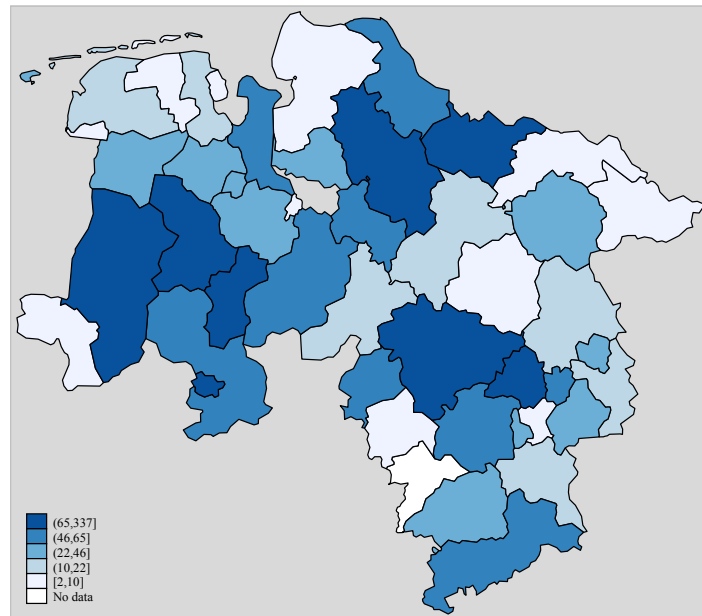
Notes: This figure illustrates the distribution of municipalities of origin in Lower Saxony among participants in our sample. Municipality of origin is defined as the municipality where a respondent got her high school degree. The sample is restricted to the subset of the main analysis sample described in Section 3 that completed the demographics section of our survey.

Figure A.4: Curriculum Effects for Each Knowledge Quiz Component
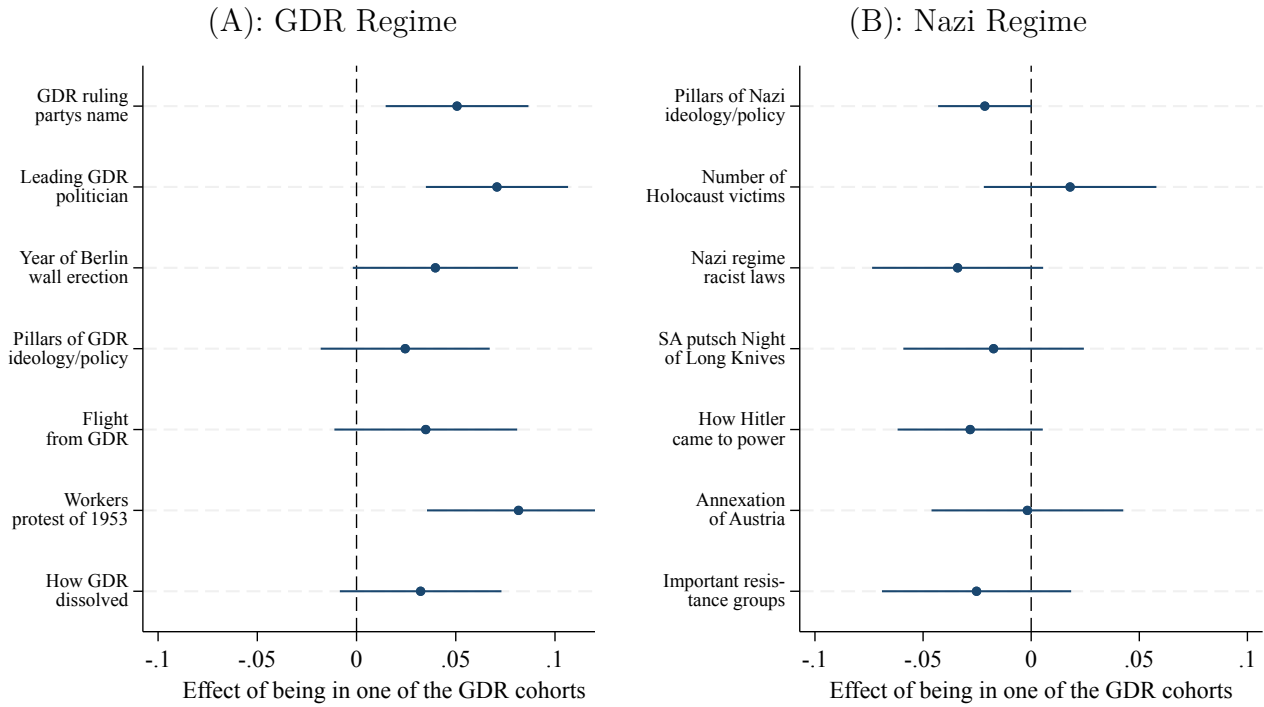
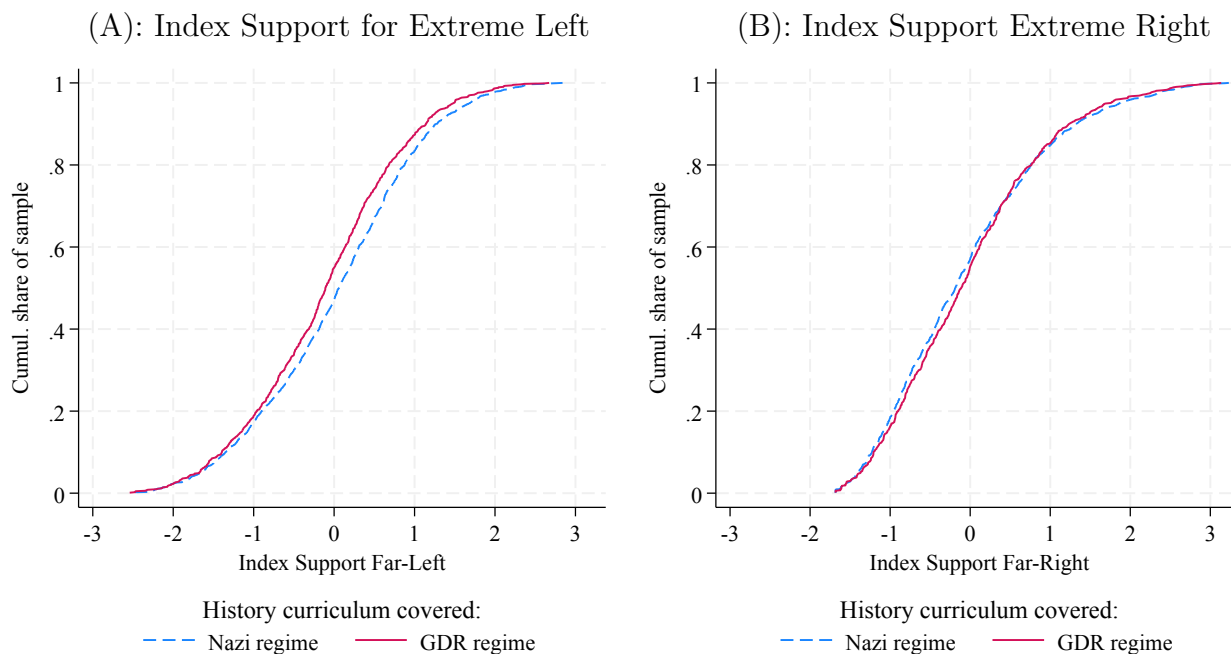(A): GDR Regime (B): Nazi Regime

Notes: This figure explores the effect of covering the GDR regime rather than the Nazi regime in senior high school on knowledge about each regime. Specifically, it presents estimates of coefficient β_1 from Equation (1), where we apply probability weights that weigh each of the three graduating cohort groups ('09-'10, '11-'12, '13-'14) equally (see Section 4 for details). The estimates are from our preferred specification, which includes recruitment-channel fixed effects. The outcome variables are the scores on the individual components of our knowledge quizzes. For a detailed description of the outcome variables see Table A.1. All outcomes are standardized so that, for participants in the graduating cohorts who studied the Nazi regime, they have a mean of zero and a standard deviation of one. The bars represent 95% confidence intervals. Standard errors are robust. The sample is restricted to the subset of the main analysis sample described in Section 3 that completed the knowledge section of the survey.

A.17

Figure A.5: Persuasion Rates

(A): Disagreement with Extreme Left Wing Ideology   (B): Disagreement with Extreme Right Wing Ideology

Notes: This figure plots the persuasion rate for each statement that enters our primary outcome indices. Following DellaVigna and Gentzkow (2010), we compute the persuasion rate as follows: first, we binarize each outcome into a dummy that equals one if the respondent disagrees with the statement (i.e. answers 3 or less on the 1-7 disagree/agree scale). Then, we compute the effect of covering the GDR regime rather than the Nazi regime in senior high school on each binary outcome, following our baseline specification from Equation (1) (see Section 4 for details). Lastly, we divide the effect thus estimated by the mean agreement rate in the cohorts that studied the Nazi regime in senior high school (where agreement is defined as one minus the disagreement dummy). The plots also show the average persuasion rates, computed as the simple average of the statement-level persuasion rates.

A.18

Figure A.6: Distributional Effects

Notes: This figure shows the cumulative distribution functions (CDFs) of our indices of extreme left-wing and right-wing ideology, separately for cohorts who studied the Nazi regime ("Nazi") and cohorts who studied the GDR regime ("GDR"). For a detailed description of the outcome variables see Table A.1. All outcomes are standardized so that, for participants in the graduating cohorts who studied the Nazi regime, they have a mean of zero and a standard deviation of one.

Figure A.7: Curriculum Effects on Antisemitic Attitudes
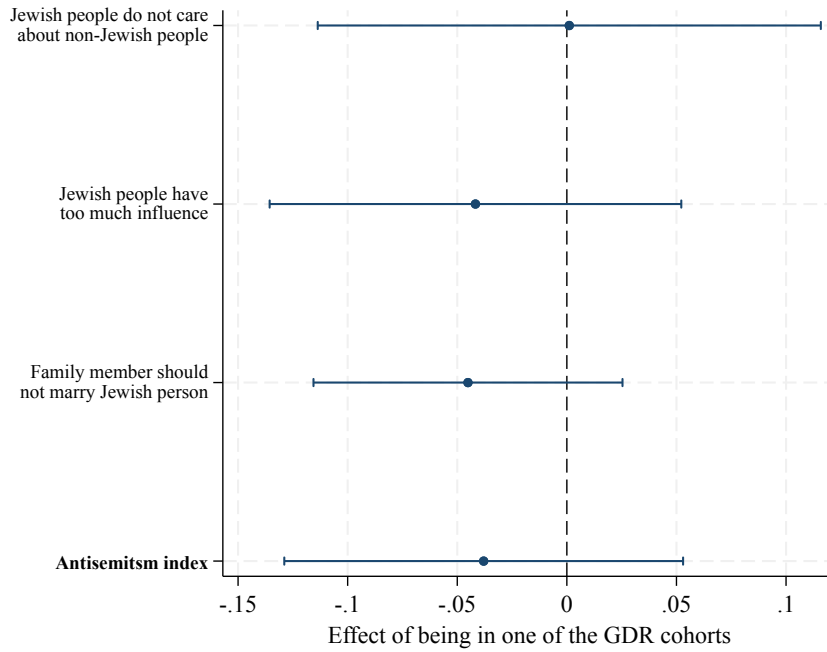
Notes: This figure explores the effect of covering the GDR regime rather than the Nazi regime in senior high school on antisemitism. Specifically, it presents estimates of coefficient β_1 from Equation (1), where we apply probability weights that weigh each of the three graduating cohort groups ('09-'10, '11-'12, '13-'14) equally (see Section 4 for details). The estimates are from our preferred specification, which includes recruitment-channel fixed effects. The outcome variables are an index of antisemitism, as well as its components. For a detailed description of the outcome variables see Table A.1. All outcomes are standardized so that, for participants in the graduating cohorts who studied the Nazi regime, they have a mean of zero and a standard deviation of one. The bars represent 95% confidence intervals. Standard errors are robust. The sample is restricted to the subset of our main analysis sample described in Section 3 who answered the questions about antisemitism.

Figure A.8: Curriculum Effects on Tertiary Outcomes

(A): Self-Reported Voting Outcomes

(B): Remaining Tertiary Outcomes
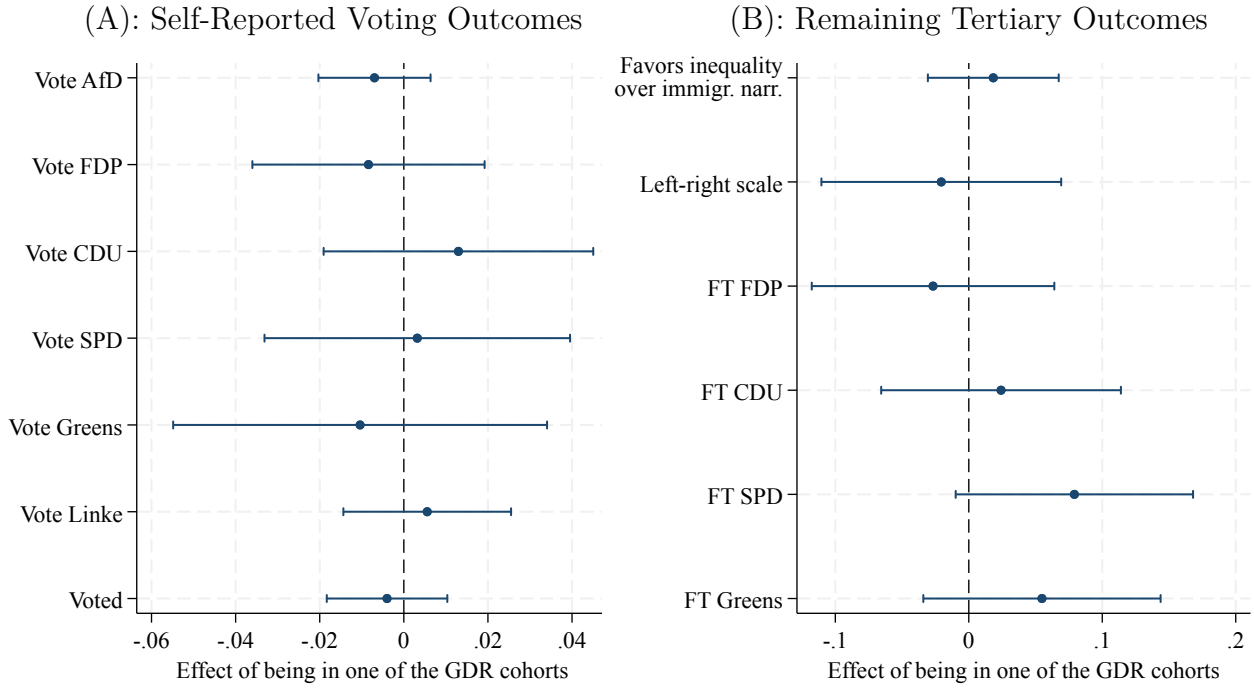
Notes: These figures explore the effect of covering the GDR regime rather than the Nazi regime in senior high school on a battery of tertiary outcomes. Specifically, it presents estimates of coefficient β_1 from Equation (1), where we apply probability weights that weigh each of the three graduating cohort groups ('09-'10, '11-'12, '13-'14) equally (see Section 4 for details). The estimates are from our preferred specification, which includes recruitment-channel fixed effects. The outcome variables are outcomes that, in our pre-analysis plan, were pre-specified as tertiary. For a detailed description of the outcome variables see Appendix E. The left panel shows curriculum effects on dummy variables for whether the respondent voted, and for the party she voted for. The right panel shows results for the remaining tertiary outcomes: feeling thermometer responses for the four centrist German parties, self-placement on a left-right scale, and the coded open response variable that captures the respondents' weight put on inequality (relative to immigration) in explaining the rise in support for populist radical parties over the last 20 years. In the right panel, all but the top outcome are standardized to mean 0 standard deviation 1 in the leave-out group. The bars represent 95% confidence intervals. Standard errors are robust. The sample is restricted to the subset of the main analysis sample described in Section 3 who answered the question related to a particular tertiary outcome.

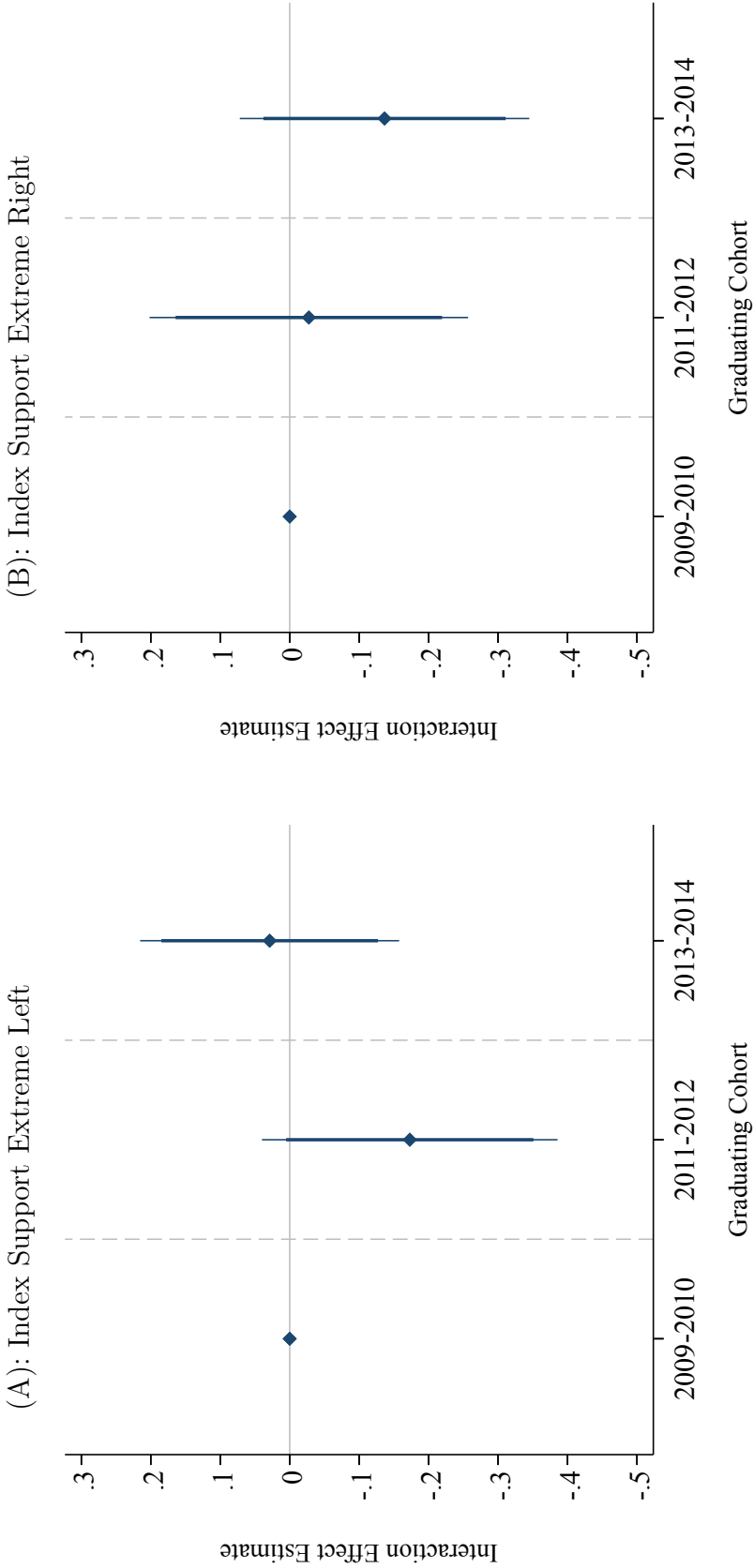Figure A.9: Heterogeneity by Local Party Vote Share
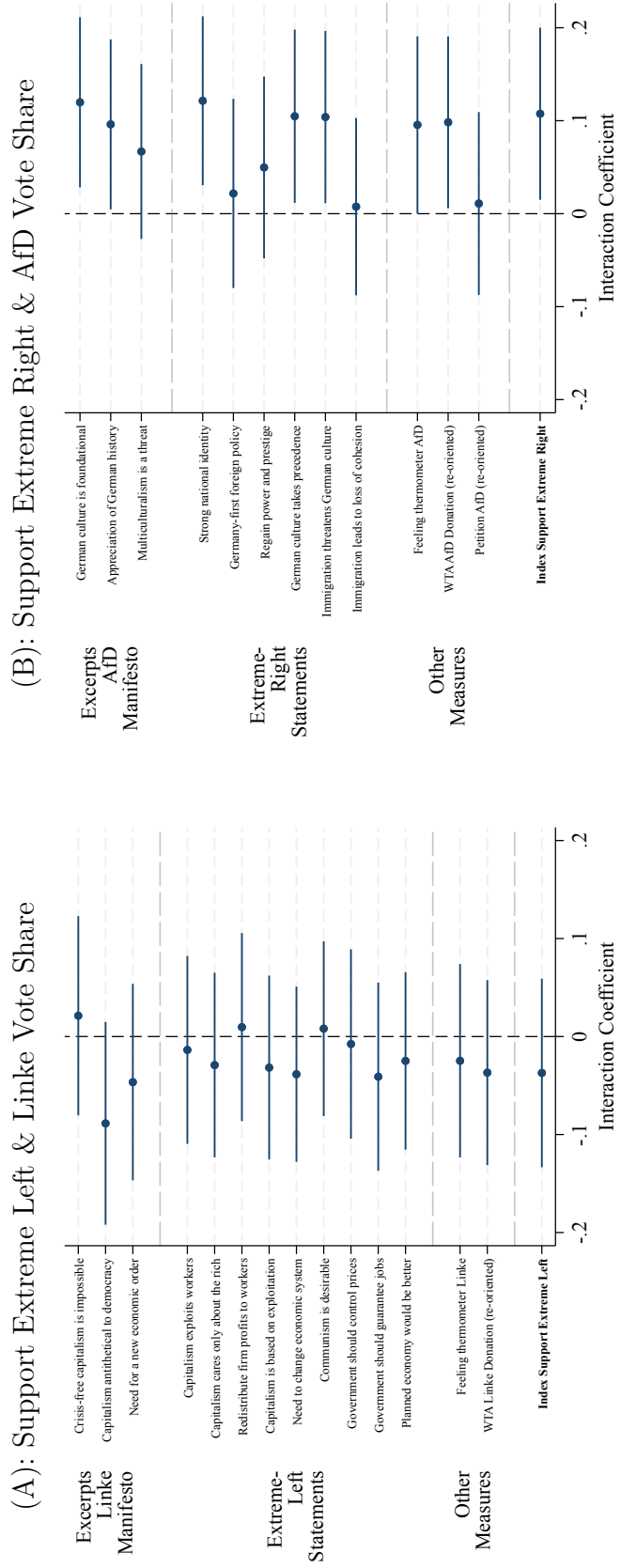
(A): Support Extreme Left & Linke Vote Share

(B): Support Extreme Right & AfD Vote Share

Notes: Panel A (Panel B) explores the extent to which the effects of covering the GDR regime rather than the Nazi regime in senior high school on support for extreme left-wing (right-wing) ideology are heterogeneous by the current level of support, in the respondent's municipality of origin, for the left-most (right-most) party in Germany, the Linke (AfD). Specifically, it presents estimates of coefficient γ_1 from Equation (2), where we apply probability weights that weigh each of the three graduating cohort groups ('09-'10, '11-'12, '13-'14) equally (see Section 4 for details). The estimates are from our preferred specification, which includes recruitment-channel fixed effects. The outcome variables are the indices of extreme left-wing and extreme right-wing ideology, as well as their components. For a detailed description of the outcome variables see Table A.1. All outcomes, as well as the vote shares, are standardized so that, for participants in the graduating cohorts who studied the Nazi regime, they have a mean of zero and a standard deviation of one. The bars represent 95% confidence intervals. Standard errors are robust. The sample is restricted to the subset of the main analysis sample described in Section 3 who completed the last section of the survey, which elicits their municipality of origin.

A.22

Figure A.10: Additional Heterogeneity Margins
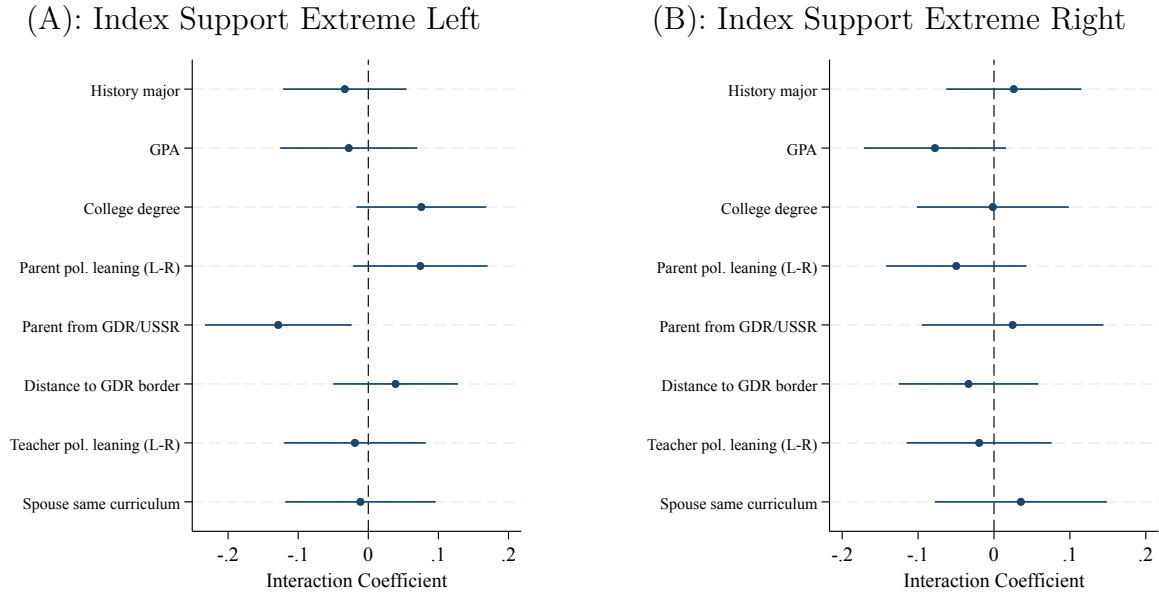
(A): Index Support Extreme Left

(B): Index Support Extreme Right

Notes: Panel A (Panel B) explores the extent to which the effects of covering the GDR regime rather than the Nazi regime in senior high school on support for extreme left-wing (right-wing) ideology are heterogeneous along various margins. Specifically, it presents estimates of coefficient γ_1 from Equation (2), where we apply probability weights that weigh each of the three graduating cohort groups ('09-'10, '11-'12, '13-'14) equally (see Section 4 for details). The margins of heterogeneity are shown on the vertical axis and described in detail in Table A.2. The estimates are from our preferred specification, which includes recruitment-channel fixed effects. The outcome variables are the indices of extreme left-wing and extreme right-wing ideology. For a detailed description of the outcome variables see Table A.1. All outcomes are standardized so that, for participants in the graduating cohorts who studied the Nazi regime, they have a mean of zero and a standard deviation of one. The bars represent 95% confidence intervals. Standard errors are robust. The sample is restricted to the subset of the main analysis sample described in Section 3 who completed the last section of the survey, which elicits the heterogeneity margins.
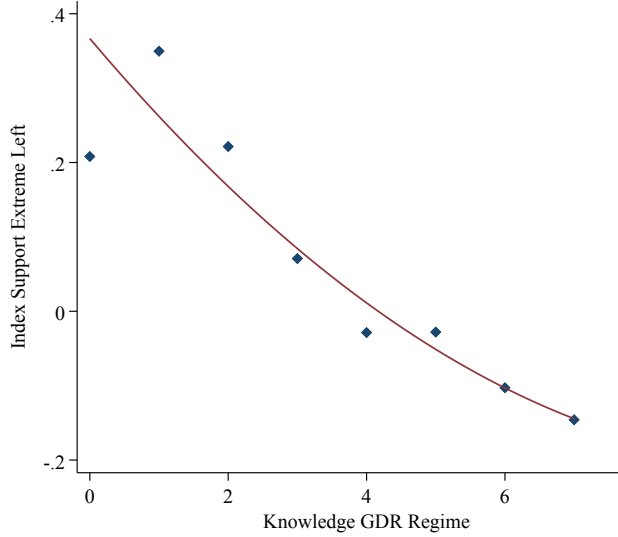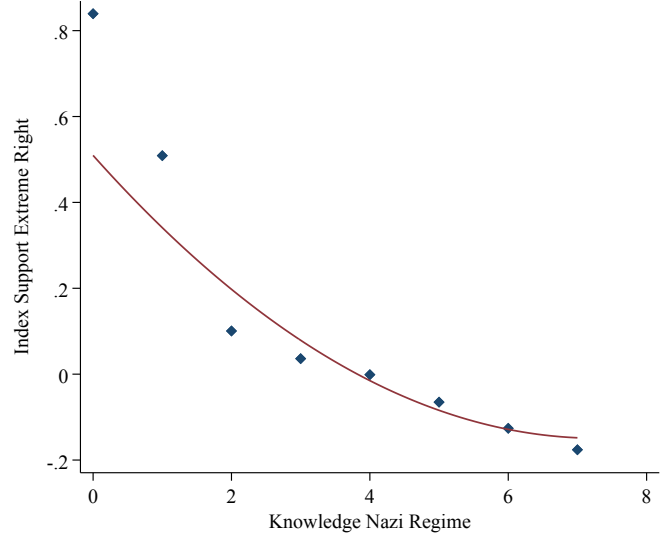
Figure A.11: Event Study Results

(A): Index Support Extreme Left

(B): Index Support Extreme Right

Figure A.12: Correlation between Knowledge and Ideology

(A): Index Support Extreme Left & GDR Knowledge

(B): Index Support Extreme Right & Nazi Knowledge

Notes: This figure explores the relationship between our indices of support for extreme left-wing and right-wing ideology and knowledge of the GDR and Nazi regimes. Specifically, it displays two binned scatter plots: one relating our index of extreme left-wing ideology and scores on the GDR quiz, and the other relating our index of extreme right-wing ideology and scores on the Nazi quiz. The red lines are splines of best fit. The sample is restricted to the subset of the main analysis sample described in Section 3 that completed the knowledge section of the survey.

A.25

Figure A.13: Causal Forest Estimation: Correlation between Treatment Effects on Knowledge and Ideology

(A): Index Support Extreme Left & GDR Knowledge

(B): Index Support Extreme Right & Nazi Knowledge
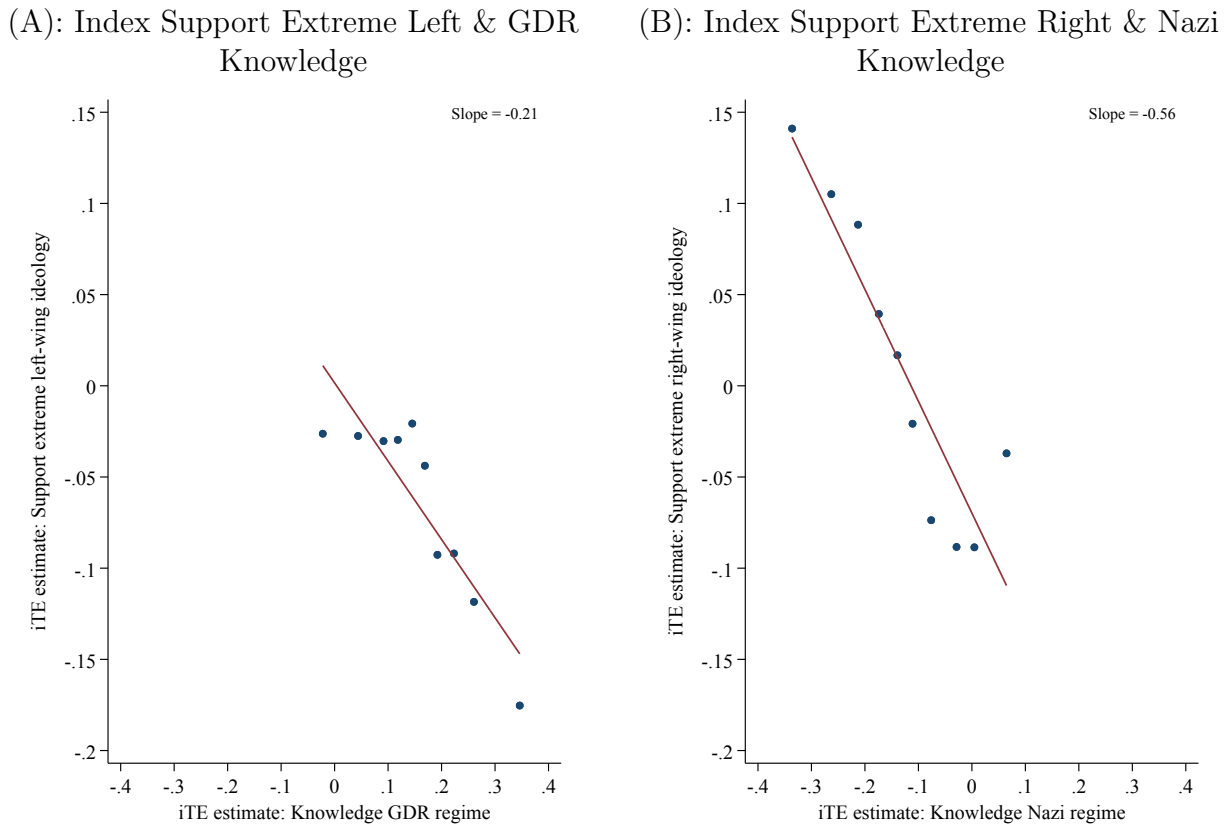
Notes: This figure explores the correlation between the individual-level treatment effect (iTE) estimates on knowledge and support for extreme ideology obtained using a causal forest. The variables included in the causal forest estimation are dummies for gender, recruitment channel, and history major, as well as continuous variables for municipal-level AfD and Linke vote shares in the 2021 national election. Causal forests are estimated separately for each of the four outcomes (knowledge GDR Regime, knowledge Nazi Regime, Index Support Extreme Left-wing Ideology, and Index Support Extreme Right-wing Ideology). All outcomes are standardized to mean 0 and sd 1 in the cohorts who studied the Nazi regime in senior high school. Panel A (B) shows iTE estimates for the GDR (Nazi) knowledge quiz score outcome, grouped into ten equally sized bins, on the horizontal axis. The vertical axis shows the average iTE estimates for the index of support for extreme left-wing (right-wing) ideology, for each knowledge iTE bin. The slope parameter from an individual-level regression of the iTE for the ideology index listed on the vertical axis on the iTE for the knowledge quiz score listed on the horizontal axis is provided in the top right corner of each panel.

B. Theoretical Framework

In this appendix, we introduce a simple framework to help structure our empirical findings. The framework formalizes the claim that the results on knowledge and support for extreme ideology are consistent with diminishing marginal returns in the production function that maps years of coverage of a regime in history class to knowledge or ideology. It also formalizes the claim that the degree of inoculation against extreme right-wing ideology in one's childhood environment and coverage of the history of the Nazi regime in high school can be thought of as substitutes in the production function of ideology.

Let $K_j \in \mathbb{R}$ denote knowledge of regime $j \in \{GDR, Nazi\}$. We let K_j equal some function $f : \mathbb{R} \to \mathbb{R}$ that takes as input $c_j \in \mathbb{R}^+$: the intensity of coverage of regime $j \in \{GDR, Nazi\}$ in school. Thus:

$$K_j = f(c_j)$$

Note that this formalization assumes that the production function f that maps coverage to knowledge is the same for the GDR and the Nazi regimes. It also implicitly assumes that covering the GDR regime in high school history class does not affect knowledge of the Nazi regime, and vice-versa. We believe that, as far as knowledge is concerned, the assumption is appropriate.[35]

If the one-semester increase (decrease) in coverage of the GDR (Nazi) regime due to the rotation in topics can be considered marginal, the effects of our treatment (namely belonging to the 2011-2012 graduating cohorts) on knowledge would be captured by the partial derivative of K_{GDR} (K_{Nazi}) with respect to c_{GDR} (c_{Nazi}), evaluated at the average levels of c_{GDR} (c_{Nazi}) in Lower Saxony. Using this notation, our knowledge findings can be stated as follows. In the context of Lower Saxony, a region where students cover the Nazi regime extensively ($c_{Nazi} >> 0$) and the GDR regime less extensively ($c_{Nazi} > c_{GDR} > 0$): i) a marginal increase in coverage of the GDR regime leads to a significant increase in knowledge of the GDR regime; ii) a marginal decrease in coverage of the Nazi regime leads to a small and insignificant decrease in knowledge of the Nazi regime.

The results are consistent with diminishing marginal returns in the production function that maps years of coverage of a regime in history class to knowledge. Specifically, since f is assumed to be the same for the two regimes, the fact that we observe

$$\frac{\partial K_{GDR}}{\partial c_{GDR}}|c_{GDR}^{low} > \frac{\partial K_{Nazi}}{\partial c_{Nazi}}|c_{Nazi}^{high}$$

implies

$$\frac{\partial K_{GDR}}{\partial c_{GDR}}|c_{GDR}^{low} > \frac{\partial K_{GDR}}{\partial c_{GDR}}|c_{GDR}^{high}$$

which is consistent with f exhibiting diminishing marginal returns.

For ideology, we first introduce a slightly more involved but more precise framework and then make a simplifying assumption to help build intuition. Let $s_j \in \mathbb{R}$ denote support for ideology $j \in \{extreme\ left, extreme\ right\}$. We let s_j equal some function $g : \mathbb{R}^3 \to \mathbb{R}$ that takes as input $e_j \in \mathbb{R}^+$, which denotes the intensity of political attitude $j \in \{extreme\ left, extreme\ right\}$ in one's formative adolescent environment, and $c_j \in \mathbb{R}^+$, which denotes the intensity of coverage of regime $j \in \{GDR, Nazi\}$. The magnitude of e_j indicates the degree of support for ideology j in one's childhood environment. Thus, we can conceptualize ideology as follows:

$$s_j = g(e_j, c_j, c_{-j})$$

---

[35]We relax the assumption when modeling ideology.

If the semester increase in coverage of the GDR and the semester decrease in coverage of the Nazi regime can be thought of as marginal, the effects of our treatment (namely belonging to the 2011-2012 graduating cohorts) on extreme left-wing ideology would be captured by the directional derivatives of $s_{extreme\ left}$ in direction $(0, 1, -1)$ and by the directional derivative of $s_{extreme\ right}$ in direction $(0, -1, 1)$. Let's denote such directional derivative as $D(s_{extreme\ left})$ and $D(s_{extreme\ right})$. In our baseline specification, such directional derivatives are evaluated at the average levels of $e_{extreme\ left}$, $e_{extreme\ right}$, c_{Nazi}, and c_{GDR} in Lower Saxony. Thus, our main finding on ideology can be stated as follows. In the context of Lower Saxony, which, on average, is a moderately left-wing region ($e_{extreme\ left} \gtrsim 0$, $e_{extreme\ right} \approx 0$) where students cover the Nazi regime extensively ($c_{Nazi} >> 0$) and the GDR regime less extensively ($c_{Nazi} > c_{GDR} > 0$), a marginal decrease in coverage of the Nazi regime together with a marginal increase in the coverage of the GDR regime entail a decrease in support for extreme left-wing ideology, without significantly affecting support for extreme right-wing ideology. As in the case of knowledge, the fact that, on average in Lower Saxony, we find significant results for left-wing ideology but not for right-wing ideology is consistent with diminishing marginal returns to coverage of a particular topic in high school history on ideology.

Our main heterogeneous treatment effect analysis measures how $D(s_{extreme\ right})$ ($D(s_{extreme\ left})$)changes as a respondent's formative adolescent environment becomes more supportive of extreme right-wing (left-wing) ideology. In what follows, we focus on right-wing ideology; the argument for left-wing ideology is symmetric.

Figure A.9 shows

$$\frac{\partial D(s_{extreme\ right})}{\partial e_{extreme\ right}} > 0$$

which means that, as a respondent's childhood environment becomes more right-wing, a marginal decrease in coverage of the Nazi regime, together with a marginal increase in coverage of the GDR regime, leads to a relative increase in support for extreme right-wing ideology.

The following simplifying assumption will help build intuition. Specifically, suppose studying the GDR (Nazi) regime does not affect support for extreme right-wing (left-wing) ideology. Then, $s_{extreme\ right} = g(e_{extreme\ right}, c_{Nazi})$ and our main heterogeneous treatment effect analysis would capture

$$\frac{\partial^2 s_{extreme\ right}}{\partial c_{Nazi} \partial e_{extreme\ right}} > 0$$

With this assumption in place, it is easy to see how the degree of inoculation against extreme right-wing ideology in one's childhood environment (which one can think of as the negative of $e_{extreme\ right}$) and coverage of the history of the Nazi regime in high school can be thought of as substitutes in the production function of ideology.

C. Curriculum Content

In this section, we first present two sources to describe the high school history curricula in use in Lower Saxony over the sample period 2009-2014 in more detail. The first source consists of the curriculum guidelines provided by the state's education ministry (summarized in Appendix C.1). The second source consists of the textbooks published by the main schoolbook publishing house in Germany (summarized in Appendix C.2 and further analyzed in Appendix D). Next, to show that the topics prescribed in the curriculum guidelines indeed form the basis of the high-stakes state-wide high school history exit exams, we reproduce the topics covered in said exams in Appendix C.3. Finally, we present an overview of the topic rotation in subjects other than history, in Appendix C.4.

C.1 Content as per the Ministry Guidelines

The education ministry's curriculum guidelines for history are published as 5-page documents—one document for every graduation year—and lay out the main topics to be covered within each year. They are publicly available in the online archive of the ministry (Ministry of Education and Culture of Lower Saxony, 2024).

For each topic (i.e. historical era), the ministry specifies three subtopics that have to be covered, as well as more detailed bullet points on the content to be covered within a subtopic. Below, we reproduce the topics and subtopics for each graduation year as retrieved from the guideline documents.

1. Graduation Year 2009

    1.1. Imperialism – Expansion in the Industrial Age

    - Industrial capitalism and world trade
    - Variants of imperialist power politics
    - Imperialism from the perspective of colonial peoples

    1.2. Europe in the Late Middle Ages

    - Cities as power factors
    - The Church between universality claims and division
    - The Black Death and its consequences

    1.3. Ideology and Rule of National Socialism

    - Ideological roots of National Socialism
    - The rule of National Socialism
    - Adaptation, resistance, persecution, and extermination

2. Graduation Year 2010

    2.1. Ideology and Rule of National Socialism

    - Ideological roots of National Socialism
    - The rule of National Socialism
    - Adaptation, resistance, persecution, and extermination

    2.2. China's Path to Modernity from the middle of the 19th century to 1949

    - The crisis of the old empire
    - Economic, social, and political causes for the failure of modernization
    - The path to national unity

    2.3. The French Revolution

    - Crisis of the Ancien Régime
    - From constitutional monarchy to the rule of the Jacobins
    - The Revolution ends – Napoleon

3. Graduation Year 2011

    3.1. The French Revolution

- Crisis of the Ancien Régime
- From constitutional monarchy to the rule of the Jacobins
- The Revolution ends – Napoleon

3.2. The Soviet Union – Genesis of a World Power

- The Tsarist regime in crisis
- The year 1917 and its consequences for Russia
- Soviet communism after 1945

3.3. Collapse of the GDR and German Unity

- Historical burdens of the SED dictatorship
- The crisis of the 1980s
- The path to German unity

4. Graduation Year 2012

4.1. Collapse of the GDR and German Unity

- Historical burdens of the SED dictatorship
- The crisis of the 1980s
- The path to German unity

4.2. Europe on the Threshold to Modernity (15th Century)

- Economic and social changes in northern Italy
- New thinking in Europe (Rennaissance, Humanism)
- The beginnings of European expansion

4.3. Economic and Social History of the USA from Industrialization to the New Deal

- Preconditions and framework conditions for industrialization
- The free market and its consequences
- The USA in the World Economic Crisis

5. Graduation Year 2013

5.1. The World Economic Crisis of 1929

- Causes and course of the Great Depression
- Comparative solutions (New Deal and Brüning's Deflation Policy)
- Reactions and societal consequences

5.2. Spanish Colonialism

- Spanish governance practices in the "New World"
- Demographic, ecological, and health impacts in the colonies and Spain
- Formation of Latin American societies and cultures

5.3. National Socialism

- Backgrounds and contents of Nazi ideology and its implementation in practice

A.30

- Between adaptation and resistance in Nazi Germany
- Reviewing guilt and responsibility after 1945

6. Graduation Year 2014

6.1. Crises in the Roman Republic

- Processes of change in Roman society since the 2nd century BC
- Crisis management strategies
- Transformation of the republican state order

6.2. Spanish Colonialism

- Spanish governance practices in the "New World"
- Demographic, ecological, and health impacts in the colonies and Spain
- Formation of Latin American societies and cultures

6.3. National Socialism

- Backgrounds and contents of Nazi ideology and its implementation in practice
- Between adaptation and resistance in Nazi Germany
- Reviewing guilt and responsibility after 1945

C.2 Content Retrieved from Textbooks

Since topics rotated across cohorts every year, the leading schoolbook publishing house in Germany, "Ernst Klett Verlag", produced topic-specific textbooks tailored to match each cohort's history curriculum guidelines. We obtained the textbooks on national socialism produced for the 2009/2010 and 2013/2014 graduating cohorts, as well as the textbook on the GDR produced for the 2011/2012 graduating cohort (Wunderer, 2007; Mätzing et al., 2010).

Each textbook is ~ 70 pages long and consists of a mix of explanatory texts and graphics produced by the textbook's editing historians, and direct source material (such as speeches, photographs, pamphlets, and newspaper snippets). Below, we present a summary of each chapter of each textbook, compiled using openAI's ChatGPT 4o.[36]

Textbook on Nazi Germany

1. **Ideological foundations**: Describes origins and core beliefs of National Socialism, emphasizing racial theories, nationalism, and the Fuehrerprinzip (leader principle).

2. **Governance and rule**: Covers how the Nazi regime implemented its ideology through policies and governance structures, including the role of propaganda and the suppression of dissent.

3. **Judiciary collaboration**: Highlights the complicity of the judicial system in enforcing Nazi policies, illustrating how legal professionals contributed to the regime's goals.

4. **Adaptation and resistance**: Examines the ways in which German society adapted to, resisted, or complied with Nazi rule, including the diverse forms of resistance and collaboration.

---

[36]For brevity, we show summaries only for the 2009/2010 and 2011/2012 textbooks. The 20372014 textbook is broadly similar to the 2009/2010 one.

5. **Persecution and annihilation**: Focuses on the systematic persecution and extermination policies targeting Jews, political opponents, and other groups deemed undesirable by the regime

6. **Emigration and exile**: Discusses the impact of Nazi policies on causing forced emigration and the experiences of those who lived in exile

7. **Fascism in Europe**: Provides a comparative analysis of fascism across Europe, situating National Socialism within a broader continental context of fascist ideologies and practices

Textbook on the GDR

1. **Historical Context and Political Stagnation**: Examines the GDR's establishment post-World War II, focusing on the political and economic systems that defined the state, leading to widespread dissatisfaction and calls for reform.

2. **Economic Troubles and Social Unrest**: Discusses the economic challenges faced by the GDR, including inefficiencies and shortages, contributing to public dissatisfaction and protests.

3. **Role of the SED and Leadership Crisis**: Analyzes the Socialist Unity Party's (SED) grip on power, leadership issues, and how these factors contributed to the state's inability to adapt to changing demands and pressures.

4. **Influence of International Politics and the Soviet Union**: Explores how changes in the Soviet Union and Eastern Bloc politics, especially under Gorbachev's policies of Glasnost and Perestroika, influenced the political landscape of the GDR.

5. **Peaceful Revolution and Fall of the Berlin Wall**: Details the events leading up to the peaceful protests, the opening of the Berlin Wall, and the rapid sequence of events that led to the eventual dissolution of the GDR.

6. **Process of Reunification**: Describes the negotiations, challenges, and steps taken towards the reunification of East and West Germany, culminating in the official reunification on October 3, 1990.

C.3 High School Exit Exam Topics

We collected the universe of exam questions included in the high school exit exams in history in Lower Saxony administered in the years 2009-2014.[37] Students who major in history take a different exam from those who minor in history, hence, there are two exam booklets per cohort. Each exam features two questions (with 3-4 sub-questions each), of which students choose one. Each question covers two topics included in the students' history curriculum: a primary topic (to which 2-3 sub-questions are dedicated), and a secondary topic (covered with one sub-question). We list the primary and secondary topics that each exam question included in the high school exit examinations for history between 2009 and 2014 addresses in Table C.12.

---

[37] As sources, we relied on preparatory booklets, published annually by the education publisher STARK, that list the past year's questions from Lower Saxony's centralized high school history exit exams.

Table C.12: High School Exit Exam Questions

Year	History track	Q no.	Primary topic	Secondary topic
2009	Major	1	**National Socialism**	Middle Ages
2009	Major	2	Imperialism	**National Socialism**
2009	Minor	1	Middle Ages	Imperialism
2009	Minor	2	**National Socialism**	Middle Ages
2010	Major	1	China in the 19th century	French Revolution
2010	Major	2	**National Socialism**	French Revolution
2010	Minor	1	**National Socialism**	French Revolution
2010	Minor	2	French Revolution	China in the 19th century
2011	Major	1	**GDR**	French Revolution
2011	Major	2	Soviet Union after 1945	**GDR**
2011	Minor	1	French Revolution	Russia pre-1917
2011	Minor	2	**GDR**	French Revolution
2012	Major	1	15th Century Europe	**GDR**
2012	Major	2	15th Century Europe	History of the USA
2012	Minor	1	15th Century Europe	History of the USA
2012	Minor	2	**GDR**	15th Century Europe
2013	Major	1	**National Socialism**	
2013	Major	2	Great Depression	**National Socialism**
2013	Minor	1	**National Socialism**	
2013	Minor	2	Spanish Colonialism	**National Socialism**
2014	Major	1	Spanish Colonialism	
2014	Major	2	Roman Republic	**National Socialism**
2014	Minor	1	Spanish Colonialism	
2014	Minor	2	**National Socialism**	Roman Republic

C.4 Curriculum Variation in Other Subjects

The rotation scheme was implemented in the German curriculum as well, which varied the literary canon across cohorts. Like history, it is a mandatory subject in senior high school. Rotation in topics was also implemented, to a lesser extent, in the subject of politics-economics, where some smaller sub-topics rotated across cohorts. In both cases, the rotation in topics appears orthogonal to the variation related to extreme right-wing and extreme left-wing ideology we study in this paper. Below, we reproduce the topics assigned to each cohort in these two subjects.

Table C.13: German Literature Curriculum by Graduation Year

Grad. Year	Topic 1	Topic 2	Topic 3
2009	**Literary criticism**	**Romanticism** (among others J.v. Eichendorff "Moonlit Night", 1837)	**Social Drama** (G. Hauptmann "The Rats", 1911; O. von Horvath "Tales from the Vienna Woods", 1931)
2010	**Social Drama** (G. Hauptmann "The Rats", 1911; O.v. Horvath "Tales from the Vienna Woods", 1931)	**J. W. Goethe** ("The Sorrows of Young Werther", 1774 and other works by the author)	**German language today**
2011	**German language today**	**H. v. Kleist** ("Mutterliebe", 1811 and other works by the author)	**Science and responsibility** (J. W. Goethe "The Sorcerer's Apprentice", 1797; H. Ibsen "Enemy of the People", 1882; F. Duerrenmatt "The Physicists", 1961)
2012	**Science and responsibility** (F. Duerrenmatt "The Physicists", 1961)	**Lyrical speaking**: concepts of love since the middle ages (among others W.v.d. Vogelweide "Unter den Linden", ca. 1200)	
2013	**Literature and language around 1800** (F. Schiller "Kabale und Liebe", 1784)	**Modern literature** (C. Kracht "Faserland", 1995)	
2014	**F. Kafka** ("The Metamorphosis", 1915 and "First Sorrow", 1922)	**Media critique**	

Notes: The table lists the topics covered in the senior high school German literature curriculum in Lower Saxony by graduation year. Whenever the curriculum mentions a mandatory book or play to be covered, the table lists it too. Source: Ministry of Education and Culture of Lower Saxony (2024).

Table C.14: Politcs-Economics Curriculum by Graduation Year

Grad. Year	Topic 1	Topic 2	Topic 3	Topic 4
2009	**German political system**: separation of powers	**Economic policy**: structural change, demographic change, and economic policy responses	**International politics**: modern challenges; international security and peacekeeping actors	
2010	**International politics**: modern challenges; international security and peacekeeping actors	**German political system**: mechanisms through which citizens participate in political decisions	**Economic policy**: role of the state in the economy; example of energy policy	
2011	**Economic policy**: role of the state in the economy; example of energy policy	**International politics**: modern challenges; international security and peacekeeping actors	**German political system**: Legislative branch; German Basic Law	
2012	**German political system**: Legislative branch; German Basic Law	**Economic policy**: role of the state in the economy; example of labor market policy	**International politics**: modern challenges; international security and peacekeeping actors	**International trade**: reasons for trade; recent trade developments; Germany's position in the global economy
2013	**German political system**: Legislative branch; German Basic Law	**Economic policy**: role of the state in the economy; example of labor market policy	**International politics**: conflicts over resources; contemporary German foreign policy; international organizations	**International trade**: trade policy instruments; Germany's position in the global economy
2014	**German political system**: Legislative branch; civil society in Germany today	**Economic policy**: role of the state in the economy; example of labor market policy	**International politics**: modern challenges; contemporary German foreign policy; international organizations	**International trade**: Germany's position in the global economy; the World Trade Organization

Notes: The table lists the topics covered in the senior high school politics-economics curriculum in Lower Saxony by graduation year. Source: Ministry of Education and Culture of Lower Saxony (2024).

D. Political Propaganda in the German and Chinese textbooks

In this appendix, we employ text analysis to assess and compare the degree to which the Chinese textbooks that form the basis of the curriculum reform studied in Cantoni et al. (2017) and the German textbooks that form the basis of the curriculum rotation studied in this paper can be considered political propaganda. To perform such analysis, we extracted all the text from the Politics textbook used after the Chinese reform studied in Cantoni et al. (2017) and all the editorial text extracted from the history textbooks from Lower Saxony that cover the Nazi and GDR regimes in the years we consider in this paper.[38]

The text analysis was performed by GPT 4o in September 2024 using the following prompt:

"I am a Professor of Economics at Bocconi University and you are a helpful research assistant.

I am working on a paper about the effects of the high school history curriculum in Germany on political ideology that I would like to publish in an economic journal. As part of my argument, I want to compare specific high school textbooks from Germany to specific high school textbooks from China. In particular, I am interested in the degree to which the specific German and Chinese textbooks I want to compare can be considered political propaganda.

I will upload four spreadsheets. One, titled Chinese-textbook-politics, contains all the text featured in a specific high school politics textbook from China. The other three spreadsheets, titled German-textbook-1, German-textbook-2, German-textbook-3, contain all the text featured in specific high school history textbooks from Germany. German-textbook-1 and German-textbook-3 cover the topic of Nazi Germany; German-textbook-2 covers the topic of the German Democratic Republic (GDR). The German textbooks also contained primary source material that I removed because I want you to focus not on the primary source material (e.g., historical newspaper articles), but on the content written by the authors of the German textbooks.

Your task is to write a formal and detailed summary of the extent to which the content of the German and Chinese textbooks I uploaded can be considered political propaganda. For this, I would like you to do three things: first, do as thorough an analysis as you possibly can of the German and Chinese textbooks and describe the extent to which you consider the content of the textbooks propaganda and why. Second, assign a propaganda score to the German and Chinese textbooks, where 0 indicates no propaganda whatsoever, and 100 indicates complete propaganda. Assign two scores, one for the German and one for the Chinese textbooks, and explain your reasoning. Third, provide examples from the textbooks to support your argument. I will add the summary you create as an appendix to the paper I am writing."

The analysis by GPT 4o is reported below. Overall, GPT 4o assigns a propaganda score of 10 out of 100 to the German textbooks and of 85 out of 100 to the Chinese ones.

"Summary Analysis of Textbooks as Political Propaganda

1. Analysis of the German Textbooks

The German textbooks provided (German-textbook-1, German-textbook-2, and German-textbook-3) focus on significant historical periods in Germany, such as Nazi Germany and the German Democratic Republic (GDR). The content appears to be mainly editorial and educational in nature, aiming to provide an objective analysis of these historical events and their implications for German society.

---

[38]The German textbooks also contain primary source material (e.g., historical newspaper articles). We remove the primary source material because we want the text analysis to solely focus on the content written by the authors of the German textbooks. The source material itself can be highly propagandist, because both the Nazi and GDR regimes engaged in extensive propaganda.

German Textbook 1 & 3 (Nazi Germany):

- These textbooks discuss the ideological roots, causes, and political climate leading to the rise of Nazi Germany, emphasizing the dangers of authoritarianism, racism, and totalitarianism.

- The language used in these texts is largely descriptive, with a focus on explaining historical facts and events. The authors frequently use academic terminology and provide historical context, showing an intent to educate rather than to persuade ideologically.

- The content critically examines Nazi propaganda, antisemitic rhetoric, and policies, highlighting the manipulation techniques used by the Nazis to control public opinion and maintain power. This critical stance suggests that the textbooks themselves are not propagandistic but rather aim to deconstruct and analyze past propaganda.

German Textbook 2 (GDR):

- This textbook covers the history of the GDR, examining its political structure, ideology, and the extent of Soviet influence.

- It discusses the role of the Socialist Unity Party (SED) and its efforts to maintain control through propaganda and state surveillance. The tone is analytical, discussing the effectiveness and societal impact of GDR policies, including repression and the promotion of socialist ideology.

- Like the other German textbooks, it does not appear to promote any contemporary political ideology. Instead, it presents a critical examination of the GDR's use of propaganda to maintain power, thereby educating students on the mechanisms of propaganda rather than engaging in it.

Overall, the German textbooks aim to provide a comprehensive historical account and critique of political regimes that have utilized propaganda. They do not exhibit characteristics of political propaganda themselves; rather, they critique and analyze historical instances of propaganda.

Propaganda Score for German Textbooks: 10/100

The score is low because the textbooks do not exhibit overt propagandistic tendencies. They aim to educate students on historical events and critically analyze past propaganda rather than promoting any particular political ideology.

2. Analysis of the Chinese Textbook

The Chinese textbook (Chinese-textbook-politics) appears to serve a dual function: educating students on political systems while also promoting specific political ideologies aligned with the current Chinese government.

Content Analysis:

- The content often emphasizes the superiority of the socialist system and the role of the Communist Party in guiding the nation. The textbook frequently uses phrases like "the people are the masters" and "democratic dictatorship of the people," which reflect specific ideological positions.

- There is a consistent focus on promoting the benefits of socialism, the achievements of the Communist Party, and the importance of maintaining social stability under the leadership of the Party. This content appears to be designed to cultivate a positive image of the current political system and align students' perspectives with state ideology.

- The textbook does not provide a balanced view of different political ideologies or systems. Instead, it focuses on promoting a single narrative that aligns with state-sponsored ideology, often using emotionally charged language to foster national pride and loyalty to the government.

Degree of Propaganda:

- The Chinese textbook's approach is indicative of political propaganda. It does not critically analyze or present multiple perspectives on political ideologies. Instead, it reinforces a specific worldview aligned with the state's objectives, often without room for dissenting opinions or critical discussion.

- The frequent use of ideological rhetoric and the lack of diverse perspectives suggest that the textbook is more about reinforcing state ideology than providing an objective analysis of political systems.

Propaganda Score for Chinese Textbook: 85/100

The high score reflects the textbook's strong alignment with state ideology and its function as a tool for political socialization. The content promotes a single political perspective, aiming to shape students' political beliefs in line with the state's objectives.

3. Examples Supporting the Propaganda Analysis

German Textbooks:

- Example from German Textbook 1: The analysis of Nazi propaganda techniques, such as the use of antisemitic postcards, serves to educate about historical manipulation methods rather than endorsing any ideology. The text is factual and critical, aiming to provide historical context rather than influence current political beliefs.

- Example from German Textbook 2: The discussion of the SED's slogan "Die Partei, die hat immer recht" ("The Party is always right") is presented as an example of authoritarian control and propaganda, critiqued within the context of educating about state manipulation in the GDR.

Chinese Textbook:

- Example: The article titled "We must uphold the people's democratic dictatorship" is indicative of propagandistic content. It employs assertive language that promotes the government's perspective on maintaining control and stability, reflecting an effort to inculcate a particular political ideology among students.

- Example: Another article, "Living in a Home Where the People Are the Masters," reinforces the idea of the state as a benevolent guardian, using emotionally charged language to generate support for the government's policies.

Conclusion

The German textbooks are largely educational and analytical, aiming to provide historical context and critique of propaganda rather than engaging in it. In contrast, the Chinese textbook exhibits characteristics of political propaganda, promoting a specific state-aligned ideology with little room for critical discussion or alternative viewpoints. These findings are consistent with the differing educational and political contexts of Germany and China."

E.   Tertiary Outcome Construction

We pre-specified a set of tertiary outcomes, listed towards the bottom of Table A.1. Tertiary outcomes include a person's self-placement on a left-right scale; respondents' attitudes towards each of the four major centrist parties; a person's self-reported voting behavior in the last parliamentary election; and an open response question that elicits a respondent's view about the causes of the rise in populism in Europe. We coded the answers to the latter ourselves, manually, and blind to the curriculum condition a given response belonged

to. We assigned each response to one of three categories: i. stronger support for an inequality narrative, ii. stronger support for an immigration narrative, and iii. even/no support for either narrative.

F. Additional Robustness Checks

We include and discuss several key robustness checks in the main body of the paper, namely the difference-in-differences analysis presented in Section 5.6, as well as the robustness checks that add recruitment channel, gender, and municipality fixed effects (included as columns in our main results tables).

In this section, we detail further robustness checks.

Table A.5 shows results when we control for variables for which we found imbalance in our balance Table 3. These variables are a dummy for college graduation, a dummy for being employed, and a control for income. We note that each of the variables could in principle be affected by treatment and, thus, might bias the estimates—which is why we do not include them in our main specification. Reassuringly, we find that adding the three variables where we found imbalances as controls does not meaningfully change the results.

In Table A.8, we show robustness to controlling for the number of years of schooling received, dropping the cohort weights from the regression, and robustness to using inverse covariance weighted indices instead of indices constructed as simple averages.[39] While the causal effect estimate for the inverse-covariance weighted index (following Anderson, 2008) of support for extreme left-wing ideology becomes slightly attenuated (dropping from -0.12 to -0.09), it retains its statistical significance level at the 5% level. The other results remain unchanged.

In Table A.9, we provide evidence that differential stigma or social image concerns, in the form of respondents who studied the GDR regime feeling less comfortable to voice extreme left-wing opinions, are unlikely to drive our results. That is, we find no causal effect of the senior high school history curriculum variation on respondents' assessment of how socially acceptable it is to state that the GDR regime and the Nazi regime respectively also had good sides (columns 1-2). We also find no effect on where respondents place the research team on a left-right spectrum (column 3).

In Table A.6 and Table A.7, we present estimates on a sample that includes low quality respondents (see Section 3.4 for a detailed description of our quality criteria). The tables show that the inclusion of low quality respondents causes coefficients to be less stable; however, it does not change the qualitative conclusions of our baseline analysis (Table 5 and Table 6).

G. Ideological Differences Between GDR and Nazi Regime

While the Nazi regime and the GDR had some similarities—including a one-party dictatorship, extensive use of propaganda, powerful secret police, and suppression of political dissent—the two regimes were based on

---

[39]See footnote 8 for why include the years-of-schooling robustness check. Years of schooling is measured as a respondent's reported grade in which they graduated high school.

fundamentally different ideologies.[40]

The Nazi regime was based on the ideology of National Socialism, a form of fascism that emphasized the supremacy of the Aryan race, antisemitism, Social Darwinism, extreme nationalism, and aggressive militarism. In contrast, the GDR was based on the ideology of Marxism-Leninism, which emphasized the need for a socialist revolution, the importance of the working class, and the central role of the Communist Party in society.

These ideological differences manifest in large differences in the treatment of minorities, as well as in the economic system. The Nazi regime was notorious for its persecution of minorities, particularly Jews and Romani people, as well as homosexuals, people with disabilities, and political dissidents. In contrast, the GDR was committed to promoting equality (except for political dissidents, and, to a lesser extent, homosexuals).

With regards to the economic system, the Nazi regime embraced a capitalist economic system in the pre-war years, while its war economy was a mixed economy that combined free markets with central planning, with private enterprise and market competition playing a significant role throughout. In contrast, the GDR embraced a planned socialist economy, with the state controlling most of the means of production and distribution.

H. Recruitment

H.1 Mail Letter Recruitment

Our primary means of recruitment involved survey invitations sent out by mail in January 2024 to 35,000 individuals. The invitation letter, which included a unique, single-use passcode to access the survey,[41] and whose English translation is shown in Figure H.14, invited respondents to navigate to the online survey's landing page, which presented respondents with a pre-screen questionnaire. A total of 2,692 letter recipients completed the screening questionnaire, resulting in a response rate of 7.7 percent.

The letter was sent out by the German Post, with addresses sampled from its address repository for direct-to-consumer mail marketing. The repository, from which enlistees can actively opt out, includes the addresses of 60% of the adult population residing in Germany. Given the high cost of this recruitment method,[42] to achieve the desired sample size at a reasonable cost, it was key to ensure that a high rate of letter recipients satisfied our screening criteria (high school degree from Lower Saxony obtained in the years 2009-2014). We achieved such a high rate (in this case, 65%) by first compiling a list of names of individuals who fulfill our targeting criteria based on publicly available sources, which the German Post then matched to its address repository. We compiled the list by relying on a tradition of local newspapers to annually publish the names of high school graduates. Through an intensive internet search of local online news outlets, we found the names of 17% of all high school graduates in Lower Saxony from the relevant years, for a total

---

[40]The two regimes were also embedded in very different historical contexts: The Nazi regime came to power in Germany in 1933, in the aftermath of World War I and the economic turmoil of the Great Depression. The GDR was established in 1949, in the aftermath of World War II and the division of Germany between the Soviet Union and Western powers. Political structures also differed: the Nazi regime adhered to the "Fuehrerprinzip", which gave absolute power to Hitler; the GDR regime relied on a "collective leadership" principle within the SED party.

[41]To maintain privacy and anonymity, the German Post randomly assigned the passcodes supplied by the research team to the invitation letters, never transmitted the assignment to the research team, and destroyed the assignment after the letters were sent.

[42]We paid ca. 1 Euro per letter, of which 85 cents is the postage alone.

of 34,645 names. The German Post then matched these names to their address repository, finding at least one match for 55% (or 19,151) of names.[43] For ca. 50% of names, two matches were found in the address repository, bringing the total number of addresses to 34,434. Finally, another 566 addresses were sampled from the address repository at random (among residents in Lower Saxony), bringing the total number of letters sent to 35,000.[44]

H.2   Other Recruitment Channels

Recruitment through the other channels involved distributing the survey invitation via the Facebook groups and email lists of five high school alumni networks, through advertisements on Meta's platforms, or through an online survey panel provider (Cint). Respondents would click on a link that directed them to the screening questionnaire.[45] The ads used for advertisement on Meta's platforms are displayed in Figure H.15.

---

[43]Matching was done in three waves. In the first wave, matching was done on first- and last name, restricting to individuals who reside in Lower Saxony—the most readily available proxy for having gone to school in the state—and who, according to the German Post's records, belong to the relevant birth cohorts (1989-1996). In the second wave, only the unmatched names from wave 1 were retained, and matching was done on first- and last names, restricting to individuals who reside in Lower Saxony and for whom no birth year was recorded in the address repository. In the last wave, only the un-matched names from wave 2 were retained, and matching was done on first- and last names, restricting to individuals who reside in neighboring states of North Rhine-Westphalia, Hamburg, and Bremen and who, according to the German Post's records, belong to the relevant birth cohorts (1989-1996). If, in a given wave and for a given name, more than one match was found, all matches were retained as long as they were no more than three; if there were more than three matches, none was kept.

[44]To maintain privacy and anonymity, the addresses were never transmitted to the research team; furthermore, no information about which names found a match in the address repository was shared with the research team.

[45]The structure of the survey was identical across recruitment channels. However, respondents recruited through the online panel provider did not receive a gift card; they received the regular incentive payment for survey completion provided by the panel provider.

Figure H.14: Cover Letter Mail Invitation

Bocconi University

Via Roberto Sarfatti 25
20136 Milan, Italy

Email:
politics-survey@unibocconi.it
or
sarah.eichmeyer@unibocconi.it

TEL: +39 XXX

Study website:
https://www.europa-monitor.de

Mr. Jürgen Schmidt
Sesamestreet 25
20134 Hannover

Milan, 08 January 2024

The Europe Monitor 2024: Your opinion counts!

Dear Madam/Mr. Schmidt,

how satisfied are you with your life in Germany? And what do you think about the political situation in Germany and Europe and about the relevance of education? The *Europe Monitor* seeks answers to these questions. Therefore, we ask you to take part in our survey today.

In Germany, a total of 35,000 people are contacted for the *Europa-Monitor* . The survey is conducted by scientists from Bocconi University and members of the CESifo research network. Bocconi University, based in Milan, is one of the world's leading research institutions in the field of economics. Of course, Bocconi University complies with data protection. For more information on how to do this, as well as explanations about the origin of your contact information, please refer to the attached privacy policy.

Participation in the survey takes place **online**. To do this, simply enter the following web address and password in your browser on your PC, notebook or tablet:

Website: **www.europa-monitor.de/umfrage**
Password: **xxxx**

Of course, your participation in the survey is voluntary. However, the results of the *Europe Monitor* are only meaningful if as many selected persons as possible participate. Therefore, *you* personally and *your* participation are particularly important to us. The survey takes about 20 minutes. All those who are eligible for the survey according to a short preliminary survey of demographic characteristics (e.g. age, level of education) and then participate will receive a **€10 voucher as a thank you**, which can be redeemed at many online retailers (such as Amazon.de).

If you have any questions, please feel free to contact me by e-mail (contact details see above). More Information on the study can be found at www.europa-monitor.de. The most important results will also be published there in the middle of the year.

I look forward to your participation in the *Europe Monitor* and thank you very much for your support.

Yours sincerely,

Dr. Sarah Eichmeyer

Notes: Exhibit shows English translation of the cover letter sent out via mail to prospective survey participants in January 2024.

Figure H.15: Social Media Ads Used for Recruitment

Notes: The title states "Scientific study: Society in the 21st Century"; the text states: "Got your high school degree in the years 2009-2014? We need your opinion! Participate in 15 min. survey and receive 10 Euro gift card."

I. Survey Instrument

The complete survey instrument in its English translation is available here. The German original is available here.

I.1 List of Knowledge Questions

For each question in the knowledge quiz listed below, we list the correct answer first; in the survey itself, the order of the answer options was randomized.

Knowledge about National Socialism

1. What was **not** part of Nazi ideology?

   - Expropriation of farmers
   - Forced sterilization of the mentally ill
   - Superiority of the Aryan race
   - Antisemitism

2. How many Jews were murdered in the Holocaust?

   - About 6 million
   - Less than a million

- About 3 million

- More than 12 million

3. Which statement on the state-organized "race war" in the time of National Socialism is **incorrect**?

- The so-called Nuremberg Laws of 1939 made political rights dependent on proof of "Aryan descent".

- The "Final Solution to the Jewish Question" was decided at the Wannsee Conference.

- As part of the program known as "euthanasia", the National Socialists murdered thousands of people with disabilities.

- The Nazi racial ideology tied in with the idea of the "struggle for existence" of social Darwinism.

4. What does the term "Night of the Long Knives" refer to?

- A night in 1934 when members of the SA were executed by the Hitler regime over fears that they were organizing a putsch.

- A night in 1939 when an assassination attempt was made on Hitler.

- A night in 1944 when the Red Army captured Berlin.

- A night in 1944 when fighting in Stalingrad was particularly intense; it is widely considered to be the night when it became clear that Germany was going to lose the war.

5. Which of the following statements best describes how Adolf Hitler became Chancellor of Germany in 1933?

- Hindenburg appointed him chancellor after the NSDAP won the most votes in the democratic elections a year earlier.

- His predecessor Kurt von Schleicher chose him as his successor.

- The Treaty of Versailles stipulated that he should become chancellor.

- By a military coup.

6. What does the "annexation" mean in the context of World War II?

- The annexation of Austria.

- The annexation of Czechoslovakia.

- The invasion of Poland.

- The invasion of the Netherlands.

7. Which statement about the resistance to the National Socialists is **not** true?

- The Catholic Church strongly denounced the anti-Semitic crimes of the regime.

- The most determined resistance to the regime was offered by the communists. Thousands of them were imprisoned, tortured and murdered because of this.

- The "White Rose" was a resistance group.

- In 1939, a bomb attack on Hitler failed only because he left a meeting in the Bürgerbräukeller in Munich early.

A.44

Knowledge about the GDR

1. What was the name of the GDR's ruling party?

    - SED

    - KPD

    - SPD

    - Die Linke

2. Who had a leading role in the GDR's ruling party?

    - Walter Ulbricht

    - Helmut Kohl

    - Konrad Adenauer

    - Boris Jelzin

3. In which year was the Berlin Wall built?

    - 1961

    - 1949

    - 1956

    - 1967

4. What was **not** one of the initial priorities of East German politics?

    - Cult around the person of Gorbachev

    - Establishment of the Ministry of State Security

    - Introduction of the ideology of Marxism-Leninism as the only true worldview.

    - Expropriation of industry

5. Which statement about the Berlin Wall and escape from the GDR is **not** correct?

    - Between 1949 and 1961, fewer than 10,000 people escaped from the GDR.

    - The GDR leadership called the Wall an "anti-fascist protective wall."

    - The statement "Nobody wants to build a wall" was made by Walter Ulbricht

    - Forced collectivization of agriculture led to a sharp increase in GDR refugees.

6. What happened on June 17, 1953?

    - First major uprising against the communist regime in the GDR. Began as a workers' protest and general strike and was violently suppressed by the regime.

    - Hungarian uprising against the communist regime. Student protests began in Budapest and were violently crushed by Soviet troops.

    - The protest for more democracy, known as the "Prague Spring" and organized by the Czechoslovakian Communist Party, was violently suppressed under the leadership of Soviet troops.

A.45

- The first of the "Monday Demonstrations", a series of peaceful pro-democracy protests by hundreds of thousands of GDR citizens, took place in Leipzig.

7. How did the GDR dissolve?

- Through a peaceful revolution.

- Through a brutal civil war.

- Through a democratic referendum.

- Due to military intervention by the USA.

I.2 List of Statements Included in "*Far-left ideas*" and "*Far-right ideas*" Index

I.2.1 Statements Taken From Party Programs

Respondents were asked to evaluate the following six statements, on an 7-point Likert scale where 1 is "completely disagree" and 7 is "completely agree". The statements were taken from the current party program of the furthest right and furthest left party in the German national parliament—AfD and Die Linke—respectively.[46] For each program excerpt listed below—shown in its English translation—we also list the topic, the party, and the source (none of which is shown to respondents).

Statement 1: *Primacy of German values* (AfD, 2021, p.158)

"The German Leitkultur describes our consensus of values, which is identity-forming for our people and distinguishes us from others. It ensures the cohesion of society and is a prerequisite for the functioning of our state. The community-building effect of German culture is the foundation of our Basic Law."

Statement 2: *Need to overcome capitalism through fight* (Die Linke, 2011, p.35)

"A crisis-free, social, ecological and peaceful capitalism is not possible. But as a result of social and political struggles and the changes in the distribution of power, it is possible to bring about a change in the direction of development and thus create the conditions for far-reaching democratic and socialist restructuring. The concepts, social forces and majorities for alternatives to capitalism will be developed in such conflicts."

Statement 3: *Downplaying NS-History* (AfD, 2021, p.168)

"German history should be appreciated in its entirety. The official culture of remembrance must not only concentrate on the low points of our history, it must also have an eye on the high points. A people without national consciousness cannot exist in the long run."

---

[46]The program excerpts for the left party come from its official party program (Die Linke, 2011), which, as of 2023, has remained unchanged since 2011. The program excerpts for the right party come from its official election program for the latest national election in 2021 (AfD, 2021) and from its official party program (AfD, 2016), which, as of 2023, has remained unchanged since 2016.

Statement 4: *Capitalism as exploitative process* (Die Linke, 2011, p.4)

"We are not prepared to accept a world in which profit interests determine the prospects of millions of men and women and in which exploitation, war and imperialism cut whole countries off from hope and the future. Where profit rules above all else, there is little space for democracy. The untrammelled freedom of the big corporations means bondage for the majority of men and women."

Statement 5: *Anti-Multiculturalism* (AfD, 2016, p.47)

"The ideology of multiculturalism is blind to history and puts on a par imported cultural trends with the indigenous culture, thereby degrading the value system of the latter. This is a serious threat to social peace and the survival of the nation state as a cultural unit. It is the duty of the government and civil society to confidently protect German cultural identity as the predominant culture."

Statement 6: *Call for change of economic order* (Die Linke, 2011, p.34)

"Sustainably overcoming the economic crisis, mass unemployment, and the social crisis requires a different economic order that is not governed by the drive for maximum profits."

I.2.2   Short Political Statements

Respondents were asked to evaluate the statements listed below on an 7-point Likert scale where 1 is "completely disagree" and 7 is "completely agree". Some statements were designed by ourselves, others were taken from existing surveys. For each statement—shown in its English translation—we also list the topic and the source (neither of which is shown to respondents).

Right-Wing Ideology

Chauvinism/Nationalism

- "We should finally have the courage to have a strong national feeling again." *(German General Social Survey GGSS, 2018)*

- "What our country needs today is a tough and energetic assertion of German interests vis-à-vis other countries." *(The Leipzig Authoritarianism Study 2018, Decker et al., 2019)*

- "Germany should try to regain the power and prestige it once had."

Immigration

- "Foreigners living in Germany should orientate themselves towards German culture. Of course they can keep their own customs, language or religion, but in case of conflict German culture should prevail." *(Allensbach Institute Survey, 2022)*

- "Germany has changed a lot due to immigration; there are many neighborhoods in which one no longer leads a German life."

- "The presence of foreigners in Germany means that social cohesion is lost." *(German General Social Survey GGSS, 2018)*

Left-Wing Ideology

Working Class

- "Workers are exploited in our economic system."

- "Politicians only care about the interests of the rich." *(minimally adapted from Comparative Study of Electoral Systems, 2023)*

- "Corporate profits are generated by the workers. The government should therefore ensure that the profits go to the workers and not to the employers."

Capitalism

- "Capitalism is based on inequality, exploitation, expansion and competition, and is thus incompatible with democracy, freedom, equality, justice, internationalism and solidarity."

- "Capitalism is fundamentally wrong and we should do everything in our power to replace it with a completely different system."

- "It would be desirable for Germany to move towards a socialist/communist system."

Economy Policy

- "The government should control prices and wages in the economy."

- "The government should implement a federal job guarantee so that everyone has a stable job with a living wage."

- "A planned economy would successfully distribute the work to be done among those able to work and distribute goods to those who need them most."

I.3 List of Statements Included in "*Antisemitism*" Index

Respondents are asked to evaluate the following short statements, on an 7-point Likert scale where 1 is "completely disagree" and 7 is "completely agree". These questions are the last outcomes to be elicited in the survey; they are combined into an index outcome, *Antisemitism*, but do not enter the index of support for extreme right-wing ideology.

- "I wouldn't mind if a member of my family marries someone of Jewish descent."

- "Jewish people have too much power in the business world." (**Anti-Defamation League Survey, 2007**)

- "Jewish people care little about the suffering of non-Jewish people."

J. Deviations from Pre-Analysis Plan

Our pre-analysis plan specified that our main analysis sample would include only those respondents who took the history track in senior high school—that is, individuals who either majored or minored in history, corresponding to 6 and 4 hours of weekly history lessons, respectively. We pre-specified that we would

include students who did not take the history track (thus receiving "only" 2 hours of weekly history lessons) for robustness analyses. Given difficulties in recruiting a sufficiently large sample of those who took the history track, and the fact that individuals who did not take the history track are treated as well (albeit less strongly), we decided to include the latter group in our main analysis sample. However, excluding them does not meaningfully change our results, as shown in Table J.15 (for knowledge) and Table J.16 (for political attitudes). Finally, as shown in Panel A of Figure A.10, the "dose-response" pattern is broadly consistent with the intuition that treatment effects should be larger for those who received the most intense history education of 6 hours a week (i.e. majored in history). The 2- and 4 hours a week groups do not meaningfully differ from each other.

Table J.15: Main Results for Knowledge Following PAP Sample Definitions

Panel A:	Knowledge GDR Regime		
	(1)	(2)	(3)
GDR Curriculum	0.33***	0.48***	0.42***
	(0.08)	(0.10)	(0.13)
Mean	4.67	4.88	4.93
Sample	Baseline	Major/Minor	Major
Observations	2,010	1,003	677

Panel B:	Knowledge Nazi Regime		
	(1)	(2)	(3)
GDR Curriculum	-0.12*	-0.19**	-0.13
	(0.07)	(0.09)	(0.11)
Mean	4.85	5.06	5.10
Sample	Baseline	Major/Minor	Major
Observations	2,010	1,003	677

Notes: This table explores the effect of covering the GDR regime rather than the Nazi regime in senior high school on knowledge of the GDR and Nazi regimes. Specifically, it presents estimates of coefficient β_1 from Equation (1), where we apply probability weights that weigh each of the three graduating cohort groups ('09-'10, '11-'12, '13-'14) equally (see Section 4 for details). The outcome variables are the scores on the GDR and Nazi knowledge quizzes. For a detailed description of the outcome variables see Table A.1. In column (1), the sample is restricted to the subset of the main analysis sample described in Section 3 that completed the knowledge section of the survey. In column (2), the sample is restricted to those who took the history track (major or minor). In column (3), the sample is restricted to those who majored in history. "Mean" refers to the mean outcome in the leave-out group: respondents belonging to cohorts whose senior high school history curriculum included the Nazi regime (but not the GDR regime). Robust standard errors are reported in parentheses.

Table J.16: Main Results for Ideology Following PAP Sample Definitions

Panel A:	Index Support Extreme Left		
	(1)	(2)	(3)
GDR Curriculum	-0.10**	-0.09	-0.14*
	(0.04)	(0.06)	(0.08)
Mean	-0.00	-0.06	-0.08
Sample	Baseline	Major/Minor	Major
Observations	2,146	1,063	715

Panel B:	Index Support Extreme Right		
	(1)	(2)	(3)
GDR Curriculum	-0.01	-0.04	0.02
	(0.05)	(0.06)	(0.08)
Mean	0.00	0.01	-0.02
Sample	Baseline	Major/Minor	Major
Observations	2,146	1,063	715

Notes: This table explores the effect of covering the GDR regime rather than the Nazi regime in senior high school on support for extreme left-wing and right-wing ideology. Specifically, it presents estimates of coefficient β_1 from Equation (1), where we apply probability weights that weigh each of the three graduating cohort groups ('09-'10, '11-'12, '13-'14) equally (see Section 4 for details). The outcome variables are the indices of extreme left-wing and extreme right-wing ideology. For a detailed description of the outcome variables see Table A.1. In column (1), the sample is restricted to the main analysis sample described in Section 3. In column (2), the sample is restricted to those who took the history track (major or minor). In column (3), the sample is restricted to those who majored in history. "Mean" refers to the mean outcome in the leave-out group: respondents belonging to cohorts whose senior high school history curriculum included the Nazi regime (but not the GDR regime). Robust standard errors are reported in parentheses.