

SUPPLEMENTARY MATERIAL

for

“Populist Attitudes Among Teenagers: How Negative Relationships with Socialization Agents are Linked to Populist Attitudes”

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A Appendix: Additional Results from Youth Survey

We conducted a survey of adolescents aged 12 to 18 (mean: 14.66, SD: 1.25) in the Lake Constance area, spanning schools in Austria (N=1,523), Germany (N=356), and Switzerland (N=1,244).¹ The study was reviewed and approved by a Regional Administrative Authority of the governmental district (*Regierungsbezirk*) Tübingen in Baden-Württemberg.

Prior to the survey taking place, schools were approached by the research team and the principals were asked about a potential participation in the study. If principals agreed, a list documents about the study was sent to the schools.² These included:

- a brief study description for parents including an outline of goals and procedure of the study and the voluntariness of participation
- a pre-printed form for parents to approve their consent for children taking part in the study (needed to be signed by parents and handed back to teachers)
- a list for teachers to check which parents agreed their consent
- a list of access codes to the LimeSurvey³ platform (with spare codes)

¹In Switzerland, populist attitudes were asked randomly only among about two-thirds of the sample and the number of respondents for the models below is thus reduced.

²All documents will be made available in case of acceptance.

³LimeSurvey was used in Austria and Germany. For Switzerland, the survey was conducted using *Survey & Report*.

Parents and teachers informed students about the intention and procedure of the study. All surveys were taken in class (during a 45 minute slot) electronically under teacher supervision and submitted anonymously online through the LimeSurvey platform. As each child received only one access code to the platform, it was assured that everyone participated only once. Although only children with prior parental approval were able to take part in the survey, children were allowed to withdraw their participation at any stage of the survey and also afterwards. There was no compensation for students, as incentives are tied to a variety of legal issues, in particular in Germany. Thus, researchers are generally asked to abstain from issuing incentives when conducting studies with children *in* schools.⁴ The study did not include any form of deception.

The fieldwork period ranged from fall 2019 to early March 2020 in Eastern Switzerland (Cantons Appenzell-Ausserrhoden, Glarus, Graubünden, and St.Gallen), from March to June 2020 in Western Austria (state Vorarlberg), and from September to December 2020 in Southern Germany (governmental district Tübingen in Baden-Württemberg).⁵ Whereas the Austrian and Swiss samples were part of larger nationwide studies with representative sampling strategies (Beck and Ha 2018; Quenzel and Böheim-Galehr 2021), the German sample was conducted independently and could not be stratified based on representative quotas due to the ongoing COVID-19 pandemic. Overall, the sample is 52% female and 32% have a migration background.

⁴See <https://www.forschungsdaten-bildung.de/genehmigungen> and <https://www.km.bayern.de/ministerium/statistiken-und-forschung/forschung-an-schulen.html>

⁵The project was led by Gudrun Quenzel (PH Vorarlberg) who also oversaw the conduction of the study in Vorarlberg. Co-project leader Michael Beck (PH St.Gallen) supervised the conduction in Eastern Switzerland (*Ostschweiz*) and Sebastian Jungkuz (formerly Zepelin University) oversaw and conducted the study in Baden-Württemberg.

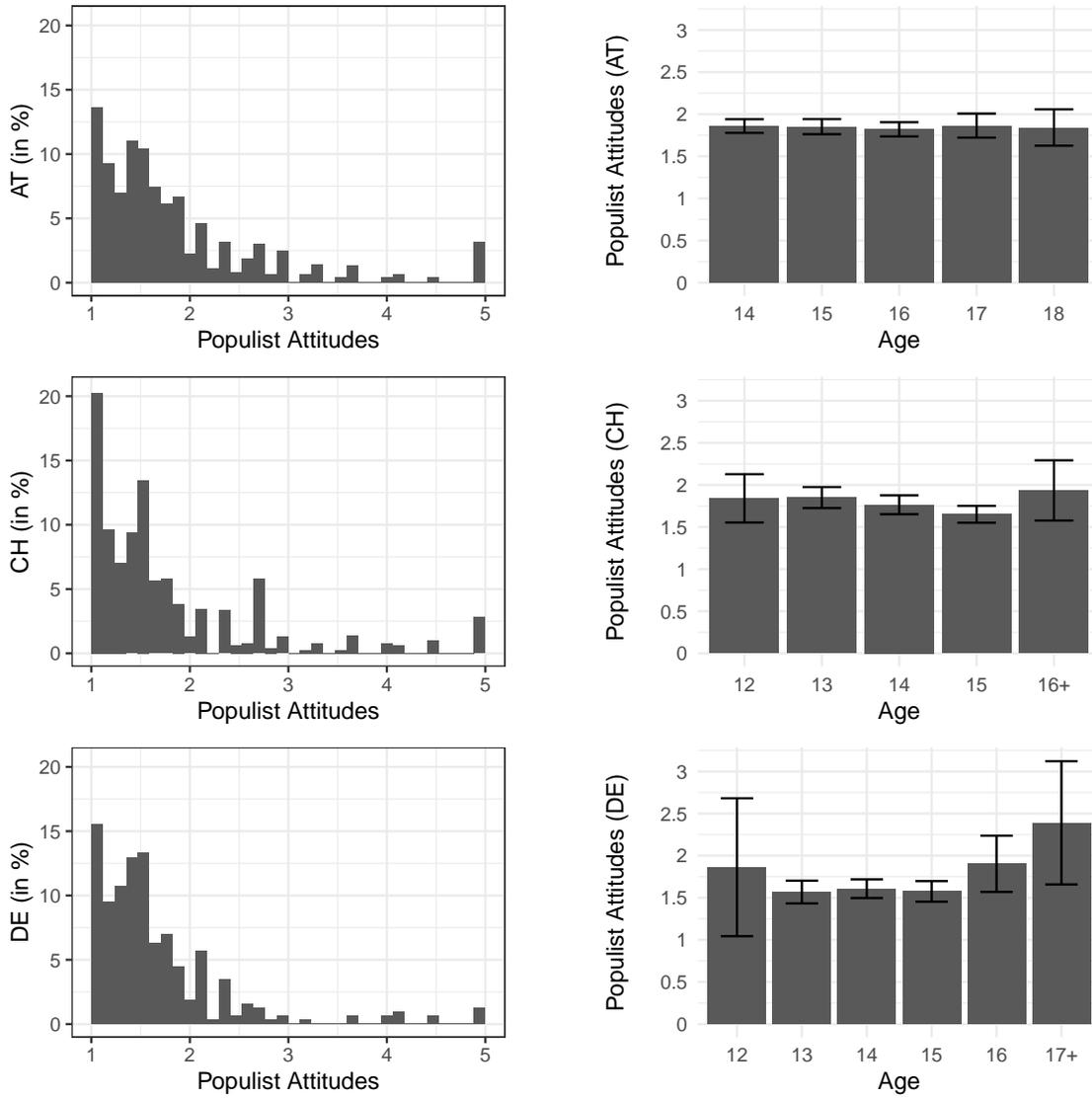
A full description of survey design and sampling strategies can be found in Quenzel et al. (2023).

In conducting the study, we confirm compliance with APSA's Principles and Guidance for Human Subjects Research. The study was funded by the *Internationale Bodensee-Hochschule (IBH)*. We have no conflict of interest to declare. Replication materials will be available at the *Perspectives* Dataverse. However, due to very strict data protection laws for such sensitive data, the full dataset can only be made available after scholars have acquired consent from the Regional Administrative Authority in Germany, and similar authorities in Austria and Switzerland. It is, however, possible to acquire access to the separate subsamples individually. More information can be found in the replication materials.

Table A.1: Summary Statistics

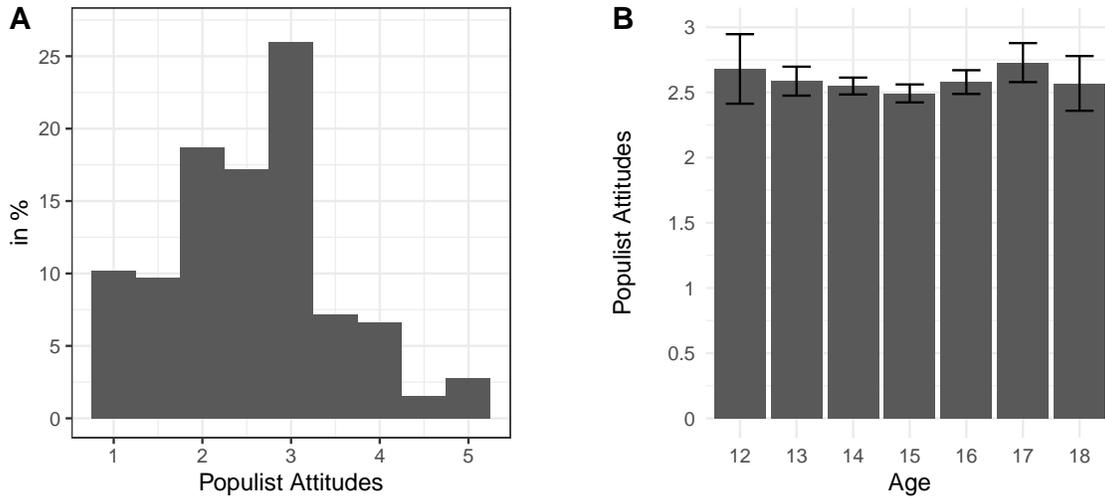
	Mean	SD	Min	Max
Populist attitudes (multiplied)	1.80	0.86	1	5
Populist attitudes (minimum)	2.56	0.95	1	5
Populist attitudes (additive)	3.22	0.73	1	5
Populist attitudes, rescaled (multiplied)	2.00	2.16	0	10
Populist attitudes, rescaled (minimum)	3.89	2.36	0	10
Populist attitudes, rescaled (additive)	5.56	1.81	0	10
Parental relationship (Codetermination at home)	2.68	2.21	0	10
Parental relationship (Parents care)	1.64	2.05	0	10
Peer relationship	1.78	1.73	0	10
Teacher relationship	2.46	2.14	0	10
Female	0.53		0	1
Age	14.66	1.25	12	18
Education: high	0.47		0	1
Parental education: college	0.18		0	1
Parental political interest	6.28	2.48	0	10
Migration background	0.31		0	1
Family Affluence Score	8.09	1.56	0	10
Post-Lockdown	0.38		0	1

Figure A.1: Distribution of Populist Attitudes by Country



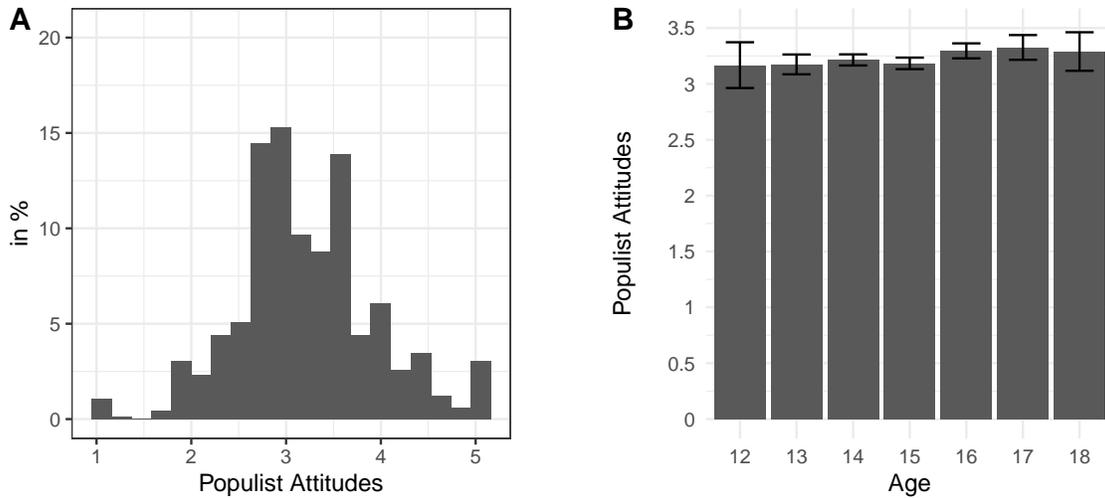
We combined ages 16 (n=57) and 17 (n=7) in Switzerland and ages 17 (n=10) and 18 (n=3) in Germany due to low case numbers.

Figure A.2: Distribution of Populist Attitudes (Minimum Value)



Panel A displays the distribution of populist attitudes. Panel B shows mean values of populist attitudes by age with 95%-confidence intervals. Populist attitudes range from one to five. Both panels are based on the pooled sample. Populist attitudes are operationalized as the minimum value out of the anti-elitism, people-centrism, and Manicheanism dimensions.

Figure A.3: Distribution of Populist Attitudes (Additive Index)



Panel A displays the distribution of populist attitudes. Panel B shows mean values of populist attitudes by age with 95%-confidence intervals. Populist attitudes range from one to five. Both panels are based on the pooled sample. Populist attitudes are operationalized as a mean index across the anti-elitism, people-centrism, and Manicheanism dimensions.

Table A.2: Confirmatory Factor Analyses for Populist Attitudes

	N	χ^2	df	RMSEA	SRMR	CFI
Pooled	2580	33.274	6	0.042	0.015	0.992
Austria	1452	25.389	6	0.047	0.019	0.987
Germany	320	25.104	6	0.100	0.036	0.937
Switzerland	808	44.619	6	0.089	0.026	0.975

Table A.3: Additional Multilevel Regression Models for Populist Attitudes (Parental Evaluation)

	(1)	(2)
Intercept	1.987*** (0.294)	1.964*** (0.295)
Parental relationship	0.051 (0.028)	0.062 (0.032)
Age	0.047 (0.052)	0.075 (0.063)
Female	-0.416*** (0.106)	-0.415*** (0.106)
Migration background	0.381*** (0.113)	0.386*** (0.113)
Education: high	-0.696*** (0.142)	-0.697*** (0.142)
Parental education: college	0.057 (0.128)	0.054 (0.128)
Family Affluence Score	0.065 (0.033)	0.066* (0.033)
DE	-0.280 (0.190)	-0.283 (0.190)
Lockdown	-0.221 (0.145)	-0.225 (0.145)
Parental relationship X Age		-0.017 (0.022)
AIC	7187.708	7194.894
BIC	7263.713	7276.328
Log Likelihood	-3579.854	-3582.447
N	1684	1684
N _{classes}	114	114

Unstandardized estimates from linear multilevel regression models with standard errors in parentheses. Models include random-slopes for parental relationship. Higher values on parental relationship indicate a bad relationship. Age has been centered. "Education high" refers to being in a school that grants university entrance. DE is a country dummy for Germany. All continuous variables range from zero to ten. * p < 0.05, ** p < 0.01, *** p < 0.001.

Table A.4: Interaction Models with Class-Level Indicators for Populist Attitudes

	(1)	(2)	(3)	(4)
Intercept	1.382*** (0.331)	1.316*** (0.352)	1.290*** (0.312)	1.258*** (0.341)
Teacher relationship	0.112*** (0.024)	0.154* (0.074)	0.115*** (0.023)	0.115*** (0.023)
Peer relationship	0.044 (0.028)	0.044 (0.028)	0.039 (0.029)	0.068 (0.095)
Female	-0.430*** (0.090)	-0.430*** (0.090)	-0.426*** (0.089)	-0.423*** (0.090)
Age	0.001 (0.044)	0.003 (0.044)	-0.001 (0.043)	0.003 (0.044)
Migration background	0.473*** (0.095)	0.470*** (0.095)	0.482*** (0.095)	0.468*** (0.096)
Education: high	-0.446*** (0.112)	-0.448*** (0.112)	-0.412*** (0.105)	-0.436*** (0.111)
Parental education: college	-0.072 (0.112)	-0.072 (0.112)	-0.086 (0.112)	-0.073 (0.112)
Family Affluence Score	0.077** (0.029)	0.077** (0.029)	0.075* (0.029)	0.077** (0.029)
CH	-0.197 (0.152)	-0.195 (0.153)	-0.221 (0.144)	-0.209 (0.149)
DE	-0.411* (0.190)	-0.402* (0.190)	-0.438* (0.183)	-0.443* (0.192)
Lockdown	-0.117 (0.145)	-0.125 (0.146)	-0.128 (0.134)	-0.116 (0.143)
CA: Teacher relationship	0.034 (0.068)	0.065 (0.087)		
CA: Teacher relationship X TR		-0.016 (0.026)		
CA: Peer relationship			0.111 (0.091)	0.121 (0.115)
CA: Peer relationship X PR				-0.015 (0.045)
AIC	9890.110	9897.377	9891.232	9894.855
BIC	10005.028	10018.041	10006.149	10015.518
Log Likelihood	-4925.055	-4927.689	-4925.616	-4926.427
N	2312	2312	2312	2312
N _{classes}	255	255	255	255

Unstandardized estimates from linear multilevel regression models with standard errors in parentheses. Models include random-slopes for evaluations of teachers and peers. Higher values on peer and teacher relationship indicate a bad relationship. Age has been centered. "Education high" refers to being in a school that grants university entrance. CH and DE are country dummies for Switzerland and Germany. CA indicates class-averages. TR: teacher relationship, PR: peer relationship. All continuous variables range from zero to ten. *p < 0.05, **p < 0.01, ***p < 0.001.

Table A.5: Multilevel Regression Models for Populist Attitudes (Minimum Version)

	(1)	(2)	(3)	(4)	(5)
Intercept	3.738*** (0.289)	3.440*** (0.290)	3.288*** (0.288)	3.216*** (0.295)	3.132*** (0.358)
Parental relationship	-0.004 (0.024)			-0.029 (0.024)	-0.029 (0.024)
Peer relationship		0.116*** (0.030)		0.079* (0.031)	0.079* (0.031)
Teacher relationship			0.172*** (0.025)	0.159*** (0.025)	0.155*** (0.026)
Female	-0.587*** (0.097)	-0.544*** (0.098)	-0.487*** (0.097)	-0.478*** (0.096)	-0.475*** (0.097)
Age	-0.018 (0.047)	-0.008 (0.048)	-0.013 (0.048)	-0.029 (0.046)	-0.029 (0.046)
Migration background	0.613*** (0.105)	0.605*** (0.105)	0.578*** (0.104)	0.582*** (0.103)	0.581*** (0.103)
Education: high	-0.641*** (0.114)	-0.680*** (0.118)	-0.645*** (0.118)	-0.585*** (0.112)	-0.575*** (0.115)
Parental education: college	-0.287* (0.124)	-0.269* (0.124)	-0.238 (0.123)	-0.234 (0.122)	-0.232 (0.122)
Family Affluence Score	0.090** (0.032)	0.101** (0.032)	0.082** (0.032)	0.084** (0.032)	0.084** (0.032)
CH	-0.131 (0.156)	-0.135 (0.159)	-0.059 (0.160)	-0.064 (0.155)	-0.052 (0.158)
DE	-0.136 (0.183)	-0.302 (0.197)	-0.344 (0.198)	-0.304 (0.183)	-0.318 (0.187)
Lockdown	-0.130 (0.145)	-0.073 (0.152)	-0.032 (0.153)	-0.062 (0.143)	-0.049 (0.147)
Class avg. teacher relationship					0.030 (0.071)
AIC	10321.173	10317.659	10272.347	10276.859	10282.141
BIC	10407.361	10403.847	10358.535	10414.759	10425.788
Log Likelihood	-5145.586	-5143.829	-5121.173	-5114.429	-5116.070
N	2312	2312	2312	2312	2312
N _{classes}	255	255	255	255	255

Unstandardized estimates from linear multilevel regression models with standard errors in parentheses. Models include random-slopes for evaluations of relationships with parents, peers, and teachers (if possible). Populist attitudes are operationalized as the minimum value out of the anti-elitism, people-centrism, and Manicheanism dimensions. Higher values on relationship variables indicate a bad relationship. Age has been centered. “Education high” refers to being in a school that grants university entrance. CH and DE are country dummies for Switzerland and Germany. All continuous variables range from zero to ten. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table A.6: Multilevel Regression Models for Populist Attitudes (Additive Version)

	(1)	(2)	(3)	(4)	(5)
Intercept	5.755*** (0.224)	5.523*** (0.225)	5.408*** (0.223)	5.414*** (0.231)	5.468*** (0.283)
Parental relationship	-0.017 (0.019)			-0.028 (0.019)	-0.028 (0.019)
Peer relationship		0.053* (0.026)		0.032 (0.025)	0.033 (0.025)
Teachers relationship			0.109*** (0.020)	0.106*** (0.018)	0.108*** (0.020)
Female	-0.419*** (0.075)	-0.394*** (0.075)	-0.361*** (0.075)	-0.353*** (0.075)	-0.356*** (0.075)
Age	0.003 (0.037)	0.008 (0.037)	0.002 (0.037)	-0.003 (0.037)	-0.002 (0.037)
Migration background	0.429*** (0.081)	0.426*** (0.081)	0.407*** (0.080)	0.405*** (0.080)	0.407*** (0.080)
Education: high	-0.284** (0.092)	-0.295** (0.092)	-0.259** (0.093)	-0.255** (0.091)	-0.260** (0.093)
Parental education: college	-0.088 (0.096)	-0.083 (0.096)	-0.060 (0.095)	-0.053 (0.094)	-0.055 (0.095)
Family Affluence Score	0.030 (0.025)	0.041 (0.025)	0.027 (0.025)	0.029 (0.024)	0.028 (0.025)
CH	-0.384** (0.125)	-0.379** (0.125)	-0.324* (0.127)	-0.332** (0.124)	-0.337** (0.126)
DE	-0.328* (0.154)	-0.370* (0.157)	-0.439** (0.158)	-0.412** (0.154)	-0.412** (0.156)
Lockdown	-0.048 (0.120)	-0.030 (0.120)	0.005 (0.122)	-0.002 (0.119)	-0.007 (0.121)
Class avg. teacher relationship					-0.018 (0.057)
AIC	9360.560	9356.457	9323.425	9337.085	9342.641
BIC	9447.057	9442.954	9409.921	9475.479	9486.801
Log Likelihood	-4665.280	-4663.229	-4646.713	-4644.542	-4646.320
N	2360	2360	2360	2360	2360
N _{classes}	256	256	256	256	256

Unstandardized estimates from linear multilevel regression models with standard errors in parentheses. Models include random-slopes for evaluations of relationships with parents, peers, and teachers (if possible). Populist attitudes are operationalized as a mean index across the anti-elitism, people-centrism, and Manicheanism dimensions. Higher values on relationship variables indicate a bad relationship. Age has been centered. “Education high” refers to being in a school that grants university entrance. CH and DE are country dummies for Switzerland and Germany. All continuous variables range from zero to ten. * p < 0.05, ** p < 0.01, *** p < 0.001.

Table A.7: Multilevel Regression Models for Populist Attitudes (Austria)

	(1)	(2)	(3)	(4)	(5)
Intercept	2.055*** (0.331)	1.703*** (0.334)	1.590*** (0.321)	1.728*** (0.331)	1.227** (0.420)
Parental relationship	-0.051 (0.030)			-0.069* (0.030)	-0.070* (0.030)
Peer relationship		0.066 (0.037)		0.043 (0.035)	0.040 (0.036)
Teacher relationship			0.149*** (0.032)	0.147*** (0.031)	0.135*** (0.032)
Female	-0.449*** (0.120)	-0.433*** (0.121)	-0.376** (0.117)	-0.381** (0.116)	-0.355** (0.117)
Age	0.032 (0.057)	0.049 (0.058)	0.040 (0.055)	0.034 (0.055)	0.051 (0.055)
Migration background	0.368** (0.128)	0.390** (0.129)	0.381** (0.126)	0.356** (0.125)	0.334** (0.126)
Education: high	-0.610*** (0.149)	-0.663*** (0.155)	-0.538*** (0.140)	-0.498*** (0.138)	-0.420** (0.144)
Parental education: college	0.043 (0.148)	0.044 (0.148)	0.083 (0.145)	0.087 (0.144)	0.097 (0.144)
Family Affluence Score	0.077* (0.037)	0.091* (0.038)	0.059 (0.037)	0.053 (0.037)	0.055 (0.037)
Lockdown	-0.195 (0.138)	-0.171 (0.144)	-0.138 (0.133)	-0.141 (0.131)	-0.082 (0.135)
Class avg. teacher relationship					0.176 (0.091)
AIC	5900.597	5907.974	5865.814	5875.241	5876.483
BIC	5968.481	5975.857	5933.698	5990.122	5996.585
Log Likelihood	-2937.298	-2940.987	-2919.907	-2915.621	-2915.241
N	1369	1369	1369	1369	1369
N _{classes}	92	92	92	92	92

Unstandardized estimates from linear multilevel regression models with standard errors in parentheses. Models include random-slopes for evaluations of relationships with parents, peers, and teachers (if possible). Higher values on relationship variables indicate a bad relationship. Age has been centered. "Education high" refers to being in a school that grants university entrance. All continuous variables range from zero to ten. * p < 0.05, ** p < 0.01, *** p < 0.001.

Table A.8: Multilevel Regression Models for Populist Attitudes (Germany)

	(1)	(2)	(3)	(4)	(5)
Intercept	2.719*** (0.615)	2.591*** (0.624)	2.265*** (0.608)	2.111** (0.660)	3.003*** (0.824)
Parental relationship	0.037 (0.048)			0.008 (0.046)	0.013 (0.045)
Peer relationship		0.035 (0.073)		-0.017 (0.072)	-0.018 (0.073)
Teacher relationship			0.131* (0.059)	0.133* (0.060)	0.143* (0.061)
Female	-0.210 (0.195)	-0.144 (0.195)	-0.182 (0.185)	-0.226 (0.187)	-0.238 (0.187)
Age	0.245* (0.098)	0.216* (0.101)	0.245** (0.093)	0.210* (0.096)	0.204* (0.092)
Migration background	0.228 (0.210)	0.303 (0.210)	0.211 (0.206)	0.207 (0.204)	0.223 (0.203)
Education: high	-0.698* (0.277)	-0.816** (0.274)	-0.533* (0.249)	-0.571* (0.247)	-0.724** (0.244)
Parental education: college	0.255 (0.223)	0.314 (0.223)	0.244 (0.214)	0.228 (0.213)	0.230 (0.213)
Family Affluence Score	-0.098 (0.066)	-0.081 (0.066)	-0.092 (0.063)	-0.068 (0.064)	-0.073 (0.064)
Class avg. teacher relationship					-0.285 (0.173)
AIC	1190.758	1188.178	1174.814	1194.348	1196.288
BIC	1235.362	1232.783	1219.418	1272.406	1278.062
Log Likelihood	-583.379	-582.089	-575.407	-576.174	-576.144
N	304	304	304	304	304
N _{classes}	22	22	22	22	22

Unstandardized estimates from linear multilevel regression models with standard errors in parentheses. Models include random-slopes for evaluations of relationships with parents, peers, and teachers (if possible). Higher values on relationship variables indicate a bad relationship. Age has been centered. “Education high” refers to being in a school that grants university entrance. All continuous variables range from zero to ten. * p < 0.05, ** p < 0.01, *** p < 0.001.

Table A.9: Multilevel Regression Models for Populist Attitudes (Switzerland)

	(1)	(2)	(3)	(4)	(5)
Intercept	0.941 (0.574)	0.605 (0.575)	0.645 (0.576)	0.631 (0.589)	0.467 (0.650)
Parental relationship	-0.022 (0.047)			-0.034 (0.047)	-0.034 (0.047)
Peer relationship		0.099 (0.054)		0.089 (0.053)	0.088 (0.053)
Teacher relationship			0.071 (0.043)	0.047 (0.044)	0.036 (0.049)
Female	-0.749*** (0.170)	-0.725*** (0.172)	-0.721*** (0.173)	-0.682*** (0.173)	-0.678*** (0.173)
Age	-0.185* (0.085)	-0.169 (0.087)	-0.181* (0.088)	-0.194* (0.085)	-0.204* (0.087)
Migration background	0.816*** (0.186)	0.710*** (0.187)	0.737*** (0.186)	0.771*** (0.187)	0.782*** (0.187)
Education: high	-0.206 (0.180)	-0.235 (0.184)	-0.244 (0.184)	-0.197 (0.181)	-0.185 (0.183)
Parental education: college	-0.609* (0.251)	-0.637* (0.254)	-0.611* (0.254)	-0.594* (0.251)	-0.598* (0.251)
Family Affluence Score	0.142* (0.063)	0.160* (0.064)	0.155* (0.064)	0.148* (0.063)	0.151* (0.063)
Class avg. teacher relationship					0.065 (0.115)
AIC	2819.460	2824.059	2825.945	2840.858	2845.043
BIC	2872.979	2877.578	2879.464	2934.516	2943.161
Log Likelihood	-1397.730	-1400.030	-1400.972	-1399.429	-1400.521
N	639	639	639	639	639
N _{classes}	141	141	141	141	141

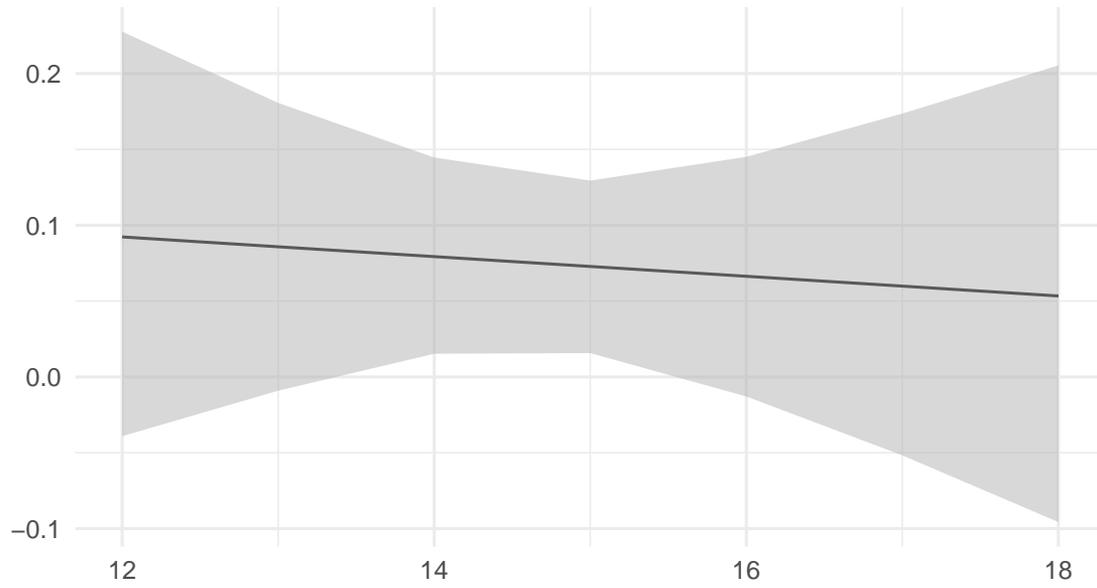
Unstandardized estimates from linear multilevel regression models with standard errors in parentheses. Models include random-slopes for evaluations of relationships with parents, peers, and teachers (if possible). Higher values on relationship variables indicate a bad relationship. Age has been centered. "Education high" refers to being in a school that grants university entrance. All continuous variables range from zero to ten. * p < 0.05, ** p < 0.01, *** p < 0.001.

Table A.10: Interaction Models with Age for Populist Attitudes

	(1)	(2)	(3)	(4)	(5)	(6)
Intercept	1.985*** (0.267)	1.988*** (0.267)	1.686*** (0.267)	1.685*** (0.267)	1.596*** (0.264)	1.608*** (0.264)
Parental relationship	-0.025 (0.024)	-0.026 (0.024)				
Parental relationship X Age		0.007 (0.017)				
Peer relationship			0.075** (0.029)	0.076** (0.029)		
Peer relationship X Age				-0.007 (0.023)		
Teacher relationship					0.121*** (0.023)	0.118*** (0.023)
Teacher relationship X Age						0.019 (0.018)
Female	-0.514*** (0.089)	-0.514*** (0.089)	-0.486*** (0.090)	-0.486*** (0.090)	-0.444*** (0.089)	-0.448*** (0.089)
Age	-0.004 (0.043)	-0.025 (0.066)	0.005 (0.044)	0.016 (0.058)	0.001 (0.044)	-0.040 (0.059)
Migration background	0.474*** (0.096)	0.475*** (0.096)	0.488*** (0.096)	0.487*** (0.096)	0.478*** (0.096)	0.480*** (0.096)
Education: high	-0.459*** (0.107)	-0.458*** (0.107)	-0.496*** (0.110)	-0.495*** (0.110)	-0.455*** (0.109)	-0.457*** (0.109)
Parental education: college	-0.112 (0.113)	-0.113 (0.113)	-0.101 (0.113)	-0.102 (0.113)	-0.080 (0.112)	-0.083 (0.112)
Family Affluence Score	0.074* (0.029)	0.074* (0.029)	0.089** (0.029)	0.089** (0.029)	0.069* (0.029)	0.069* (0.029)
CH	-0.253 (0.146)	-0.253 (0.146)	-0.278 (0.149)	-0.277 (0.149)	-0.191 (0.150)	-0.198 (0.150)
DE	-0.240 (0.176)	-0.236 (0.176)	-0.362 (0.187)	-0.361 (0.187)	-0.384* (0.186)	-0.389* (0.186)
Lockdown	-0.184 (0.138)	-0.185 (0.138)	-0.159 (0.143)	-0.159 (0.143)	-0.121 (0.143)	-0.119 (0.143)
AIC	9904.342	9912.457	9911.505	9919.154	9878.673	9885.767
BIC	9990.530	10004.390	9997.693	10011.087	9964.861	9977.701
Log Likelihood	-4937.171	-4940.228	-4940.753	-4943.577	-4924.337	-4926.884
N	2312	2312	2312	2312	2312	2312
N _{classes}	255	255	255	255	255	255

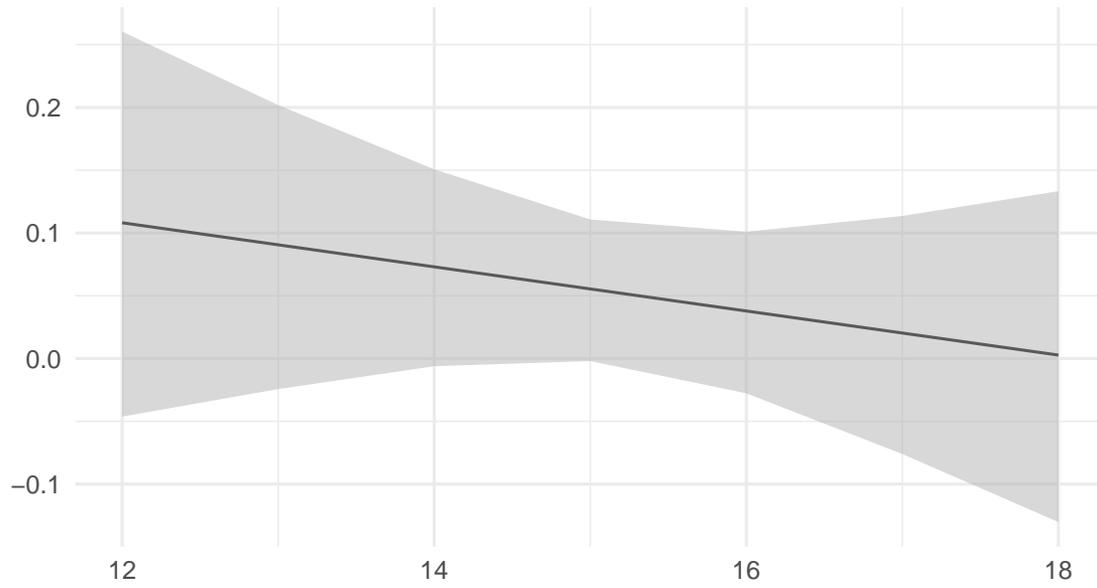
Unstandardized estimates from linear multilevel regression models with standard errors in parentheses. evaluations of relationships with parents, peers, and teachers (if possible). Higher values on relationship variables indicate a bad relationship. Age has been centered. "Education high" refers to being in a school that grants university entrance. CH and DE are country dummies for Switzerland and Germany. CA indicates class-averages. All continuous variables range from zero to ten. *p < 0.05, **p < 0.01, ***p < 0.001.

Figure A.4: Marginal Effect of Peer Evaluation on Populist Attitudes by Age



Marginal effect of peer evaluation on populist attitudes by age with 95%-confidence intervals. Higher values on peer relationship indicate a bad relationship.

Figure A.5: Marginal Effect of Parental Evaluation on Populist Attitudes by Age



Marginal effect of parental evaluation on populist attitudes by age with 95%-confidence intervals. Higher values on parental relationship indicate a bad relationship.

Table A.11: Multilevel Regression Models for Populist Attitudes (Excluding Migrants)

	(1)	(2)	(3)	(4)	(5)
Intercept	1.554*** (0.328)	1.308*** (0.326)	1.264*** (0.314)	1.161*** (0.326)	1.165** (0.386)
Parental relationship	-0.012 (0.031)			-0.020 (0.029)	-0.020 (0.029)
Peer relationship		0.093** (0.034)		0.045 (0.032)	0.045 (0.032)
Teacher relationship			0.159*** (0.029)	0.144*** (0.028)	0.144*** (0.029)
Female	-0.481*** (0.102)	-0.460*** (0.103)	-0.373*** (0.101)	-0.365*** (0.101)	-0.365*** (0.101)
Age	0.013 (0.053)	0.010 (0.053)	0.002 (0.051)	-0.001 (0.051)	-0.001 (0.051)
Education: high	-0.532*** (0.127)	-0.542*** (0.124)	-0.500*** (0.120)	-0.479*** (0.120)	-0.480*** (0.123)
Parental education: college	-0.032 (0.124)	-0.003 (0.126)	0.017 (0.123)	0.020 (0.122)	0.020 (0.122)
Family Affluence Score	0.129*** (0.036)	0.135*** (0.036)	0.103** (0.035)	0.111** (0.035)	0.111** (0.035)
CH	-0.388* (0.177)	-0.369* (0.174)	-0.318 (0.171)	-0.300 (0.171)	-0.302 (0.173)
DE	-0.271 (0.212)	-0.406 (0.213)	-0.393 (0.205)	-0.369 (0.205)	-0.368 (0.208)
Lockdown	-0.194 (0.167)	-0.172 (0.163)	-0.172 (0.158)	-0.149 (0.158)	-0.150 (0.161)
Class avg. teacher relationship					-0.002 (0.077)
AIC	6585.427	6594.250	6539.670	6550.726	6556.017
BIC	6660.531	6669.353	6614.774	6674.111	6684.766
Log Likelihood	-3278.714	-3283.125	-3255.835	-3252.363	-3254.009
N	1579	1579	1579	1579	1579
N _{classes}	237	237	237	237	237

Unstandardized estimates from linear multilevel regression models with standard errors in parentheses. Models include random-slopes for evaluations of relationships with parents, peers, and teachers (if possible). Age has been centered. "Education high" refers to being in a school that grants university entrance. CH and DE are country dummies for Switzerland and Germany. Higher values on relationship variables indicate a bad relationship. All continuous variables range from zero to ten. * p < 0.05, ** p < 0.01, *** p < 0.001.

Table A.12: Multilevel Regression Models for Populist Attitudes (including Parental Political Interest)

	(1)
Intercept	1.424 (0.288)***
Parental relationship	-0.034 (0.023)
Peer relationship	0.056 (0.028)*
Teacher relationship	0.111 (0.023)***
Female	-0.443 (0.088)***
Age	-0.005 (0.043)
Migration background	0.481 (0.095)***
Education: high	-0.400 (0.105)***
Parental education: college	-0.100 (0.112)
Parental political interest	0.027 (0.018)
Family Affluence Score	0.065 (0.029)*
CH	-0.166 (0.146)
DE	-0.317 (0.176)
Lockdown	-0.152 (0.135)
AIC	9817.669
BIC	9961.174
Log Likelihood	-4883.834
N	2299
N _{classes}	255

Unstandardized estimates from linear multilevel regression models with standard errors in parentheses. Models include random-slopes for evaluations of relationships with parents, peers, and teachers. Age has been centered. “Education high” refers to being in a school that grants university entrance. CH and DE are country dummies for Switzerland and Germany. Higher values on relationship variables indicate a bad relationship. All continuous variables range from zero to ten. *p < 0.05, **p < 0.01, ***p < 0.001.

Table A.13: Correlations between Dimensions of Populist Attitudes and Relationships with Socialization Agents

	Anti-Elitism	People-Centrism	Manicheanism
Parental relationship	0.036	-0.012	-0.023
Peer relationship	0.074**	-0.045	0.087***
Teacher relationship	0.208***	-0.063**	0.192***

Higher values on relationship variables indicate a bad relationship. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table A.14: Sensitivity Analyses for Main Model (E-Values)

Predictors	E-Values
Parental relationship	1.670
Peer relationship	1.935
Teacher relationship	2.817
Female	1.766
Age	1.220
Migration background	1.791
Education: high	1.704
Parental education: college	1.232
Family Affluence Score	2.118
CH	1.422
DE	1.599
Post-Lockdown	1.361

Reported are E-Values for maximum effects of predictors in Model 4 of Table 2 from the main text using the *R* package *EValue* (Mathur et al. 2018; VanderWeele and Ding 2017). E-Values must be interpreted in the context of the study and in relation to other values of the model. Higher E-Values indicate that unmeasured confounding would need to have a larger effect as compared to other predictors in the model to explain away the effect on populist attitudes (Haneuse et al. 2019). The table shows by far the largest E-Value for teacher relationship (2.77), indicating that it is the least sensitive effect to unmeasured confounders.

Table A.15: Question Wording and Coding of Indicators

Indicator	Question wording	Coding
Populist attitudes: Anti-Elitism	<p>Mean index created based on the following items: What do you think about the following statements? - The government is pretty much run by a few big interests looking out for themselves. - Quite a few of the people running the government are crooked. 1-fully agree, 2-somewhat agree, 3-partly/partly, 4-somewhat disagree, 5-fully disagree</p>	<p>created mean index across both items: 1-low anti-elitism, 5-high anti-elitism</p>
Populist attitudes: People-Centrism	<p>Mean index created based on the following items: What do you think about the following statements? - Politicians should always listen closely to the problems of the people. - The will of the people should be the highest principle in this country's politics. 1-fully agree, 2-somewhat agree, 3-partly/partly, 4-somewhat disagree, 5-fully disagree</p>	<p>created mean index across both items: 1-low people-centrism, 5-high people-centrism</p>
Populist attitudes: Manicheanism	<p>Mean index created based on the following items: What do you think about the following statements? - You can tell if a person is good or bad if you know their politics. - The people I disagree with politically are just misinformed. 1-fully agree, 2-somewhat agree, 3-partly/partly, 4-somewhat disagree, 5-fully disagree</p>	<p>created mean index across both items: 1-low Manicheanism, 5-high Manicheanism</p>
Populist attitudes: multiplied version	<p>Created based on the three sub-dimensions indices: anti-elitism, people-centrism, and Manicheanism</p>	<p>first, rescaled item to range from 0-4, then multiplication of all three items; index was then rescaled to: 0-low populist attitudes, 10-high populist attitudes</p>
Populist attitudes: minimum version	<p>Created based on the three sub-dimensions indices: anti-elitism, people-centrism, and Manicheanism</p>	<p>minimum value across all three items; index was then rescaled to: 0-low populist attitudes, 10-high populist attitudes</p>

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Table A.15: Question Wording and Coding of Indicators

Indicator	Question wording	Coding
Populist attitudes: additive version	Created based on the three sub-dimensions indices: anti-elitism, people-centrism, and Manicheanism	created mean index across all three sub-indices; index was then rescaled to: 0–low populist attitudes, 10–high populist attitudes
Parental relationship	Based on the following item: All in all, how much of a say do you have at home?" 1–very much, 2–much, 3–partly/partly, 4–little, 5–very little	rescaled to range from 0–good relationship to 10–bad relationship
Parental evaluation	Mean index created based on the following items: - My parents don't care how I do in school. - My parents don't have time to care about my school. 1–fully agree, 2–agree, 3–disagree, 4–fully disagree <i>only available in Austria and Germany</i>	rescaled to range from 0–good relationship to 10–bad relationship
Peer relationship	Based on the following items: - I am treated badly by my classmates. - I am alone in the breaks. - When I make mistakes, I am made fun of by others. - My classmates stand by me when it matters.* 1–fully agree, 2–agree, 3–disagree, 4–fully disagree	created mean index across items (* were reversed) and rescaled to range from 0–good relationship to 10–bad relationship
Teacher relationship	Based on the following items: - I feel I am treated fairly.* - I am graded fairly.* - Other students are treated better than I. 1–fully agree, 2–agree, 3–disagree, 4–fully disagree	created mean index across items (* were reversed) and rescaled to range from 0–good relationship to 10–bad relationship
Education	Dummy variable. The following school types are classified as "high education": - Austria: Gymnasium and Berufsbildende Höhere Schule mit Matura (e.g., HAK, HTL) - Germany: Gymnasium - Switzerland: Sekundarschule	0–low education, 1–high education

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Table A.15: Question Wording and Coding of Indicators

Indicator	Question wording	Coding
Parental education	Dummy variable. Children were asked to report the education of their mother and their father. The following degrees are classified as “high education”: - Austria: Fachhochschule, PÄDAK/Pädagogische Hochschule, or University - Germany: University or Fachhochschule - Switzerland: University, ETH, Fachhochschule, Pädagogische Hochschule (graduated with Lizenziat, Diplom, Master, Bachelor, or Lehrdiplom)	Coded as 1 if at least one parent has a college degree, 0 if otherwise
Parental political interest	Children were asked to report the political interest of their mother and their father based on the following it: "And your parents, they are interested in politics ..." 1–very interested, 2–somewhat interested, 3–little interested, 4–not interested	created mean index across mother and father interest variables, then rescaled to 0–no parental political interest, 10–high parental political interest
Family Affluence Score	Adapted from the Health Behaviour in School-Aged Children (HBSC) study of the World Health Organization(WHO) (Inchley et al. 2020). It is a sum score of family wealth based on six items asking about the number of cars, computers, and bathrooms a family owns, the child having an own room, the family possessing a dishwasher and the number of vacations abroad during the past year. The items are the following: - Own room for child: 0–no, 1–yes - Number of computers in the household: 0–0, 1–1, 2–2 or more - Number of cars in the household: 0–0, 1–1, 2–2 or more - Number of times on vacation abroad in past year: 0–0, 1–1, 2–2 or more - Number of bathrooms in the household: 0–0, 1–1, 2–2 or more - Dishwasher in household: 0–no, 1–yes	created sum score across items, then rescaled to 0–low affluence, 10–high affluence

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Table A.15: Question Wording and Coding of Indicators

Indicator	Question wording	Coding
Migration background	Based on child report about where child and parents were born.	Coded as 1 (migrant) if one of either child, mother, or father were born in a country other than Austria, Germany, Liechtenstein, and Switzerland, 0 if neither child nor parents were born outside that region
Female	Sex of the child (self-report)	0–male, 1–female

B Results from Adult Surveys in Austria and Germany

We use data from two studies in Austria and Germany to compare the results from the youth survey to the respective adult population. The surveys were conducted using a respondi (now Bilendi & respondi) online access panel in Austria between July and August 2018 (n=1,094) and in Germany in October 2017 (n=1,229).⁶ The surveys contain adult samples (age 18 and above) with Austrian or respectively German nationality and are representative in terms of age, sex, and education. Both surveys contained the populist attitudes battery from Castanho Silva et al. (2018) measured on seven-point Likert scales. To make results comparable to the youth survey, we rescaled all items and the respective indices to a range from one to five. We excluded speeders and respondents with very long response times (fastest and slowest three percent of the sample).

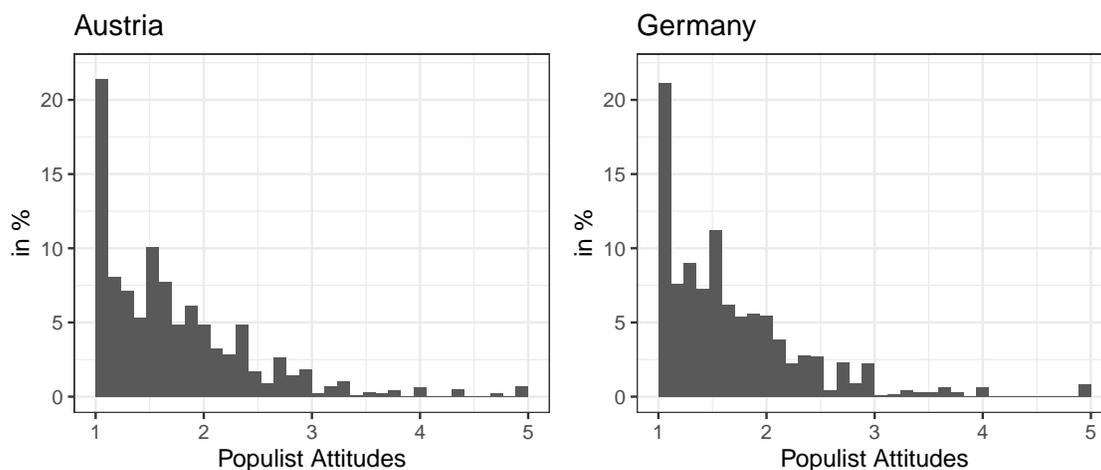
The results below show that the mean values and distributions of populist attitudes are quite similar compared to the youth sample. For instance, children have a mean level of populist attitudes of 1.80 (SD=0.86, see Table A.1), whereas adults hold a mean level of 1.70 (SD=0.70, see Table B.1).

⁶For more information on the respondi access panel, see <https://www.respondi.com/EN/access-panel>

Table B.1: Summary Statistics (Adult Sample)

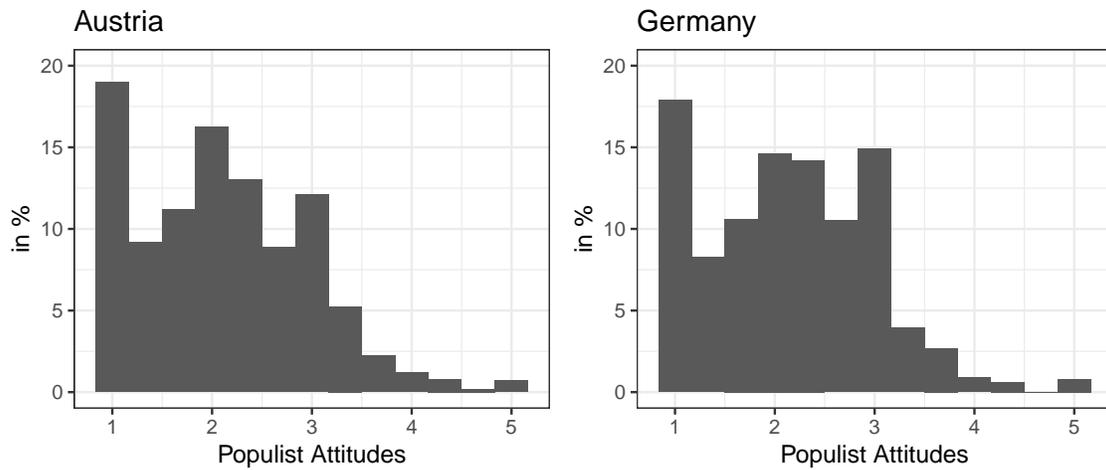
	Mean	SD	Min	Max
Populist attitudes (multiplied)	1.70	0.70	1	5
Populist attitudes (minimum)	2.13	0.85	1	5
Populist attitudes (additive)	3.41	0.58	1	5
Female	0.49		0	1
Age	43.22	14.07	18	83
Education: high	0.31		0	1
Migration background	0.15		0	1

Figure B.1: Distribution of Populist Attitudes for Adults (Multiplicative Index)



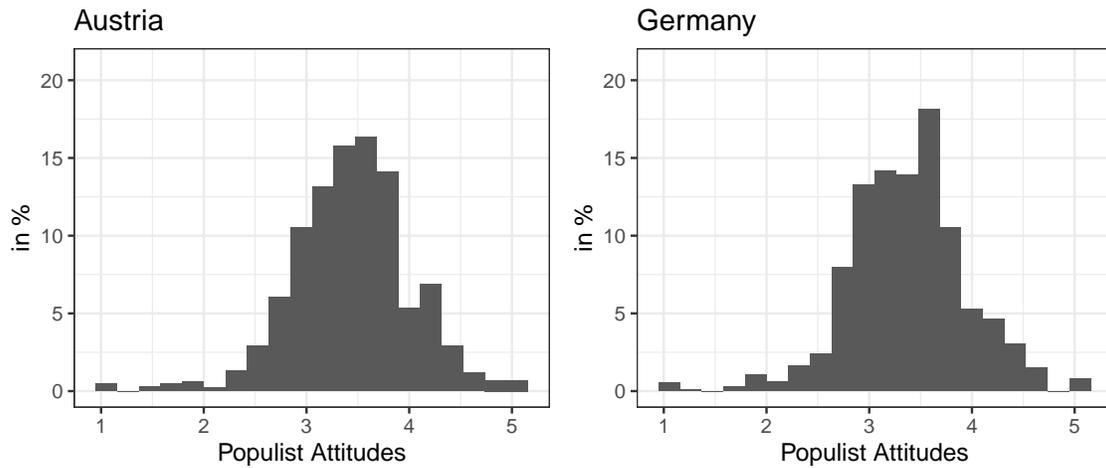
Populist attitudes range from one (low) to five (high) and are operationalized as multiplicative index out of the anti-elitism, people-centrism, and Manicheanism dimensions.

Figure B.2: Distribution of Populist Attitudes for Adults (Minimum Value)



Populist attitudes range from one (low) to five (high) and are operationalized as the minimum value out of the anti-elitism, people-centrism, and Manicheanism dimensions.

Figure B.3: Distribution of Populist Attitudes for Adults (Additive Index)



Populist attitudes range from one (low) to five (high) and are operationalized as a mean index across the anti-elitism, people-centrism, and Manicheanism dimensions.

C Results from UK Household Longitudinal Study (UKHLS)

Given the nature of our data, it is not possible to further investigate the causal relationship between negative relationships with socialization agents and populist attitudes. To the best of our knowledge, our study is also the first to survey populist attitudes among adolescents which makes it difficult to rely on additional data. Nevertheless, we want to underscore our findings with an additional investigation of the causal chain that can lead up to the development of populist attitudes. To do so, we rely on panel data from the harmonized British Household Panel Study (BHPS) and the UK Household Longitudinal Study (UKHLS) (University of Essex, Institute for Social and Economic Research 2023).

The data allow us to track young people’s attitudes during adolescence up into adulthood. To do so, we link children’s answers from the youth questionnaire (age 11-15 in BHPS, age 9-15 in UKHLS) with answers from when children move into the adult questionnaire (at age 16). This setup also allows us to include parental information by linking children to parents. While this wealth of data is a promising resource, it also comes with some restrictions. First, the survey does not include questions on populist attitudes. We therefore focus on external political efficacy — a concept that is strongly connected to populist attitudes (Geurkink et al. 2020).⁷

⁷For instance, Geurkink et al. (2020, 263) conclude that “we do see that there is overlap (i.e. correlation) among [...] constructs. Something we would expect from concepts that theoretically tap partly into one common feature of populism: anti-elitism.” Further research also confirmed the connection between (a lack of) external political efficacy and populist attitudes (e.g., Bene and Boda 2023; Spruyt et al. 2016) and populist party support (Krause and Wagner 2021).

Secondly, the timing of questions across waves is not ideal for a variety of estimation techniques. Table C.1 gives an overview of the concepts that we use across waves of the BHPS and UKHLS. The question wording of indicators is reported in Table C.6. Unfortunately, our main dependent variable (political efficacy) was asked only in waves 3, 6, 9, and 12 of the adult questionnaire of the UKHLS. This means that we cannot track immediate changes in political efficacy based on changes in negative experiences with socialization agents. This is even more problematic given that one of our main independent variables (experiences with teachers) was only asked in waves of the BHPS. Finally, there are no indicators for measuring specific negative experiences with family or friends which is why we have to rely on more general questions asking about satisfaction with family or friends.

To circumvent these restrictions, we estimated the association of negative experiences in adolescence with political efficacy in adulthood (for a similar procedure, see Jungkunz and Marx 2023). Given that respondents enter the panel at different ages, we calculated mean values for negative experiences with teachers, satisfaction with family, and satisfaction with friends when respondents were between 13 to 15 years old. This age range basically reflects the majority of the age range in our own data where 75% fall into that age range.⁸ Thus, this assures comparability to our own data. We then use these indicators to predict political efficacy in adulthood, i.e. when respondents were between 18 to 21 years old. Due to the nature of the panel and the gap between waves, we were not able to use political efficacy at a certain age

⁸Only 3% of our sample are 12 years old. Furthermore, extending the range to older adolescents is impossible, as our main independent variables were only asked in the youth questionnaire that ends at age 15.

but had to rely on an age range, as this would otherwise lead to too many missing values. Finally, we control in all our models for a variety of aspects that are likely to be connected to political efficacy (or perceptions of socialization agents), namely labor force status (in adulthood), self-esteem (in adolescence) the highest level of education that respondents ever achieved⁹, parental education, sex, and migration background. As a note of caution, we want to emphasize that including information from children and parents, variables from the youth and adult questionnaire is challenging in terms of sample size, as the BHPS surveyed only roughly 1,200 children as part of the youth questionnaire each year.¹⁰ We therefore control additionally for Big 5 personality traits and parental political interest in separate models (see Table C.3).

The results in Table C.2 show that teacher relationships in adolescence are associated with political efficacy in adulthood, whereas there is no significant association with satisfaction with friends or family. If respondents perceive a one-point greater perception that “the teachers are always getting at me” (on a scale from zero to ten), this is associated with a -0.077 points lower political efficacy in adulthood. Likewise, a one-point higher rating in teacher sympathy (“likes teacher”) is associated with 0.101 points higher political efficacy in adulthood. Thus, these findings back our results from the main text and suggest that a negative teacher relationship may be

⁹That way, we account for the many qualities that underlie selection into various educational outcomes, as well as the experiences respondents have previously had in their individual educational trajectories (such as entering university).

¹⁰In the UKHLS, this number ranges from about 5,000 young respondents in the first wave to about 1,600 in wave 12. However, since our main independent variables are only asked in the BHPS, all children that entered the panel for the first time as part of the UKHLS were omitted from the analyses.

associated with holding stronger populist attitudes.

Finally, we further investigate the connection between negative relationships with socialization agents with political involvement more generally. Using fixed-effects models, we can test whether *changes* in relationship perceptions are associated with *changes* in political interest. Since political interest was asked on a three-point scale in the youth questionnaire, we combined the answers “fairly interested” and “very interested” to form a dummy variable (reference category “not interested”).

The results in Table C.4 show that neither a change in satisfaction with family nor friends is significantly associated with a higher level of political interest.¹¹ However, we once again find significant results of negative relationships with teachers to be associated with lowered political interest. If adolescents experience a one point greater perception that the “the teachers are always getting at me” (on a scale from zero to ten), this is associated with a 1.3 percentage points lower level of political interest. Likewise, if adolescents’ teacher sympathy increases by one point (“likes teachers”), this is associated with a 2.3 percentage points higher level of political interest. Taken together, these results underscore the importance of adolescents’ experience and interaction with teachers for the connection with political involvement, political efficacy, and populist attitudes among adolescents.

¹¹The results from a logistic fixed-effects model in Table C.5 are basically identical.

Table C.1: Overview of Main Indicators across Waves in BHPS and UKHLS

	BHPS																		UKHLS											
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	1	2	3	4	5	6	7	8	9	10	11	12
Political Interest	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Political Efficacy ¹																					x			x			x			x
Teacher: getting at me ²								x	x	x	x	x	x	x	x	x	x	x												
Teacher: likes teacher ²								x	x	x	x	x	x	x	x	x	x	x												
Satisfaction with family ²				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Satisfaction with friends ²				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

¹ Only available in adult questionnaire. ² Only available in youth questionnaire. The BHPS and UKHLS data are combined and harmonized. Thus, wave 1 of the UKHLS can technically be seen as wave 19 of the BHPS.

Table C.2: Regression Models for External Political Efficacy (full models)

	(1)	(2)
<i>In Adolescence</i>		
Teacher relationship: always getting at me	-0.077* (0.038)	
Teacher relationship: likes teacher		0.101** (0.037)
Satisfaction with family	-0.051 (0.056)	-0.053 (0.055)
Satisfaction with friends	0.064 (0.094)	0.063 (0.094)
Self-esteem	-0.005 (0.064)	-0.007 (0.063)
<i>In Adulthood</i>		
Labor force status (ref.: working)		
- unemployed	-0.615* (0.300)	-0.678* (0.296)
- in education	0.325+ (0.178)	0.311+ (0.177)
- not in labor force	-1.217 (0.743)	-1.185 (0.741)
Education: A-levels or higher	0.146 (0.212)	0.136 (0.211)
<i>Socio-demographics</i>		
Parental education: A-levels or higher	0.409* (0.170)	0.407* (0.170)
Female	-0.123 (0.165)	-0.116 (0.164)
Migration background	-0.430 (0.286)	-0.411 (0.286)
Constant	4.497*** (0.962)	3.695*** (0.911)
<i>N</i>	776	776

Unstandardized estimates from linear regression models with standard errors in parentheses. The models show the associations of indicators reported in childhood (mean values between age 13 to 15) with external political efficacy reported in adulthood (mean value between age 18 to 21). Education refers to highest level of education ever achieved by the child. All continuous variables range from zero to ten. +p < 0.1, *p < 0.05, **p < 0.01, ***p < 0.001.

Table C.3: Regression Models for External Political Efficacy (additional control variables)

	(1)	(2)	(3)	(4)
<i>In Adolescence</i>				
Teacher relationship: always getting at me	-0.075 ⁺ (0.040)		-0.073* (0.037)	
Teacher relationship: likes teacher		0.116** (0.039)		0.102** (0.037)
Satisfaction with family	-0.042 (0.058)	-0.049 (0.057)	-0.049 (0.054)	-0.054 (0.053)
Satisfaction with friends	0.058 (0.105)	0.054 (0.104)	0.070 (0.094)	0.070 (0.094)
<i>In Adulthood</i>				
Labor force status (ref.: working)				
- unemployed	-0.878** (0.326)	-0.955** (0.321)	-0.548 ⁺ (0.302)	-0.605* (0.297)
- in education	0.306 (0.188)	0.274 (0.188)	0.325 ⁺ (0.178)	0.308 ⁺ (0.178)
- not in labor force	-1.134 (0.780)	-0.992 (0.779)	-1.239 ⁺ (0.743)	-1.204 (0.741)
Education: A-levels or higher	0.059 (0.225)	0.054 (0.224)	0.177 (0.213)	0.165 (0.212)
<i>Big 5</i>				
- agreeableness	0.019 (0.056)	0.018 (0.055)		
- extraversion	-0.106* (0.050)	-0.114* (0.049)		
- conscientiousness	-0.003 (0.050)	-0.006 (0.050)		
- openness	0.008 (0.045)	0.005 (0.044)		
- neuroticism	-0.041 (0.041)	-0.046 (0.040)		
<i>Socio-demographics</i>				
Parental education: high	0.426* (0.179)	0.413* (0.179)	0.338 ⁺ (0.174)	0.330 ⁺ (0.174)
Parental political interest			0.038 (0.027)	0.042 (0.027)
Female	-0.056 (0.180)	-0.038 (0.179)	-0.095 (0.160)	-0.086 (0.159)
Migration background	-0.354 (0.296)	-0.331 (0.294)	-0.430 (0.299)	-0.411 (0.298)
Constant	5.145*** (1.131)	4.459*** (1.092)	4.170*** (0.937)	3.365*** (0.901)
<i>N</i>	681	681	770	770

Unstandardized estimates from linear regression models with standard errors in parentheses. The models show the associations of indicators reported in childhood (mean values between age 13 to 15) with external political efficacy reported in adulthood (mean value between age 18 to 21). Education refers to highest level of education ever achieved by the child. All continuous variables range from zero to ten. ⁺p < 0.1, *p < 0.05, **p < 0.01, ***p < 0.001.

Table C.4: Fixed-Effects Models for Political Interest

	(1)	(2)	(3)	(4)
Satisfaction with family	0.002 (0.002)			
Satisfaction with friends		-0.001 (0.002)		
Teacher relationship: always getting at me			-0.013*** (0.002)	
Teacher relationship: likes teacher				0.023*** (0.002)
Two-Way FE	✓	✓	✓	✓
N	17434	17442	8695	8705

Unstandardized estimates from fixed-effects regression models with standard errors in parentheses (linear probability models). The models show the associated changes in indicators with changes in political interest for children between age 13 to 15. All continuous variables range from zero to ten. *p < 0.05, **p < 0.01, ***p < 0.001.

Table C.5: Fixed-Effects Models for Political Interest (Logit)

	(1)	(2)	(3)	(4)
Satisfaction with family	0.016 (0.015)			
Satisfaction with friends		-0.008 (0.016)		
Teacher relationship: always getting at me			-0.103*** (0.014)	
Teacher relationship: likes teacher				0.189*** (0.015)
Two-Way FE	✓	✓	✓	✓
N	17434	17442	8695	8705

Unstandardized estimates from logistic fixed-effects regression models with standard errors in parentheses. The models show the associated changes in indicators with changes in political interest for children between age 13 to 15. All continuous variables range from zero to ten. *p < 0.05, **p < 0.01, ***p < 0.001.

Table C.6: Question Wording and Coding of Indicators

Indicator	Question wording	Coding
Pol. interest	<p>vote6 & ypvte6: How interested would you say you are in politics?</p> <p>adult questionnaire: 1–very interested, 2–fairly interested, 3–not very interested, 4–not at all interested</p> <p>youth questionnaire: 1–very interested, 2–fairly interested, 3–not interested</p>	<p>combined (adult and youth): 0–not (very) interested, 1–fairly or very interested</p>
Pol. efficacy	<p>Mean index created based on poleff3 & poleff4:</p> <p>poleff3: Public officials don’t care much about what people like me think.</p> <p>poleff4: People like me don’t have any say in what the government does.</p> <p>1–strongly agree, 2–agree, 3–neither agree or disagree, 4–disagree, 5–strongly disagree</p> <p><i>was asked only in the adult questionnaire of the UKHLS</i></p>	<p>created mean index across both items, then rescaled to range from 0–low efficacy to 10–high efficacy</p>
Satisfaction with family	<p>yphfm: The next few questions are about how you feel about different aspects of your life. The faces express various types of feelings. Below each face is a number where '1' is completely happy and '7' is not at all happy. Please put an "x" in the box which comes closest to expressing how you feel about each of the following things ... your family?</p> <p>1–completely unhappy, 7–completely happy</p> <p><i>was asked only in the youth questionnaire</i></p>	<p>recoded to 0–completely unhappy, 10–completely happy</p>
Satisfaction with friends	<p>yphfr: The next few questions are about how you feel about different aspects of your life. The faces express various types of feelings. Below each face is a number where '1' is completely happy and '7' is not at all happy. Please put an "x" in the box which comes closest to expressing how you feel about each of the following things ... your friends?</p> <p>1–completely unhappy, 7–completely happy</p> <p><i>was asked only in the youth questionnaire</i></p>	<p>recoded to 0–completely unhappy, 10–completely happy</p>
Teacher relationship: always getting at me	<p>yptchb: Please say whether you strongly agree, agree, disagree, or strongly disagree, that the following statements apply to yourself. Teachers are always getting at me.</p> <p>1–strongly agree, 4–strongly disagree</p> <p><i>was asked only in the youth questionnaire of the BHPS</i></p>	<p>recoded to 0–strongly disagree, 10–strongly agree</p>
Teacher relationship: likes teachers	<p>yptcha: Please say whether you strongly agree, agree, disagree, or strongly disagree, that the following statements apply to yourself. I like most of my teachers.</p> <p>1–strongly agree, 4–strongly disagree</p> <p><i>was asked only in the youth questionnaire of the BHPS</i></p>	<p>recoded to 0–strongly disagree, 10–strongly agree</p>

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Table C.6: Question Wording and Coding of Indicators

Indicator	Question wording	Coding
Self-esteem	<p>Mean index created based on the following variables: Please say whether you strongly agree, agree, disagree, or strongly disagree, that the following statements apply to yourself.</p> <ul style="list-style-type: none"> - ypesta: I feel I have a number of good qualities. - ypestb: I certainly feel useless at times.* - ypestc: I am a likeable person. - ypeste: I am inclined to feel I am a failure.* - ypestf: at times I feel I am no good at all.* - ypesti: I feel that I do not have much to be proud of.* - ypestj: I am as able as most people. 	<p>created mean index across all items (* were reversed), then rescaled to range from 0–low self-esteem to 10–high self-esteem</p>
Big 5: Agreeableness	<p>Mean index created based on the following variables: The following questions are about how you see yourself as a person. Please choose the number which best describes how you see yourself, using a scale from 1 to 7 where 1 means 'does not apply to me at all' and 7 means 'applies to me perfectly'.</p> <ul style="list-style-type: none"> - scptrt5a1: I see myself as someone who is sometimes rude to others.* - scptrt5a2: I see myself as someone who has a forgiving nature. - scptrt5a3: I see myself as someone who is considerate and kind to almost everyone. 	<p>created mean index across all items (* were reversed), then rescaled to range from 0–low agreeableness to 10–high agreeableness</p>
Big 5: Conscientiousness	<p>Mean index created based on the following variables: The following questions are about how you see yourself as a person. Please choose the number which best describes how you see yourself, using a scale from 1 to 7 where 1 means 'does not apply to me at all' and 7 means 'applies to me perfectly'.</p> <ul style="list-style-type: none"> - scptrt5c1: I see myself as someone who does a thorough job. - scptrt5c2: I see myself as someone who tends to be lazy.* - scptrt5c3: I see myself as someone who does things efficiently. 	<p>created mean index across all items (* were reversed), then rescaled to range from 0–low conscientiousness to 10–high conscientiousness</p>

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Table C.6: Question Wording and Coding of Indicators

Indicator	Question wording	Coding
Big 5: Extraversion	<p>Mean index created based on the following variables: The following questions are about how you see yourself as a person. Please choose the number which best describes how you see yourself, using a scale from 1 to 7 where 1 means 'does not apply to me at all' and 7 means 'applies to me perfectly'.</p> <ul style="list-style-type: none"> - scptrt5e1: I see myself as someone who is talkative. - scptrt5e2: I see myself as someone who is outgoing, sociable. - scptrt5e3: I see myself as someone who is reserved.* 	<p>created mean index across all items (* were reversed), then rescaled to range from 0–low extraversion to 10–high extraversion</p>
Big 5: Neuroticism	<p>Mean index created based on the following variables: The following questions are about how you see yourself as a person. Please choose the number which best describes how you see yourself, using a scale from 1 to 7 where 1 means 'does not apply to me at all' and 7 means 'applies to me perfectly'.</p> <ul style="list-style-type: none"> - scptrt5n1: I see myself as someone who worries a lot. - scptrt5n2: I see myself as someone who gets nervous easily. - scptrt5n3: I see myself as someone who is relaxed, handles stress well.* 	<p>created mean index across all items (* were reversed), then rescaled to range from 0–low neuroticism to 10–high neuroticism</p>
Big 5: Openness	<p>Mean index created based on the following variables: The following questions are about how you see yourself as a person. Please choose the number which best describes how you see yourself, using a scale from 1 to 7 where 1 means 'does not apply to me at all' and 7 means 'applies to me perfectly'.</p> <ul style="list-style-type: none"> - scptrt5o1: I see myself as someone who is original, comes up with new ideas. - scptrt5o2: I see myself as someone who values artistic, aesthetic experiences. - scptrt5o3: I see myself as someone who has an active imagination. 	<p>created mean index across all items, then rescaled to range from 0–low openness to 10–high openness</p>
Labor force status	<p>jbstat: Current labour force status Original variable was coded into three dummy variables: unemployed if “unemployed” in education if “Full-time student” or “On apprenticeship” not in labor force if “Retired”, “Maternity leave”, “Family care” , “LT sick or disabled”, “Govt training scheme”, “Unpaid, family business”, “On furlough”, “Doing something else”, or “Other” Reference category: self-employed or employed</p>	<p>0–no, 1–yes</p>

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Table C.6: Question Wording and Coding of Indicators

Indicator	Question wording	Coding
Education	hiqualb_dv (BHPS) & hiqual_dv (UKHLS): Current status highest educational or vocational qualification	0–GCSE or lower, 1–A-Levels or higher
Migration background	Plbornc: Country of birth for those not born in the UK.	0–no migrant (born in UK), 1–migrant (born outside UK)
Female	sex: Respondent’s sex based on data from the latest interview.	0–male, 1–female

References

- Beck, Michael and Julia Ha (2018). *Lebenswelten Ostschweizer Jugendlicher*. St. Gallen: Pädagogische Hochschule St.Gallen.
- Bene, Márton and Zsolt Boda (2023). “A safety net against populism? An investigation of the interaction effect of political efficacy and democratic capacities on populist attitudes”. *Political Research Exchange* 5 (1), 2220385.
- Castanho Silva, Bruno, Ioannis Andreadis, Eva Anduiza, Nebojša Blanuša, Yazmin Morlet Corti, Gisela Delfino, Guillem Rico, Saskia P. Ruth-Lovell, Bram Spruyt, Marco Steenbergen, and Levente Littvay (2018). “Public opinion surveys: a new scale”. In: *The Ideational Approach to Populism. Concept, Theory, and Analysis*. Ed. by Kirk A. Hawkins, Ryan Carlin, Levente Littvay, and Cristóbal Rovira Kaltwasser. Routledge, 150–171.
- Geurkink, Bram, Andrej Zaslove, Roderick Sluiter, and Kristof Jacobs (2020). “Populist Attitudes, Political Trust, and External Political Efficacy: Old Wine in New Bottles?” *Political Studies* 68 (1), 247–267.
- Haneuse, Sebastien, Tyler J. VanderWeele, and David Arterburn (2019). “Using the E-Value to Assess the Potential Effect of Unmeasured Confounding in Observational Studies”. *JAMA* 321 (6), 602.
- Inchley, Jo, Dorothy Currie, Sanja Budisavljevic, Torbjørn Torsheim, Atle Jåstad, Alina Cosma, Colette Kelly, and A. Már Arnarsson (2020). *Spotlight on adolescent health and well-being. Findings from the 2017/2018 Health Behaviour in School-aged Children (HBSC) survey in Europe and Canada. International report. Volume 1. Key findings*. Copenhagen: WHO Regional Office for Europe.

- Jungkunz, Sebastian and Paul Marx (2023). “Material deprivation in childhood and unequal political socialization: the relationship between children’s economic hardship and future voting”. *European Sociological Review*.
- Krause, Werner and Aiko Wagner (2021). “Becoming part of the gang? Established and nonestablished populist parties and the role of external efficacy”. *Party Politics* 27 (1), 161–173.
- Mathur, Maya B., Peng Ding, Corinne A. Riddell, and Tyler J. VanderWeele (2018). “Web Site and R Package for Computing E-values”. *Epidemiology* 29 (5), e45–e47.
- Quenzel, Gudrun, Michael Beck, and Sebastian Jungkunz (2023). *Bildung und Partizipation. Mitbestimmung von Schülerinnen und Schülern in Deutschland, Österreich und der Schweiz*. Opladen, Berlin, Toronto: Barbara Budrich.
- Quenzel, Gudrun and Gabriele Böheim-Galehr (2021). *Lebenswelten 2020 – Werthaltungen junger Menschen in Vorarlberg*. Innsbruck: Studien Verlag.
- Spruyt, Bram, Gil Keppens, and Filip Van Droogenbroeck (2016). “Who Supports Populism and What Attracts People to It?” *Political Research Quarterly* 69 (2), 335–346.
- University of Essex, Institute for Social and Economic Research (2023). *Understanding Society: Waves 1-12, 2009-2021 and Harmonised BHPS: Waves 1-18, 1991-2009*.
- VanderWeele, Tyler J. and Peng Ding (2017). “Sensitivity Analysis in Observational Research: Introducing the E-Value”. *Annals of Internal Medicine* 167 (4), 268.