Automation, Culture, and Vote Choice

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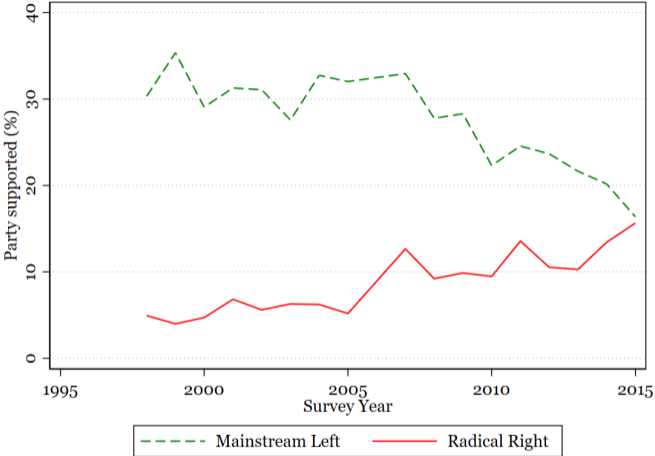
October 28, 2022

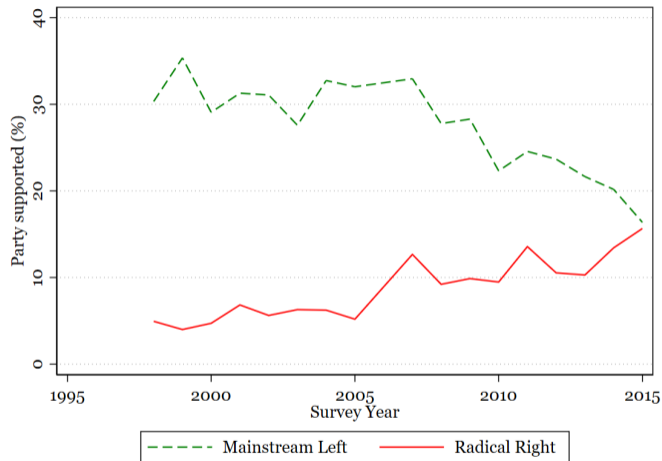# The Robots Are Coming. Prepare for Trouble

(NYT, 01/30/20, 03/06/21)

Political support of at-risk workers

Political support of at-risk workers

Source: Author's elaboration using ISSP data.
(Anelli et al., 2021; Frey et al., 2017; Im et al., 2019; Milner, 2021; Owen, 2019)

Does the threat of automation increase support the for far right and decrease turnout?

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~25 pp less likely to vote.

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...if so, what are the mechanisms?

- Effect of automation risk is mediated by cultural grievances.

Outgroup threat mediates 30% of the effect of automation on far-right support
(8% for turnout)

Nostalgia mediates 12% of the effect of automation on far-right support
(5% for turnout)

Definitions ▸

Automation
- Increase of tasks that can be done by capital (Acemoglu & Restrepo, 2018)
- Probability of computerization (Frey & Osborne, 2017)
    - low → e.g, computer engineer, management directors
    - high → e.g, accounts clerks, tax preparers, and telemarketing

Occupations' characteristics determine vulnerability to automation.

Telemarketers

41-9041.00

Solicit donations or orders for goods or services over the telephone.

Sample of reported job titles: Telemarketer, Telemarketing Sales Representative, Telephone Sales Representative (TSR), Telephone Service Representative (TSR), Telesales Representative, Telesales Specialist

Summary   Details   Custom   🖉 Easy Read   🖉 Veterans   🖉 Español

📕 Contents ▾

Occupation-Specific Information

Tasks

⌄ 5 of 12 displayed

- ⊕ Deliver prepared sales talks, reading from scripts that describe products or services, to persuade potential customers to purchase a product or service or to make a donation.
- ⊕ Contact businesses or private individuals by telephone to solicit sales for goods or services, or to request donations for charitable causes.
- ⊕ Explain products or services and prices, and answer questions from customers.
- ⊕ Obtain customer information such as name, address, and payment method, and enter orders into computers.

Argument

Interplay between automation and cultural grievances

Automation Risk

Interplay between automation and cultural grievances

Automation Risk

Nostalgia

Psych. Barauskaitė et al. (2022); Davis (1979); Hirsch (1992)
Eco. ↓ Rindfleisch et al. (2009); Zhou et al. (2013)

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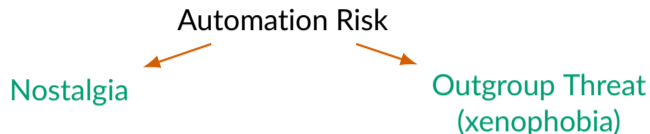
Automation Risk

Nostalgia

Outgroup Threat
(xenophobia)

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Interplay between automation and cultural grievances

Automation Risk

Nostalgia

Outgroup Threat
(xenophobia)

Vote Choice
(Turnout & far right)

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Political efficacy Beesley and Bastiaens (2020); Marx and Nguyen (2016)

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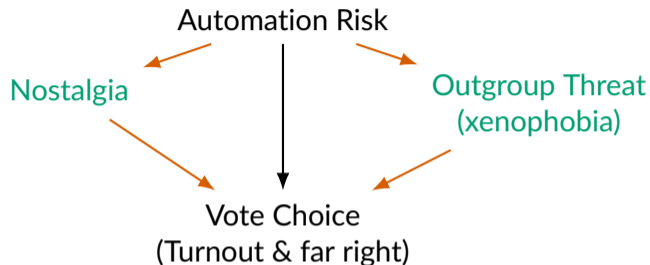
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Nostalgia

Outgroup Threat (xenophobia)

Vote Choice (Turnout & far right)

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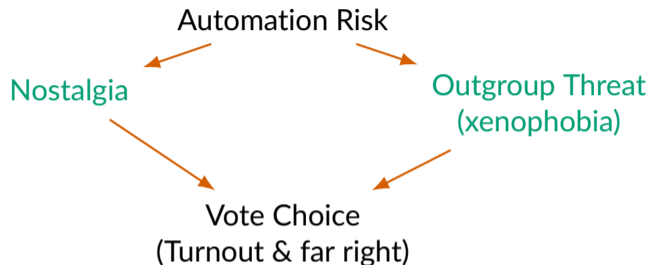**Eco.** ↓ Rindfleisch et al. (2009); Zhou et al. (2013)

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Hypotheses

H.I Risk from automation increases **xenophobic** attitudes.

H.II Risk from automation increases **nostalgic** sentiments.

H.III Effects of automation risks on support for **far right** are mediated by cultural beliefs.

H.IV Effects of automation risks on **turnout** are mediated by cultural beliefs.

Research Design

Empirical Analysis

$$\underbrace{Automation\ Risk_i}_{\text{Treatment}} \rightarrow \underbrace{Xenophobia\ /\ Nostalgia_i}_{\text{Mediator}} \rightarrow \underbrace{Political\ Behavior_i}_{\text{Outcome}}$$

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2. *Automation Risk → Cultural Grievances*
3. Mediation analysis (Imai et al., 2011; Keele et al., 2015)

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- **Data**: European Social Survey (2002-2016), 13 European countries

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- **Treatment**: probability of computerisation Frey and Osborne (2017) & Anelli et al. (2021).
- **Outcome**: support of far right parties & turnout
- **Mediators**:
    - Xenophobia: respondents' evaluations of immigration regarding i) country's cultural life ii) worsening economy, iii) worsening the country overall.
    - Nostalgia: respondents' positions regarding i) life is getting worse, ii) lack of hope about the future.

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    - Xenophobia: respondents' evaluations of immigration regarding i) country's cultural life ii) worsening economy, iii) worsening the country overall.
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- **Controls**:
    Individual: education, age, gender, ethnic minority, foreign born, unemployed, unionized.
    Region: regional robots, immigrants, unemployment rate, regional & country-year FE

Results

Results - Automation Risks and Cultural Beliefs

	Political Behavior		Immigration (Hyp. I)			Nostalgia (Hyp. II)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Radical Right	Turnout	Culture	Economy	Live	Life Better	Hopeful
Automation Risk							
Demographic Country-Year FE NUTS FE							
Observations R^2							

Standard errors clustered by region-year in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Automation risks $\implies$ **less** tolerance toward immigrants, **less** hope about the future, **more** likely to support radical right, and **less** likely to vote. ▸ ▸

Results - Automation Risks and Cultural Beliefs

	Political Behavior		Immigration (Hyp. I)			Nostalgia (Hyp. II)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Radical Right	Turnout	Culture	Economy	Live	Life Better	Hopeful
Automation Risk	3.503***	-1.764***					
	(0.231)	(0.127)					
Demographic	✓	✓					
Country-Year FE	✓	✓					
NUTS FE	✓	✓					
Observations		141092					
R^2	0.174	0.103					

Standard errors clustered by region-year in parentheses
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Results - Automation Risks and Cultural Beliefs

	Political Behavior		Immigration (Hyp. I)			Nostalgia (Hyp. II)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Radical Right	Turnout	Culture	Economy	Live	Life Better	Hopeful
Automation Risk	3.503***	-1.764***	-2.376***	-2.315***	-1.987***		
	(0.231)	(0.127)	(0.100)	(0.094)	(0.095)		
Demographic	✓	✓	✓	✓	✓		
Country-Year FE	✓	✓	✓	✓	✓		
NUTS FE	✓	✓	✓	✓	✓		
Observations	64440	141092	151296	150778	151615		
R^2	0.174	0.103	0.162	0.116	0.136		

Standard errors clustered by region-year in parentheses
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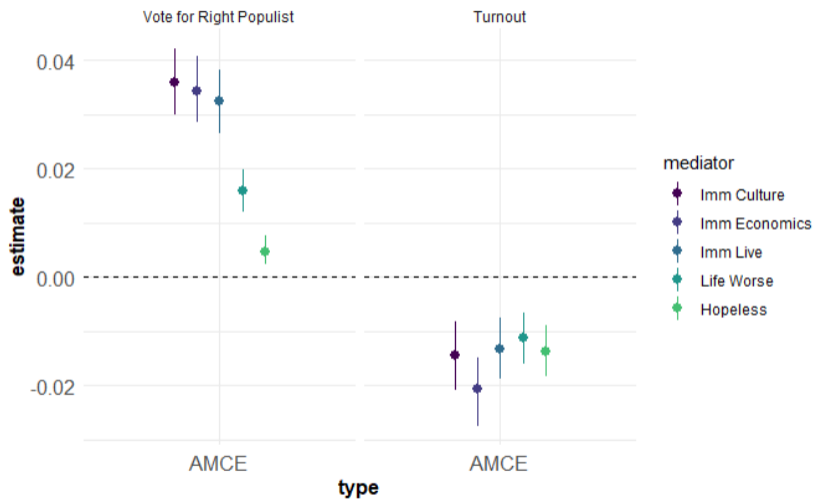
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	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Radical Right	Turnout	Culture	Economy	Live	Life Better	Hopeful
Automation Risk	3.503***	-1.764***	-2.376***	-2.315***	-1.987***	-0.718***	-0.735***
	(0.231)	(0.127)	(0.100)	(0.094)	(0.095)	(0.052)	(0.058)
Demographic	✓	✓	✓	✓	✓	✓	✓
Country-Year FE	✓	✓	✓	✓	✓	✓	✓
NUTS FE	✓	✓	✓	✓	✓	✓	✓
Observations	64440	141092	151296	150778	151615	44674	44923
R^2	0.174	0.103	0.162	0.116	0.136	0.294	0.134

Standard errors clustered by region-year in parentheses
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Results - Automation → Cultural Beliefs → Political Behavior

Far right: total effect ↑ probability ∼**12 pp**, mediated ∼**3.5 pp** for xenophobia, and ∼**1 pp** for nostalgia
Turnout: total effect ↓ probability ∼**25 pp**, mediated ∼**1.5 pp** for xenophobia & nostalgia

Results - Automation $\rightarrow$ Cultural Beliefs $\rightarrow$ Political Behavior
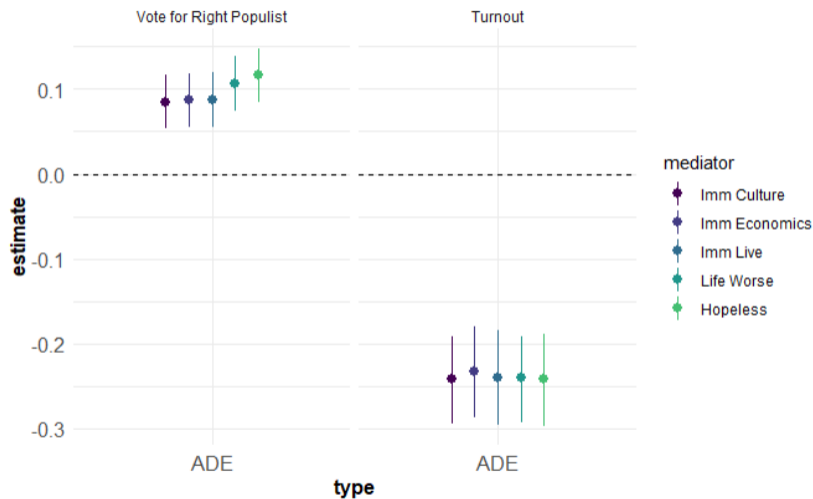
Far right: total effect $\uparrow$ probability $\sim$**12 pp**, mediated $\sim$**3.5 pp** for xenophobia, and $\sim$**1 pp** for nostalgia

Turnout: total effect $\downarrow$ probability $\sim$**25 pp**, mediated $\sim$**1.5 pp** for xenophobia & nostalgia

Implications

Challenges and Further Work

Key findings

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Challenges and future steps

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- Automation affects politics through triggering xenophobia and nostalgia.

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- Automation affects politics through triggering xenophobia and nostalgia.

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Challenges and future steps
- Observational study $\rightarrow$ leverage causality using survey experiment.
- Unpack when an individual decide to abstain vs support far-right populist.

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Key findings

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- What are the policy strategies to mitigate this?

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Thank you! 🌐 gonzalez-rostani ✉ mag384[at]pitt.edu

Supplementary Slides

Appendix - Index

Countries in sample

Austria, Belgium, Finland, France, Germany, Italy, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

Question wording

Attitudes toward immigration

- Cultural: "country's cultural life undermined or enriched by immigrants" (*imueclt*)
- Economy: whether immigration is "bad or good for the country's economy" (*imbgeco*)
- Overall:"make the country worse or better place to live" (*imwbcnt*).

$\rightarrow$ 11-point scales. From 0, representing negative views about immigration (e.g., a worse place to live), to 10, representing positive views (e.g., better place to live).

Nostalgic feelings

- Hope: whether it is hard "to be hopeful about the future of the world" (*nhpftr*)
- Life: "For most people in this country, life is getting worse" (*lfwrs*).

$\rightarrow$ from (1) 'agree strongly' to (5) 'disagree strongly.'

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Radical Right	Turnout	Culture	Economy	Live	Life Better	Hopeful
Frey & Osborne	3.501***	-1.502***	-2.139***	-2.235***	-1.760***	-0.754***	-0.563***
	(0.310)	(0.174)	(0.130)	(0.120)	(0.119)	(0.094)	(0.098)
Education (years)	-0.060***	0.076***	0.089***	0.083***	0.067***	0.011***	0.012***
	(0.010)	(0.006)	(0.005)	(0.005)	(0.004)	(0.004)	(0.003)
Age	-0.016***	0.034***	-0.004***	0.004***	-0.003***	-0.005***	-0.006***
	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Female	-0.448***	-0.016	0.094***	-0.311***	-0.038	-0.089***	-0.081***
	(0.059)	(0.029)	(0.027)	(0.023)	(0.027)	(0.017)	(0.017)
Urban	-0.164**	-0.034	0.209***	0.166***	0.159***	0.013	0.010
	(0.070)	(0.035)	(0.027)	(0.028)	(0.025)	(0.023)	(0.020)
Union Member	0.027	0.234***	0.101***	-0.003	0.033	-0.069***	-0.048**
	(0.073)	(0.033)	(0.029)	(0.030)	(0.027)	(0.020)	(0.021)
Unemployed	0.203	-0.268***	-0.163**	-0.260***	-0.282***	-0.181***	-0.114**
	(0.172)	(0.072)	(0.063)	(0.060)	(0.061)	(0.046)	(0.057)
Ethnic minority	0.891***	0.203***	-0.398***	-0.267***	-0.405***	0.023	0.032
	(0.255)	(0.067)	(0.072)	(0.059)	(0.060)	(0.035)	(0.050)
Foreign Born	-0.276**	-1.101***	0.440***	0.547***	0.673***	0.071**	-0.036
	(0.136)	(0.070)	(0.059)	(0.051)	(0.047)	(0.032)	(0.038)
Precarious employment contract	-0.149	-0.105**	0.101***	0.117***	0.125***	0.022	-0.004
	(0.097)	(0.042)	(0.034)	(0.031)	(0.031)	(0.023)	(0.027)
Income	-0.058***	0.107***	0.055***	0.065***	0.046***	0.025***	0.048***
	(0.011)	(0.006)	(0.005)	(0.005)	(0.005)	(0.004)	(0.005)
Regional controls	✓	✓	✓	✓	✓	✓	✓
Country-Year FE	✓	✓	✓	✓	✓	✓	✓
NUTS FE	✓	✓	✓	✓	✓	✓	✓
Observations	28559	50711	53612	53435	53512	13396	13434
R^2	0.163	0.143	0.184	0.153	0.153	0.345	0.162
AIC	1.2e+04	4.1e+04	2.4e+05	2.3e+05	2.3e+05	3.3e+04	3.7e+04

Table: **Robustness checks.** Standard errors clustered by region-year in parentheses * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Robustness - Automation Risks and Cultural Beliefs (Anelli et al., 2021) ▸ Back ▸ Ind

| | Immigration (Hyp. I) | | | Nostalgia (Hyp. II) | | Political Behavior | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
	Culture	Economy	Live	Life Better	Hopeful	Radical Right	Turnout
Automation risks	-0.314***	-0.332***	-0.261***	-0.144***	-0.125***	0.011**	-0.033***
	(0.042)	(0.042)	(0.039)	(0.022)	(0.024)	(0.005)	(0.006)
Demographic	✓	✓	✓	✓	✓	✓	✓
Country-Year FE	✓	✓	✓	✓	✓	✓	✓
NUTS FE	✓	✓	✓	✓	✓	✓	✓
Observations	151296	150778	151615	44674	44923	97035	141097
R^2	0.155	0.109	0.130	0.291	0.130	0.108	0.096
AIC	6.7e+05	6.7e+05	6.5e+05	1.2e+05	1.3e+05	-3.4e+04	1.3e+05

Table: Standard errors clustered by region-year in parentheses * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$
Dependent variable: A) level of agreement with **immigration as better** for culture, economy and life. Answers range from "Not like me at all" ($= 1$) to "Very much like me" ($= 10$). B) level of agreement with "life is getting worse" and "hard to have hope about the future." Answers range from "Agree strongly" ($= 1$) to "Disagree strongly" ($= 5$). Source: ESS (1-7) data.

	Immigration (Hyp. I)			Nostalgia (Hyp. II)		Political Behavior	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Culture	Economy	Live	Worse Life	Hopeless	Radical Right	Turnout
Frey & Osborne	-2.310***	-2.354***	-2.056***	-0.451***	-0.726***	0.162***	-0.234***
	(0.199)	(0.183)	(0.175)	(0.127)	(0.103)	(0.028)	(0.035)
IV Δ robots	-0.544	0.323	0.570	-2.832**	-0.095	-0.434**	0.266
	(1.440)	(1.319)	(1.247)	(1.119)	(0.780)	(0.214)	(0.241)
Demographic	✓	✓	✓	✓	✓	✓	✓
Country-Year FE	✓	✓	✓	✓	✓	✓	✓
NUTS FE	✓	✓	✓	✓	✓	✓	✓
Observations	151296	150778	151615	44674	44923	97035	141097
R^2	0.162	0.116	0.136	0.294	0.134	0.111	0.097
AIC	6.7e+05	6.6e+05	6.5e+05	1.1e+05	1.3e+05	-3.4e+04	1.3e+05

Standard errors in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table: IV Regional exposure to industrial robots per worker and support for radical right and turnout.
Dependent variable: Support for immigration as they enrich cultural life (1), are better for the economy (2), and
make the country a better place to live (3). Answers range from "Very much like me" ($= 0$) to "Not like me at all"
($= 10$). Nostalgia: Life is getting worse (4), hard to be hopeful about the future of the world (5). Answers range
from "Very much like me" ($= 1$) to "Not like me at all" ($= 5$). Source: ESS (1-7) data.

Robustness - IV ▸ Back ▸ Ind

	(1) Radical Right	(2) Turnout	(3) Culture	(4) Economy	(5) Live	(6) Life Better	(7) Hopeful
Automation Risk	0.028***	-0.062***	-0.806***	-0.768***	-0.653***	-0.371***	-0.321***
	(0.007)	(0.008)	(0.069)	(0.064)	(0.059)	(0.048)	(0.040)
Demographics	✓	✓	✓	✓	✓	✓	✓
NU FE	✓	✓	✓	✓	✓	✓	✓
Country-Year FE	✓	✓	✓	✓	✓	✓	✓
Observations	97035	141097	151296	150778	151615	44674	44923
R^2	0.108	0.095	0.151	0.106	0.127	0.288	0.128
AIC	-3.4e+04	1.3e+05	6.7e+05	6.7e+05	6.5e+05	1.2e+05	1.3e+05

Standard errors in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table: Automation risk is instrumented using robot adoption in other countries. Individual vulnerability is then weighted by the average percentage change in the stock of operational robots across other Western European countries in previous three years. Measure comes from (Anelli et al., 2021).

Cultural Beliefs & Support for Radical Right ▸ Back ▸ Ind

Regional Exposure to Δ Robots

	(1) Baseline	(2) Culture	(3) Imm Eco	(4) Imm Worse Life	(5) Hopeless	(6) Worse Life
Automation Risk	0.028*** (0.007)	0.016** (0.006)	0.018*** (0.007)	0.018*** (0.007)	0.028** (0.011)	0.034*** (0.011)
Culture		-0.015*** (0.001)				
Economy			-0.013*** (0.001)			
Live				-0.015*** (0.001)		
Worse Life					-0.016*** (0.002)	
Hopeless						-0.004*** (0.001)
Demographics	Yes	Yes	Yes	Yes	Yes	Yes
Observations	97035	94081	93716	94199	27866	27963
R^2	0.108	0.131	0.127	0.129	0.111	0.107
AIC	-3.4e+04	-3.6e+04	-3.5e+04	-3.6e+04	-1.3e+04	-1.2e+04

Standard errors in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table: Regression estimates of the impact of a one-SD increase in regional-level robot exposure on voting for a radical-right party (Anelli et al., 2021). DV: Support for radical right parties. Source: ESS (1-7).

Cultural Beliefs & Turnout

Regional Exposure to Δ Robots

	(1)	(2)	(3)	(4)	(5)	(6)
	Baseline	Culture	Imm Eco	Imm Worse Life	Hopeless	Worse Life
Automation Risk	-0.062***	-0.055***	-0.053***	-0.056***	-0.084***	-0.086***
	(0.008)	(0.008)	(0.008)	(0.008)	(0.019)	(0.019)
Culture		0.008***				
		(0.001)				
Economy			0.010***			
			(0.001)			
Live				0.009***		
				(0.001)		
Worse Life					0.019***	
					(0.003)	
Hopeless						0.017***
						(0.002)
Demographics	Yes	Yes	Yes	Yes	Yes	Yes
Observations	141097	137135	136697	137538	40695	40853
R^2	0.095	0.098	0.099	0.098	0.101	0.102
AIC	1.3e+05	1.2e+05	1.2e+05	1.3e+05	3.7e+04	3.7e+04

Standard errors in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table: Regression estimates of the impact of a one-SD increase in regional-level robot exposure on voting for a radical-right party (Anelli et al., 2021). DV: Turnout Source: ESS (1-7).

Mediated Analysis for Support for Populist Right (Hyp. III)

Automation Risk (Frey & Osborne)

	(1) Culture	(2) Imm Eco	(3) Imm Worse Life	(4) Hopeless	(5) Worse Life
Frey & Osborne	0.094***	0.096***	0.097***	0.117***	0.106***
	(0.015)	(0.015)	(0.016)	(0.023)	(0.021)
Demographics	Yes	Yes	Yes	Yes	Yes
NU FE	Yes	Yes	Yes	Yes	Yes
Country-Year FE	Yes	Yes	Yes	Yes	Yes
Observations	28810	28698	28763	14587	14551
R^2	0.109	0.106	0.110	0.097	0.102
AIC	-4.9e+03	-4.6e+03	-4.8e+03	-5.4e+03	-5.5e+03

Standard errors in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table: Mediated effects of Risk of automation on electoral support for the radical right (2nd stage).
Source: ESS (6-7).

Mediated Analysis for Turnout (Hyp. IV)

Automation Risk (Frey & Osborne)

	(1) Culture	(2) Imm Eco	(3) Imm Worse Life	(4) Hopeless	(5) Worse Life
Frey & Osborne	-0.213***	-0.202***	-0.211***	-0.241***	-0.205***
	(0.029)	(0.028)	(0.028)	(0.037)	(0.027)
Demographics	Yes	Yes	Yes	Yes	Yes
Country-Year FE	Yes	Yes	Yes	Yes	Yes
NUTS FE	Yes	Yes	Yes	Yes	Yes
Observations	40058	39947	40068	20496	40695
R^2	0.098	0.101	0.099	0.105	0.095
AIC	3.6e+04	3.6e+04	3.6e+04	1.8e+04	3.6e+04

Standard errors in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table: Mediated effects of Risk of automation on turnout (2nd stage).Source: ESS (6-7).

Mediated Analysis for Support for Populist Right (Hyp. III)

	(1) Culture	(2) Imm Eco	(3) Imm Worse Life	(4) Hopeless	(5) Worse Life
Individual Exposure	0.499**	0.510**	0.576***	0.448*	0.840***
	(0.206)	(0.204)	(0.214)	(0.256)	(0.214)
Demographics	✓	✓	✓	✓	✓
NU FE	✓	✓	✓	✓	✓
Country-Year FE	✓	✓	✓	✓	✓
Observations	28810	28698	28763	14587	14603
R^2	0.108	0.105	0.109	0.094	0.092
AIC	-4.8e+03	-4.6e+03	-4.8e+03	-5.3e+03	-5.3e+03

Standard errors clustered by region-year in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table: Mediated effects of Risk of automation on electoral support for the radical right (2nd stage). Automation risk operationalized using Anelli et al. (2021) approach. Source: ESS (6-7).

Mediated Analysis for Turnout (Hyp. IV)

	(1) Culture	(2) Imm Eco	(3) Imm Worse Life	(4) Hopeless	(5) Worse Life
Individual Exposure	-0.929***	-0.848***	-0.912***	-0.691*	-2.505***
	(0.289)	(0.278)	(0.284)	(0.388)	(0.544)
Demographics	✓	✓	✓	✓	✓
NU FE	✓	✓	✓	✓	✓
Country-Year FE	✓	✓	✓	✓	✓
Observations	40058	39947	40068	20496	20466
R^2	0.096	0.099	0.096	0.102	0.080
AIC	3.6e+04	3.6e+04	3.6e+04	1.8e+04	1.9e+04

Standard errors clustered by region-year in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table: Mediated effects of Risk of automation on turnout (2nd stage). Automation risk operationalized using Anelli et al. (2021) approach. Source: ESS (6-7).

Mediated Analysis for Populist Right (w/control variables)

	(1) Culture	(2) Imm Eco	(3) Imm Worse Life	(4) Hopeless	(5) Worse Life
Automation Risk	0.094***	0.094***	0.097***	0.114***	0.100***
	(0.017)	(0.016)	(0.017)	(0.025)	(0.023)
Income	✓	✓	✓	✓	✓
Individual Control variables	✓	✓	✓	✓	✓
Regional Control variables	✓	✓	✓	✓	✓
NU FE	✓	✓	✓	✓	✓
Country-Year FE	✓	✓	✓	✓	✓
Observations	20189	20088	20134	9581	9557
R^2	0.111	0.107	0.110	0.089	0.097
AIC	-2.3e+03	-2.1e+03	-2.3e+03	-2.3e+03	-2.4e+03

Standard errors in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table: Mediated effects of Risk of automation on support for populist right (2nd stage). Automation risk operationalized using Frey and Osborne (2017) approach. Source: ESS (6-7).

Mediated Analysis for Turnout (w/control variables)

	(1) Culture	(2) Imm Eco	(3) Imm Worse Life	(4) Hopeless	(5) Worse Life
Automation Risk	-0.141***	-0.130***	-0.138***	-0.171***	-0.165***
	(0.028)	(0.027)	(0.027)	(0.040)	(0.040)
Income	✓	✓	✓	✓	✓
Individual Control variables	✓	✓	✓	✓	✓
Regional Control variables	✓	✓	✓	✓	✓
NU FE	✓	✓	✓	✓	✓
Country-Year FE	✓	✓	✓	✓	✓
Observations	26811	26702	26764	12617	12590
R^2	0.133	0.136	0.134	0.139	0.139
AIC	2.1e+04	2.1e+04	2.1e+04	9461.946	9471.757

Standard errors in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table: Mediated effects of Risk of automation on turnout (2nd stage). Automation risk operationalized using Frey and Osborne (2017) approach. Source: ESS (6-7).

Sensitivity Analysis

		Support for Radical Right	Turnout
		ρ	ρ
Immigration	Country's cultural life	-0.4	0.2
	Worsening economy	-0.4	0.2
	Worsening living in the country	-0.4	0.2
Nostalgia	Life is getting worse	-0.1	0.1
	Lack of hope for the future	-0.1	0.2

Table: Sensitivity analyses, based on Hicks & Tingley (2011).

Robots Are Coming
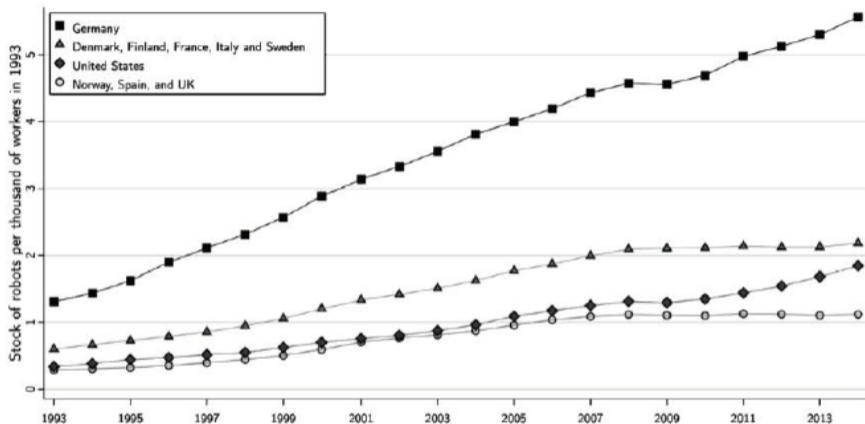
Figure: Industrial robots per thousand workers in the US and Europe

Figure comes from Acemoglu and Restrepo (2019)

Satisfaction and Routine vs. Non-Routine Workers

Figure: Importance of job security, Difficulties to find a new job, Concerns about losing the job and Job dissatisfaction
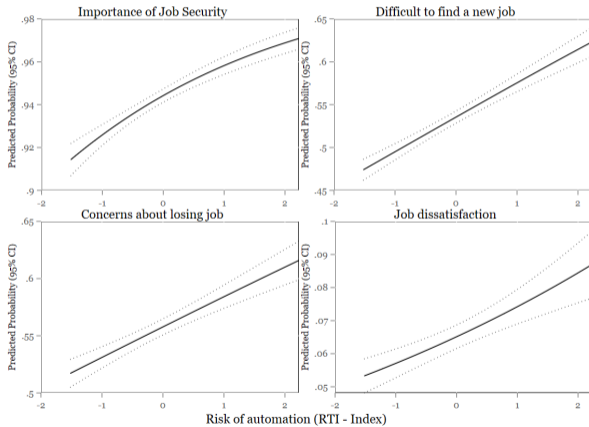
Source: ISSP (1997, 2005 and 2015)

Hollowing out the Middle ▸ Ind

Figure: Relative Share of Labor Force 1995 to 2014

Countries included: Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Italy, and

United Kingdom. Source: Author's own calculation based on ISSP data.

Automation Threat and Public Opinion ▸ Ind

Table: Public opinion and automation

Survey	Country Year	Question	Results
Special Eurobarometer	EU, 2017	Please tell me to what extent you agree or disagree with the following statement: Due to the use of robots and artificial intelligence, more jobs will disappear than new jobs will be created.	74% agree that more jobs will disappear rather than created due to automation
		Please tell me to what extent you agree or disagree with the following statement: Robots and artificial intelligence steal people's jobs	72% agree that robots steal people's jobs
		Do you think your current job could be done by a robot or by artificial intelligence in the future?	44% think that their current job could be at least partially automated

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