The Nature of Attitudes Towards Artificial Intelligence Among Mass Publics

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Outline

Introduction

Rage Against the Machine
The Echoes of the Luddites' 19th Century
Revolt Against Automation.

Does job automation risks moderate the relationship between ideology and attitudes toward welfare and redistribution?

- Automation looms as a major threat to employment, with estimates suggesting up to 40% of jobs face a high replacement risk.
- Political Scientists have long sought to understand what drives attitudes toward welfare and redistribution.
- **Research Question**: *Does exposure to automation risks moderate the relationship between individuals' ideology and support for welfare and redistribution policies?*
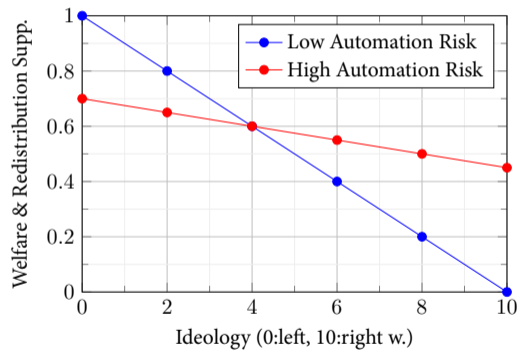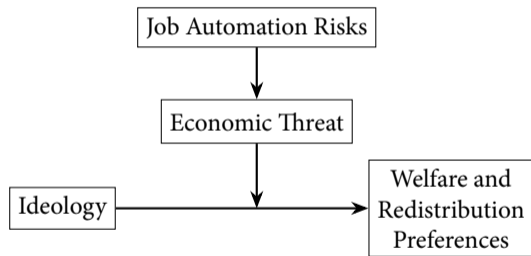
Theoretical Framework

Preferences and Support for Welfare and Redistribution

- Ideology is one of the most important predictors of support for welfare and redistribution. *(Armingeon & Weisstanner, 2022)*

- A growing literature suggests occupational exposure to job automation risk increases support for redistribution. *(Thewissen & Rueda, 2019; Busemeyer & Tober, 2023)*

- Yet, some mixed findings exist for welfare support, e.g., UBI. *(Dermont & Weisstanner 2020)*

- In this paper, building on the theory of psychological needs, I explore the role of job automation in moderating the effect of ideology on welfare and redistribution preferences. *(Jost et al. 2009; Feldman 2003)*

Hypothesis

- Increase perceptions of economic threat.
- Increase support for redistribution, improve perceptions of welfare policies and increase support for UBI (unconditionally).
- **Attenuate the effect of ideology on support for redistribution, attitudes toward welfare, and support for UBI.**

Research Design

- 7th Wave of the European Social Survey (Fielded 2016).

- Frey and Osborne's 2017 Estimation of Job Automation for SOC-coded occupations.

- Selected Items for Analysis.
  - Unemployment Worry: Likely or very likely will be unemployed and looking for work in the next 12 months.
  - Income Loss Worry: Likely or very likely will face income shortages, so they won't be able to meet their needs in the next 12 months.
  - Welfare 1: Social benefits/services prevent widespread poverty (agree/disagree, Likert, 5p).
  - Welfare 2: Social benefits/services lead to a more equal society (agree/disagree, Likert, 5p).
  - Redistribution: Government should reduce differences in income levels (agree/disagree, Likert, 5p).
  - UBI item: Against or In favor of a basic income scheme (against/in favor, Likert, 4p)

Figure 1: Distribution of Job Automation Risks in the ESS Sample
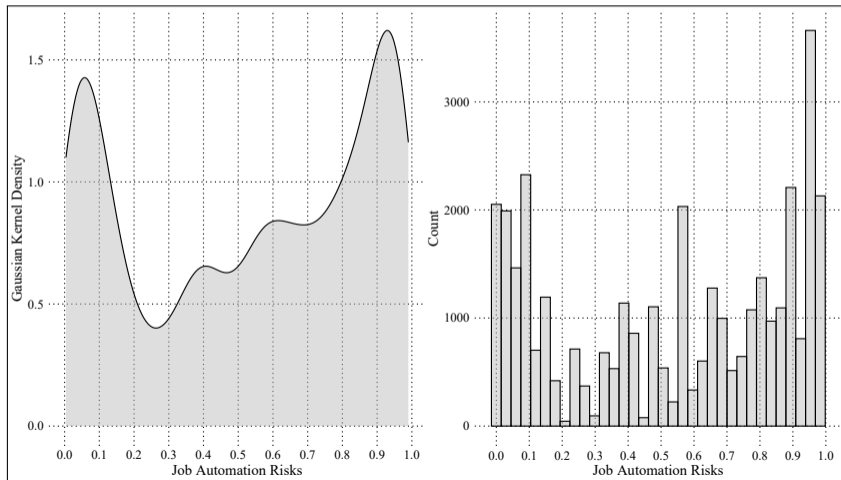
- We use linear regression, including an extensive set of controls and country-fixed effects. We *interact* automation risks with ideology.
- To explore multilevel heterogeneity, using OLS, we decompose automation risks into three orthogonal levels: country, economic industry, and individual. We *interact* these measures with ideology.

Results

-Total- Automation Risk Moderately Increases Economic Anxiety

	Unemployment Worry (dummy)				
	(1)	(2)	(3)	(4)	(5)
Autom. Risk	0.14***	0.03†	0.02†	0.02†	−0.01
	(6.57)	(1.86)	(1.78)	(1.78)	(−0.64)
Num.Obs.	35 227	24 062	23 988	23 988	23 909
Especif.	As Is + Country FE	+ Sociodemogr. Controls	+ Unempl. & Unionized	+ Welfare Beneficiary	+ Social Class FE
R2 Adj.	0.056	0.191	0.231	0.231	0.254

Significance labels: † $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. t-statistics in parenthesis. Country-clustered robust standard errors. Sociodemographics: Total income deciles, household size, household with a partner (dummy), education, gender, age. Unempl. & Unionized: current/former union membership (dummy), unemployment status (dummy). Welfare Beneficiary: source of main income is either pensions, unemployment benefits, or other welfare benefits (dummies). Social class dummies: Small Business Owners, Technical Professionals, Production Workers, Associate Managers, Clerks, Socio-cultural Professionals, and Service Workers.

Industry-level Automation Risk Drives the Effect on Economic Anxiety

|	Unemployment Worry (dummy)				
	(1)	(2)	(3)	(4)	(5)
Idiosync. AR	0.13***	0.01	0.01	0.01	−0.02
	(5.70)	(0.79)	(0.71)	(0.71)	(−1.00)
Industry AR	0.18***	0.10**	0.08**	0.08**	0.05†
	(8.48)	(3.58)	(3.24)	(3.24)	(2.02)
Especif.	As Is + Country FE	+ Sociodemogr. Controls	+ Unempl. & Unionized	+ Welfare Beneficiary	+ Social Class FE
Num.Obs.	34 763	23 801	23 727	23 727	23 650
R2 Adj.	0.057	0.193	0.234	0.234	0.256

Significance labels: † $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. t-statistics in parenthesis. Country-clustered robust standard errors. **Sociodemographics**: Total income deciles, household size, household with a partner (dummy), education, gender, age. **Uenmpl. & Unionized**: current/former union membership (dummy), unemployment status (dummy). **Welfare Beneficiary**: source of main income is either pensions, unemployment benefits, or other welfare benefits (dummies). **Social class dummies**: Small Business Owners, Technical Professionals, Production Workers, Associate Managers, Clerks, Socio-cultural Professionals, and Service Workers.

Automation & Redistribution Pref. and Welfare Att.

	Redistr.		Welfare		UBI	
	(1a)	(1b)	(2a)	(2b)	(3a)	(3b)
Idiosync. AR	0.05	0.04	−0.03	−0.03	0.03	0.03
	(1.13)	(1.06)	(−0.68)	(−0.72)	(0.90)	(0.86)
Industry AR	−0.07	−0.06	0.01	0.01	−0.02	−0.02
	(−1.15)	(−1.06)	(0.07)	(0.12)	(−0.30)	(−0.24)
Ideology	−0.10***	−0.25***	−0.02†	−0.05	−0.03*	−0.23***
	(−6.62)	(−5.14)	(−1.94)	(−0.94)	(−2.48)	(−5.75)
Idiosy. AR × Ideology		0.08***		0.03*		0.04†
		(4.82)		(2.76)		(1.85)
Industry AR × Ideology		0.13**		0.06		0.02
		(3.68)		(1.12)		(0.29)
Country AR × Ideology		0.30**		0.06		0.38***
		(3.38)		(0.55)		(4.35)
Full Model	Yes	Yes	Yes	Yes	Yes	Yes
Num.Obs.	23 585	23 585	23 576	23 576	22 781	22 781
R2 Adj.	0.148	0.154	0.082	0.082	0.062	0.066

Significance labels: † $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. t-statistics in parenthesis. Country-clustered robust standard errors. Controls for **Country Fixed Effects**, **Sociodemographics**, **Unempl. & Unionized**, **Welfare Beneficiary**, **Social class dummies**.

Automation as Moderator of the Ideology's Mfx on Redistr. Pref.
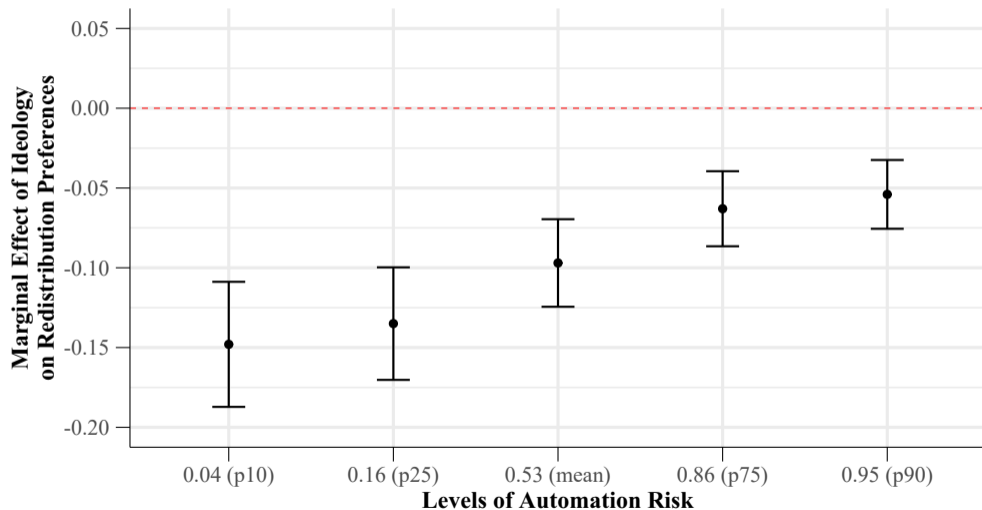
95% Confidence Intervals.

Automation as Moderator of the Ideology's Mfx on Welfare Att.
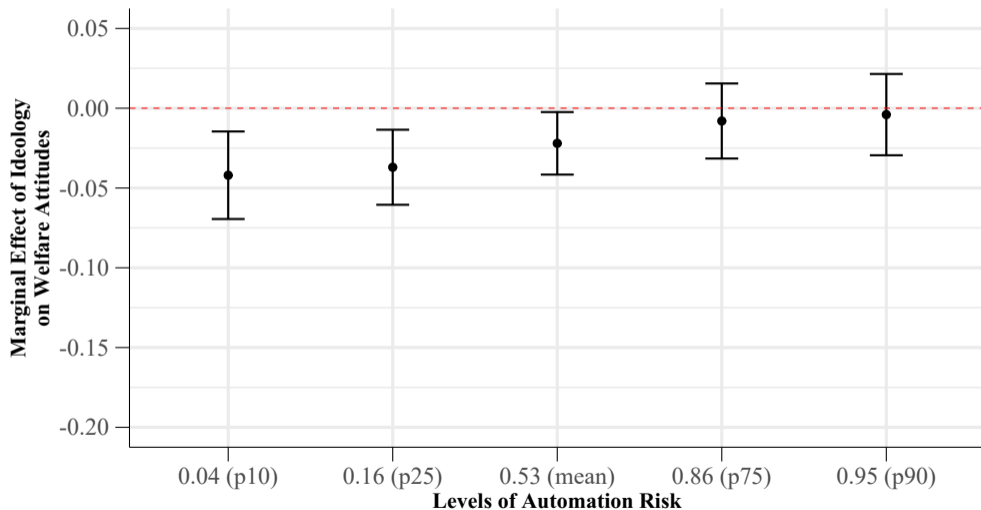
95% Confidence Intervals.

Discussion

- Exposure to industry-level job automation risks increases economic anxiety.
- In contrast to previous work, there is no evidence of a direct effect of automation risk on support for redistribution.
- We find that automation risks attenuate the relationship between ideology and support for redistribution and positive attitudes toward welfare.
- Psychological needs, motivations, individual differences, and economic threat
  - We must consider the effect of economic threats and individual differences simultaneously.