

# The Effects of Electing Working Class Candidates

## EPSA Annual Congress 2024

Frederik Kjøller

Olivia Levinsen

Anna Lund

Frederik Hjorth

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FOUNDATION

UNIVERSITY OF  
COPENHAGEN



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Political candidates often campaign on their working-class roots...

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POLITIK

## **Murersvenden der blev minister:** 'Det er første gang i mit liv, jeg har slips på'

Mattias Tesfaye bandt i dag slipset som ny udlændinge- og integrationsminister i Mette Frederiksens regering.



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Sarah Jones / June 22, 2017

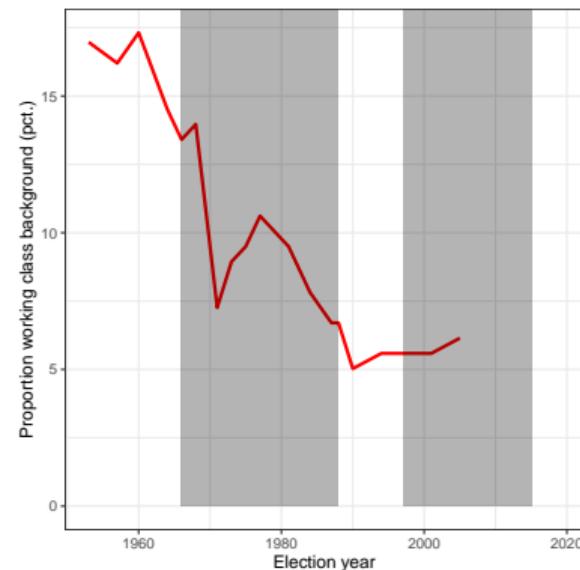
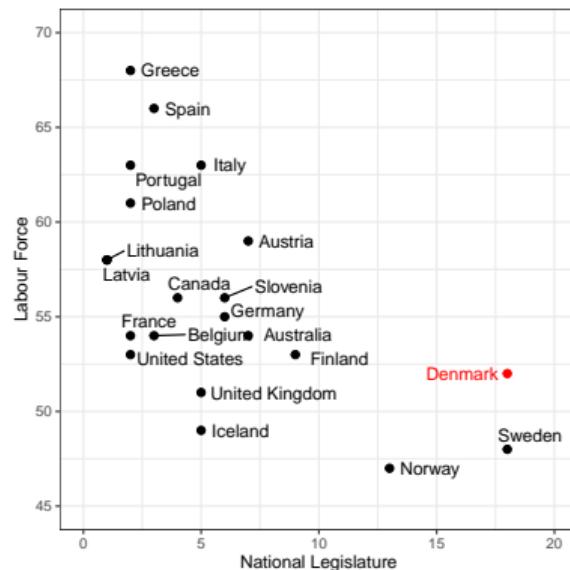
## "I'm A Working Person. That's My Life": A Q&A with Paul Ryan Challenger Randy Bryce

Bryce, known as @IronStache on Twitter, talks about his bid to unseat the speaker of the House.

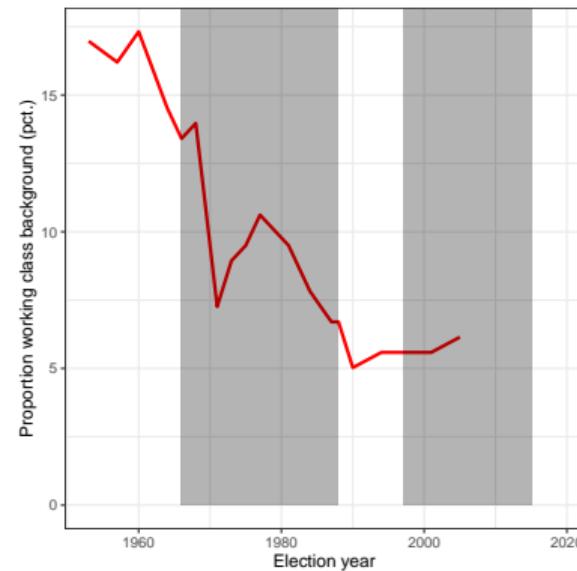
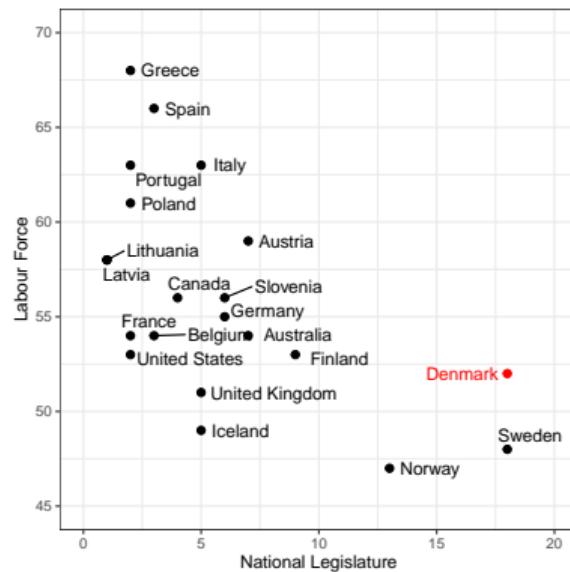


COURTESY OF RANDY BRYCE

# ... and working class representation is low and falling



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~~ but does descriptive representation of workers matter?

# Existing literature

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1. stronger **causal inference** using close elections btw. workers and non-workers  
[not yet implemented]
2. consider **broader range of outcomes** using parliamentary speech data

# How worker MPs differ

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Building on earlier work, we consider effects  
w.r.t.:

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Building on earlier work, we consider effects  
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- representational style
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- agenda congruence w. working-class voters

# Hypotheses

## Complexity

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## Issue attention

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## Complexity

Worker MPs speak with lower rhetorical complexity.

## Issue attention

Issue attention differs between worker and non-worker MPs.

## Agenda congruence

Congruence between issue attention and voter issue agendas is greater for worker MPs.

# Roadmap

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# We collect extensive data on candidates, parliamentary speeches, and voter agendas

*Table:* Data Basis for measuring representation in parliament: note data is missing for 1984–1998

	General Election Data (GED)	Parliamentary Speeches (PS)	National Election Study (DNES)
Unit	Candidates	Speeches	Voters
Concept	Electoral closeness, Occupations	Issue agenda	Issue emphasis
Years	1953–1987, 1998–2015	1966–1985, 1998–2015	1971–1984, 1998–2015
N	18,664 candidates	528,798 speeches	23,633 voter responses

# Historical sources: election reports + parliamentary transcripts

STATISTISKE MEDDELELSER  
1967:5

Folketingsvalget  
den 22. november 1966

## Folketingstidende

Forhandlingerne i folketingsåret 1966-67

(118. årgang)

(Åbnet den 4. oktober 1966)

I henhold til grundlovens § 36 samledes folketingets medlemmer tirsdag den 4. oktober 1966 kl. 12 i *folketingssalen på Christiansborg*.

Til stede var Deres Majestæter Kongen og Dronningen og Hendes kongelige Højhed Tronfølgeren, prinsesse Margrethe, samt højesterets præsident.

DANMARKS STATISTIK  
København 1967

DANMARKS STATISTIK  
1967

Forinden mødet var samme dag kl. 10 i Christiansborg Slotskirke afholdt en gudstjeneste, ved hvilken forstander ved præstehøjskolen, dr. phil. Chr. Thodberg prædikede.

## Candidates

# We use segmentation + OCR to automate digitization

Kandidaternes navn, stilling og bopæl	Opstillet i kreds nr.	Nomineeret i kreds nr.	Stemmer		Valgt nr.	Stedfortræder nr.
			I alt	Heraf personlige		

## A. SOCIALDEMOKRATIET (s. 260–262)

### *Frederiksborg amtskreds*

Erik Andersen, forstander, Jørlunde, Slangerup.....	alle	3	9 269	4 074	3 T	
René Robert Brusvang, eksp.-sekr, cand. jur., Humlebæk...	alle	2	4 475	1 872		2
Inge Fischer Møller, socialrådgiver, Nivå .....	alle		14 732	6 707	1 K	
Niels Mørk*, maskinarbejder, Helsingør .....	alle	1	8 235	4 315		1
Bent Sørensen, borgmester, Hundested .....	alle	4	10 638	5 566	2 K	

## Candidates

We use segmentation + OCR to automate digitization (cont.)

page	district	elected	party	greater_district	residence	name	occupation
1	alle	3T	A. SOCIALDEMOKRATIET	Frederiksborg	Slangerup	Erik Andersen	forstander
1	alle		A. SOCIALDEMOKRATIET	Frederiksborg	Humlebæk	René Robert Brusvang	eksp.-sekr , cand. jur.
1	alle	1K	A. SOCIALDEMOKRATIET	Frederiksborg	Nivå	Inge Fischer Møller	socialrådgiver
1	alle		A. SOCIALDEMOKRATIET	Frederiksborg	Helsingør	Niels Mørk	maskinarbejder
1	alle	2K	A. SOCIALDEMOKRATIET	Frederiksborg	Hundested	Bent Sørensen	borgmester

# Measuring class from occupation labels

- We use the language model OccCANINE to transform the occupational labels to codes within the occupational classification scheme HISCO (Dahl and Vedel, 2024).

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Translated label	HISCO	HISCO label	HISCLASS	Working-class
teacher	13000	Teacher, Level and Subj. Unknown	2	0
machinist	99930	Factory Worker	11	1

## Parliamentary speeches

# We correct (rampant) OCR mistakes using GPT-3.5

Man kan ikke forvente eller forlange, at en temmelig stor forsamling som f. eks. egnsviklingsrådet skal arbejde på grundlag af dette princip. Vi foretrækker derfor den konstruktion, som administrationen har i dag, således at det tekniske ansvar

Man' kan i ikke forVente eller forlange; at en temmelig stor forsamling som f. eks'. egnsviklingsrådèt! skaD arbejde påi-grundlag af; dette princip'. ■ Vi' foretrækker derfor den konstruktion, soni administrationen har i^ (d'ag,: således at ~l dét tekniske ansvar

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→ we correct around 342.000 blocks of text at a total cost of ~€ 69

Parliamentary speeches

# Measuring rhetorical complexity

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- To capture rare words, we lemmatize all tokens in each speech and count lemmas not among the most common 2,500 Korpus90 lemmas.

Motivation  
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Parliamentary speeches

# Measuring voters' and MP's issue agendas in speeches

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- ↗ for ~529k speeches, estimated distribution across issues comparable to time-specific voter agendas

Motivation  
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Parliamentary speeches

# Measuring agenda congruence

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- We measure agenda congruence as the degree of overlap between the distribution of worker voters' issue priorities and MP's expressed issue agendas respectively:

$$\text{Congruence}_{ijt} = 1 - \sum_{i=1}^{14} (T_{ijt} - P_{it})^2 \quad (1)$$

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Complexity

# Complexity hypothesis

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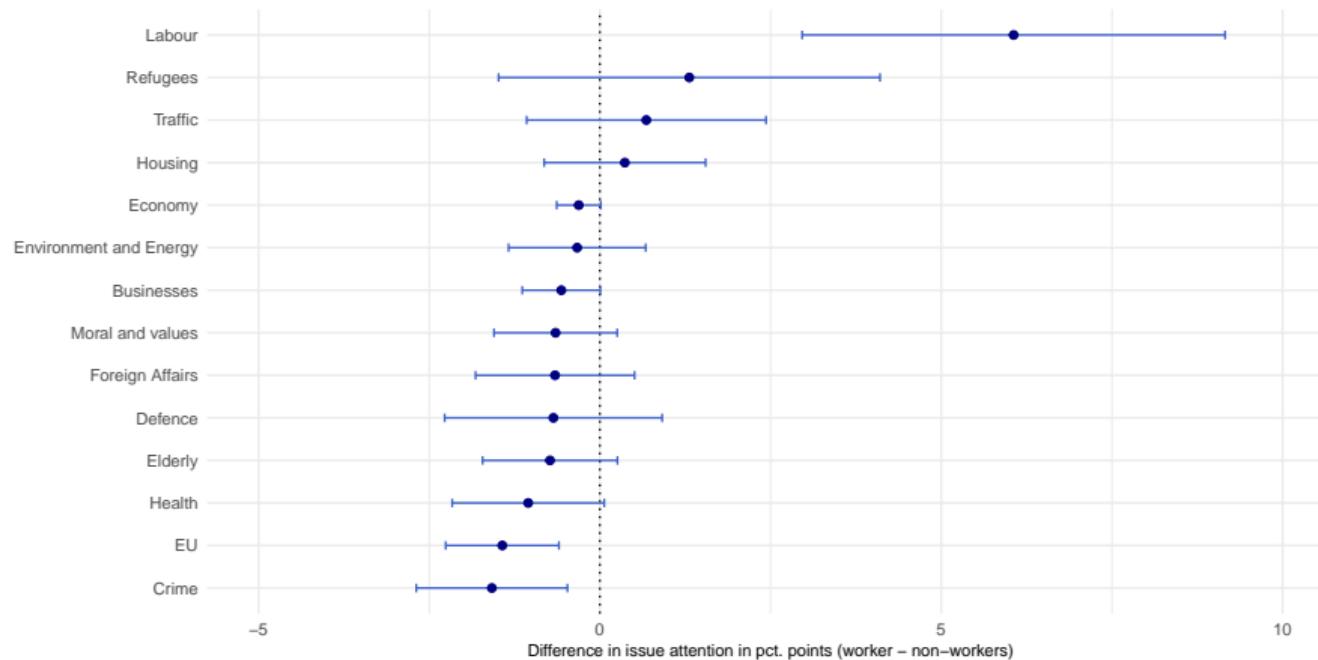
	(1)	(2)	(3)	(4)
Worker	-0.67*** (0.03)	-0.87*** (0.03)	-0.79+ (0.42)	-0.54+ (0.27)
Gender (man)		1.03*** (0.02)	0.91** (0.26)	0.51** (0.14)
(Intercept)	12.64*** (0.01)	11.92*** (0.01)		
Party FE			✓	✓
Year FE				✓
Num.Obs.	528 798	528 798	528 798	528 798
R2	0.001	0.009	0.035	0.115

Note: + p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

⇒ worker MPs speak more simply

## Issue Attention

# Issue attention hypothesis



⇒ worker MPs pay more attention to labor issues

Motivation  
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Agenda congruence

# Agenda congruence hypothesis

## Agenda congruence

## Agenda congruence hypothesis

	(1)	(2)	(3)	(4)
Worker	0.02*** (0.00)	0.03*** (0.00)	0.04 (0.02)	0.03** (0.01)
Gender (man)		-0.05*** (0.00)	-0.04** (0.01)	-0.02* (0.01)
(Intercept)	0.63*** (0.00)	0.67*** (0.00)		
Party FE			✓	✓
Year FE				✓
Num.Obs.	300 809	300 809	300 809	300 809
R2	0.001	0.011	0.074	0.421

Note: + p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

⇒ worker MPs increase agenda congruence w. working-class voters

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    - i speak more simply
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    - iii increase agenda congruence w. working-class voters
- ~~~ descriptive representation by class is more consequential than previously assumed!

Thanks for your attention!

## ODER: Origins of Descriptive Representation

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## References I

- Benoit, Kenneth, Kevin Munger, and Arthur Spirling (2019).** "Measuring and explaining political sophistication through textual complexity". *American Journal of Political Science* 63.2, pp. 491–508.
- Carnes, Nicholas (2012).** "Does the numerical underrepresentation of the working class in Congress matter?" *Legislative studies quarterly* 37.1, pp. 5–34.
- Dahl, Christian Møller and Christian Vedel (2024).** "Breaking the HISCO Barrier: Automatic Occupational Standardization with OccCANINE". *arXiv preprint arXiv:2402.13604*.
- O'Grady, Tom (2019).** "Careerists versus coal-miners: welfare reforms and the substantive representation of social groups in the British Labour Party". *Comparative Political Studies* 52.4, pp. 544–578.