Perspectives on societal polarization

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Research motivation & Problem definition

Relevance: polarization ...

- fosters social, political and cultural **conflicts** up to riots and civil wars
  (e. g. Esteban & Ray 2008, Permanyer 2012, Reynal-Querol 2002, Teney & Rupieper 2023)
- is fundamental for social & political **cleavages**
  (e. g. Borbáth et al. 2023, Herold et al. 2023, Lux et al. 2022, Taskforce FGZ-Datenzentrum 2022)
- is a **much-discussed topic**, e. g. in debates on the middle classes (e. g. Mau, 2022, Reckwitz, 2019)

Definition

- **no uniform definition** & measurement
- is actually **distinct from neighbouring phenomena** such as inequality and fractionalisation
  (Duclos & Taptué 2015, Esteban & Ray 1994)

Wide variety of polarization sub-concepts

- e. g. income-, ethnic-, religious-, political-, affective-, social-, health-, or spatial-polarization
  (Bauer 2019)

→ Question

How different empirical perspectives on societal polarization can be classified?

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Basic conception of polarization

polarization is reflected in **frequency distributions** of attributes or characteristics (e. g. income, attitudes, values, etc.)

Overall/ mass Polarization[1]

= degree of spread around the median of a distribution within the total population (bipolarity)

Group Polarization[2]

- High degree of dissimilarity between groups
- High degree of similarity within each group
- Small number of significantly sized groups

Figure 1:
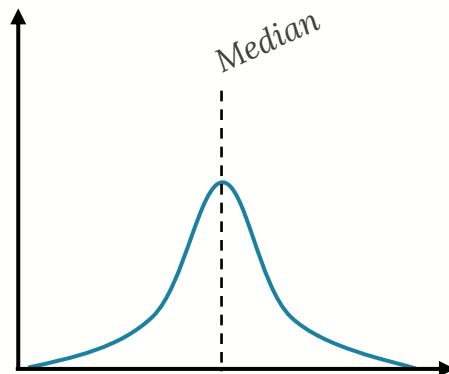Normal distribution

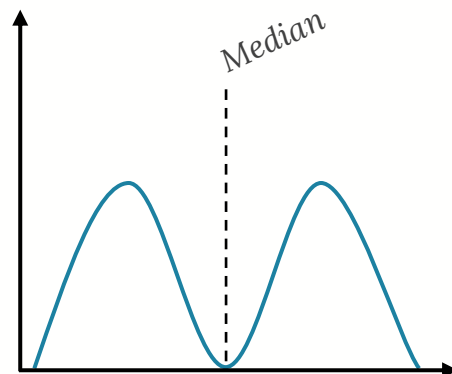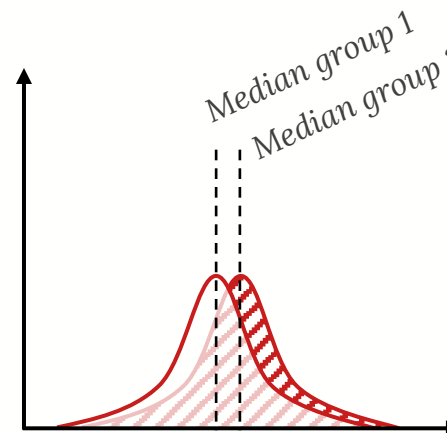**Figure 2:**
Mass polarization
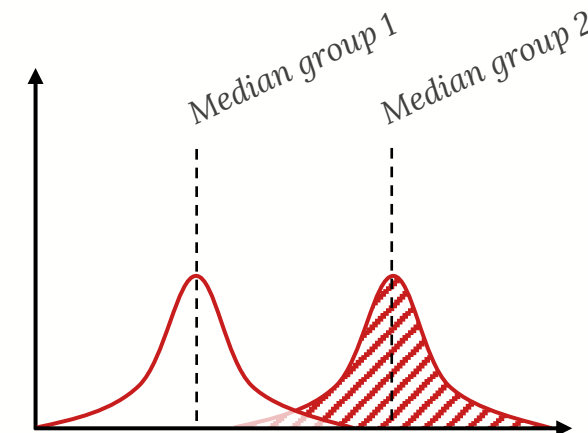
Figure 3:
Low group polarization

Figure 4:
High group polarization

[1]e. g. Lelkes 2016; [2]adapted from Esteban & Ray 1994, p. 824

Common axioms & distinction from neighbouring concepts

1. Greater **dispersion** around the median: polarization ↑ ; inequality ↑ *(Figure 1)*

2. Greater **bipolarity**:   polarization ↑ ; inequality ↓ *(Figure 2)*

3. Unipolar **concentration**:   polarization ↓ ; inequality ↑ *(Figure 3)*

4. Greater **fractionalization** ↑ :   polarization ↓ *(Figure 2, reversed: B → A)*
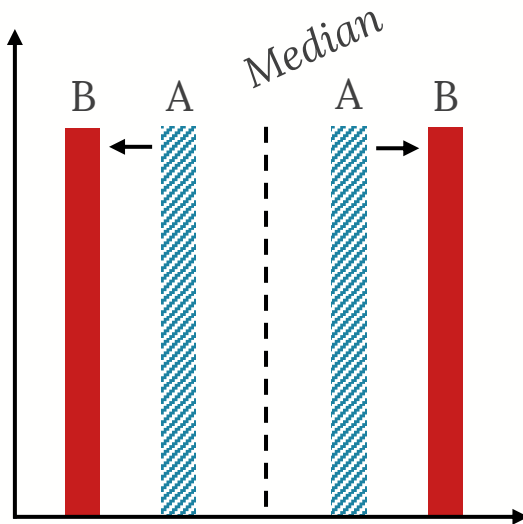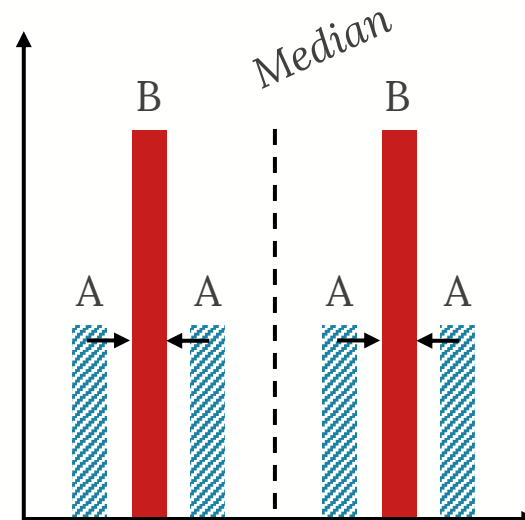

Figure 1:
Increase in dispersion

Figure 2:
Increase in bipolarity

Figure 3:
Increase in unipolar concentration

Societal polarization: A heuristic

Dimension	(A) Manifest polarization	(B) Perceived polarization
I. Access	**I.** Analysis of distributions of relevant attributes (e. g.: Income, status, attitudes, affects towards others, etc.)	**I.** Ask for perceived polarization (e. g.: *How divided on key societal issues you believe your country is today?*)
II. Subject	**II.** Defined by researcher: Overall or between groups	**II.** Built in question: Overall or between groups
III. Object	**III.** Defined by researcher: Topic (e. g.: Social, political, cultural)	**III.** Built in question: Topic (e. g.: Social, political, cultural)
IV. Time	**IV.** State: Cross sectional data Process: Time series/longitudinal data	**IV.** Built in question: State: Cross sectional data Process: Time series/longitudinal data Perceived development: In question

Application examples

	SOCIAL POL.	POLITICAL POL.	CULTURAL POL.
Author, short title	Gercke & Delhey 2023, Life satisfaction inequality & polarization in Europe*	Reiljan 2020, Affective polarization in European party systems	Akaliyski 2019, Convergence of cultural values among EU member states & candidates
I. Access	Manifest	Manifest	Manifest
II. Subject	Overall & income group polarization in 30 European countries	Group polarization: Partisans, nested in 23 European countries	Group polarization btw. 30 European countries
III. Object	Life satisfaction	Closeness to a party, Interparty hostility	Emancipative & secular value indices
IV. Time	Process: Time series data 2002-2018	State & Process: Comparison 2005 & 2016	Process: Time series data 1992-2008
Measure	Disagreement Index, Dissimilarity Index	Affective polarization index (AP-Index)	Dyadic data regression
Results	Decrease of overall pol., Increase of group pol.	AP highly present in European party systems	Polarization btw. EU members & non-members

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Own research:
Life satisfaction polarization in Europe

Question

How did **polarization of life satisfaction (LS)** in Europe develop, and what determinants affect it?

Polarization measures

$LS_{Polarization}$ Disagreement Index: **DAgrm.**   [0,1]   1 – Van der Eijks (2001) Agrm. A

$LS_{Group\ Polarization}$ Dissimilarity Index: **DI**   [0,1]   1 – OVL (Goldstein 1995)

→ **1st vs. 5th** Net. equ. income quintile

Determinants

Wealth: Log. GDP p.c. (PPP)
Income inequality: Gini
Social Trust: Overall trust
LGBT+ Rights: LGBT+ Rights Index

Data on life satisfaction → ESS 1-9 (2002-2018)
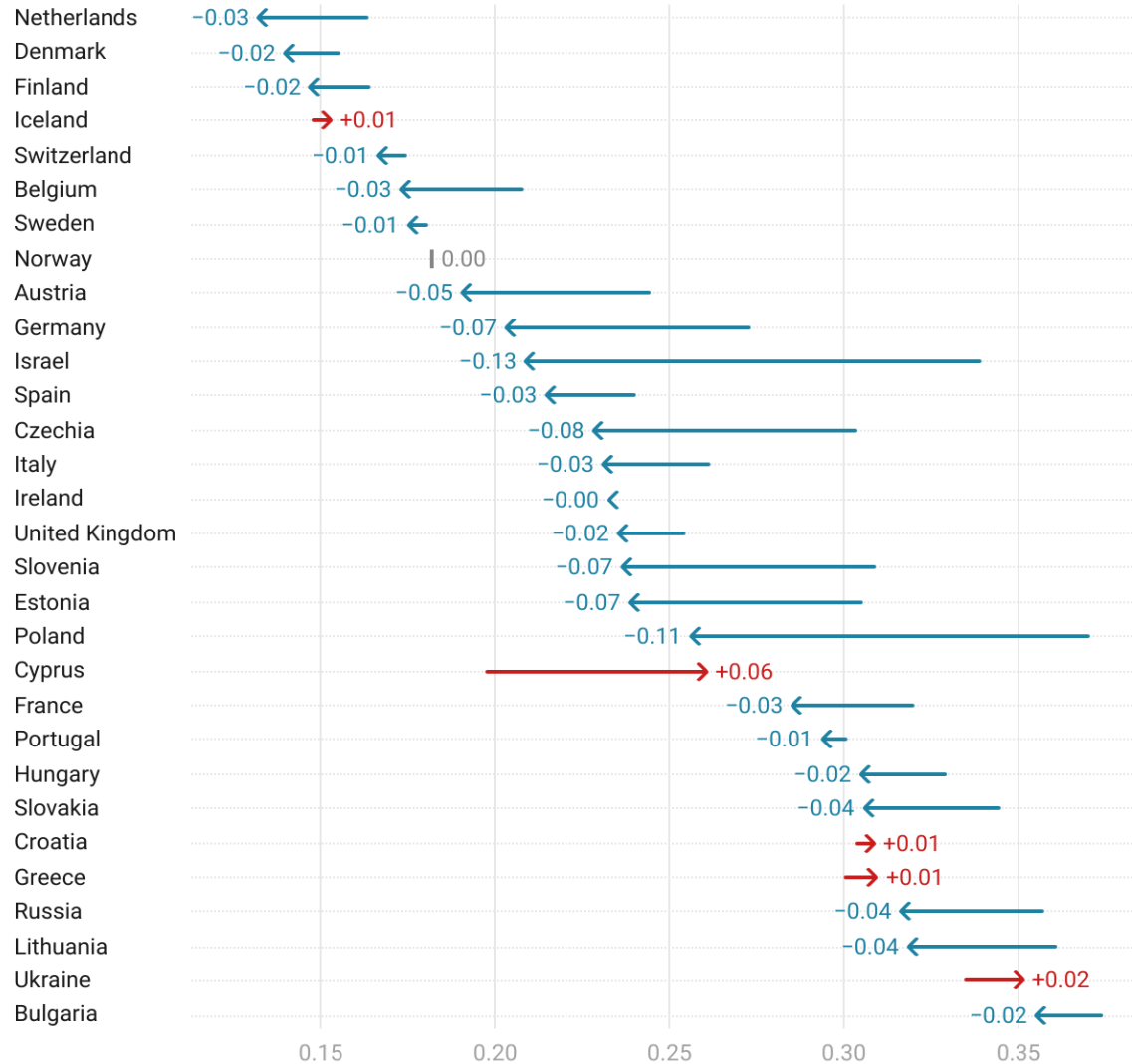→ World Bank
→ SWIID (Solt 2020)
→ ESS 1-9
→ Velasco 2020

Total:
N = 510, n = 30, t = 17

Change of Life Satisfaction Polarization 2002-2018

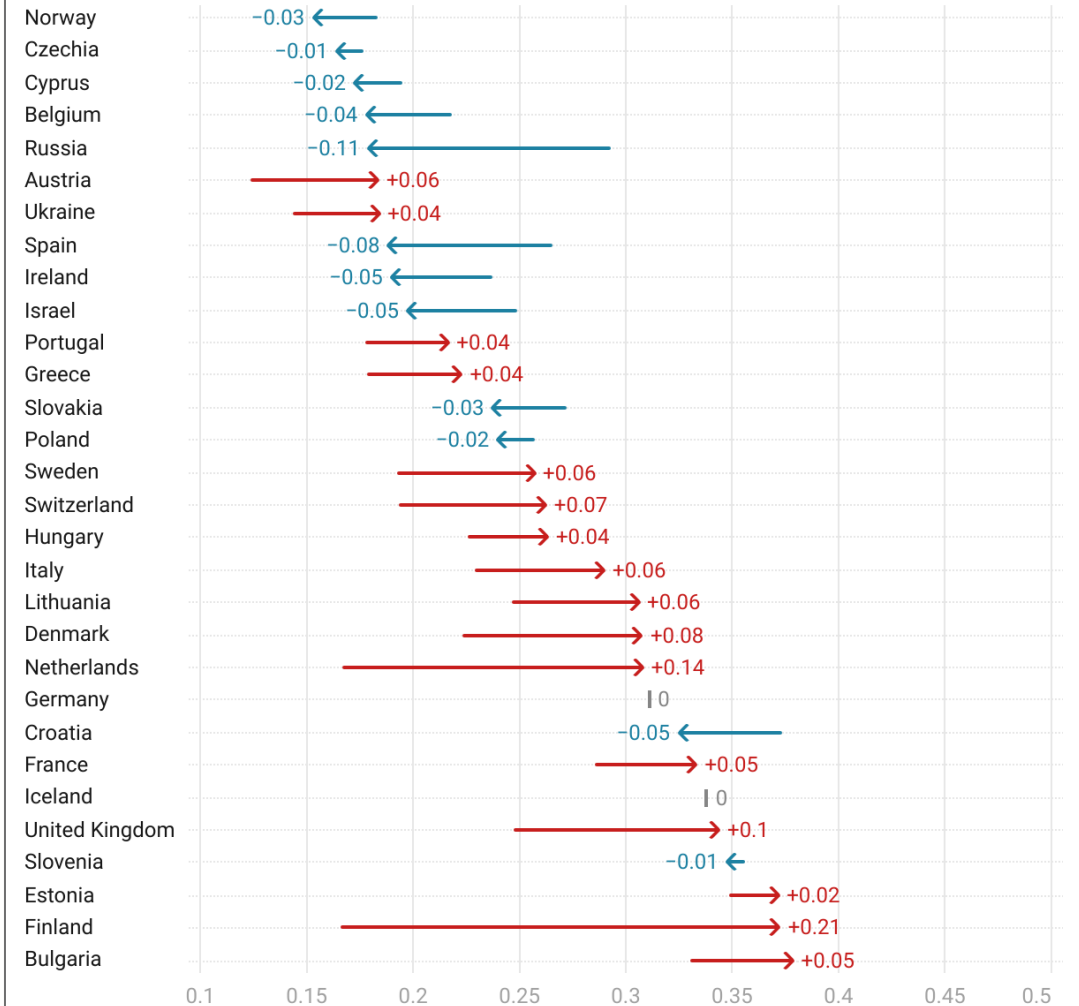| Country	Value
Netherlands	−0.03
Denmark	−0.02
Finland	−0.02
Iceland	+0.01
Switzerland	−0.01
Belgium	−0.03
Sweden	−0.01
Norway	0.00
Austria	−0.05
Germany	−0.07
Israel	−0.13
Spain	−0.03
Czechia	−0.08
Italy	−0.03
Ireland	−0.00
United Kingdom	−0.02
Slovenia	−0.07
Estonia	−0.07
Poland	−0.11
Cyprus	+0.06
France	−0.03
Portugal	−0.01
Hungary	−0.02
Slovakia	−0.04
Croatia	+0.01
Greece	+0.01
Russia	−0.04
Lithuania	−0.04
Ukraine	+0.02
Bulgaria	−0.02

Measurement of Polarization: 1 - Van der Eijks (2001) Agreement A [0,1], 0 = perfect unimodality (concentration), 1 = perfect bimodality (absolute polarization), 0.5 = perfect uniformity, Correlation over time: r(508) = − .097, p = .029.

Chart: Delhey, Gercke 2023 • Source: ESS Cumulative data file • Created with Datawrapper

Change of Life Satisfaction Group-Polarization 2002-2018

Dissimilarity of the life satisfaction distribution between persons from the 1st and 5th quintile of net equivalent income.

Country	Value
Norway	−0.03
Czechia	−0.01
Cyprus	−0.02
Belgium	−0.04
Russia	−0.11
Austria	+0.06
Ukraine	+0.04
Spain	−0.08
Ireland	−0.05
Israel	−0.05
Portugal	+0.04
Greece	+0.04
Slovakia	−0.03
Poland	−0.02
Sweden	+0.06
Switzerland	+0.07
Hungary	+0.04
Italy	+0.06
Lithuania	+0.06
Denmark	+0.08
Netherlands	+0.14
Germany	0
Croatia	−0.05
France	+0.05
Iceland	0
United Kingdom	+0.1
Slovenia	−0.01
Estonia	+0.02
Finland	+0.21
Bulgaria	+0.05

Dissimilarity Measurement: 1 - OVL Coefficient (Goldstein 1995), 0 = no polarization, 1 = absolute polarization, Correlation over time: r(508) = .174, p < 0.001.

Chart: Delhey, Gercke 2023 • Source: ESS Cumulative data file • Created with Datawrapper

Overall/ mass Polarization

Variables	(1)	(2)	(3)
l. GDP p.c.	-0.115***	-0.081***	-0.108***
	(0.014)	(0.011)	(0.016)
Gini	0.004**	0.002*	0.004**
	(0.001)	(0.001)	(0.001)
Trust		-0.026***	
		(0.005)	
LGBT Rights			-0.002
			(0.002)
Year	0.003***	0.002***	0.003***
	(0.001)	(0.001)	(0.001)
Observations	510	510	510
Countries	30	30	30
F-Stat.	40.10	66.40	31.52
Adj. R-squared	0.708	0.799	0.712

Note: GDP p.c. (PPP) was logarithmized, l. GDP p.c., Gini and LGBT+ Rights Index (LGBT) were lagged by one year (t-1), Robust standard errors in parentheses, t = 17 years, *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.1$

Income Group Polarization (Quintiles)

Variables	(1)	(2)	(3)
l. GDP p.c.	-0.020	-0.030	-0.039
	(0.035)	(0.046)	(0.038)
Gini	0.001	0.002	0.002
	(0.003)	(0.003)	(0.003)
Trust		0.008	
		(0.013)	
LGBT Rights			0.006
			(0.004)
Year	0.003*	0.004†	0.003†
	(0.002)	(0.002)	(0.002)
Observations	510	510	510
Countries	30	30	30
F-Stat.	3.502	2.773	3.739
Adj. R-squared	0.0502	0.0562	0.0786

Note: GDP p.c. (PPP) was logarithmized, l. GDP p.c., Gini and LGBT+ Rights Index (LGBT) were lagged by one year (t-1), Robust standard errors in parentheses, t = 17 years, *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.1$

Take-away messages

- Polarization is conceptually & empirically distinct from neighbouring concepts like inequality or fractionalization

- The **4-dimensional heuristic** reveals commonalities and differences of societal polarization

- **Overall/ Mass polarization** ≠ **group polarization**, e. g.

  - Much progress towards a more equal distribution of life satisfaction overall vs.

  - Growing polarization in life satisfaction between high and low income groups
    → Especially in the most affluent countries

Research recommendations

  - Look at overall & group polarization for full picture

  - If possible, research polarization as a process, or compare units (e. g. countries)

  - "More/less" polarization is easier to establish than "yes/no" polarization
    (latter: threshold problem)

Thank you very much for your attention!

Ideas and suggestions?

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