Network segregation, Social Isolation and Preference for Redistribution across societies

29 September 2023

1 Introduction

The escalating economic inequality and the current sanitary crisis have threatened social cohesion among citizens. However, these consequences have been unevenly experienced across the social structure. The upper and intermediate classes, benefiting from privileged access to social resources, have shown resilience. Conversely, working-class families have faced deteriorating material conditions, leading to a heightened sense of marginalisation and increasing the demand for welfare support. Particularly, social resources through network ties have been suggested to have a direct link with an individual's welfare through instrumental and expressive outcomes, such as providing information or help in moments of need. Consequently, inequalities in access to certain social positions (i.e. occupations) are translated into a lack of social resources beyond individual economic and cultural capital. Additionally, it has been argued that social isolation not only plays a role in terms of resources but given that higher levels of segregation can bolster opinions, it is argued that being isolated from other social classes can polarise attitudes mainly in the working and upper-middle classes. Employing data from the International Social Survey Programme - Social Networks this research aims to understand to what extent the demand for redistribution is linked to social ties. For addressing this, ego-centred social networks are used to represent the degree of class-based homogeneity of social ties. The results of multilevel estimations show that being socially segregated increases demand for redistribution. Additionally, this influence is conditional to social class, where the working and intermediate classes with highly homogeneous networks demand more governmental redistribution than the upper class. At the macro level, as the current distribution of economic resources influences the opportunity structure, it has been hypothesised that income inequality could bolster the influence of social segregation on the demand for redistribution. However, cross-level interactions do not provide supporting evidence on this behalf.

network segregation decreases attachment to society (Otero et al., 2022)

subjective marginalization increases alienation (Gidron & Hall, 2020)

social ties with lower or upper class influence welfare attitudes aligned to class interests (Paskov & Weisstanner, 2022; Lindh et al., 2021)

Focus on the sociability/relational dimension and its consequences on inequality attitudes - redistributive and welfare attitudes

The literature review (possible structure)

- Class and political attitudes (Svallfors, Edlund & Lindh)
- Inequality in social networks (Lin, Wright, Bourdieu, Volker)
- Interplay of class, networks and attitudes toward inequality (Lindh, McCall)

The literature have discussed two complementary social mechanisms that could explain what role does social ties play in shaping people's demand for redistribution.

2 Data, variables and methods

Data

International Social Survey - Social Networks 2017

Variables

Redistributive preferences

A widely used method for evaluating people's views on redistribution is by employing a standard measure commonly found in the literature. The measure involves asking respondents to indicate their level of agreement with the statement, "It is the responsibility of the government to decrease the income gap between individuals with high and low incomes." Respondents are asked to indicate their level of agreement on a scale of one to five, with one being "Strongly agree" and five being "Strongly disagree." In this case, a reverse code is utilized to interpret higher values as indicating greater support for redistribution.

Social Class

A synthetic version of the EGP class was used, including three main classes: Service class (I+II), Intermediate class (III+IV) and Working class (V+VI+VII)

Class-based network homogeneity

For measuring the personal network of the respondent, a short version of the position generator was included in the survey, which presents a set of ten occupations that seek to represent the hierarchical status order in society (Joye et al., 2019), declaring four possible response alternatives: "Family or relative", "Close friend", "Someone else I know" or "No one". For this research, a binary variable is created by coding the first three categories as 1 and the last one as 0, representing if the person knows (or not) one of the occupations. The following text corresponds to the original phrasing of the questionnaire:

> *Here is a list of jobs that people you know may have. These people could be family or relatives, close friends or someone else you know. By "knowing" a person, we mean that you know him/her by name and well enough to contact him/her. If you know several people who have a job from the list below, please only tick the box for the person who you feel closest to. Each of these jobs could be held by a woman or a man.*

Table 1: Clasification of occupations of the position generator in the ISSP 2017

Status	Occupation	ISEI.08
High	Lawyer	85
	Executive of large firm	70
	Human resource manager	68
Middle	School teacher	63
	Police officer	53
	Nurse	48
Low	Car mechanic	38
	Bur/lorry driver	37
	Hairdresser/barber	32
	Home or office cleaner	17

Therefore, Table 1 shows the classification of each occupation into three status groups according to their scores in the International Socioeconomic Index (ISEI)(Ganzeboom & Treiman, 1996).

Consequently, we calculate the number of contacts that belong to a similar class/status to create the number of ingroup and outgroup contacts. It is considered ingroup (i) when the ego's class matches the Alter's status. This measure represents the proportion of similar contacts, where 0 implies that all contacts are different to Ego's social class, while 1 represents complete network homogeneity. Therefore, higher values represent greater social distance from other groups in society. The calculation of the class-based network homogeneity variables is as follows:

$$H_i = \frac{\text{Ingroup}}{(\text{Ingroup} + \text{Outgroup})}$$

Perceived Isolation

"The next questions are about how you feel about different aspects of your life. For each one, please indicate how often during the past 4 weeks you have felt that way. How often in the past 4 weeks have you felt that…" 1) "companionship lacking?",(2) "isolated from others?" and (3) "left out?".

The response categories are (1)"Never", (2)"Rarely", (3) "Sometimes", (4)"Often" and (5)"Very often". As the indicators show an acceptable internal consistency (α=.85), an index of the three items was created. Positive values indicate higher perceived isolation.

Methods

- Multilevel regression with random intercept and slopes

3 Results

3.1 Descriptive

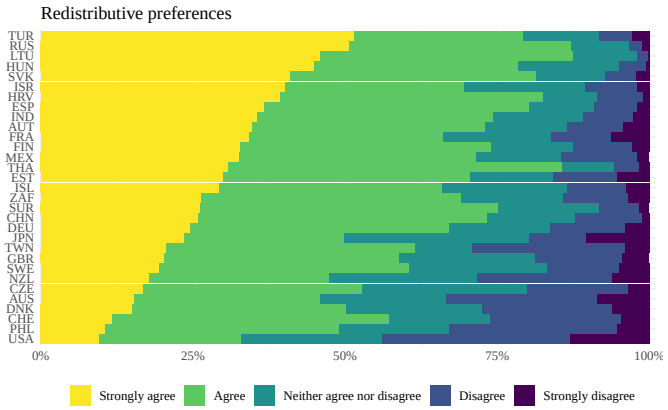

Figure 1: Redistributive preferences by country in the ISSP 2017

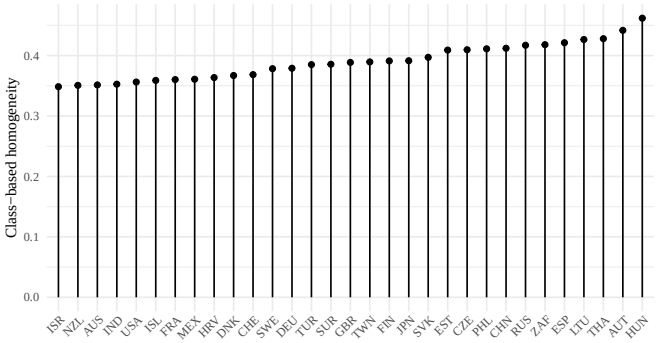

Figure 2: Class-based network homogeneity by country in the ISSP 2017

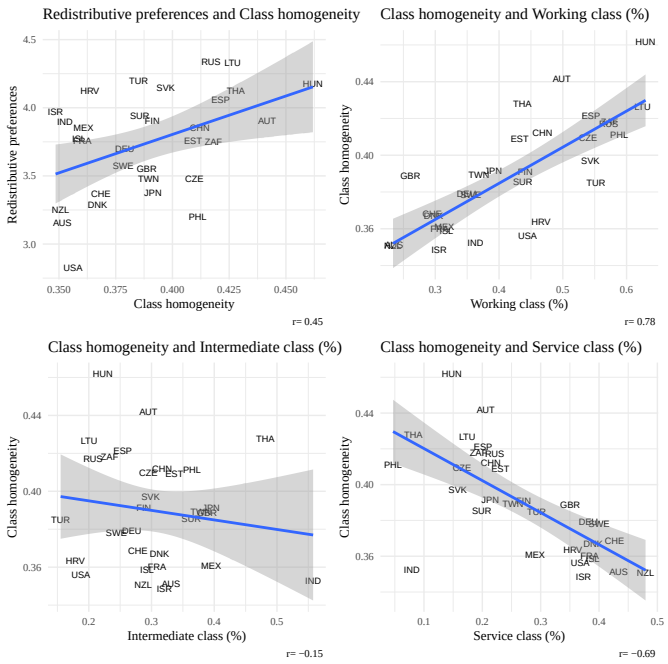

Figure 3: Redistribution, Network homogeneity and Social Class in the ISSP 2017

3.2 Individual level

1. Class:
    - having a working class position is associated with higher redistributive preferences
    - class homogeneity is higher among the working class, and lower in the upper-class
2. Network segregation
    - being more segregated in terms of network homogeneity increase demand for redistribution
3. Network segregation x Social Class
    - The influence of homogeneity is positive among the working and intermediate classes, and negative among the upper class

Table 2: Multilevel regression for redistributive preferences, network homogeneity and social class

	Model 1	Model 2	Model 3	Model 4	Model 5
Class-based network homogeneity	0.18^{***}		0.06^{*}	0.06^{*}	0.10^{*}
	(0.02)		(0.03)	(0.03)	(0.05)
Social Class (ref: Intermediate Class)					
Service Class		-0.09^{***}	-0.08^{***}	-0.05^{***}	0.08^{**}
		(0.02)	(0.02)	(0.02)	(0.03)
Working Class		0.10^{***}	0.10^{***}	0.07^{***}	0.02
		(0.01)	(0.01)	(0.01)	(0.03)
Income Tercile (ref: Low)					
Middle				-0.12^{***}	-0.12^{***}
				(0.02)	(0.02)
High				-0.21^{***}	-0.20^{***}
				(0.02)	(0.02)
Education in years				-0.01^{***}	-0.00^{**}
				(0.00)	(0.00)
Not in labor force				0.05^{***}	0.05^{***}
				(0.01)	(0.01)
Union: Yes				0.14^{***}	0.14^{***}
				(0.01)	(0.01)
Homogeneity x Social Class					
Homogeneity x Service Class					-0.47^{***}
					(0.08)
Homogeneity x Working Class					0.09
					(0.06)
Controls	No	No	No	Yes	Yes
BIC	104184.93	104075.72	104022.77	103818.84	103784.33
Num. obs.	35146	35146	35146	35146	35146
Num. groups: country2	31	31	31	31	31
Var: country2 (Intercept)	0.14	0.13	0.13	0.14	0.14
Var: Residual	1.13	1.12	1.12	1.11	1.11

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$

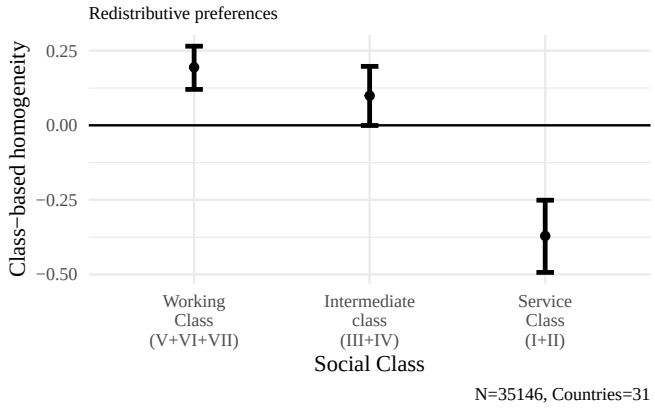

Figure 4: Conditional marginal effects of Network homogeneity on redistributive preferences

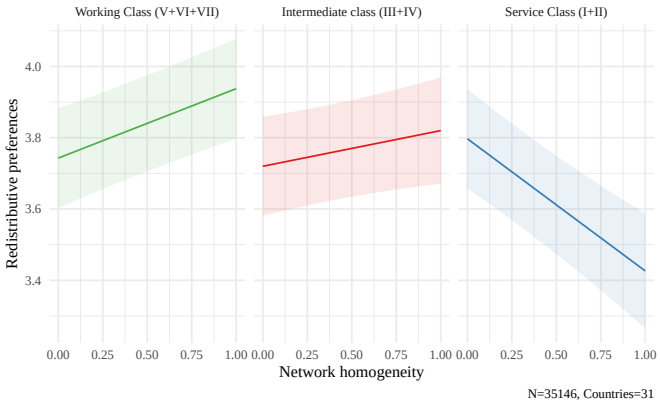

Figure 5: Predictions for Redistributive Preferences

Table 3: Cross-level interaction for Network homogeneity and Economic Inequality

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Network Homogeneity	0.06*	0.07*	0.13	0.06*	0.07*	0.02
	(0.03)	(0.03)	(0.13)	(0.03)	(0.03)	(0.20)
log GDP	−0.05	−0.05	−0.05	−0.04	−0.04	−0.04
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Gini (Disposable)	0.01	0.01	0.01			
	(0.01)	(0.01)	(0.01)			
Homogeneity x Gini (D)			−0.00			
			(0.00)			
Gini (Market)				−0.00	−0.00	−0.00
				(0.01)	(0.01)	(0.01)
Homogeneity x Gini (M)						0.00
						(0.00)
BIC	103850.51	103869.18	103888.84	103850.55	103869.23	103888.79
Num. obs.	35146	35146	35146	35146	35146	35146
Num. groups: country2	31	31	31	31	31	31
Var: country2 (Intercept)	0.14	0.14	0.14	0.14	0.14	0.14
Var: Residual	1.11	1.11	1.11	1.11	1.11	1.11
Var: country2 homclass		0.01	0.01		0.01	0.01
Cov: country2 (Intercept) homclass		0.00	0.00		0.00	0.00

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$

3.3 Macro level

- expected: economic inequality increases segregation (maybe weak or null effect)
- expected: economic inequality increase the influence of network homogeneity/segregation

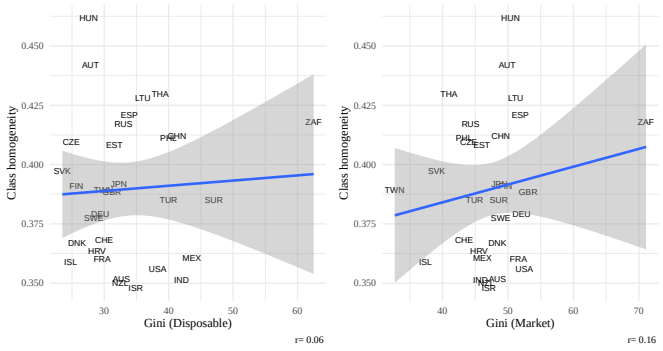

Figure 6: Network Homogeneity and Income Inequality in the ISSP 2017

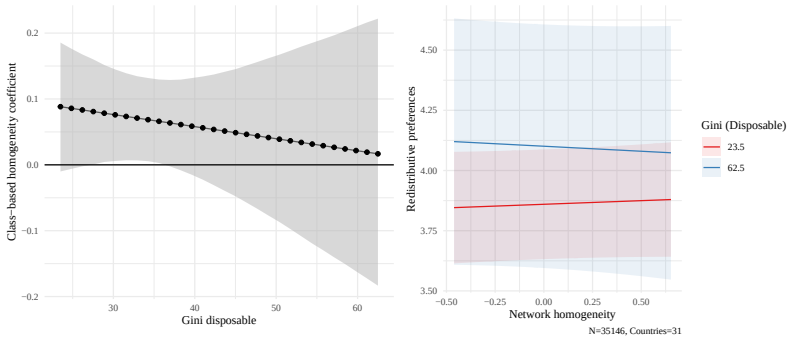

Figure 7: Cross-level interaction for Network homogeneity and Gini (Disposable)

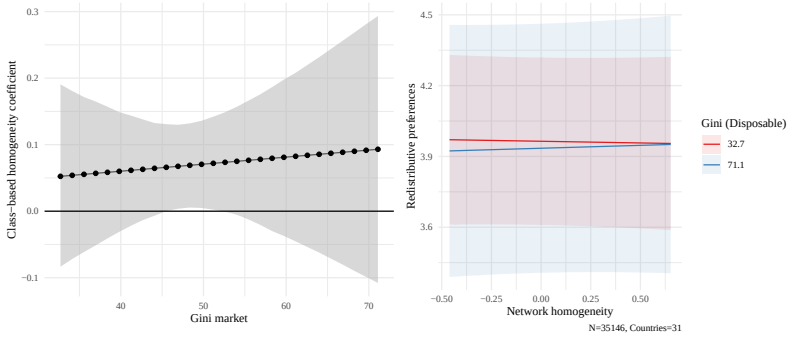

Figure 8: Cross-level interaction for Network homogeneity and Gini (Market)

4 References

Ganzeboom, H. B. G., & Treiman, D. J. (1996). Internationally Comparable Measures of Occupational Status for the 1988 International Standard Classification of Occupations. *Social Science Research*, *25*(3), 201–239. https://doi.org/10.1006/ssre.1996.0010

Joye, D., Sapin, M., & Wolf, C. (2019). *Measuring social networks and social resources: an exploratory ISSP survey around the world*. Köln: GESIS - Leibniz- Institut für Sozialwissenschaften.

5 Other analysis

- Perceived Isolation
- Network homogeneity (Strong ties)
- Network homogeneity (Weak ties)
- R's and Partner social class
- Homogeneity x other macro variables

5.1 Perceived Isolation

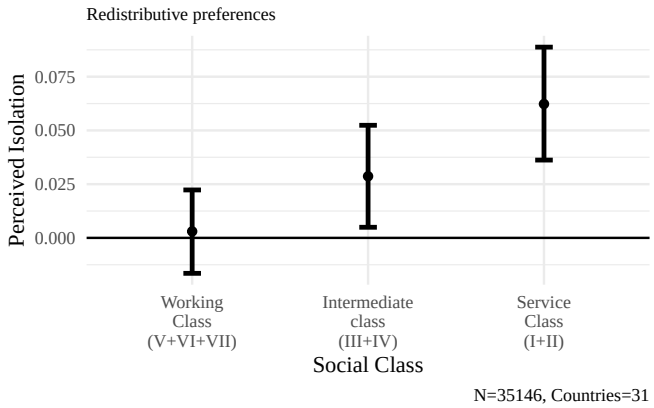

Figure 9: Conditional marginal effects of Perceived Isolation on redistributive preferences

Table 4: Multilevel regression for redistributive preferences, social isolation and social class

	Model 1	Model 2	Model 3	Model 4	Model 5
Perceived Isolation	0.03^{***}		0.03^{***}	0.03^{***}	0.03^{*}
	(0.01)		(0.01)	(0.01)	(0.01)
Social Class (ref: Intermediate Class)					
Service Class		-0.09^{***}	-0.08^{***}	-0.05^{**}	-0.11^{**}
		(0.02)	(0.02)	(0.02)	(0.03)
Working Class		0.10^{***}	0.10^{***}	0.07^{***}	0.12^{***}
		(0.01)	(0.01)	(0.01)	(0.03)
Income Tercile (ref: Low)					
Middle				-0.12^{***}	-0.12^{***}
				(0.02)	(0.02)
High				-0.20^{***}	-0.20^{***}
				(0.02)	(0.02)
Education in years				-0.01^{***}	-0.01^{***}
				(0.00)	(0.00)
Not in labor force				0.05^{***}	0.05^{***}
				(0.01)	(0.01)
Union: Yes				0.14^{***}	0.14^{***}
				(0.01)	(0.01)
Isolation x Social Class					
Isolation x Service Class					0.03
					(0.02)
Isolation x Working Class					-0.03
					(0.02)
Class-based network homogeneity	0.18^{***}		0.06^{*}	0.06^{*}	0.06^{*}
	(0.02)		(0.03)	(0.03)	(0.03)
Controls	No	No	No	Yes	Yes
BIC	104179.69	104075.72	104019.09	103822.89	103843.68
Num. obs.	35146	35146	35146	35146	35146
Num. Countries:	31	31	31	31	31
Var: Group	0.14	0.13	0.14	0.14	0.14
Var: Residual	1.13	1.12	1.12	1.11	1.11

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$

Table 5: Cross-level interaction for Perceived Isolation and Economic Inequality

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Perceived Isolation	0.03^{***}	0.02	0.17^{*}	0.03^{***}	0.02	-0.05
	(0.01)	(0.02)	(0.08)	(0.01)	(0.02)	(0.14)
log GDP	-0.05	-0.04	-0.04	-0.04	-0.05	-0.05
	(0.04)	(0.03)	(0.03)	(0.04)	(0.03)	(0.03)
Gini (Disposable)	0.01	-0.00	0.01			
	(0.01)	(0.01)	(0.01)			
Isolation x Gini (D)			-0.00^{*}			
			(0.00)			
Gini (Market)				-0.00	0.00	-0.00
				(0.01)	(0.01)	(0.01)
Isolation x Gini (M)						0.00
						(0.00)
BIC	103854.48	103757.94	103774.75	103843.45	103746.13	103766.22
Num. obs.	35146	35146	35146	35146	35146	35146
Num. groups: country2	31	31	31	31	31	31
Var: country2 (Intercept)	0.14	0.25	0.24	0.14	0.25	0.25
Var: Residual	1.11	1.10	1.10	1.11	1.10	1.10
Var: country2 isolation		0.01	0.01		0.01	0.01
Cov: country2 (Intercept) isolation		-0.04	-0.04		-0.04	-0.04

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$

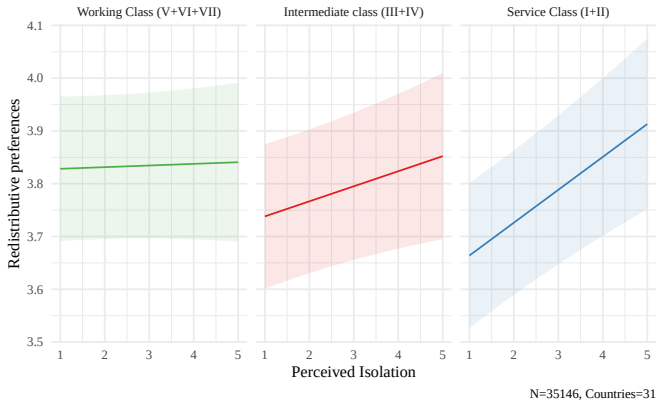

Figure 10: Predictions for Redistributive Preferences

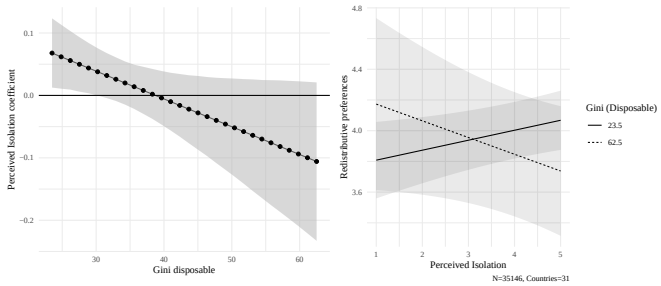

Figure 11: Cross-level interaction for Perceived Isolation and Gini (Disposable)

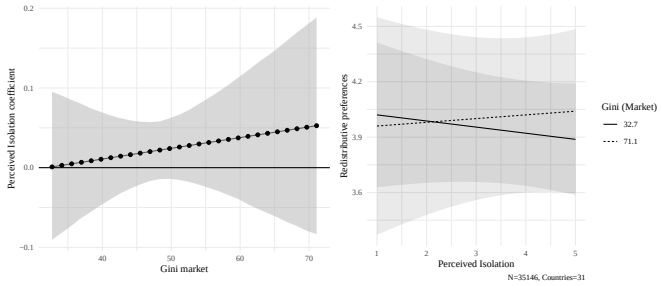

Figure 12: Cross-level interaction for Perceived Isolation and Gini (Market)

5.2 Strong & weak ties

Homogeneity: strong ties

Homogeneity: weak ties

Homogeneity: respondent class

5.3 Other macro variables

Source: https://www4.wider.unu.edu/?ind=1&type=ChoroplethSeq&year=70&byCountry=false&slider=buttons

- The **Palma ratio** is the share of all income received by the 10% people with highest disposable income divided by the share of all income received by the 40% people with the lowest disposable income.

Table 6: Multilevel regression for redistributive preferences, network homogeneity (strong) and social class

	Model 1	Model 2	Model 3	Model 4	Model 5
Class-based network homogeneity (Strong)	0.08^{***}		0.02	0.02	0.02
	(0.02)		(0.02)	(0.02)	(0.04)
Social Class (ref: Intermediate Class)					
Service Class		-0.09^{***}	-0.08^{***}	-0.05^{**}	0.01
		(0.02)	(0.02)	(0.02)	(0.02)
Working Class		0.10^{***}	0.11^{***}	0.08^{***}	0.02
		(0.01)	(0.01)	(0.02)	(0.02)
Income Tercile (ref: Low)					
Middle				-0.13^{***}	-0.13^{***}
				(0.02)	(0.02)
High				-0.22^{***}	-0.21^{***}
				(0.02)	(0.02)
Education in years				-0.00^{**}	-0.00^{*}
				(0.00)	(0.00)
Not in labor force				0.06^{***}	0.06^{***}
				(0.02)	(0.02)
Union: Yes				0.15^{***}	0.15^{***}
				(0.01)	(0.01)
Homogeneity x Social Class					
Homogeneity x Service Class					-0.24^{***}
					(0.05)
Homogeneity x Working Class					0.12^{**}
					(0.05)
Controls	No	No	No	Yes	Yes
BIC	92325.92	92211.00	92183.09	91988.28	91966.35
Num. obs.	30947	30947	30947	30947	30947
Num. Countries:	31	31	31	31	31
Var: Group	0.14	0.13	0.13	0.14	0.14
Var: Residual	1.15	1.14	1.14	1.13	1.13

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$

Table 7: Multilevel regression for redistributive preferences, network homogeneity (weak) and social class

	Model 1	Model 2	Model 3	Model 4	Model 5
Class-based network homogeneity (Weak)	0.07^{***}		-0.01	-0.01	0.00
	(0.02)		(0.02)	(0.02)	(0.04)
Social Class (ref: Intermediate Class)					
Service Class		-0.08^{***}	-0.08^{***}	-0.05^{**}	-0.01
		(0.02)	(0.02)	(0.02)	(0.02)
Working Class		0.12^{***}	0.13^{***}	0.09^{***}	0.08^{**}
		(0.01)	(0.02)	(0.02)	(0.02)
Income Tercile (ref: Low)					
Middle				-0.11^{***}	-0.11^{***}
				(0.02)	(0.02)
High				-0.19^{***}	-0.19^{***}
				(0.02)	(0.02)
Education in years				-0.01^{***}	-0.01^{***}
				(0.00)	(0.00)
Not in labor force				0.05^{**}	0.05^{**}
				(0.02)	(0.02)
Union: Yes				0.15^{***}	0.14^{***}
				(0.01)	(0.01)
Homogeneity x Social Class					
Homogeneity x Service Class					-0.12^{*}
					(0.06)
Homogeneity x Working Class					0.03
					(0.05)
Controls	No	No	No	Yes	Yes
BIC	87106.81	86970.88	86950.82	86800.99	86820.64
Num. obs.	29408	29408	29408	29408	29408
Num. Countries:	31	31	31	31	31
Var: Group	0.14	0.13	0.13	0.14	0.14
Var: Residual	1.12	1.12	1.11	1.11	1.11

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$

Table 8: Multilevel regression for redistributive preferences, network homogeneity and Own social class

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Class-based network homogeneity	0.24^{***}		0.12^{**}	0.10^{*}	0.06	0.24^{***}
	(0.04)		(0.04)	(0.04)	(0.04)	(0.07)
Social Class - Resp. (ref: Intermediate Class)						
Service Class		-0.12^{***}	-0.10^{***}	-0.08^{***}	-0.07^{***}	0.10^{*}
		(0.02)	(0.02)	(0.02)	(0.02)	(0.04)
Working Class		0.09^{***}	0.10^{***}	0.07^{***}	0.06^{**}	0.10^{*}
		(0.02)	(0.02)	(0.02)	(0.02)	(0.05)
Income Tercile (ref: Low)						
Middle				-0.13^{***}	-0.12^{***}	-0.12^{***}
				(0.02)	(0.02)	(0.02)
High				-0.20^{***}	-0.19^{***}	-0.19^{***}
				(0.02)	(0.02)	(0.02)
Education in years				-0.01^{*}	-0.00	-0.00
				(0.00)	(0.00)	(0.00)
Not in labor force				0.02	0.02	0.02
				(0.02)	(0.02)	(0.02)
Union: Yes				0.13^{***}	0.13^{***}	0.13^{***}
				(0.02)	(0.02)	(0.02)
Homogeneity x Social Class						
Homogeneity x Service Class						-0.47^{***}
						(0.10)
Homogeneity x Working Class						-0.10
						(0.09)
Service Class (Partner)					-0.03	-0.04
					(0.02)	(0.02)
Working Class (Partner)					0.07^{**}	0.06^{**}
					(0.02)	(0.02)
Controls	No	No	No	Yes	Yes	Yes
BIC	54844.22	54788.72	54785.85	54747.22	54759.09	54760.24
Num. obs.	18326	18326	18326	18326	18326	18326
Num. Countries:	31	31	31	31	31	31
Var: Group	0.15	0.15	0.15	0.15	0.15	0.15
Var: Residual	1.16	1.15	1.15	1.14	1.14	1.14

$^{***}p < 0.001; {}^{**}p < 0.01; {}^{*}p < 0.05$

Table 9: Cross-level interaction for Network homogeneity and Economic Inequality

	Model 1	Model 2	Model 3	Model 4	Model 5
Class-based network homogeneity	0.07	0.09	0.19	0.07	−0.04
	(0.04)	(0.12)	(0.46)	(0.08)	(0.11)
log GDP	−0.04	−0.04	−0.04	−0.06*	−0.04
	(0.04)	(0.04)	(0.04)	(0.03)	(0.04)
Palma Ratio	0.01				
	(0.04)				
Share National Income - top 10%		0.00			
		(0.01)			
Homogeneity x top 10		−0.00			
		(0.00)			
Share National Income - bottom 50%			0.00		
			(0.02)		
Homogeneity x bottom 50			−0.00		
			(0.01)		
Individualism Index*				−1.00***	
				(0.25)	
Homogeneity x Individualism				0.01	
				(0.14)	
Gov. Spending (% GDP)*					−0.00
					(0.01)
Homogeneity x Gov. Spend.					0.00
					(0.00)
AIC	103709.77	103715.01	103712.04	103688.62	103715.79
BIC	103887.58	103892.82	103889.85	103866.43	103893.60
Log Likelihood	−51833.88	−51836.50	−51835.02	−51823.31	−51836.89
Num. obs.	35146	35146	35146	35146	35146
Num. groups: country2	31	31	31	31	31
Var: country2 (Intercept)	0.14	0.14	0.14	0.09	0.14
Var: country2 homclass	0.01	0.01	0.01	0.01	0.01
Cov: country2 (Intercept) homclass	0.00	0.00	0.00	0.00	0.00
Var: Residual	1.11	1.11	1.11	1.11	1.11

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$

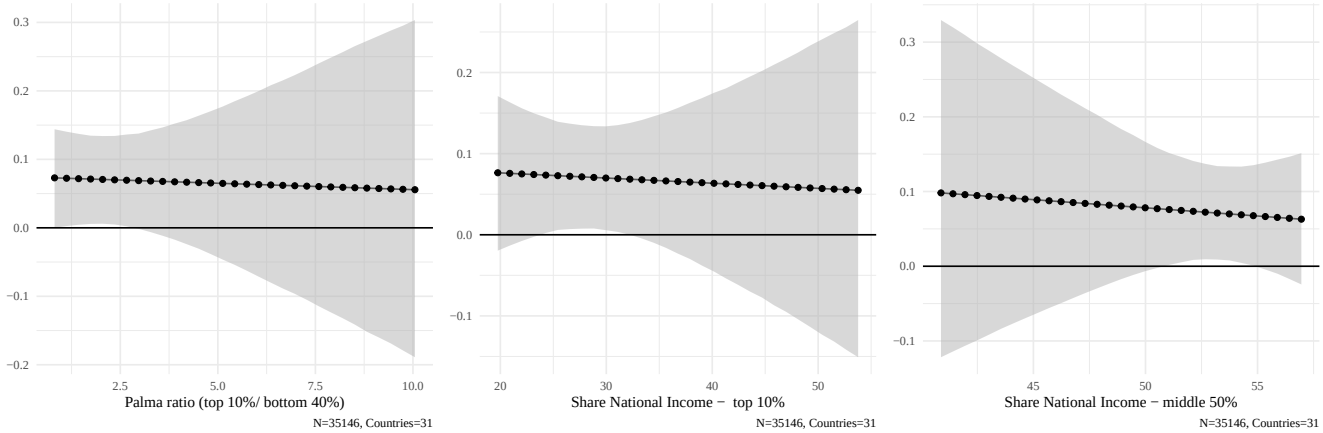

Figure 13: Cross-level interaction for Network homogeneity and Economic Inequality

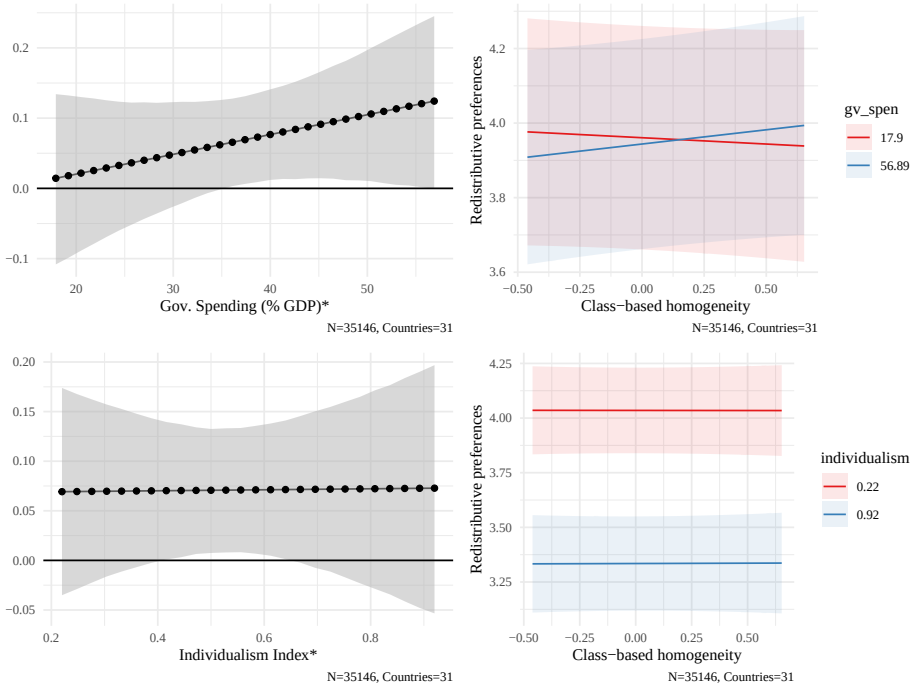

Figure 14: Cross-level interaction for Network homogeneity, Gov. Spending and Individualism