# Class-based network segregation, Economic Inequality and Redistributive Preferences across societies

Julio Iturra-Sanhueza

Bremen International Graduate School of Social Sciences \*

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#### **Abstract**

Rising economic inequality has increased attention to the link between class relations and redistributive preferences in contemporary societies. However, economic inequality unevenly affects class relations and their influence on support for redistribution across societies. While those in the upper and middle classes reinforce their privileged access to resources and diverse networks, the working class has been disproportionately affected by social exclusion as inequality rises. Consequently, inequality consolidates segregated lifeworlds as it increases the divide between the lives and experiences of the different social classes. Meeting people from diverse class positions can help individuals become more aware of other people's lifestyles and worldviews. Homogeneous upper-class networks may reduce empathy and solidarity towards those in need, resulting in decreased support for redistribution. Conversely, segregated lower-class social networks can lead to increased marginalization and reinforce support for redistribution. This study explores the relationship between class-based network segregation and redistributive preferences employing cross-national data from 32,529 individuals in 31 societies. The main findings suggest that social class conditions the association of network homogeneity on redistributive preferences, where working-class homogeneity drives stronger redistributive preferences, while greater upper-class homogeneity decreases support for redistribution. In addition, the conditional influence of network segregation weakens in unequal societies, especially for the upper classes. Implications for the study of class relations and political attitudes are discussed.

**Keywords**: social networks, segregation, social class, income inequality, redistributive preferences

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\*jiturra@uni-bremen.de

# 1 Introduction

Over the past decades, cross-national studies on redistributive preferences and social class have predominantly focused on individuals and households (Lindh et al., 2020). In contrast, less attention has been paid to how social networks influence redistributive preferences. Sociologists have demonstrated that individuals tend to segregate social networks (Lazarsfeld et al., 1954; McPherson et al., 2001). Additionally, opinions about economic inequality can be affected by class segregation, as it provides insight into the economic conditions, lifestyles, and worldviews of other social classes (Lee, 2023; Lindh et al., 2021; Paskov et al., 2022). Despite this, the study of redistributive preferences can be enhanced by broadening the understanding of class relations from a network perspective. This approach offers a comprehensive understanding of processes such as shared norm internalization, class identity formation, and collective solidarity (Goldthorpe, 1992; Svallfors, 2006). Thus, this study examines the relationship between class-based network segregation and redistributive preferences in a cross-national comparison, focusing on the role of economic inequality as a moderator in the influence of class relations on support for redistribution.

While prior research has predominantly examined the impact of social class through an individualistic lens, more attention should be devoted to understanding the role of social environments in class relations. This omission is particularly surprising given that class positions are fundamentally rooted in production relations, making them inherently relational, not only in their economic underpinnings but also in the power dynamics entwined within class conflicts (Wright, 1989). Furthermore, the normative basis of class relations introduces the relevance of solidarity and reciprocity dimensions, which are argued to provide the moral foundation for legitimacy and popular support for welfare schemes (Mau, 2003). In this regard, beyond the influence of individual class position, recent efforts have highlighted that while the class positions of network ties do affect redistributive preferences, the degree of segregation in a homogeneous class environment can drive attitudes to become even stronger (Otero, Volker, Rözer, et al., 2022).

While network segregation widens the class divide in redistributive preferences, little is known about how income inequality can affect the association between class-based network segregation and support for redistribution. On the one hand, studies on the class-attitude link suggest that income inequality is crucial for understanding how class relations are reflected in redistributive demands, as it represents the current state of the distributive class struggle in contemporary capitalist societies (Curtis et al., 2015; Edlund et al., 2015). A consistent finding in this literature is that the upper classes tend to support redistribution more in contexts of high inequality, while the already high redistributive demands of the working class remain stable regardless of inequality levels (Dimick et al., 2017; Sachweh et al., 2019). On the other hand, income inequality leads to more segregated forms of social participation and network

composition (Otero, Volker, and Rozer, 2022; Pichler et al., 2007). Indeed, inequality reinforces stratified access to social activities and widens the distance between classes, resulting in increased marginalization of the lower classes and consolidating the privileged positions of the upper classes, who have better opportunities to diversify their social activities and interpersonal ties (Lancee et al., 2012; Otero, Völker, et al., 2023). Nevertheless, current efforts to examine the impact of income inequality have primarily focused on either social networks or support for redistribution. A key question that remains unanswered is the extent to which broader economic disparities moderate the relationship between class-based network segregation and support for redistribution.

Thus, to the best of my knowledge, no research has comparatively investigated the role of economic inequality in the relationship between class-based network segregation and redistributive preferences. This study aims to address two key questions:

- (1) How does class-based network segregation affect redistributive preferences?
- (2) To what extent does economic inequality moderate the relationship between class-based network segregation and redistributive preferences?

For this investigation, I utilized a sample of 32,529 individuals across 31 countries from the International Social Survey Program (ISSP) 2017. This dataset provides unprecedented cross-national comparative data on social networks, social class, and attitudes toward redistribution.

# 2 Theoretical views on class, social networks, and redistributive preferences

### 2.1 Class divide in redistributive preferences

Over the past decades, the study of political attitudes in industrialized societies has consistently demonstrated the relevance of social class as a driver of public opinion (Lindh et al., 2020, p. 421). In this view, social class not only represents individuals' market situations but also their economic interests and moral perspectives on the role of the market and the state in the distribution and redistribution of resources (Svallfors, 2006). Here, redistributive preferences are understood as the support for policies and mechanisms aimed at reducing economic inequality through the redistribution of wealth and resources (McCall et al., 2009). These preferences encompass views on taxation, welfare programs, public services, and other government interventions designed to transfer resources from wealthier to less wealthy individuals or groups in society (García-Sánchez et al., 2022).

Class-based explanations of redistributive preferences have primarily focused on the individual or household level but are not exclusively limited to these contexts. It has

been argued that redistributive preferences can be explained through labor market situations, which encompass access to economic resources and risk exposure (Meltzer et al., 1981; Rehm, 2009). Additionally, while material interests may dominate in situations of scarcity, value-driven motivations become a significant explanatory factor for redistributive preferences under conditions of greater certainty and are weaker under material precariousness (Kulin et al., 2013; Maldonado et al., 2019). Other approaches suggest that the substantial time workers spend on their jobs allows social relations in the workplace to imprint normative views that ultimately shape political opinions (Oesch, 2006). For example, the continuous and diverse social interactions inherent in interpersonal services can foster empathy and reinforce egalitarian values (Kitschelt et al., 2014). In contrast, vertical monitoring in managerial occupations and the emphasis on autonomy in self-employed roles tend to strengthen self-interested and conservative political views (Oesch et al., 2018).

Empirically, the current understanding of class divides in redistributive preferences is extensive (Brooks et al., 2010; Curtis et al., 2015; Langsæther et al., 2020; Lindh, 2015). Nevertheless, beyond the market situation of individuals and their households, considering class-based network ties highlights the relevance of the class situation, as it encompasses both economic interests and life chances that drive communal action beyond individuals (Weber, 2011, pp. 57–59). Thus, the role of social relations in shaping redistributive preferences from a network perspective considers more straightforwardly the social ties that structure class relations.

#### 2.2 Class relations and social networks

Class relations can also be understood as the degree of cross-class relationships as a structural characteristic of society, representing a network of social ties between different class positions (Blau, 1977). Empirically, homophily in social relations is a consistent finding in the social network literature (McPherson et al., 2001, p. 416). In this context, friendship and family ties tend to be homogeneous concerning class and demographic characteristics, while more distant ties serve to bridge individuals to different social groups and contribute to network diversity (Diprete et al., 2011; Lazarsfeld et al., 1954). Besides, socialization preferences indeed play a role in the formation of segregated networks (Homans, 1951; Visser et al., 2004). Nevertheless, attitude similarity in segregated networks is rather a consequence of the social differentiation that structures the formation of cross-class network ties (Feld, 1981).

There are two primary approaches in the study of class relations from a network perspective. On the one hand, network diversity is defined as the degree of connectedness to dissimilar occupations, which represents vertical access to resources embedded in social networks (Lin et al., 1986). However, diversity is defined as the rate of dissimilar ties within the network without necessarily providing a reference position to describe network similarity. On the other hand, network segregation is the

absence of cross-class connections and represents how similar network ties are in contrast to the individual. This perspective is conceptually closer to homophily as it is anchored in individual class positions and has been empirically addressed through network homogeneity (Otero et al., 2021).

How does social class stratify social networks? Empirically, studies on network diversity reveal that higher civic engagement in formal organizations increases the likelihood of the upper-class forming connections with diverse individuals, in contrast to the more homogeneous participation observed among the working class (Pichler et al., 2009). Similar patterns are observed in the composition of social ties, where the upper and intermediate classes maintain increasingly diverse and prestigious social environments compared to the working class (Carrascosa, 2023; Cepić et al., 2020). In contrast, studies on network segregation suggest that property-based boundaries are less permeable than authority-based ones. For example, Wright et al. (1992) suggest since class interests widen the social distance between proprietors and manual workers, the intermediate position of supervisors, along with their higher contact frequency with manual workers, makes the formation of friendship ties more likely. Similarly, Otero et al. (2021) have shown that the intermediate class exhibits greater permeability compared to the more homogeneous networks of the working class, suggesting that their limited life chances and lower capacity for social engagement ultimately result in a lack of social resources that leads to segregation. Conversely, the upper class is less permeable and homogeneous because it tends to self-select, a practice that ultimately seeks to reproduce its privileged positions (Otero et al., 2021).

# 2.3 Network segregation and attitudes toward redistribution

Besides individualistic class-based mechanisms in redistributive preferences, the argument that network ties have implications for attitude formation is not novel. In particular, two approaches have discussed the role of social relations on redistributive preferences: reference groups and class-based networks.

It has been stated that perceptions about economic inequality rooted in social comparison processes with reference groups can explain the formation of redistributive preferences (Condon et al., 2020). This hypothesis can be traced to the studies on class images and perceived class conflicts (M. D. R. Evans et al., 1992; Kelley et al., 1995). The argument posits that people form their beliefs through family, friends, and coworkers' experiences instead of the whole society, which is described as an availability heuristic that systematically biases inferences about inequality based on the homophily of these reference groups (M. D. R. Evans et al., 1992, p. 467). Therefore, inferences about the social world are linked to the degree of segregation in the immediate social environment of a person, which influences the intensity and character of the information that ultimately shapes inequality perceptions (Mijs et al., 2021). Accordingly, experience sharing in conversations with socioeconomically diverse net-

works has been proven to contribute to the accuracy of the images of income and wealth inequalities compared with people in more segregated networks (Summers et al., 2022). Nevertheless, I argue that this body of research has been mainly focused on the cognitive dimension of preference formation through inequality perceptions rather than straightforwardly addressing the claimed influence of network segregation on redistributive preferences (Cansunar, 2021; García-Castro et al., 2022).

In contrast, social networks provide a comprehensive picture of the class relations that contribute to group identity formation and internalization of social norms (Kalmijn et al., 2007, p. 550). Specifically, it has been argued that redistributive preferences are influenced not only by individuals' class situations but also by the class positions of their network ties (Paskov et al., 2022). Social influence processes can either align or divide opinions depending on the class positions of contacts and the level of network segregation (Lindh et al., 2021). These findings reflect the notion that classes are characterized as collectivities with varying degrees of cohesion and solidarity, comprising asymmetric status-based interactions related to material resources, cultural practices, and political preferences that shape broader social experiences (Morris et al., 1996, p. 48). Following Sachweh (2012), social integration can be impeded in societies with few opportunities for contact between different social classes, creating an "empathy gulf" that hinders individuals from understanding others' lifestyles amid rising inequality. Consequently, spatially segregated interactions may lead individuals to view the lives of different classes as more distant, which can undermine feelings of social inclusion and cohesion (Sachweh, 2012). Thus, segregation can exacerbate perceptions of others as strangers and may impact empathy and solidarity, potentially diminishing social cohesion (Otero, Volker, Rözer, et al., 2022, p. 758).

The class position of surrounding family members, friends, and acquaintances influences redistributive preferences, as these individuals function as socialization agents whose impact can be amplified in segregated social networks. In principle, political attitudes are connected to class interests and norms that are nurtured in the family of origin during childhood and early adulthood. For instance, Lee (2023) shows that individuals with network ties to the upper class through parental connections tend to support redistribution and progressive taxation less than those from working-class family backgrounds. Moreover, since households share risk based on the class position of their members, redistributive preferences are shaped not only by family background but also by the class positions of partners. For example, Paskov et al. (2022) indicates that working-class ties bolster redistributive preferences, whereas ties with the upper class decrease these preferences, with the effects becoming more pronounced when the class positions of individuals, partners, and parents create a more homogeneous network. Additionally, Lindh et al. (2021) found that friendship and acquaintanceship ties to the managerial class are associated with lower redistributive preferences compared to ties with the sociocultural and working classes. Hence, they suggest that individuals tend to adjust their attitudes based on the class position of their contacts

(Lindh et al., 2021, p. 698).

In summary, as homogeneity refers to the overall degree of segregation without distinguishing between class positions I anticipate a weak direct association between network homogeneity and redistributive preferences. Conversely, I hypothesize that the association of network homogeneity with redistributive preferences is conditional on social class as homogeneous social networks should reinforce attitude similarity (segregation hypothesis). Specifically, I propose that greater network segregation in the lower classes is associated with higher redistributive preferences, whereas greater segregation in the upper classes is related to lower redistributive preferences. Therefore, the first hypothesis is as follows:

H1: The greater the network segregation in the lower (upper) classes, the higher (lower) the redistributive preferences.

# 2.4 Economic inequality as context for class relations and redistributive preferences

Studies on economic inequality, social class, and redistributive preferences indicate that the social classes react differently to rising economic inequality. Theoretically, political economists have suggested that high-income individuals are far from monolithic in their redistributive preferences, arguing that their concerns about the harmful *consequences* of economic inequality (e.g., crime) ultimately motivate altruistic support for redistribution (Dimick et al., 2017, 2018; Rueda et al., 2016). Conversely, the moral economy literature in sociology has argued that the differences among the affluent can be explained as a matter of distributive justice evaluations about the *procedures* for resource allocation (Liebig et al., 2016).

Empirically, affluent groups are more responsive because they perceive the overall opportunity structure and social mobility chances are affected by rising inequality (Sachweh et al., 2019). Likewise, higher perceived inequality of opportunity among the upper classes can motivate support for redistribution as a matter of justice in the conditions for getting ahead (Kim et al., 2018). In contrast, low-income individuals perceive ascribed characteristics as more important in constraining the opportunity structure, regardless of current income inequality (Sachweh et al., 2019). In a similar perspective, Edlund et al. (2015) argue that in unequal societies with residual welfare states social class has a poor political meaning, making distributive conflicts weakly institutionalized around traditional working-class organizations (e.g., unions). Thus, stronger support for state-organized redistribution among the upper classes can also be explained as they are often more aware of the institutional incentives and societal consequences of income inequality (Curtis et al., 2015; Svallfors, 2006).

How does income inequality affect social networks? As income inequality implies stronger barriers to establishing trustworthy social connections, this has also conse-

quences on the structure of class relations. Neckerman and Torche (2007, p. 344) suggest that experiencing marginalization is deeply associated with diminished chances for participating openly in social life, which can be exacerbated in contexts of greater inequality. Also, societies with higher income inequality can erode social relations as they exhibit reduced social trust that operates as the basis for mutual understanding and feelings of solidarity (Kragten et al., 2017). Likewise, in contexts of lower income inequality and encompassing welfare states, the higher levels of civic and social participation increase generalized trust and reduce social conflict (Uslaner et al., 2005). Related evicende shows that higher community participation can incentivize support for redistribution in general, being particularly salient among high-income citizens (Yamamura, 2012).

Empirically, cross-national studies show that already-stratified access to social activities and diverse networks is further reinforced in unequal societies. For instance, Letki et al. (2015) show that extensive networks in unequal societies are more common among low-income individuals who rely more on close ties for social support than high-income individuals. Additionally, Pichler et al. (2009) demonstrated that class differences in participation in civic and family networks are exacerbated in more unequal societies. Likewise, Lancee et al. (2012) found that income-based stratification in civic participation becomes more pronounced as inequality increases. Also, Otero, Völker, et al. (2023) found that economic inequality enhances stratified access to network diversity, suggesting that it amplifies the interdependence among cultural, economic, and social capital. Thus, the upper classes can navigate diverse social settings while preserving their distinctive position, whereas the lower classes often remain marginalized and segregated due to the choices of others (Otero et al., 2021, p. 24).

To summarize, I expect that income inequality weakens the interaction between network homogeneity and social class. Specifically, I hypothesize that the conditional relationship between network homogeneity and social class (*segregation hypothesis*) will be less pronounced in contexts of higher income inequality (*mitigation hypothesis*). Given the above considerations, the second hypothesis reads as follows:

H2: The greater the income inequality, the weaker the conditional association of network segregation by social class on redistributive preferences.

# 3 Methodology

#### 3.1 **Data**

The primary data source for this study is the "Social Networks and Social Resources" module of the International Social Survey Program (ISSP) (ISSP Research Group, 2019). The ISSP provides a nationally representative probability sample of the adult population in each participating country without substitution. Each country administers

a carefully adapted questionnaire to ensure the cross-cultural validity of the data and enable meaningful comparisons between countries. The questionnaire includes sections on social networks, attitudes toward economic inequality, and demographic and socioeconomic background characteristics. The complete sample comprises 47,027 observations across 32 countries. However, after reviewing the required information and applying listwise case deletion, the final sample used in the analyses consists of 32,529 observations from 31 countries <sup>1</sup>.

#### 3.2 Variables

#### Dependent variable

I use two indicators to measure redistributive preferences. The first indicator, support for government redistribution, is measured by the item: "It is the responsibility of the government to reduce the differences in income between people with high incomes and those with low incomes." The second indicator, egalitarian preferences, is measured by the item: "For a society to be fair, differences in people's standard of living should be small." Both indicators use a five-point Likert scale with the following categories: 'Strongly agree' (1), 'Agree' (2), 'Neither agree nor disagree' (3), 'Disagree' (4), and 'Strongly disagree' (5), and they are shown to be correlated (r = 0.7). The indicators were reverse-coded, averaged, and normalized to a range from 0 to 100, where higher values reflect stronger redistributive preferences (Svallfors, 2013).

#### Independent variables - individual level

To measure social class, the Erikson-Goldthorpe-Portocarrero (EGP) class scheme is employed (Erikson et al., 1992). The EGP scheme is one of the most consistent and validated measures for social class positions in comparative research and has demonstrated its validity in both industrialized and late-industrialized societies (Barozet et al., 2021; G. Evans et al., 2013). Therefore, information about occupations, self-employment status, and the number of employees is used to classify respondents into different class positions. Following previous research, a simplified version of the EGP class scheme that collapses three classes is employed (Edlund, 2003; Sosnaud et al., 2013). Specifically, this version distinguishes among the Service Class (Higher and Lower managerial and professionals), Intermediate Class (Routine nonmanual workers and self-employed), and Working Class (Manual supervisors, skilled manual workers, and unskilled manual workers).

I employed the position generator as the basis for measuring class-based network homogeneity. This instrument has been widely used in social capital studies and follows an ego-centered approach where social ties to different hierarchical positions in the social structure provide access to social resources (van der Gaag et al., 2008). In this approach, a list of ten occupations is displayed, and each tie can be classified as

"Family or relative," "Close friend," "Someone else I know," or "No one." The first three categories are coded as "Knows" = 1 and "Does not know" = 0, resulting in a total number of social ties per respondent. Subsequently, following the procedures outlined by Otero et al. (2021), occupations are classified into three groups using the International Socio-Economic Index of Occupational Status (ISEI) from the 2008 version of the International Standard Classification of Occupations (ISCO-08) (Ganzeboom, 2010) to approximate Goldthorpe's class positions. The classification is as follows: lawyer, executive of a large firm, and human resource manager are categorized as *high-status*; school teacher, police officer, and nurse are classified as *middle-status*; and car mechanic, bus driver, hairdresser, and home or office cleaner are considered *low-status* occupations.

Given the above, I adopted established procedures from the literature for measuring homogeneity in ego-centered networks. For instance, Völker (2022) computes network homogeneity for gender and education by evaluating the proportion of similar ties based on the characteristics of respondents and their network members. Similarly, Otero, Volker, Rözer, et al. (2022) employed a comparable method by classifying occupations from the position generator into three class positions to compute the proportion of similar ties based on social class, thereby measuring class-based network homogeneity. In this research, I use this latter approach. Specifically, I calculate the number of ingroup ties according to the respondents' class position and divide it by the total number of contacts to obtain a measure of network homogeneity. This measure represents the proportion of similar social ties within the personal network, where a value of zero indicates complete *heterogeneity* (i.e., all ties are different), and a value of one indicates complete *homogeneity* (i.e., all ties are similar). Substantively, higher values reflect a greater social distance from other social classes in society.

First, the number of social ties is included to ensure that the association between network homogeneity and redistributive preferences is independent of network size. Second, socioeconomic characteristics are sequentially incorporated into the models, as they represent the current social status through income, education, and labor market status (Häusermann et al., 2015; Kitschelt et al., 2014). Third, gender, age, and marital status are included in all models as sociodemographic characteristics to control for the potential influence of gender norms and life course events on attitudes (VanHeuvelen et al., 2018; Waitkus et al., 2021).

#### Independent variables - country level

To measure economic inequality comparatively, I use the Gini index (post-taxes and transfers) from the World Income Inequality Dataset (WID) (Alvaredo et al., 2022). Additionally, I incorporate two contextual variables as controls in the multilevel regression. First, employing Gross Domestic Product (GDP) in constant 2017 USD (PPP) ensures that economic inequality estimates remain consistent regardless of economic

conditions (UNU-WIDER, 2023). Second, following Edlund et al. (2015), I include a measure of the welfare state that conceptually captures both its overall size and redistributive capacity based on taxation and spending levels. This approach provides a more accurate representation of the welfare state's impact by incorporating a broader range of services and reflecting the actual outcomes of welfare policies. Empirically, I compute a normalized indicator on a scale from 0 to 100, which combines (i) tax revenue as a percentage of GDP (ILO, 2022), (ii) welfare generosity as total governmental spending as a share of GDP (ILO, 2022), and (iii) the current level of redistribution (Solt, 2020).

#### 3.3 Methods

I employ multilevel linear regression models in all the analyses for accounting by the hierarchical structure of the data given that individuals are nested within countries. The analysis begins by estimating a null model with a random intercept to reflect this nested structure. This initial model assesses the intraclass correlation, revealing that 13.5% of the variance in redistributive preferences can be attributed to differences between countries. Subsequently, micro-level models are estimated to examine the association between network homogeneity and social class to test Hypothesis <sup>2</sup>. Following this, macro-level models are estimated by incorporating random intercepts and random slopes for network homogeneity and social class. This model tests Hypothesis 2 by estimating a three-way cross-level interaction to determine whether income inequality moderates the interaction between network homogeneity and social class. In the latter models, individual-level variables are group-mean centered (CWC) to mitigate collinearity issues between lower- and higher-level predictors and to avoid spurious cross-level interaction coefficients (Aguinis et al., 2013). Additionally, all country-level factors are standardized (z-scores) to facilitate comparability in the estimations (Hox, 2010). In all the models, I use the lme4 package in R (Bates et al., 2015). 3

### 4 Results

# 4.1 Descriptive cross-country comparison on class, network segregation and redistributive preferences

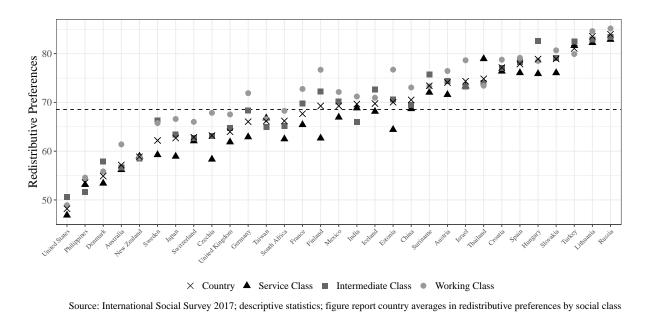
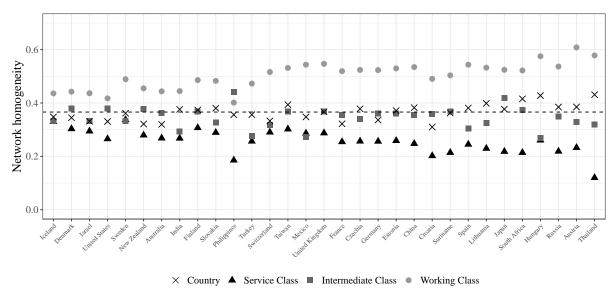


Figure 1: Cross-country comparison of redistributive preferences and social class

Figure 1 depicts the distribution of redistributive preferences across countries and social classes. As expected, in most societies, the working class shows stronger redistributive preferences compared to the intermediate and service classes, with four exceptions where the differences between these classes are minimal. Notably, there are also some differences between the two extreme cases. For instance, in the United States, the working class exhibits lower redistributive preferences (49.1) compared to the intermediate class (50.6), although both classes have higher preferences than the service class (46.8). Conversely, in Russia, the general trend of stronger preferences among the working class persists, with a notable decrease in redistributive preferences from the working (85.5) to the intermediate (83.5) and service class (83.0).



Source: International Social Survey 2017; descriptive statistics; figure report country averages in network homogeneity by social class

Figure 2: Cross-country comparison of Network homogeneity and Social Class

Regarding network segregation, Figure 2 illustrates that, between-country differences in network homogeneity are relatively low, whereas class differences are quite distinguishable. Additionally, the general pattern observed is that the working class demonstrates high network homogeneity, except in the Philippines, where the intermediate class shows a slightly higher average homogeneity. Moreover, the service class generally exhibits less segregation compared to the intermediate and working classes. An interesting observation is that, in cases like Mexico, although the working class remains highly segregated, the intermediate and service classes exhibit similar levels of network segregation.

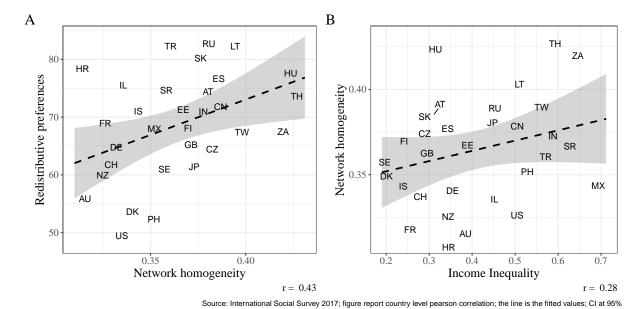


Figure 3: Bivariate relationships between Income Inequality, Network homogeneity and Redistributive preferences

Regarding the macro-level relationships, Figure 3 depicts the correlation between network homogeneity, redistributive preferences, and income inequality, which is our main societal characteristic of interest. Panel A shows a medium positive association between network homogeneity and redistributive preferences (r = 0.43). Consistent with the previously described distribution, higher levels of network homogeneity are driven by the highly segregated networks of the working classes. Thus, in countries where network homogeneity is high, this is likely to reflect greater social segregation among the working classes, which in turn drives higher redistributive preferences. Panel B illustrates a positive but relatively weak association between income inequality and network homogeneity (r = 0.28), suggesting that in more unequal countries, class-based network homogeneity is also higher. Additionally, the differences in network homogeneity between the working class and the service class increase in countries with higher income inequality (r = 0.30; see Appendix Fig. 6). Therefore, income inequality not only increases overall network homogeneity but also widens social distance between social classes.

#### 4.2 The segregation hypothesis on redistributive preferences

Table 1: Multilevel models for network homogeneity and redistributive preferences

	Model 1	Model 2	Model 3	Model 4
Class-based network homogeneity	2.72 (0.54)***	1.36 (0.54)*	-0.66(0.60)	$-7.44(1.10)^{***}$
Network size		$-0.30 (0.05)^{***}$	$-0.29 (0.05)^{***}$	$-0.23 (0.05)^{***}$
Social Class (Ref.= Service Class)				
Intermediate Class			$1.45 (0.33)^{***}$	-0.81(0.60)
Working Class			$3.07 (0.37)^{***}$	-0.35(0.62)
Homogeneity x Social Class				
Homogeneity*Intermediate Class				8.47 (1.63)***
Homogeneity*Working Class				10.42 (1.44)***
Controls	No	Yes	Yes	Yes
BIC	298052.35	297578.22	297530.89	297491.56
Num. obs.	32529	32529	32529	32529
Num. groups	31	31	31	31
Var: Country (Intercept)	76.86	79.65	77.63	76.38
Var: Residual	500.14	491.29	490.29	489.50

Note: Models include sampling weights. Gender, age, marital status, education, household income and employment status are included as controls. Standard errors in parentheses. \*\*\*p < 0.001; \*\*p < 0.01; \*p < 0.05

The multilevel analysis results are shown in Table 1. On the one hand, I expected that network homogeneity has a weak direct association with redistributive preferences as it reveals only the overall segregation without distinction between classes. In this matter, Model 1 integrates network homogeneity and as it is previously noted in the macro associations, individuals with more homogeneous networks tend to exhibit stronger redistributive preferences. Then, this association is robust to network size, sociodemographic characteristics, and socioeconomic status in Model 2. However, after including individual social class in Model 3, the association between homogeneity and redistributive preferences loses its strength. Regarding this, I expected that the inclusion of class suppresses the association of network homogeneity as it is anchored in class position. Despite this, the focus of this study is not on the *direct* associa-

tion of network homogeneity but I hypothesized the association of homogeneity, and redistributive preferences is conditional to social class.

Thus, the interaction terms of network homogeneity and social class in Model 4 show that compared to the service class, homogeneity increases redistributive preferences in the working and intermediate classes. To illustrate this result further, Figure 4 depicts that the increasing redistributive preferences in homogenous working and intermediate class networks are quite mild, where the differences in redistributive preferences go from 69.8 to 72.8 and from 69.4 to 70.47, respectively. In contrast, the decreasing redistributive preferences in homogeneous services class networks are more pronounced, changing from 70 when homogeneity is at its lowest point to 62.8 in fully homogeneous networks. Altogether, these results provide evidence in favor of the segregation hypothesis (H1), where the class divide in redistributive preferences becomes stronger for individuals with more homogeneous social networks.

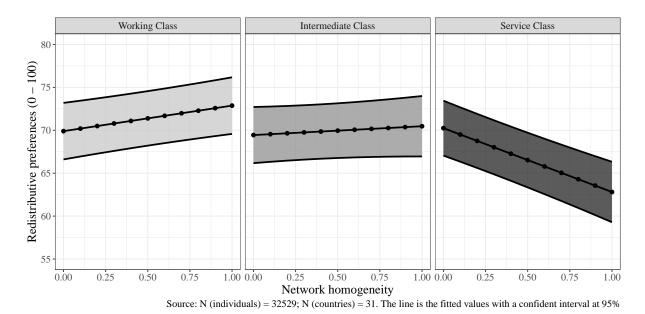


Figure 4: Interaction of network homogeneity and social class on redistributive preferences

# 4.3 The mitigation hypothesis on network segregation and redistributive preferences

Table 2: Multilevel models for income inequality, network homogeneity and redistributive preferences

	Model 1	Model 2	Model 3	Model 4
Class-based network homogeneity (CWC)	-0.74(1.09)	-0.74(1.09)	-0.79(1.09)	-6.40 (1.39)***
Social Class (Ref.= Service Class)				
Intermediate Class	1.38 (0.52)**	1.37 (0.52)**	1.38 (0.51)**	1.85 (0.46)***
Working Class	$3.10 (0.78)^{***}$	$3.08 (0.78)^{***}$	$3.08 (0.78)^{***}$	$2.99 (0.71)^{***}$
Macro-level factors				
Income inequality (Gini index)	0.87(1.47)	-2.58(1.97)	1.95(3.06)	4.90(3.21)
GDP/capita		$-4.46(2.07)^*$	$-5.07(1.94)^{**}$	$-5.05 (1.97)^*$
Size of the welfare state			7.17 (2.75)**	$6.58(2.79)^*$
Homogeneity x Social Class				
Homogeneity*Intermediate Class				7.31 (1.63)***
Homogeneity*Working Class				10.19 (1.50)***
Homogeneity x Income Inequality				6.57 (1.39)***
Homogeneity x Social Class x Income Inequality				
Homogeneity*Intermediate Class*Income Inequality				$-8.41 (1.67)^{**}$
Homogeneity*Working Class*Income Inequality				$-8.45 (1.50)^{**}$
Controls	Yes	Yes	Yes	Yes
BIC	297541.22	297544.21	297546.39	297511.52
Num. obs.	32529	32529	32529	32529
Num. groups	31	31	31	31
Var: Country (Intercept)	83.75	79.20	90.48	77.94
Var: Country Homogeneity	23.29	23.50	23.48	19.23
Var: Country Intermediate Class	4.66	4.70	4.59	2.52
Var: Country Working Class	14.03	14.06	14.12	10.50
Cov: Country (Intercept), Homogeneity	11.08	12.13	17.15	8.42
Cov: Country (Intercept), Intermediate Class	-3.74	-6.55	-13.78	-8.00
Cov: Country (Intercept), Working Class	-12.72	-15.11	-22.50	-15.20
Cov: Country Homogeneity, Intermediate Class	-5.96	-5.91	-6.01	-4.01
Cov: Country Homogeneity, Working Class	-9.10	-9.13	-9.14	-5.72
Cov: Country Intermediate Class, Working Class	7.56	7.59	7.56	5.03
Var: Residual	487.72	487.71	487.72	486.58

Note: Models include sampling weights and individual level controls centered within cluster (group mean). Standard errors in parentheses. \*\*\*p < 0.001; \*\*p < 0.01; \*

Table 2 presents the results of the multilevel models for income inequality. In the first place, Model 1 shows that there are no substantial differences in redistributive preferences between societies with different levels of income inequality. Subsequently, it can be seen in Model 2 that in societies with higher economic prosperity, redistributive preferences are lower regardless of the differences in income inequality between countries. At the same time, Model 3 indicates that in countries with more encompassing welfare states, redistributive preferences are higher, independently of income inequality and economic prosperity. More simply, higher redistributive preferences are observed in countries with more generous welfare states.

Finally, Model 4 incorporates a three-way interaction to determine whether the conditional association of network homogeneity to social class on redistributive preferences is moderated by income inequality. At the micro level, the findings for the segregation hypothesis remain robust. At the macro level, the three-way interaction suggests that higher economic inequality weakens the interaction of network homogeneity and social class. To better illustrate this result, Figure 5 depicts how the relationship between network homogeneity and social class is gradually mitigated as

income inequality increases. In this regard, the left panel in Figure 5 illustrates that under conditions of lower income inequality, the conditional association of network homogeneity and social class on redistributive preferences is more pronounced than in the center and left panels that respectively represent contexts of middle and higher income inequality.

When taking a closer look, the differences in redistributive preferences between the working and service classes are smaller when network homogeneity is low, regardless of income inequality. Besides, higher network homogeneity is associated with larger class differences in redistributive preferences when inequality is low but progressively becomes smaller as income inequality increases. These results resonate with previous studies that have argued that the upper classes are more sensitive to income inequality, whereas the working class shows relatively stable attitudes regardless of the contextual levels of income inequality. Here, the results jointly suggest that network segregation matters in contexts of low and middle economic inequality but loses relevance in contexts of high inequality. Overall, the results presented above support the claims of the *mitigation* hypothesis (H2), where the wider class divide in redistributive preferences produced by homogeneous class-based networks weakens as income inequality increases.

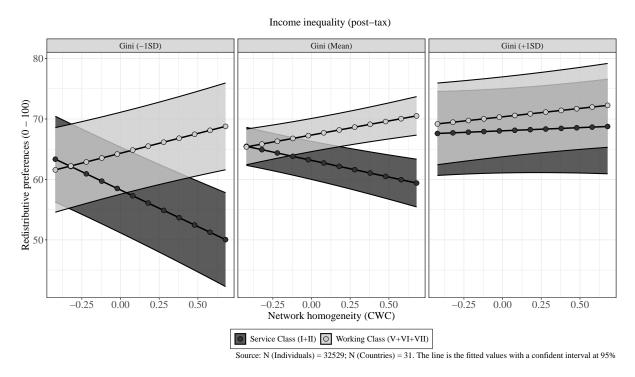


Figure 5: Three-way interaction of network homogeneity, social class and income inequality on redistributive preferences

# 5 Discussion and conclusion

This research examines how class-based network segregation relates to redistributive preferences and the extent to which economic inequality moderates this relationship. The literature on interpersonal networks highlights how network structures not only harbor social resources (Lin et al., 1986) but also contribute to forming political opinions through social influence and network segregation (Lindh et al., 2021; Paskov et al., 2022). Contrary to previous evidence suggesting that network homogeneity diminishes social cohesion (Otero, Volker, Rözer, et al., 2022), this study indicates that class segregation exacerbates the existing class divide in redistributive preferences. Specifically, the interaction of class-based network homogeneity and social class shows that for working-class members, homogeneity strengthens their redistributive preferences, while for the service class, homogeneity results in even lower redistributive preferences.

The theoretical framework of this research posits that studying the class divide in redistributive preferences should not solely address social classes regarding labor market relations but should also observe them through the structure of interpersonal networks. The literature has established that processes of social influence and political socialization demonstrate how social closure in interpersonal networks can create a divide in redistributive preferences between social classes (Lee, 2023; Lindh et al., 2021). This 'empathy gulf' is evident in how the service class is less willing to act against inequality as a collective commitment when they are highly segregated in homogeneous upper-class environments, in contrast to the increasing redistributive pressures of the marginalized working class (Otero and Mendoza, 2023; Sachweh, 2012). Furthermore, since network homogeneity represents low cross-class ties, lower social integration can undermine social solidarity by reducing contact between social classes and limiting knowledge about others' lives (Blau, 1977; Otero, Volker, Rözer, et al., 2022).

Besides the micro-level findings, this study demonstrates that economic inequality moderates the relationship between network segregation and redistributive preferences, a topic previously unexplored in an integrative empirical framework. The results from the multilevel models indicate that inequality *mitigates* the micro-level relationship, resulting in a narrower class gap in redistributive preferences, primarily through changes in the service class. These findings align with evidence on the role of inequality in class relations and redistributive preferences. Research suggests that in unequal societies, the better-off class tends to adopt more egalitarian attitudes toward economic inequality (Edlund et al., 2015; Sachweh et al., 2019). Additionally, the results highlight that upper classes can consolidate their distinctive positions and navigate diverse networks, often at the expense of marginalizing the poor in more unequal contexts (Otero, Völker, et al., 2023).

In the theoretical framework adopted, economic inequality establishes the field for

class relations and conflict, which are consequently crystallized in political attitudes. Here, the class divide in redistributive preferences represents one aspect of the economic domain (Lindh et al., 2020). Class relations can also be understood as networks of social connections between different class positions. Thus, social influence as a network mechanism on redistributive preferences can be framed as the social force that intensifies class-based mechanisms, such as self-interests and values, in segregated networks (Lindh et al., 2021). The observed weaker interaction between class and homogeneity in more unequal countries can be interpreted in two non-exclusive ways. First, network diversity becomes more stratified as inequality increases, meaning that networks in the upper classes become less homogeneous as inequality rises. Second, given that the upper classes hold more egalitarian stances in more unequal societies, it is plausible to argue that class homogeneity can also reinforce opinion similarity when redistributive preferences are higher in the upper class. Therefore, network segregation could influence opinions by either weakening or reinforcing attitudes based on the average opinion about redistribution within a class.

This research contributes to the study of social class and redistributive preferences, building on previous work that has emphasized the role of social ties. First, the cross-national component of this research complements existing studies on the impact of income inequality on social networks and class-based redistributive preferences. Second, the diverse range of societies analyzed extends the literature on redistributive preferences and social networks beyond affluent industrialized countries.

However, this study has certain limitations. The dependent variable, represented by a two-item index, is a rough proxy for redistributive preferences compared to more detailed questions on social services, taxes, or poverty policies. Additionally, the position generator employed is limited in accurately reflecting social classes, especially the self-employed and intermediate-class positions. Thus, the results should be interpreted with caution, recognizing these measurement limitations. Finally, because structural contact opportunities and value-based interactions jointly shape social network composition, the cross-sectional data used prevents causal claims due to potential endogeneity issues between class position, network structure, and attitudes.

Future research should improve measurement strategies by including established survey questions on attitudes toward specific welfare policies or willingness to pay taxes as redistributive measures. Additionally, class-based social networks can be better assessed by incorporating other aspects of the market situation of network ties, such as self-employment status or workplace authority. Finally, longitudinal analyses can help disentangle the causal mechanisms linking social class, networks, and political attitudes.

# **Notes**

<sup>1</sup>Slovenia is excluded from the study because the measure of support for government redistribution, specifically "It is the responsibility of the government to reduce the differences in income between people with high incomes and those with low incomes," was not available in the dataset.

<sup>2</sup>Supplementary analyses employing alternative income inequality measures show that the results are robust when using the Inter-decile ratio (D9/D1) and the Top 10/Bottom 50 ratio. Additionally, I classified countries into low, middle-low, middle-high, and high-income inequality groups based on quintiles according to the Gini index. Hence, I used country-fixed effects regressions to control for the cross-country differences and observed and unobserved societal characteristics. The results are consistent with the multilevel estimations.

<sup>3</sup>I employed the Restricted Maximum Likelihood (REML) method because it adjusts the estimation of standard errors for small sample sizes and provides better estimates of variance components in the context of cross-national data (Bryan et al., 2016).

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# A Appendix

Table 3: ISEI scores assigned to occupations included in the position generator instrument

Occupation	ISEI08
Higher-status positions Lawyer Executive of large firm Human resource manager	85 70 68
Middle-status positions School teacher Police officer Nurse	63 54 48
Lower-status positions Car mechanic Bus/lory driver Hairdresser/barber Home or office cleaner	38 36 32 17

Table 4: Level of aggregation of social class

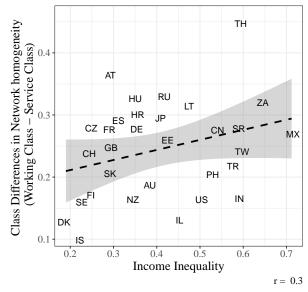
Class (6)	Class (3)	N	N
Upper Service class	Service Class (I+II)	4931	13643
Lower Service class	. ,	8712	
Routine nonmanual class	Intermediate class (III+IV)	6055	8271
Self-employed	,	2216	
Skilled working class	Working Class (V+VI+VII)	9042	10615
Unskilled working class		1573	

Table 5: Values per country for the macro-social variables

Country	N	Network Homogeneity	Gini Index	GDP/capita in \$1000	Size of the Welfare State
Croatia	864	0.31	0.37	27.15	75.38
Australia	972	0.32	0.37	48.40	53.51
New Zealand	784	0.32	0.36	42.29	53.62
France	1046	0.32	0.27	44.58	98.10
United States	1072	0.33	0.49	60.11	46.38
Israel	1033	0.33	0.47	39.12	52.37
Switzerland	985	0.33	0.26	69.10	42.97
Germany	1411	0.34	0.34	53.07	78.61
Denmark	738	0.34	0.19	55.36	93.82
Iceland	1034	0.35	0.24	55.64	84.19
Mexico	682	0.35	0.71	19.72	19.20
Philippines	1050	0.36	0.55	8.12	4.70
Turkey	830	0.36	0.55	27.91	37.40
Sweden	939	0.36	0.22	51.95	85.22
Suriname	553	0.36	0.61	18.28	10.97
United Kingdom	1389	0.37	0.28	46.37	62.65
Estonia	866	0.37	0.41	33.82	58.39
Finland	862	0.37	0.26	47.57	100.00
India	914	0.38	0.61	6.18	15.84
Japan	939	0.38	0.43	41.51	52.75
Czechia	1158	0.38	0.27	38.82	65.07
Slovakia	1053	0.38	0.27	30.06	64.10
Spain	1431	0.38	0.33	39.53	64.31
China	2405	0.38	0.52	14.24	33.92
Russia	1205	0.38	0.43	25.93	46.15
Austria	1094	0.39	0.31	54.17	86.83
Taiwan	1644	0.39	0.58	47.57	0.00
Lithuania	732	0.40	0.49	33.76	47.43
South Africa	1457	0.42	0.63	13.86	29.68
Hungary	847	0.43	0.33	29.50	80.67
Thailand	540	0.43	0.61	17.42	10.14

Note:

Data sources are from the ISSP 2017 - Social Networks, WID and ILO. Contextual variables in original scale



istics; figure report country level pearson correlation; the line is the fitted values; CI at 95%

Figure 6: Bivariate relationships between Income Inequality and Class differences in network homogeneity

Table 6: Multilevel models for network homogeneity and redistributive preferences

	Model 1	Model 2	Model 3	Model 4
Class-based network homogeneity	2.72 (0.54)***	1.36 (0.54)*	-0.66(0.60)	$-7.44 (1.10)^{***}$
Network size	, ,	$-0.30\ (0.05)^{***}$	$-0.29 \ (0.05)^{***}$	$-0.23 (0.05)^{***}$
Female (Ref. = Male)		1.87 (0.25)***	2.15 (0.26)***	2.11 (0.26)***
Age		$0.07 (0.01)^{***}$	$0.08 (0.01)^{***}$	$0.08 (0.01)^{***}$
Year of Education		$-0.22(0.03)^{***}$	$-0.12 (0.04)^{**}$	$-0.09 (0.04)^*$
Household Income (Ref.= Tertile I)				
Income (T2)		$-2.15 (0.36)^{***}$	$-1.98 (0.36)^{***}$	
Income (T3)		$-4.83 (0.36)^{***}$	$-4.41 (0.37)^{***}$	$-4.19 (0.37)^{***}$
Income (No information)		$-4.18 (0.39)^{***}$	$-3.96 (0.39)^{***}$	-3.84 (0.39)***
Not in paid work (Ref. = In paid work)		-0.10(0.31)	-0.18(0.31)	-0.17(0.31)
Has partner (Ref.= No partner)		$-1.16 (0.26)^{***}$	$-1.07 (0.26)^{***}$	$-1.05 (0.26)^{***}$
Social Class (Ref.= Service Class)				
Intermediate Class			$1.45 (0.33)^{***}$	-0.81(0.60)
Working Class			$3.07 (0.37)^{***}$	-0.35(0.62)
Homogeneity x Social Class				
Homogeneity*Intermediate Class				8.47 (1.63)***
Homogeneity*Working Class				10.42 (1.44)***
Controls	No	Yes	Yes	Yes
BIC	298052.35	297578.22	297530.89	297491.56
Num. obs.	32529	32529	32529	32529
Num. groups	31	31	31	31
Var: Country (Intercept)	76.86	79.65	77.63	76.38
Var: Residual	500.14	491.29	490.29	489.50

Note: Standard errors in parentheses. \*\*\* p < 0.001; \*\* p < 0.01; \* p < 0.05