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# How people understand inequality in Chile?

Studying attitudes with a network perspective

Gonzalo Franetovic<sup>1</sup> & Arturo Bertero<sup>2</sup>

<sup>1</sup>Ph.D. Student in Sociology  
University of Milan

<sup>2</sup>Ph.D. Student in Political Science  
University of Milan

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# Introduction

- **Attitudes towards inequality**

- A multidimensional construct (Janmaat, 2013):

- ① **Perceptions** of existing inequality
- ② **Beliefs** about fair inequality
- ③ **Judgments** of existing inequality

- Related topics:

- ① **Wages** (Osberg & Smeeding, 2006)
- ② **Taxes** (Berens & Gelepithis, 2019)
- ③ **Redistribution** (Kenworthy & McCall, 2007)

- **Research questions**

- ① **How are attitudes towards inequality structured in Chile?**
- ② **How do these attitude networks differ according to socioeconomic measures of social stratification?**

# Theory

- **Modern psychometrics and network analysis:**
  - **An attitude as a complex system** composed of many evaluative reactions (Dalege et al., 2016).
  - **Variables** represented as **nodes**, connected by weighted and undirected **edges**, rendering their **reciprocal causal influences** (ibid.).

# Theory

- Network **estimation** through **Mixed Graphical Model [mgm]** (Haslbeck & Waldorp, 2015).
  - Set of regularized linear regressions (*LASSO*) where each variable is iteratively regressed on each other.
  - Combination and average of all estimated regression coefficients (*edge weights*) to form a network model.
- Scholars working on attitude networks demonstrated that:
  - They possess a **Small World Structure** and that most central evaluative reactions are strong predictors of attitude-related behaviors (Dalege et al., 2019).
  - Equivalence between **network communities** and latent factors behind the attitude in question (Golino & Epskamp, 2019).
  - Variables tapping **the same concept** tend to be **positively correlated** (Bagozzi & Burnkrant, 1979).

# Methods

- **Data:** ISSP 2019 - Social Inequality Module, Chile (N=1.038).
- **Research design:**
  - ① Network - full sample
    - Network estimation - mgm (Haslbeck & Waldorp, 2015).
    - Computation of centrality metrics (Opsahl, Agneessens & Skvoretz, 2010).
    - Community detection (Pons & Latapy, 2005).
    - Robustness analysis - Bootnet (Epskamp, Borsboom & Fried, 2018).
  - ② Network Comparison Test (Van Borkulo et al., 2022) between networks estimated on samples obtained stratifying N by:
    - **Household income:** >\$448.000 / <=\$448.000
    - **Educational level:** High School or more / High School or less
    - **Social class:** Not manual / Manual workder
    - **Subjective social class:** Hihgh, mid-high, medium / medium - low, low.
    - **Subjective social mobility:** Ascending, null / Descending

# Methods

- **Network measures**

- ① **ASPL (Connectivity)**: density of networks' ties. Unit of analysis: network.
- ② **Strength (Centrality)**: Importance of an evaluative reaction within the attitude towards inequality networks. Unit of analysis: node.

$$l_G = \frac{1}{n \cdot (n - 1)} \cdot \sum_{i \neq j} d(v_i, v_j),$$

Figure: ASPL

$$s_i = C_D^w(i) = \sum_j^N w_{ij}$$

Figure: Strength

# Methods

- **Variables:** 23 indicators

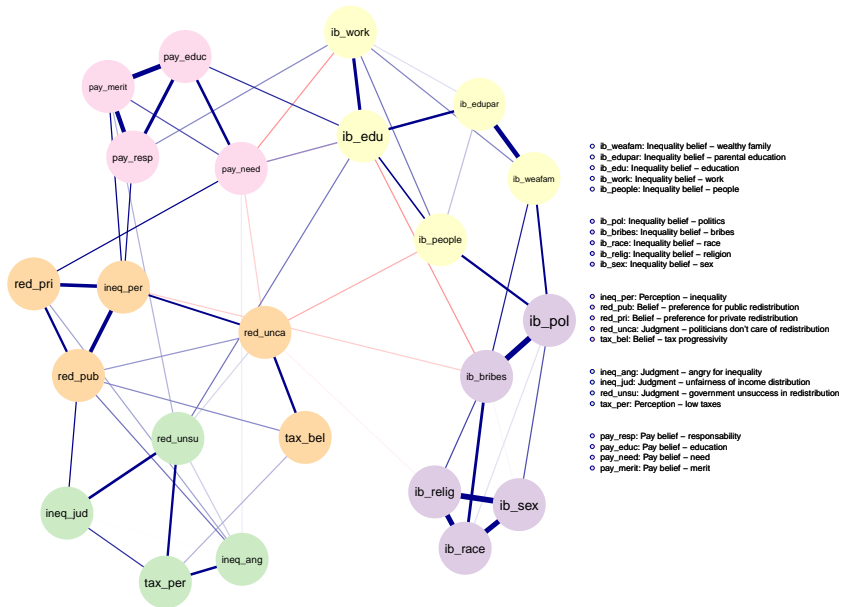
	<b>Evaluative reaction</b>	<b>Variable</b>
<b>Inequality</b>	importance of... for getting ahead in life: <i>wealthy family, parental education, education, hard work, knowing the right people, having political connections, giving bribes, race, religion, sex.</i>	ib_weafam, ib_edupar, ib_edu, ib_work, ib_people, ib_pol, ib_bribes, ib_race, ib_relig, ib_sex
<b>Inequality</b>	Perception of inequality Anger with inequality Judgment on inequality	ineq_per ineq_ang ineq_jud
<b>Wages</b>	How important should ... be, in deciding pay criteria: <i>responsability, education, need, merit.</i>	pay_resp, pay_edu, pay_need, pay_merit
<b>Taxes</b>	Perception of low taxation Beliefs on tax progressivity	tax_per tax_bel
<b>Redistribution</b>	Responsability of the government Responsability of companies Politicians' disinterest State failure	red_pub red_pri red_unca red_unsu



# Methods

- **Hypoteses:**
  - **H1:** The network of attitudes towards inequality will show a **small-world structure**.
  - **H2a:** Evaluative reactions belonging to the **same community** will be connected by **positive edges only**.
  - **H2b:** Negative edges **will only emerge between communities**.
  - **H3:** Stratifying the sample by **social stratification measures**, we will obtain 10 networks that will **structurally differ**.

# Results



# Results

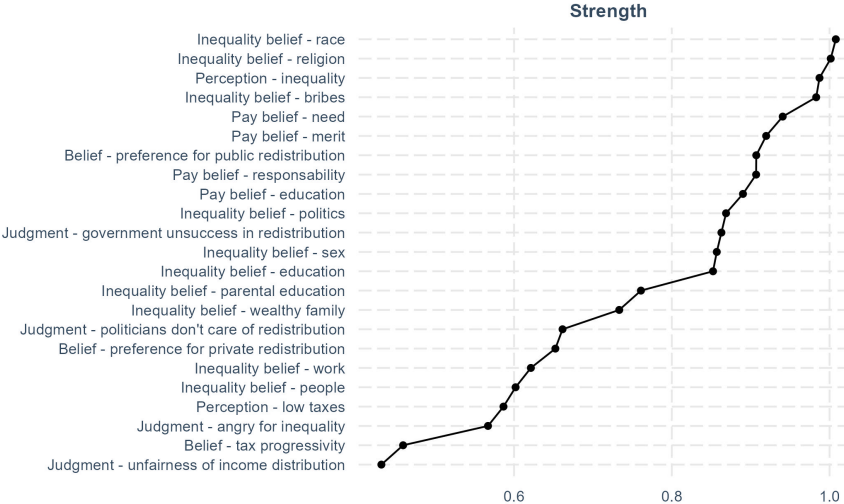


Figure: Centrality table

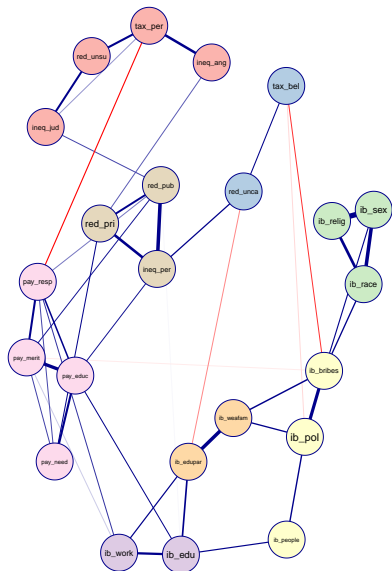
# Results

Table: Small world index

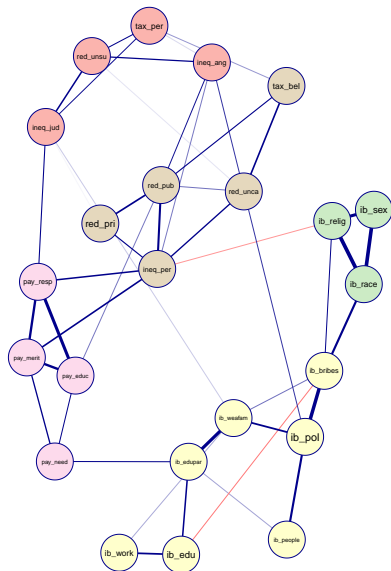
<b>Transitivity</b>	<b>ASPL</b>	<b>ASPL (weighted)</b>	<b>Small world</b>
0,42	1,74	19,00	1,17

# Results

Low income



High income



# Results

Table: Number of communities in the attitudes towards inequality networks, stratified by socioeconomic measures.

	<b>Income</b>	<b>Educational level</b>	<b>Social class</b>	<b>Subjective social class</b>	<b>Subjective social mobility</b>
<b>High</b>	5	6	7	5	5
<b>Low</b>	8	7	7	7	7

# Results

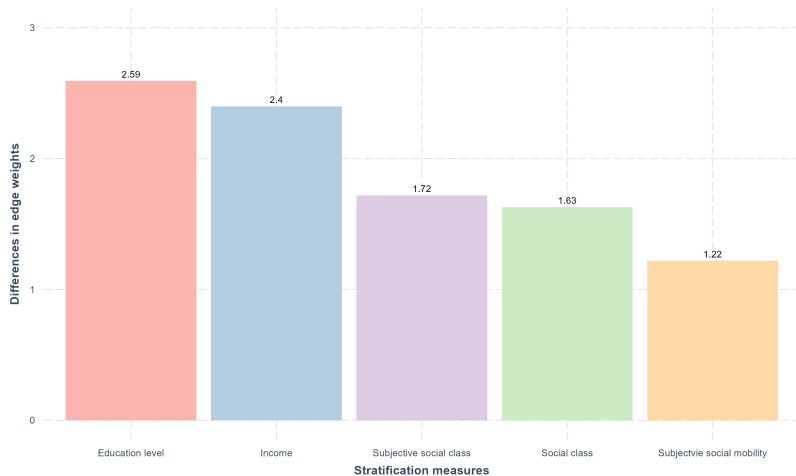
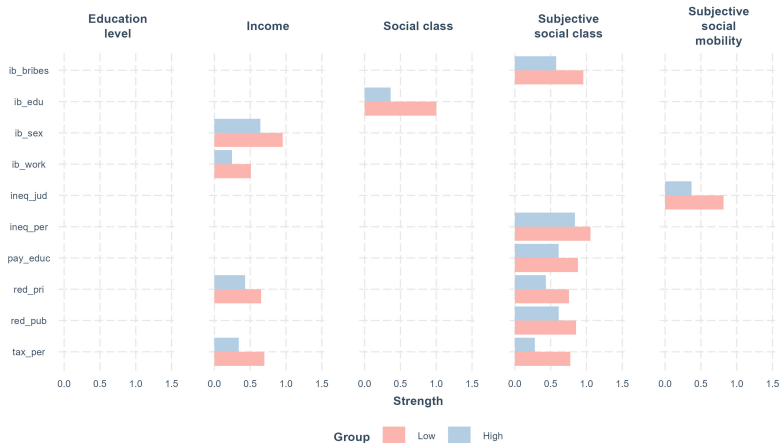


Figure: Differences in edge weights, according to socioeconomic stratification measures

# Results



Only differences between high and low groups that are statistically significant

Figure: Differences in centrality, according to socioeconomic stratification measures



# Conclusions

- **Summary**

- ① In Chile, people belonging to **disadvantaged social groups** tend to have **amore multidimensional comprehension of inequality**.
- ② **Educational level and income** are the measures **producing the highest structural differences in terms of edge weights**.

- **Limitations**

- ① High **heterogeneity within stratification groups**: methodological trade-off between sample size and the number of variables in the network.

- **Contributions**

- ① **Holistic comprehension** of how people understand inequality in a highly unequal country like Chile.

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