

# Stratification and values - potential for an integrated measure of societal position?

Alexander Seymer

November 10, 2014

prepared for the 4th LCSR International Conference  
November 10 - November 14, 2014  
Laboratory for Comparative Social Research  
HSE Saint Petersburg

## Outline

### Theoretical considerations

Stratification and Values?

### Method and results

Data and method

Results of latent class analysis

### Conclusions

Approach 1: minimalistic

Approach 2: two-step

## Criticism on social class

The general critique on social class:

- Beck (1986) suggest that groups lose importance as formative factors for individual behavior.
- lifestyle researchers (Otte, 2008; Rössel, 2007) see the variety of living conditions not reflected.

The measurement critique (EGP scheme):

- Too abstract from job conditions (Grusky & Weeden, 2001).
- Oesch (2006) introduced a new class scheme based on working conditions and work logic.

## BBC's 2011 Great British Class Survey (Savage et al., 2013, p. 230)

**Table 6.** Seven latent classes.

	Elite	Established middle class	Technical middle class	New affluent workers	Traditional working class	Emergent service workers	Precariat
Household income	£89,082	£47,184	£37,428	£29,252	£13,305	£21,048	£8,253
Household savings	£142,458	£26,090	£65,844	£4,918	£9,500	£1,138	£793
House value	£325,000	£176,834	£163,362	£128,639	£127,174	£17,968	£26,948
Social contact score	50.1	45.3	53.5	37.8	41.5	38.3	29.9
Social contact number	16.2	17.0	3.6	16.9	9.8	14.8	6.7
Highbrow cultural capital	16.9	13.7	9.2	6.9	10.8	9.6	6.0
Emerging cultural capital	14.4	16.5	11.4	14.8	6.5	17.5	8.4

Source: GfK nationally representative survey (with GBCS respondents included and weighted at 161,400th of a case).

### **Stratification and Values?**

- Social class needs some revision beyond occupation still applicable for cross-sectional research.
- Most critique on the social concept is based on the lack of accountability for individualism.
- Values as subjective measure of evaluation could revitalize the idea of heterogeneous groups in societies.
- Combining the objective and subjective measure leads to a measure of distinction/group defined cleavages.

## **Aim of the measurement / hypotheses**

Capturing a two-dimensional space of stratification (status) and subjective motivations (values) to explain variance inside countries across groups and similarities across countries along similar groups.

- H1** The number of groups extracted is expected to be similar across all samples.
- H2** The constitution of the patterns along values and ISEI is expected to be similar across different societies.
- H3** These patterns are not random but show a stability in their relative position over time.

## Data and method

ESS 1-5 including all (124) samples available (33 different countries).

**obj.:** International Socio-Economic Index (ISEI) of occupation status (Ganzeboom, De Graaf, Treiman, & Graaf, 1992). (min=16 to max=88)

**subj.:** Parts of the the Human Value Scale (HVS, see Schwartz, 1992; Schwartz & Boehnke, 2004) - namely, Hedonism, Openness to Change and Conservation (12 items)

Latent class analysis (LCA) in R version 3.0.2 with the package polCA by Linzer and Lewis (2011).

## Strategy

1. Run for each of the 124 samples multiple LCAs under the condition of 1-8 classes. Each of the 8 models per sample was estimated 10 times to avoid local minima.
2. Define the preliminary best fitting model by the minimum BIC across the estimated models per sample.
3. Assess profile plots to interpret patterns
4. Invariance across samples

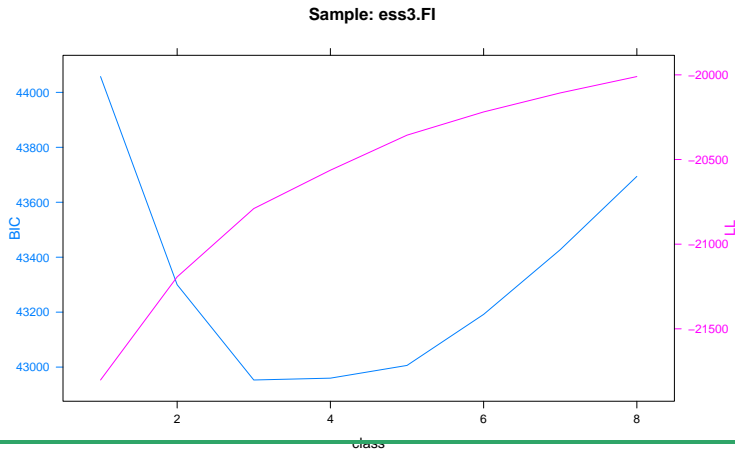


## Results of latent class analysis

Table 1: Groups by ESS round based on minimum BIC

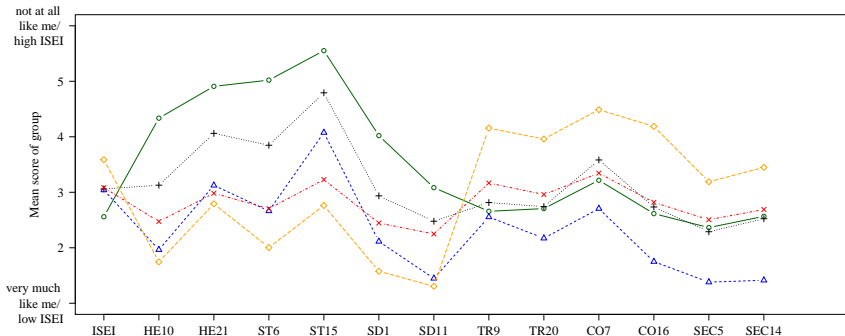
Groups by round	2	3	4	5	6	7	8	Countries
ESS1	0	0	7	13	0	0	0	20
ESS2	1	1	10	13	0	0	0	25
ESS3	0	2	6	13	2	0	0	23
ESS4	0	1	7	15	3	2	1	29
ESS5	0	0	10	11	5	1	0	27
Sum	1	4	40	65	10	3	1	124
(Share in %)	(.8)	(3.2)	(32.3)	(52.4)	(8.1)	(2.4)	(.8)	(100)

Figure 1: Chart with BIC and LL for model identification

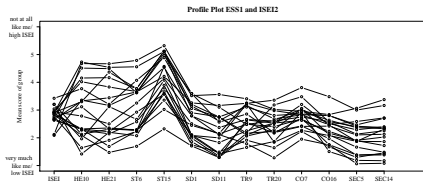
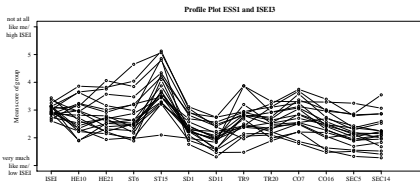
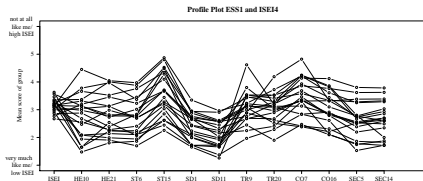
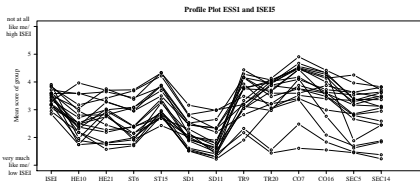


## Assessment of profile plots ESS1-AT (H2)

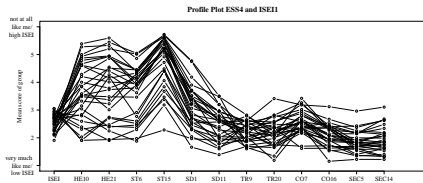
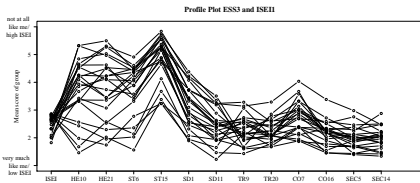
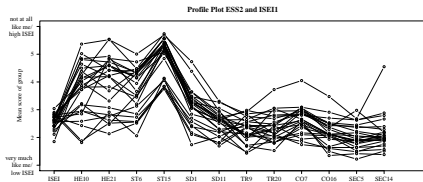
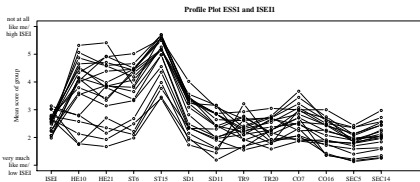
Profile Plot ess1.AT



## Profile plots across countries (H2)



## Profile plots across time (H3)

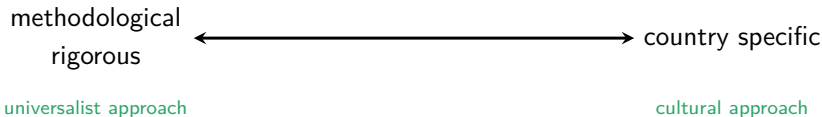


## Conclusions

- Evidence that strata and value patterns go hand in hand.
- The patterns seem reproducible across time and a majority of countries.
- Anchoring needs an alternative mechanism besides ISEI or at least a cross-check.
- Big elephant in the room: How to test invariance?

## How to test invariance?

1. Cut it down and start with most similar countries at one time point.
2. Two-step approach by estimating time and country as covariate on class membership based on single sample latent profile estimations.
3. Consider all 124 samples and estimate time and country as covariate of class membership in one model.



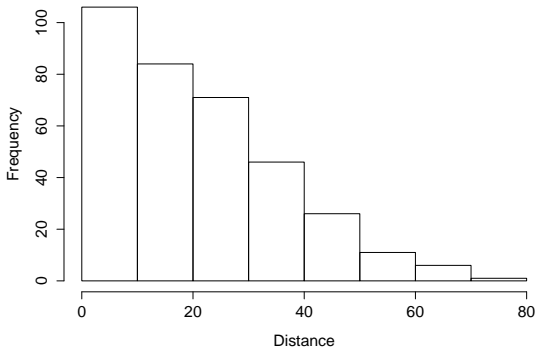
## Approach 1: minimalistic

- Considered only ESS5 and calculated distances for all countries to all other countries over all value items (351 comparisons).
- All differences smaller than (a) 10.5 or (b) 2.1 (21 values equals an average distance of 0.5 or 0.1) are count.
- Only countries with 10 and more for (a) and 2 and more (b) such differences are considered to share greater similarity.
- Result (a): BE, BG, DE, DK, EE, NL, NO, PL, PT, SI
- Result (b): BE, BG, CZ, DE, EE, FR, NL, PT, SI



## Approach 1: minimalistic

Histogram of distance between countries



## Approach 2: two-step

Figure: Multinomial Regression with country and time controls

Group	Intercept		Gender		Age	
2	0.108	(0.033)	0.014	(0.015)	-9.32e-05	(1.32e-04)
3	-0.409	(0.033)	0.067	(0.015)	-3.39e-04	(1.38e-04)
4	-0.133	(0.033)	0.098	(0.015)	1.83e-04	(1.24e-04)
5	-0.272	(0.033)	-0.016	(0.015)	-6.90e-05	(1.35e-04)
	ISCED		HIncome		Round	
	0.000	(0.050)	0.000	(0.057)	-0.079	(0.058)
	0.001	(0.053)	-0.000	(0.061)	-0.013	(0.062)
	0.000	(0.052)	-0.000	(0.058)	-0.099	(0.060)
	0.000	(0.051)	-0.000	(0.057)	-0.076	(0.057)

Thank you for your attention  
&  
any comments are welcome!

## References

- Beck, U. (1986). *Risikogesellschaft: Auf dem Weg in eine andere Moderne*. Suhrkamp Frankfurt am Main.
- Ganzeboom, H. B., De Graaf, P. M., Treiman, D. J., & Graaf, P. M. D. E. (1992). A standard international socio-economic index of occupational status. *Social Science Research*, 21(1), 1–56.
- Grusky, D. B., & Weeden, K. A. (2001, September). Decomposition Without Death: A Research Agenda for a New Class Analysis. *Acta Sociologica*, 44(3), 203–218. doi: 10.1177/000169930104400301
- Linzer, D. A., & Lewis, J. B. (2011). {poLCA}: An {R} Package for Polytomous Variable Latent Class Analysis. *Journal of Statistical Software*, 42(10), ??—??

- Oesch, D. (2006, March). Coming to Grips with a Changing Class Structure: An Analysis of Employment Stratification in Britain, Germany, Sweden and Switzerland. *International Sociology*, 21(2), 263–288. doi: 10.1177/0268580906061379
- Otte, G. (2008). *Sozialstrukturanalysen mit Lebensstilen: Eine Studie zur theoretischen und methodischen Neuorientierung der Lebensstilforschung (German Edition)*. VS Verlag für Sozialwissenschaften.
- Rössel, J. (2007, November). Conditions for the Explanatory Power of Life Styles. *European Sociological Review*, 24(2), 231–241. doi: 10.1093/esr/jcm046
- Savage, M., Devine, F., Cunningham, N., Taylor, M., Li, Y., Hjellbrekke, J., ... Miles, A. (2013, April). A New Model of Social Class? Findings

from the BBC's Great British Class Survey Experiment. *Sociology*, 47(2), 219–250. doi: 10.1177/0038038513481128

Schwartz, S. H. (1992). Universals in the content and structure of values: theoretical advances and empirical tests in 20 countries [Journal article]. *Advances in experimental social psychology*, 25(1), 1–65.

Schwartz, S. H., & Boehnke, K. (2004). Evaluating the structure of human values with confirmatory factor analysis. *Journal of Research in Personality*, 38(3), 230–255.