

Prestige and the socio-economic index of occupational status: how do they relate?

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Prestige of occupation

- Prestige = popular evaluation of the standing of occupations in society, i.e. esteem or contempt that is generated by occupation in social interaction.
- Occupational prestige is measured by polling a general population.
- Alternative: behavioral measure of prestige = patterns of social interactions between occupation groups, such as in marriage or friendship tables.

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2

Socio-Economic Index [SEI]

- An SEI scales occupations by objective characteristics of occupational groups, most commonly their mean education and mean earnings.
- SEI scales are most usefully conceptualized as the main requirement for entry into an occupation (education) and the main consequence of working in an occupation (earnings).

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3

The historical connection

- Prestige and SEI are often confused or treated as the same thing, because SEI gained popularity by Duncan's (1961): "A socio-economic index for all occupations."
- In this article Duncan created an SEI measure for (all) US occupations using occupational prestige as a criterion variable.
- However, in effect, Duncan's procedure purged prestige from the SEI construction. Even for occupations for which prestige was measured, SEI replaced it.

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4

What is the difference?

- Given Duncan's procedure, it seems natural to conceive of SEI as an approximation of occupational prestige"...
- ... and we would expect that SEI is a weak measure of prestige.
- However, it has been observed often that SEI often generates stronger correlations with criterium variables than prestige.
- This is not only true for education and earnings (the 'ingredients' of SEI), but also other variables, and in particular other occupations (like in intergenerational occupational mobility / reproduction).

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5

Correlations

parent	ISEI	SIOPS	SIDES
ISEI	1.000	0.855	0.845
SIOPS	0.855	1.000	0.825
SIDES	0.845	0.825	1.000

Responder	ISEI	SIOPS	SIDES
ISEI	1.000	0.881	0.841
SIOPS	0.881	1.000	0.834
SIDES	0.841	0.834	1.000

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6

Social mobility / reproduction

Parent/Cur	ISEI	SIOPS	SIDES
ISEI	0.338		
SIOPS		0.277	
SIDES			0.276

First/Curre	ISEI	SIOPS	SIDES
ISEI	0.548		
SIOPS		0.486	
SIDES			0.497

Parent/Firs	ISEI	SIOPS	SIDES
ISEI	0.384		
SIOPS		0.301	
SIDES			0.354

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7

Research question

- To what extent are prestige and socio-economic status of occupations:
 - Correlated but separate imperfect measures of a single underlying occupational status dimension?
 - Or / and: does each of them have a distinct [separate] role in the stratification of society?
 - Or: is one just an imperfect measure of the other?

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8

Design

- Comparison of the International Socio-Economic Index [ISEI], Standard International Occupation Prestige Scale [SIOPS] and SIDES.
- Data from the 2005 Italian Occupational Prestige survey. N=1958.
- Intergenerational status attainment model, with three occupations: (1) Dominant parent's (father or mother), (2) respondent's first, (3) respondent's current/last occupation, of different from first.

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9

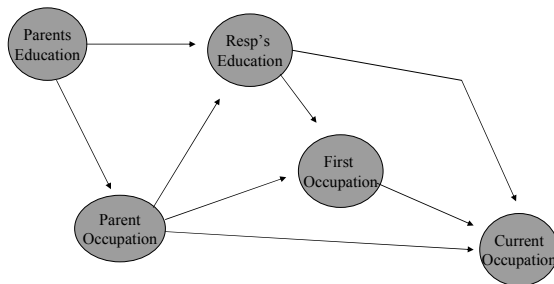
Design - details

- Dominant parent: ca. 78% fathers, 22% mothers. Earlier research shows that dominant parent has stronger effect on men and women's destination.
- Note that the current-first connection is only measured for those who are no longer in their first job → overestimate of intragenerational mobility.
- The backbone of all occupational measurement is ISCO-88. This may favor ISEI and disadvantage SIDES.

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10

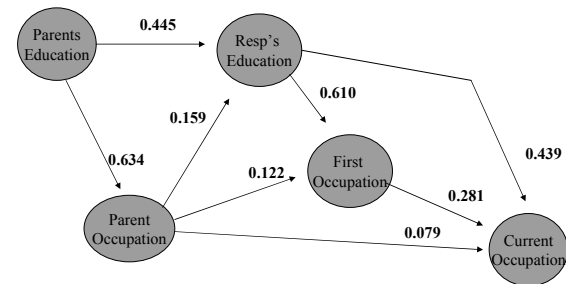
SAT model



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11

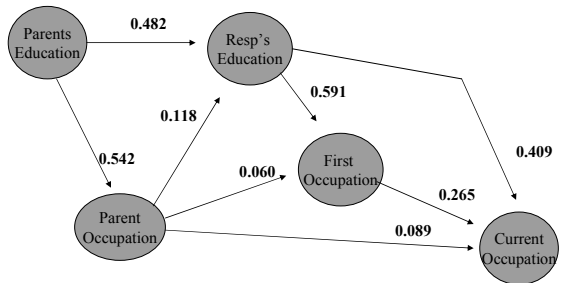
SAT model with ISEI



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12

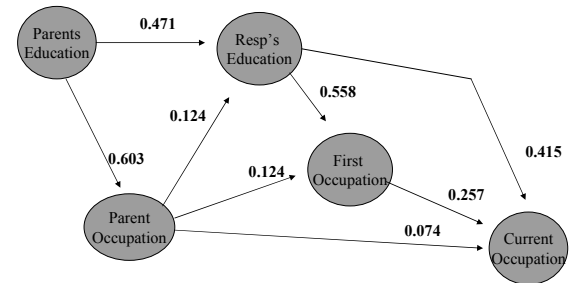
SAT model with SIOPS



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13

SAT model with SIDES



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14

Explained variances

	ISEI	SIOPS	SIDES
FMOCC	40.2%	29.4%	36.4%
fmeduc	0.634	0.542	0.603
EDUC	31.3%	30.8%	30.8%
Fmeduc	0.445	0.482	0.471
Fmocc	0.159	0.118	0.124
FSOCC	45.3%	38.0%	39.3%
Fmocc	0.122	0.06	0.137
Educ	0.61	0.591	0.558
OCC	49.1%	41.9%	41.4%
Fmocc	0.079	0.089	0.074
Educ	0.439	0.409	0.415
FsOcc	0.281	0.265	0.257

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15

Intermediate conclusions (1)

- ISEI gives stronger representation of the status attainment structure than either prestige measure
 - Stronger occupational effects
 - Higher explained variance in all variables (also education, but in particular other occupations).
- SIOPS and SIDES are almost equivalent.
- However, there is no direct comparison here between the three measures.

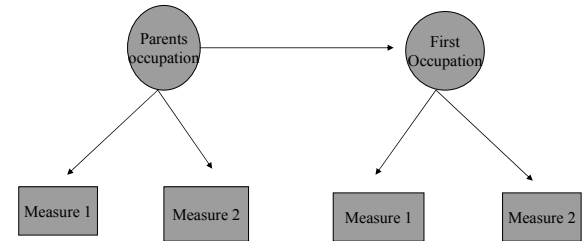
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16

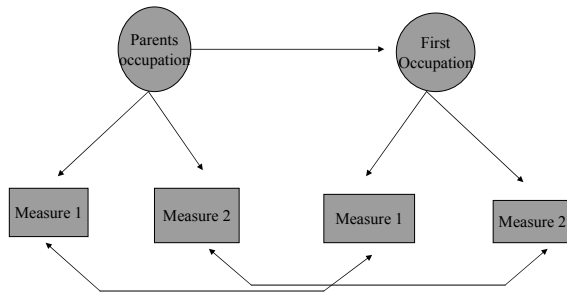
Multiple indicator models

- A natural model for these data is to regard the three measures as three separate, but fallible measures of the same underlying occupational status concept.
- Using LISREL, we can introduce a factor-analysis in a SAT model.

Multiple indicator models – element



Multiple indicator models – correlated residuals (MTMM)



Multiple indicator model

- The simple multiple indicator model will test whether two occupational measures represent alternative indicators.
- The MTMM model will estimate size of unique components in replicated measures.
- MTMM model is estimated with bivariate residual correlations.

Fit statistics

	simple model (NDF=16)	model with correlated residuals
ISEI - SIOPS	183.1	32.6
ISEI- SIDES	121.3	19.8
SIOPS- SIDES	164.4	36.8

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21

Measurement (factor loadings)

	father	first	current
ISEI - SIOPS	0.99 / 0.89	0.98 / 0.89	0.99 / 0.90
ISEI- SIDES	0.97 / 0.90	0.96 / 0.90	0.98 / 0.91
SIOPS- SIDES	0.92 / 0.95	0.92 / 0.95	0.92 / 0.95

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22

Residual correlations

	father-first	first-current	father-current
ISEI - SIOPS	0.022 / 0	0 / 0.045	0 / 0.16
ISEI- SIDES	0 / 0.029	0 / 0.046	0 / 0
SIOPS- SIDES	0 / 0.036	0.029 / 0.016	0.018 / 0

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23

Intermediate conclusions (2)

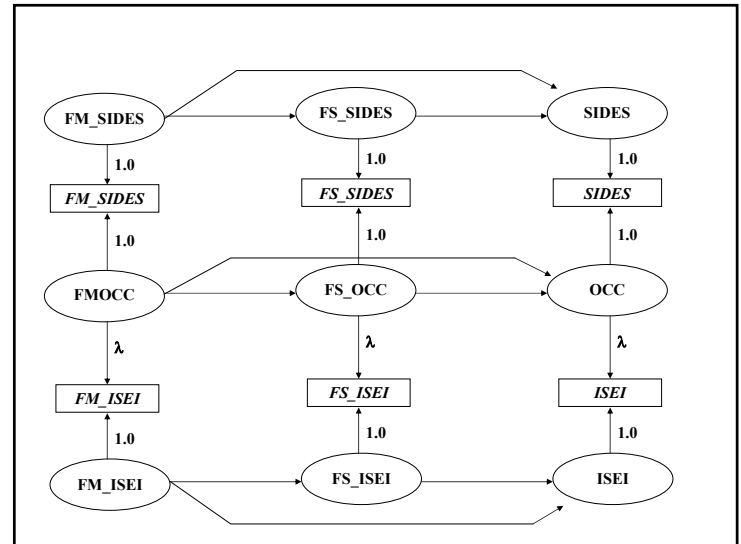
- ISEI is an almost perfect indicator of the underlying occupational status dimension.
- ISEI has no unique contribution in the status attainment process.
- Both SIOPS and SIDES have small but unique contributions in the status attainment process.

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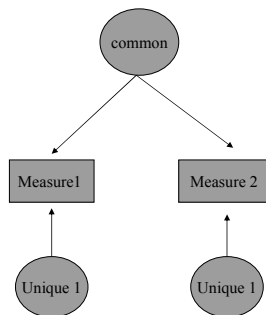
24

Variance decomposition model

- More appropriate is a model that decomposes the measures into a common and a unique component.
- This model can respect causal order in the unique and common components at the same time.
- Model is taken from sibling research on common family and unique individual patterns of status attainment (Hauser & Mossel, 1985).



Hauser-Mossel versus common factor analysis



Hauser-Mossel model -- effects

	father-first	first-current	father-current
COMMON	0.119	0.294	0.082
ISEI	0.417	0.635	0.401
SIOPS	0.085	0.261	0.075
SIDES	0.158	0.230	0.053

Final conclusions

- To a large extent the three measures are an expression of a single underlying dimension.
- However, they measure this dimension with different degree of validity: ISEI : SIOPS : SIDES = 0.99 : 0.92 : 0.89.
- There are no unique components in ISEI for inter/intragenerational status attainment [SAT].
- There are small, but significant unique components in SIOPS and SIDES with respect to SAT.
- These unique components:
 - Are stronger for intra- than for intergenerational reproduction.
 - Are slightly stronger for SIDES than for SIOPS.