EDUCATIONAL HETEROGAMY: A MEASUREMENT QUESTION

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THE ‘TEXTBOOK HYPOTHESIS’

Heterogamy

- Cultural differences
- Lack of social support

Homogamy

- Symbolic interactionism, Conflict theory, Bourdieu, ...
- Social support

- Divorce risk
- Marital satisfaction
- Other (child-rearing, mental health, …) ?
**WHAT ABOUT EDUCATIONAL HETEROGAMY?**

Empirical studies give mixed results

**Reason?**
- Comparability of findings?
- Methodological issues?

**Research question:**
What is the best method for studying educational heterogamy?

**DIFFERENCE MEASURES**
- (Absolute) difference score
  - e.g. years education man – years education woman
- Categorical difference variable
  - e.g. 3 categories: homogamy / education $M > W$ / education $M < W$

**COMPOUND MEASURES**
- Combinations of education men and women
  - e.g. both low education/ woman low, man high education/ man low, woman high education/ etc.
- With or without extra controls for main effects
**Previous research:**

- Results depend on control variables (diff. scores) or the number of categories considered (cat. diff. var.).
- Moderate support for heterogamy effect on marital stability (especially when education W > M)
  - *e.g.* Gong, 2007; Janssen, 2001; Tynes, 1990

**Difference measures**

- Limited to no support for a heterogamy effect on marital stability (without/with extra controls)
  - *e.g.* Finnäs, 1997; Lyngstad, 2004; Vannoy & Cubbins, 2001

**Compound measures**

- Lowered reliability
- Loss of information (categorical variable)

**Methodological features:**

- Significant effect ≠ heterogamy effect *(Luo & Klohnen, 2005)*
- Extreme categories
- Loss of information

→ Alternatives?
COMPARISON OF METHODS

Alternative?
Diagonal Reference Models (Sobel, 1981, 1985)

\[ Y_{ijk} = p \cdot \mu_{ij} + (1-p) \cdot \mu_{jj} + \varepsilon_{ijk} \]

\[ 0 \leq p \leq 1 \]

i = 1,…,T ; j = 1,…,T ; k = 1,…,n

Advantages?
- Substantive motivation
- Flexible
- Easy interpretation

Heterogamy variable(s):
- homogamy / heterogamy
- homogamy / w>m / w<m
- difference in categories
- absolute difference in categories

DATA

- ‘Child-rearing and family in the Netherlands, 1990’
- 643 married couples with children:
  - First marriages
  - Both partners born in the Netherlands

Variables:

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completed education, man</td>
<td>643</td>
</tr>
<tr>
<td>Elementary</td>
<td>80</td>
</tr>
<tr>
<td>Lower technical or vocational</td>
<td>204</td>
</tr>
<tr>
<td>First class or lower gen. secondary</td>
<td>85</td>
</tr>
<tr>
<td>Intermediate vocational</td>
<td>110</td>
</tr>
<tr>
<td>Upper gen. secondary</td>
<td>46</td>
</tr>
<tr>
<td>Higher vocational</td>
<td>79</td>
</tr>
<tr>
<td>University</td>
<td>65</td>
</tr>
<tr>
<td>Completed education, woman</td>
<td>85</td>
</tr>
<tr>
<td>Elementary</td>
<td>188</td>
</tr>
<tr>
<td>Lower technical or vocational</td>
<td>139</td>
</tr>
<tr>
<td>First class or lower gen. secondary</td>
<td>114</td>
</tr>
<tr>
<td>Intermediate vocational</td>
<td>43</td>
</tr>
<tr>
<td>Upper gen. secondary</td>
<td>52</td>
</tr>
<tr>
<td>Higher vocational</td>
<td>28</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dependent variables</th>
<th>N</th>
<th>Mean (s.d.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marital satisfaction, man</td>
<td>629</td>
<td>6.00 (0.20)</td>
</tr>
<tr>
<td>Destructive communication, man</td>
<td>630</td>
<td>2.76 (1.10)</td>
</tr>
<tr>
<td>Positive communication, man</td>
<td>628</td>
<td>5.05 (1.12)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Control variables</th>
<th>N</th>
<th>Mean (s.d.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of children</td>
<td>643</td>
<td>17.38 (3.37)</td>
</tr>
</tbody>
</table>

643 married couples with children:
- First marriages
- Both partners born in the Netherlands
RESULTS – 1. DIFFERENCE MEASURES

Small + effect on destructive comm.

Small + effect on destructive comm., Nonsign direction-effect (+ when education woman > man)

Small + effect on destructive comm., which is biggest when educ. w > m BUT: effect changes depending on control variables!!

Small + effect on destructive comm.

BUT: depends on entered control var. !!

RESULTS – 2. COMPOUND MEASURES

Marital satisfaction

→ Educ. W > M: - effect

Educ. W < M: + effect

Positive communication

→ No obvious pattern

No significant heterogamy effect when controlling for main effects

Summary:

No indication of a significant effect of heterogamy, beyond the main effects of education
**RESULTS – 3. DIAGONAL REFERENCE MODELS**

<table>
<thead>
<tr>
<th>Marital satisfaction: Effect of 'number of categories difference' (b = 0.058)&lt;br&gt;Model selection</th>
<th>0.042</th>
<th>0.042</th>
<th>0.046</th>
<th><strong>0.048</strong>&lt;br&gt;*p=0.010, **p=0.05, **<em>p=0.01</em>&lt;br&gt;BM + Absolute number categories diff.</th>
<th>0.044</th>
</tr>
</thead>
<tbody>
<tr>
<td>Destructive communication: Effect of 'Absolute number of categories difference' (b = 0.087)&lt;br&gt;Model selection</td>
<td>0.017</td>
<td>0.017</td>
<td>0.020</td>
<td>0.017</td>
<td><strong>0.023</strong>&lt;br&gt;*p=0.010, **p=0.05, **<em>p=0.01</em>&lt;br&gt;BM + Absolute number categories diff.</td>
</tr>
<tr>
<td>Positive communication: No heterogamy effect&lt;br&gt;Model selection</td>
<td>0.026</td>
<td>0.026</td>
<td>0.028</td>
<td>0.027</td>
<td>0.027</td>
</tr>
</tbody>
</table>

**Summary:** Effect of heterogamy on marital satisfaction and destructive communication, BUT: small & differs in type.

**CONCLUSION**

3 methods for studying educational heterogamy:
- **Difference measures**
  - Problem of reliability (e.g. identification problem)?
- **Compound measures**
  - Loss of information & Interpretation
- **DRM**
  - The best option?

Thank you for your attention!