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# EDUCATIONAL HETEROGAMY: DOES IT EQUAL CULTURAL DIFFERENCES IN CHILD-REARING?

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## HETEROGAMY RESEARCH

**Two basic findings:**

1. Ubiquity of homogamous relationships
2. Vulnerability of heterogamous relationships

| Homogamy | | Heterogamy |
|---|---|---|
| Cultural similarity | ? | Lack of cultural similarity |
| Social support | | Lack of social support |

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## EMPIRICAL RESEARCH

- Only a **handful of studies** have empirically tested and supported this link (e.g. Curtis & Ellison ,2002; Hohmann-Marriott & Amato, 2008)

  → these studies have important limitations:

  1. Cultural differences in wide and seemingly random domains
  2. Diversity of measures for cultural differences

- The link is questioned by the findings of the **psychology oriented literature**

**(How) do heterogamous marriages differ from homogamous marriages in terms of cultural differences?**

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## THEORY VS. RESEARCH

\+ (Sociological) theory

- Weber (status groups)
- Merton
- Conflict theory
- Bourdieu (habitus)
- Symbolic interactionism

*Structuralism*

*Interactionism*

– Empirical considerations

1. Gender differences
2. Gender differences in the link with education

*Homogamy = cultural similarity?*

3. Selection
4. Convergence

*Heterogamy = cultural differences?*

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## WHICH DIFFERENCES?

- **Educational** heterogamy
  - Educational homogamy ↗
  - Achieved vs. ascribed characteristics
- Cultural differences in **child-rearing**
  - Importance for the functioning of the family
    - Visibility
    - Consequences
  - Link with education (cf. Kohn)

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## DATA

- 'Child-rearing and family in the Netherlands, 1990'
- 631 married couples with children:
  - First marriages
  - Both partners born in the Netherlands
- Variables:

| | N | Mean/p (s.d.) |
|---|---|---|
| **Control variables** | | |
| Age of the man | 631 | 0.00 (4.84) |
| Age of the woman | 631 | -0.01 (4.15) |
| Number of children | 631 | 0.00 (1.04) |
| Age of the target child | 631 | 0.00 (2.21) |
| Gender of the target child | 631 | |
| *Boy (ref.cat.)* | 310 | 0.49 |
| *Girl* | 321 | 0.51 (0.50) |
| Urbanization grade birthplace man | 631 | |
| *Big city (ref.cat.)* | 189 | 0.30 |
| *Small city* | 188 | 0.30 (0.77) |
| *Urbanized rural* | 183 | 0.29 (0.77) |
| *Rural* | 70 | 0.11 (0.61) |
| Urbanization grade birthplace woman | 631 | |
| *Big city (ref.cat.)* | 191 | 0.30 |
| *Small city* | 188 | 0.30 (0.78) |
| *Urbanized rural* | 184 | 0.29 (0.77) |
| *Rural* | 68 | 0.11 (0.61) |
| Educational level of the man's father | 631 | |
| *Low (ref.cat.)* | 313 | 0.50 |
| *Middle* | 230 | 0.36 (0.92) |
| *High* | 88 | 0.14 (0.71) |
| Educational level of the woman's father | 631 | |
| *Low (ref.cat.)* | 288 | 0.46 |
| *Middle* | 263 | 0.42 (0.93) |
| *High* | 80 | 0.13 (0.69) |

| | N | Mean (s.d.) |
|---|---|---|
| **Independent variables** | | |
| Completed education, man | 631 | |
| *Less than elementary* | *16* | |
| *Elementary* | *38* | |
| *Lower technical or vocational* | *201* | |
| *(First classes of) (lower) gen. secondary* | *83* | |
| *Intermediate vocational* | *107* | |
| *Upper general secondary* | *45* | |
| *Higher vocational* | *78* | |
| *University* | *63* | |
| Completed education, woman | 631 | |
| *Less than elementary* | *10* | |
| *Elementary* | *81* | |
| *Lower technical or vocational* | *186* | |
| *(First classes of) (lower) gen. secondary* | *135* | |
| *Intermediate vocational* | *114* | |
| *Upper general secondary* | *38* | |
| *Higher vocational* | *51* | |
| *University* | *16* | |
| **Dependent variables** | | |
| Negative Control - man | 548 | 1.73 (1.01) |
| Negative Control - woman | 553 | 1.59 (0.98) |
| Support - man | 543 | 3.66 (0.81) |
| Support - woman | 553 | 3.59 (0.84) |
| Adaptation - man | 618 | 3.80 (0.77) |
| Adaptation - woman | 629 | 3.76 (0.76) |

## DIAGONAL REFERENCE MODELS

$$Y_{ijk} = p * \mu_{ii} + (1-p) * \mu_{jj} + \sum\beta_l * X_{ijl} + \sum\beta_w * H_{ijw} + \varepsilon_{ijk}$$

Covariates | Heterogamy

$0 \le p \le 1$
$i = 1,\ldots,T$ ;
$j = 1,\ldots,T$ ;
$k = 1,\ldots,n_{ij}$

The effect of five commonly studied heterogamy variables:

- Three **categorical** (2categories / 3categories / 5categories)

*2 categories*

| Education man \ Education woman | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |

*3 categories*

| Education man \ Education woman | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |

*5 categories*

| Education man \ Education woman | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |

- Two **numerical** (signed / absolute difference in education)

*Signed difference in education*

| Education man \ Education woman | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |

*Absolute difference in education*

| Education man \ Education woman | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |

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## RESULTS – EDUCATION

**Comparison of the Baseline model to the Model with the control variables, based on $R^2$ ($p_{R^2change}$: comparison with previous model).**

| | Negative control | | Support | | Adaptation | |
|---|---|---|---|---|---|---|
| | Men | Women | Men | Women | Men | Women |
| Baseline model | 0.045 ** | 0.040 ** | 0.040 ** | 0.035 ** | 0.137 ** | 0.099 ** |
| Model with the control variables | 0.134 ** | 0.106 ** | 0.069 | 0.086 ** | 0.174 * | 0.161 ** |

The educational variables explain a substantial part of the variation

The eight control variables are of importance for 5/6 dependent variables

+ p<0.100, * p<0.050, ** p<0.010

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**Parameter estimates for the Model with the control variables (SE).**

| | Negative control | | Support | | Adaptation | |
|---|---|---|---|---|---|---|
| | Men | Women | Men | Women | Men | Women |
| **Salience parameter** | | | | | | |
| p | 1.000 (.274) | 0.540 (.142) | 0.693 (.262) | 0.000 (.153) | 0.784 (.102) | 0.458 (.085) |
| **Means ($\mu_{ij}$'s) for the homogamous with educ. level i** | | | | | | |
| $\mu_{11}$ | 1.870 (.161) | 2.010 (.182) | 3.484 (.157) | 3.568 (.108) | 4.166 (.125) | 4.346 (.121) |
| $\mu_{22}$ | 1.832 (.088) | 1.783 (.091) | 3.589 (.076) | 3.474 (.073) | 4.041 (.063) | 3.931 (.063) |
| $\mu_{33}$ | 1.470 (.122) | 1.671 (.133) | 3.772 (.109) | 3.790 (.090) | 3.637 (.088) | 3.655 (.093) |
| $\mu_{44}$ | 1.475 (.089) | 1.137 (.108) | 3.879 (.086) | 3.803 (.090) | 3.319 (.072) | 3.282 (.077) |
| **Control variables** | | | | | | |
| Age of the man | -0.021 (.013) | 0.005 (.013) | 0.011 (.011) | 0.023 (.011) * | 0.016 (.009) + | -0.005 (.009) |
| Age of the woman | 0.002 (.016) | -0.001 (.016) | 0.004 (.013) | -0.028 (.013) * | 0.009 (.011) | 0.041 (.011) ** |
| Number of children | 0.055 (.040) | -0.025 (.039) | -0.066 (.033) * | 0.009 (.035) | -0.031 (.028) | -0.057 (.028) * |
| Age of the target child | -0.081 (.021) ** | -0.074 (.021) ** | 0.009 (.018) | 0.050 (.018) ** | -0.040 (.015) * | -0.052 (.015) ** |
| Gender of the target child (ref.cat. Boy) | | | | | | |
| Girl | -0.108 (.042) * | -0.107 (.041) ** | 0.006 (.035) | 0.061 (.035) + | -0.018 (.029) | -0.051 (.029) + |
| Urbanization grade birthplace man (ref.cat. Big city) | | | | | | |
| Small city | -0.027 (.077) | -0.032 (.074) | 0.006 (.063) | -0.003 (.063) | 0.005 (.053) | 0.030 (.052) |
| Urbanized rural | -0.067 (.076) | 0.031 (.075) | -0.002 (.063) | -0.029 (.064) | 0.141 (.053) * | 0.040 (.052) |
| Rural | -0.066 (.112) | -0.082 (.111) | 0.017 (.094) | -0.101 (.095) | -0.079 (.078) | -0.029 (.078) |
| Urbanization grade birthplace woman (ref.cat. Big city) | | | | | | |
| Small city | 0.101 (.075) | 0.184 (.074) * | 0.031 (.063) | 0.066 (.064) | 0.041 (.052) | 0.051 (.052) |
| Urbanized rural | 0.009 (.076) | -0.044 (.074) | -0.007 (.063) | -0.020 (.063) | -0.072 (.052) | 0.023 (.052) |
| Rural | -0.050 (.113) | -0.042 (.111) | -0.105 (.093) | -0.072 (.095) | 0.029 (.078) | 0.043 (.078) |
| Educational level of the man's father (ref.cat. Low) | | | | | | |
| Middle | -0.102 (.063) | -0.127 (.062) * | 0.016 (.053) | -0.046 (.053) | 0.041 (.044) | -0.041 (.044) |
| High | -0.101 (.087) | 0.095 (.088) | 0.081 (.075) | 0.034 (.076) | -0.070 (.062) | 0.034 (.061) |
| Educational level of the woman's father (ref.cat. Low) | | | | | | |
| Middle | 0.020 (.063) | -0.007 (.064) | -0.048 (.053) | -0.057 (.054) | -0.054 (.045) | -0.038 (.044) |
| High | -0.006 (.090) | 0.140 (.089) | 0.065 (.075) | 0.103 (.076) * | 0.058 (.065) | 0.032 (.063) |
| N | 548 | 553 | 543 | 553 | 618 | 629 |

+ p<0.100, * p<0.050, ** p<0.010

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## RESULTS – EDUCATIONAL HETEROGAMY

**Model selection for the Heterogamy models, based on $R^2$ ($p_{R^2change}$: comparison with *Model with the control variables*).**

| | Negative control | | Support | | Adaptation | |
|---|---|---|---|---|---|---|
| | Men | Women | Men | Women | Men | Women |
| **Model with the control variables** | 0.134 | 0.106 | 0.069 | **0.086** | 0.174 | **0.161** |
| **+ Heterogamy** | | | | | | |
| Two categories | **0.140** ** | 0.119 ** | **0.074** ** | 0.087 | 0.175 | 0.161 |
| Three categories | 0.140 ** | 0.119 ** | 0.078 ** | 0.088 | 0.176 | 0.161 |
| Five categories | 0.141 | 0.134 ** | 0.078 | 0.088 | 0.178 | 0.163 |
| Steps | 0.134 | 0.106 | 0.071 | 0.086 | **0.177** ** | 0.162 |
| Steps absolute value | 0.139 ** | **0.125** ** | 0.074 ** | 0.086 | 0.175 | 0.161 |

**Men**: *Negative control* & *Support* → presence of heterogamy
*Adaptation* → presence, size & direction of heterogamy

**Women:** *Negative control* → presence & size of heterogamy
*Adaptation* & *Support* →no effect of heterogamy

+ p<0.100, * p<0.050, ** p<0.010

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**Parameter estimates for the best fitting (Heterogamy) models (SE).**

| | Negative control | | Support | | Adaptation | |
|---|---|---|---|---|---|---|
| | Men | Women | Men | Women | Men | Women |
| **Salience parameter** | | | | | | |
| p | 1.000 (.241) | 0.741 (.168) | 0.650 (.257) | 0.000 (.153) | 1.000 (.399) | 0.458 (.085) |
| **Means ($\mu_{ii}$'s) for the homogamous with educ. level i** | | | | | | |
| $\mu_{11}$ | 1.742 (.171) | 1.695 (.198) | 3.354 (.180) | 3.568 (.108) | 4.166 (.128) | 4.346 (.121) |
| $\mu_{22}$ | 1.783 (.092) | 1.718 (.091) | 3.554 (.078) | 3.474 (.073) | 4.048 (.064) | 3.931 (.063) |
| $\mu_{33}$ | 1.352 (.135) | 1.493 (.133) | 3.666 (.127) | 3.790 (.090) | 3.623 (.079) | 3.655 (.093) |
| $\mu_{44}$ | 1.376 (.101) | 1.012 (.112) | 3.819 (.092) | 3.803 (.090) | 3.312 (.069) | 3.282 (.077) |
| **Control variables** | | | | | | |
| Age of the man | -0.022 (.013) + | 0.004 (.013) | 0.011 (.011) | 0.023 (.011) * | 0.017 (.009) + | -0.005 (.009) |
| Age of the woman | 0.005 (.016) | 0.004 (.016) | 0.006 (.013) | -0.028 (.013) * | 0.009 (.011) | 0.041 (.011) ** |
| Number of children | | | | | | |
| Age of the youngest child | | | | | | |
| Gender of the child (ref.cat. Boy) | | | | | | |
| Girl | | | | | | |
| Urbanization grade birthplace man (ref.cat. B | | | | | | |
| Small city | | | | | | |
| Urbanized rural | | | | | | |
| Rural | | | | | | |
| Urbanization grade birthplace woman (ref.ca | | | | | | |
| Small city | | | | | | |
| Urbanized rural | | | | | | |
| Rural | | | | | | |
| Educational level of the man's father (ref.cat. | | | | | | |
| Middle | | | | | | |
| High | -0.100 (.087) | 0.075 (.087) | 0.076 (.075) | 0.034 (.076) | -0.067 (.062) | 0.034 (.061) |
| Educational level of the woman's father (ref.cat. Low) | | | | | | |
| Middle | 0.008 (.063) | -0.019 (.063) | -0.055 (.053) | -0.057 (.054) | -0.057 (.044) | -0.038 (.044) |
| High | 0.014 (.090) | 0.155 (.088) + | 0.076 (.075) | 0.103 (.076) * | 0.064 (.065) | 0.032 (.063) |
| **Heterogamy variables** | | | | | | |
| Two categories | 0.175 (.088) * | | 0.133 (.080) + | | | |
| Steps | | | | | 0.084 (.130) | |
| Steps absolute value | | 0.207 (.059) ** | | | | |
| N | 548 | 553 | 543 | 553 | 618 | 629 |

**Do the educational effects lead to (more) cultural differences for heterogamous couples?**

***Negative control:*** No, just more in heterogamous couples
***Support:*** Yes, no counteracting heterogamy effect
***Adaptation:*** Yes, no counteracting heterogamy effect

+ p<0.100, * p<0.050, ** p<0.010

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## RESULTS – EDUCATIONAL HETEROGAMY

### Empirical considerations

1. Gender differences
   → Largest for *Negative control*
2. Gender differences in the effect of education
   → Only minor differences

3. Selection
   → Of importance for all couples
4. Convergence
   → No support

**The link is not so straightforward**

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## CONCLUSION:

### Education

Large association with the studied values and behaviors (esp. *Adaptation*!)

### Educational heterogamy

- *Support* & *Adaptation*: Educational effects will lead to (some) cultural differences
  *Negative control*: different link as heterogamous couples report more use overall

- The link with cultural differences appeared less straightforward
  →Homogamous couples: Gender differences
  →Heterogamous couples: Selection

Educational heterogamy appears linked to some cultural differences.
Yet, homogamous couples are not free of cultural differences either, while the degree of cultural differences is affected by other important factors as well.

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## THANK YOU FOR YOUR ATTENTION

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