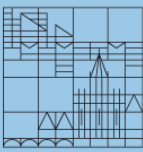


Adolescents' values of children and their intentions to have children: A multi-level perspective

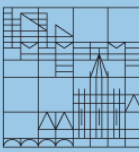
Boris Mayer & Gisela Trommsdorff

University of Konstanz



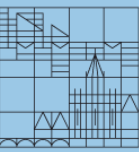
Value of Children (VOC)

- Reasons for having children
- Needs children fulfill for their parents
(Hoffman & Hoffman, 1973)
- Emotional, social, and economic benefits and costs from having children
(e.g., Arnold et al., 1975)



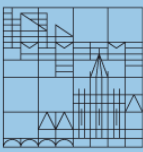
Relations Between VOC and Fertility (1)

- Economic needs can be best fulfilled by many children
→ **Economic VOC** positively related to fertility
- Emotional needs can be fulfilled by 1 or 2 children as good as by many children
→ **Emotional VOC** negatively related to fertility



Relations Between VOC and Fertility (2)

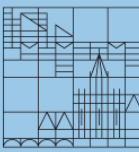
- Mostly confirmed at the group-level
(e.g., Trommsdorff, in press; Kagitcibasi & Ataca, 2005)
- Partly confirmed at the individual level
(e.g., Kagitcibasi, 1982; Nauck, 2007)
- Multilevel models needed to account for differential effects on the cultural and on the individual level



Method: Cultures in the Study

Cultures selected to represent

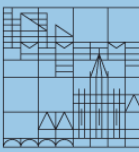
- a) Geographic and Cultural Regions of the World:
Europe, Asia, Africa (excl. Americas & Middle East)
- b) Range of economic development: per capita
GNP from **3.120 \$** (India) to **35.660 \$** (Switzerland)



France



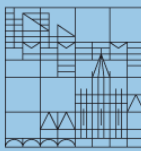
- Population = 61m
- GNI per capita = 32,240 \$
- Total Fertility Rate = 2.0
- Teamleader
Prof. Dr. Colette Sabatier,
Université Victor Segalen,
Bordeaux



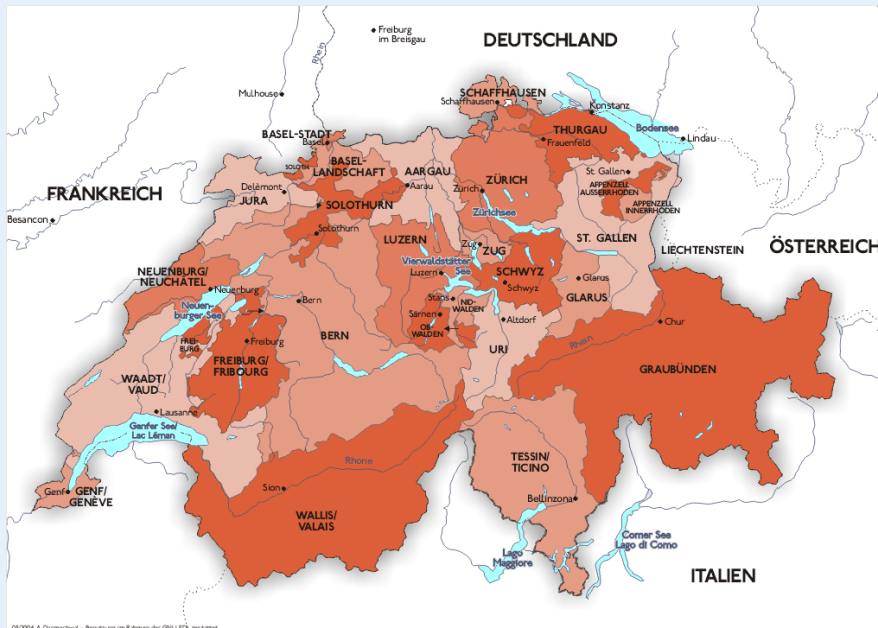
Germany



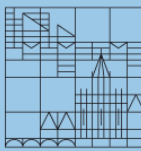
- Population = 82m
- GNP per capita = 32,680 \$
- Total Fertility Rate = 1.3
- Principal Investigators:
 Prof. Dr. Gisela Trommsdorff
 University of Konstanz
 Prof. Dr. Bernhard Nauck
 Technische Universität Chemnitz



Switzerland



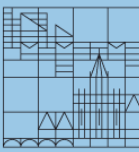
- Population = 8m
- GNP per capita = 40,840 \$
- Total Fertility Rate = 1.4
- Data provided by
Dipl.-Psych. Karen Fux,
University of Konstanz



South Africa



- Population = 47m
- GNP per capita = 8,900 \$
- Total Fertility Rate = 2.7
- Teamleader
Prof. Dr. Karl Peltzer
Human Sciences Research
Council, Cape Town

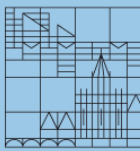


Turkey



- Population = 74m
- GNP per capita = 8,410 \$
- Total Fertility Rate = 2.2
- Teamleader
 Prof. Dr. Cigdem Kagitçibasi
 Koc University, Istanbul
 Dr. Bilge Ataca
 Bogazici University, Istanbul





Israel



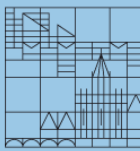
- Population = 7m
- GNP per capita = 23,840 \$
- Total Fertility Rate = 2.7
- Teamleader
 Dr. Asher Ben-Arieh, The Hebrew University of Jerusalem
 Dr. Muhammad M. Haj-Yahia, The Hebrew University of Jerusalem



India



- Population = 1.12bn
- GNP per capita = 2,460 \$
- Total Fertility Rate = 2.5
- Teamleader
Prof. Dr. Ramesh Mishra, Banaras
Hindu University, Varanasi



Indonesia



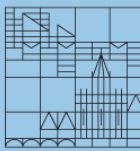
- Population = 226m
- GNP per capita = 3,310 \$
- Total Fertility Rate = 2.2

- Teamleader

Dr. Lieke Wisnubrata,
Padjadjaran University,
Bandung

Drs. Peter R. Nelwan
Padjadjaran University,
Bandung





People's Republic of China



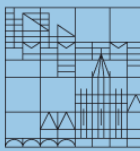
- Population = 1.31bn
- GNI per capita = 4,660 \$
- Total Fertility Rate = 1.8
- Teamleader
 - Prof. Dr. Gang Zheng,
Chinese Academy of
Sciences, Beijing
 - Prof. Shaohua Shi,
Chinese Academy of
Sciences, Beijing



Republic of Korea



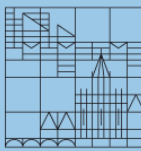
- Population = 49m
- GNP per capita = 22,990 \$
- Total Fertility Rate = 1.1
- Teamleader
 Prof. Dr. Uichol Kim,
 Inha University, Incheon
 Prof. Dr. Young-Shin Park,
 Inha University, Incheon



Japan

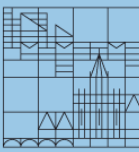


- Population = 128m
- GNP per capita = 32,840 \$
- Total Fertility Rate = 1.3
- Data provided by
Chiaki Yamada, MA, Université
Victor Segalen, Bordeaux,
France

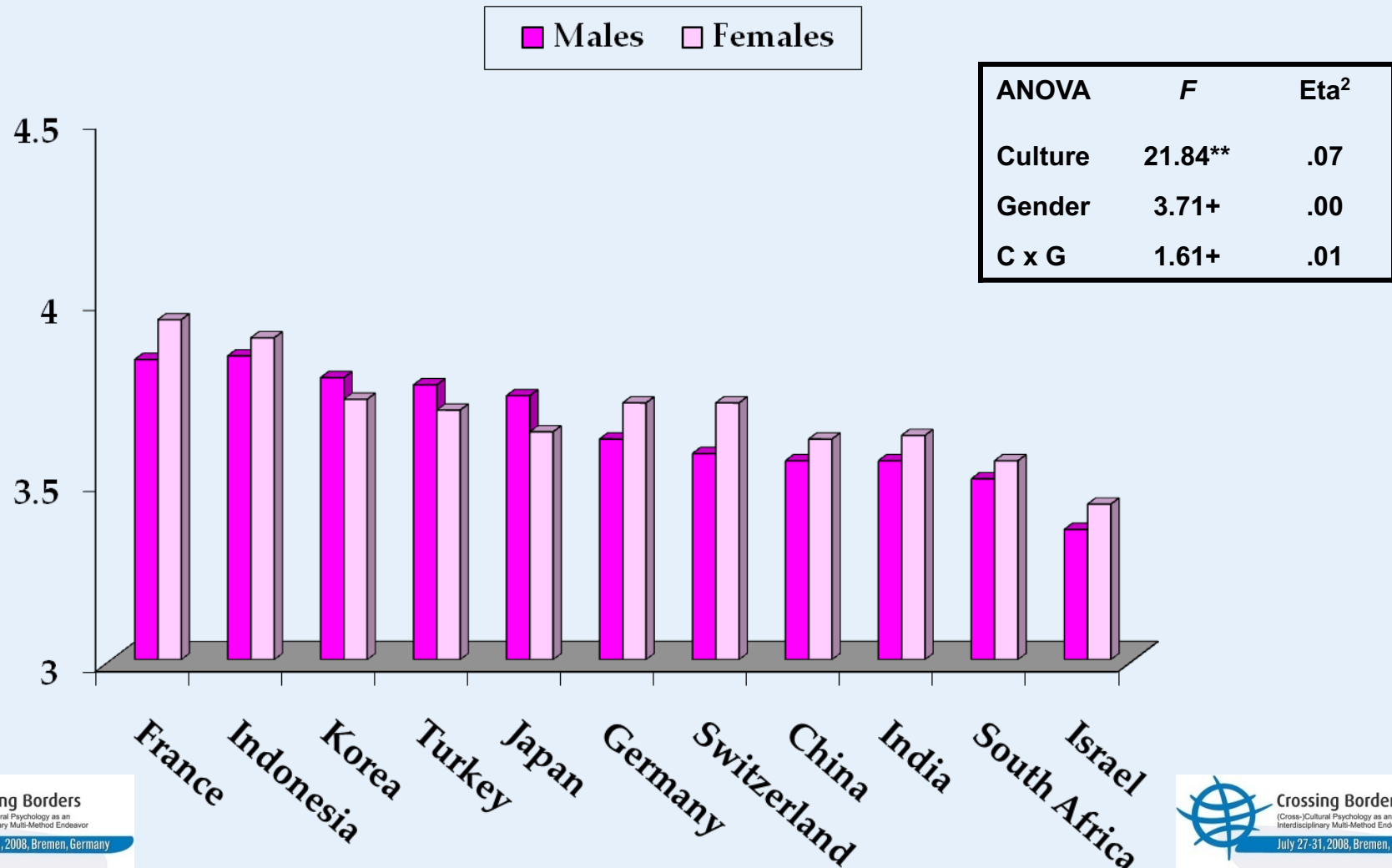


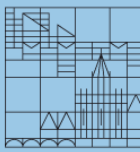
Adolescents from 11 Cultures

| Cultures | Males | Females | All | M Age | (SD) |
|--------------|-------------|-------------|-------------|-------------|--------------|
| Germany | 137 | 174 | 311 | 15.7 | (1.1) |
| France | 90 | 110 | 200 | 15.7 | (1.2) |
| Switzerland | 55 | 76 | 131 | 19.8 | (1.9) |
| Israel | 69 | 119 | 188 | 15.8 | (1.4) |
| Turkey | 144 | 162 | 306 | 14.7 | (1.1) |
| South Africa | 122 | 195 | 317 | 15.0 | (1.2) |
| India | 148 | 152 | 300 | 16.0 | (1.5) |
| Indonesia | 135 | 165 | 300 | 15.3 | (1.0) |
| China | 129 | 177 | 306 | 13.8 | (1.1) |
| Korea | 143 | 252 | 395 | 15.3 | (1.5) |
| Japan | 77 | 130 | 207 | 16.5 | (0.8) |
| Total | 1249 | 1712 | 2961 | 15.5 | (1.7) |

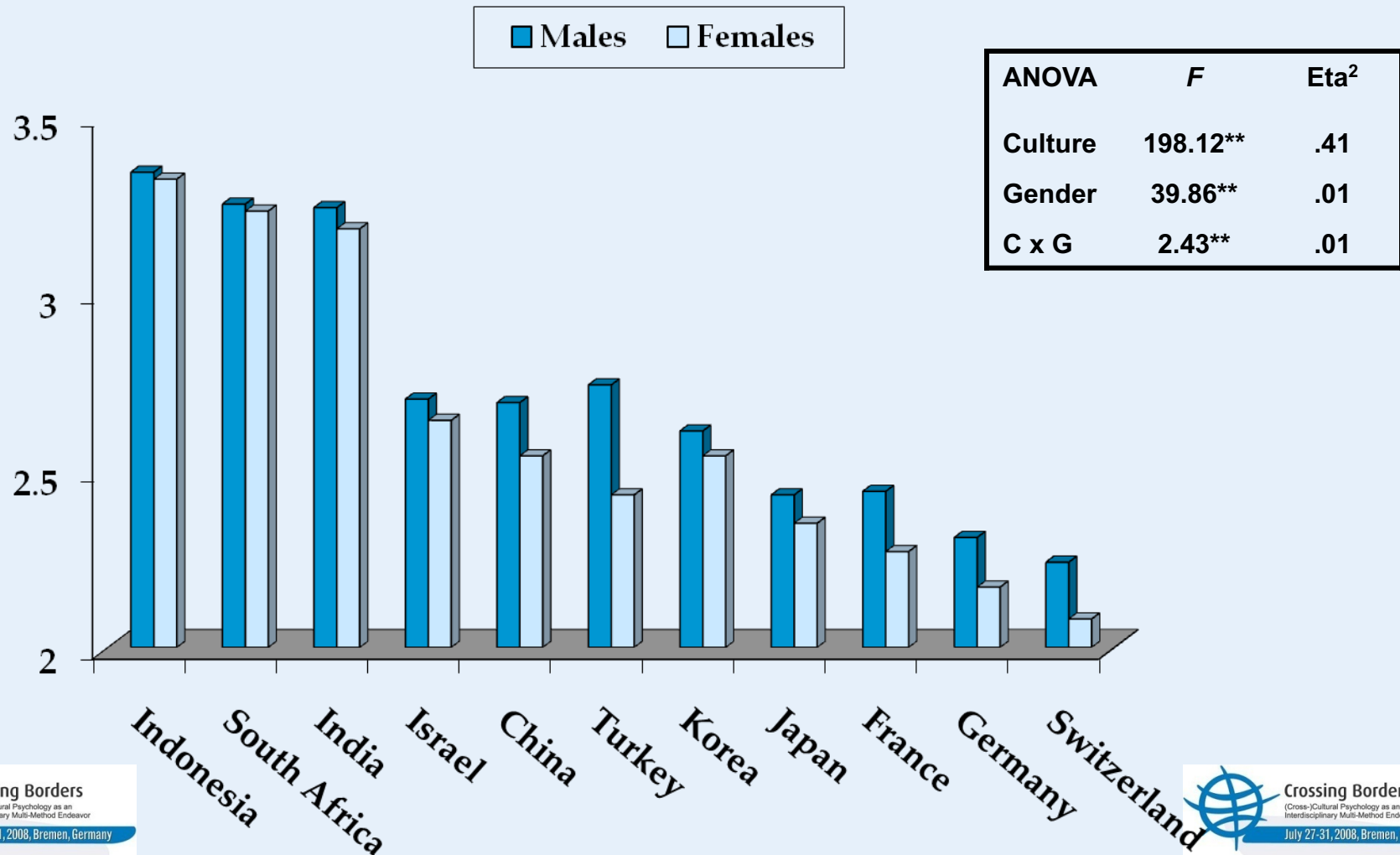


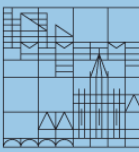
Mean Differences: Emotional VOC



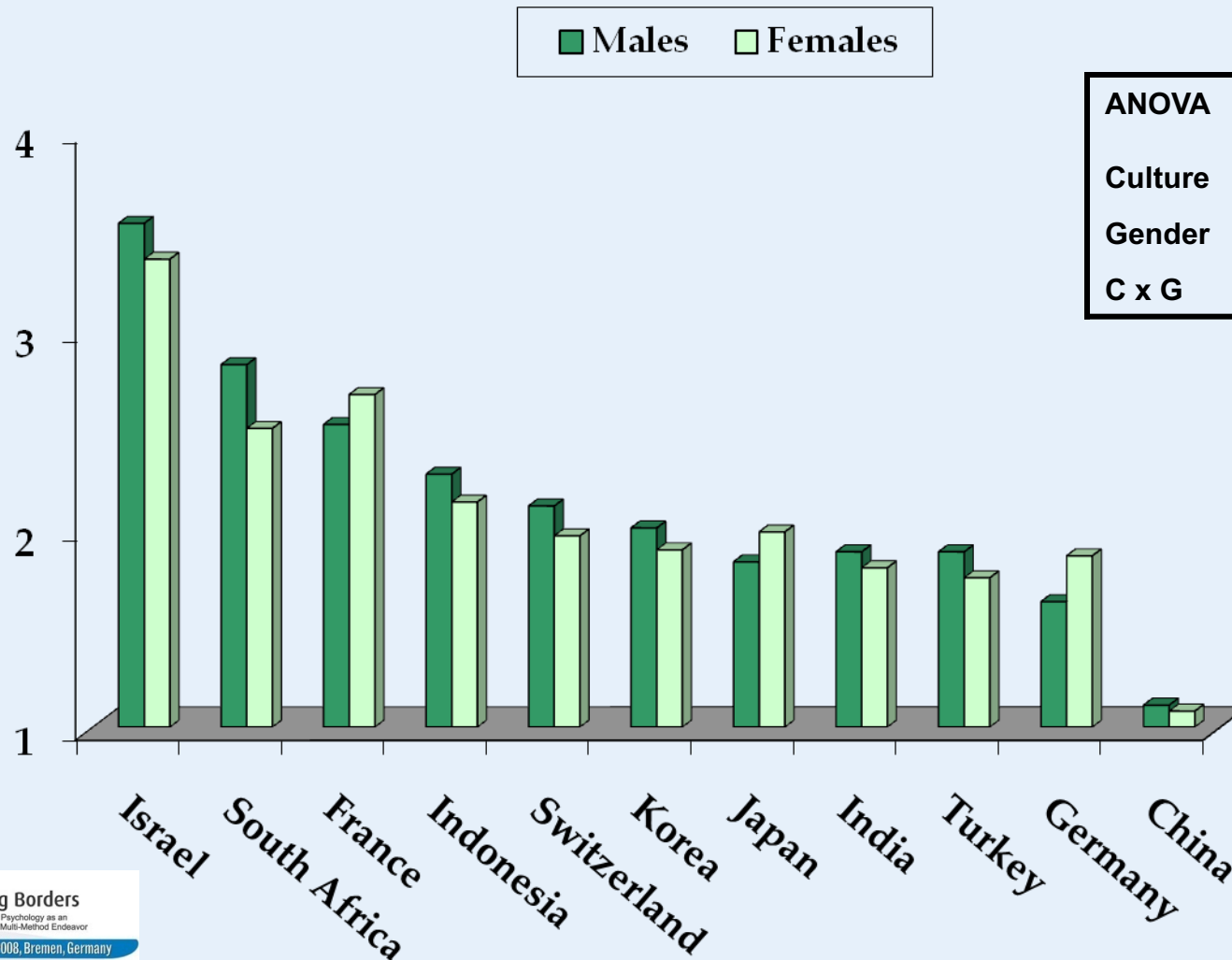


Mean Differences: Traditional VOC

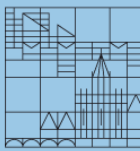




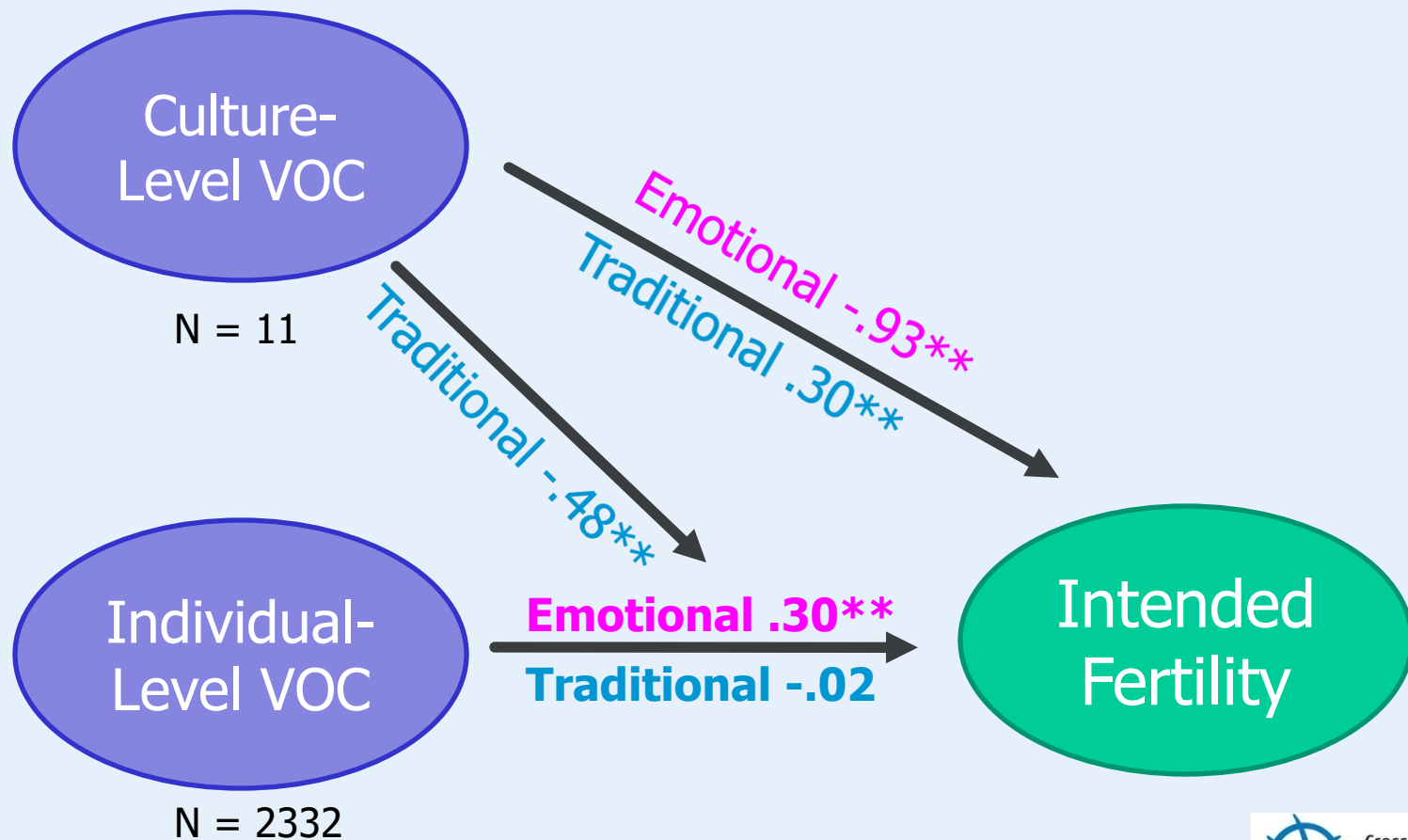
Mean Differences: Number of Children (Intendend Fertility)

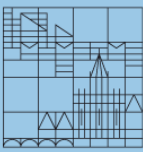


| ANOVA | <i>F</i> | Eta ² |
|---------|----------|------------------|
| Culture | 59.48** | .21 |
| Gender | 1.67 | .00 |
| C x G | 1.49 | .01 |



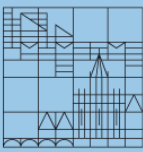
Hierarchical Linear Modeling (HLM)





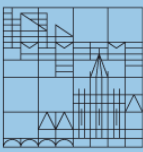
Discussion: Mean Differences

- Emotional VOC high in all cultures → universal?
- Traditional VOC declines with modernization
- Intended Fertility
 - Extreme cases (Israel & China) due to political rather than cultural and structural reasons?
 - French adolescents rather pro-natalistic
 - Trend to having **2** children



Discussion: Multi-Level-Analysis

- Individual-Level-Effects
 - Positive (instead of negative) effect of **Emotional VOC** on **Intended Fertility** in modern(izing) cultures
 - **Traditional VOC** and **Intended Fertility** unrelated
- Culture-Level-Effects
 - Positive effect of **Traditonal VOC** on **Intended Fertility**
 - Negative effect of **Emotional VOC** on **Intended Fertility**
 - **Traditionality** weakens positive (individual-level) effect of **Emotional VOC**



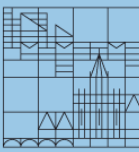
Conclusions

- Multi-level analyses needed to account for theoretically meaningful differential effects across levels
- Emotional VOC positive predictor of fertility in most cultures
- Traditional conceptualization of the VOC-Fertility relation valid mostly for culture-level analysis
- **Limitation:** Results refer to adolescents only



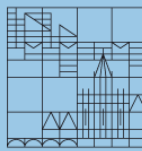
Thank you!





References

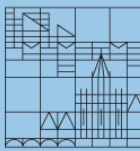
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| Pooled Solution | EMO | TRAD |
|--|------------|------------|
| 01 Child helps around the house. | .15 | .61 |
| 02 Makes family more important. | .50 | .32 |
| 03 Increases responsibility, develop | .61 | .21 |
| 04 It is a joy to have a small baby | .73 | .14 |
| 05 Fun to have young children around | .76 | .10 |
| 06 Pleasure watching children grow. | .78 | .12 |
| 07 Feeling of love parent and child | .75 | .03 |
| 08 Standing/reputation among your kin | .30 | .58 |
| 09 Less likely to be lonely in old age | .34 | .49 |
| 10 Raising helps learn about life/self | .62 | .21 |
| 11 Older relatives feel more children | .03 | .62 |
| 12 life will be continued through | .38 | .46 |
| 13 Sure enough children will survive | .07 | .59 |
| 14 To carry on the family name | .13 | .68 |
| 15 To help your family economically | .07 | .72 |
| 16 Have someone to love and care for | .63 | .18 |
| 17 A duty according to your belief | .15 | .56 |
| 18 Children can help when you're old | .20 | .62 |

VOC – Structural Equivalence and Reliabilities

| | Tucker's Phi | | Cronbach's α | |
|---------------------|--------------|------------|---------------------|------------|
| | EMO | TRAD | EMO | TRAD |
| Germany | .97 | .97 | .81 | .80 |
| Turkey | .99 | .99 | .84 | .86 |
| Israel | .75 | .61 | .76 | .68 |
| Korea | .97 | .98 | .83 | .78 |
| China | .98 | .98 | .89 | .82 |
| Indonesia | .95 | .96 | .79 | .76 |
| France | .96 | .94 | .75 | .77 |
| India | .96 | .97 | .84 | .84 |
| Japan | .98 | .99 | .89 | .81 |
| South Africa | .84 | .73 | .88 | .77 |
| Switzerland | .98 | .96 | .78 | .95 |

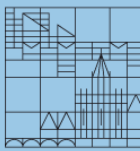


Linear Regression Analysis

Emotional VOC + Traditional VOC → Intended Fertility

| Culture | Predictors | Beta |
|-------------|-----------------|-------|
| Japan | Emotional VOC | .52** |
| | Traditional VOC | -.01 |
| Germany | Emotional VOC | .46** |
| | Traditional VOC | -.05 |
| Switzerland | Emotional VOC | .37** |
| | Traditional VOC | .12 |
| Korea | Emotional VOC | .33** |
| | Traditional VOC | .02 |
| China | Emotional VOC | .31** |
| | Traditional VOC | .16+ |
| France | Emotional VOC | .20* |
| | Traditional VOC | -.05 |

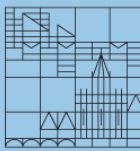
| Culture | Predictors | Beta |
|--------------|-----------------|-------|
| Turkey | Emotional VOC | .16* |
| | Traditional VOC | -.04 |
| Indonesia | Emotional VOC | .16* |
| | Traditional VOC | -.09 |
| Israel | Emotional VOC | .06 |
| | Traditional VOC | -.05 |
| South Africa | Emotional VOC | .04 |
| | Traditional VOC | .07 |
| India | Emotional VOC | -.14+ |
| | Traditional VOC | .30** |



Multi-Level-Analysis (incl. Random Effects)

n = 2342

| | | Intercept | | Slope Emot. VOC | | Slope Trad. VOC | |
|---------|-------------------|-----------|----|--------------------|----|--------------------|----|
| | Ind. Level | B | df | B | df | B | df |
| Model 1 | No. Children | 2.11 | 10 | .29** | | .00 | 10 |
| | | | | | | | |
| | Cult. Level | B | df | B | | B | df |
| Model 2 | Effect Emot. VOC | -1.16 | 8 | | | | |
| | Effect Trad . VOC | -.02 | 8 | | | | |
| Model 3 | Effect Emot. VOC | -.91 | 8 | .42 | 8 | -.31 | 8 |
| | Effect Trad . VOC | .18 | 8 | -.46** | 8 | .14 | 8 |



Multi-Level-Analysis (Fixed Effects only)

n = 2332

| | | Intercept | | Slope Emot. VOC | | Slope Trad. VOC | |
|---------|-------------------|-----------|------|--------------------|------|--------------------|------|
| | Ind. Level | B | df | B | df | B | df |
| Model 1 | No. Children | 2.09 | 2329 | .30** | | -.02 | 2339 |
| | Cult. Level | B | df | B | | B | df |
| Model 2 | Effect Emot. VOC | -.93** | 2327 | | | | |
| | Effect Trad . VOC | .30** | 2327 | | | | |
| Model 3 | Effect Emot. VOC | -.93** | 2323 | .42 | 2333 | -.34 | 2323 |
| | Effect Trad . VOC | .30** | 2323 | -.48** | 2333 | .14 | 2323 |