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Methodological Aspects of Measuring Stability and Change in Personal Culture

Testing the Models of Settled Dispositions and Active Updating Using a Randomized Experiment

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Stability and Change in Personal Culture

- Personal culture is defined as attitudes and behaviors

- Two different models regarding people's personal culture have been suggested:

  ▸ The <u>Active Updating Model</u> (AUM) suggests that beliefs and attitudes change throughout the course of a person's life, due to new information and experiences

  ▸ The <u>Settled Disposition Model</u> (SDM) suggests that beliefs and attitudes are relatively stable after socialization, and that new information and experience will not alter one's personal culture dramatically

Test of the Two Models Using the GSS

- Recently those two models have been tested against each other using the panel component of the **US General Social Survey** (Kiley & Vaisey 2020; Vaisey & Kiley 2021)

- Research Design
  - Use of three cohorts with three panel waves each with one year distance
  - Test of 180 attitudinal and behavioral questions between 2006 and 2014

- Results
  - General pattern was more consistent with the SDM
  - Consistent with *socialization hypothesis*, change was more likely for younger people
  - Change was also more likely for high-profile issues (e.g., views on gay marriage or partisan identification)

Research Questions

- Replication
  - ▶ Do the findings generalize to a new context outside the United States?
- Extension (data collection not finished yet)
  - ▶ More waves
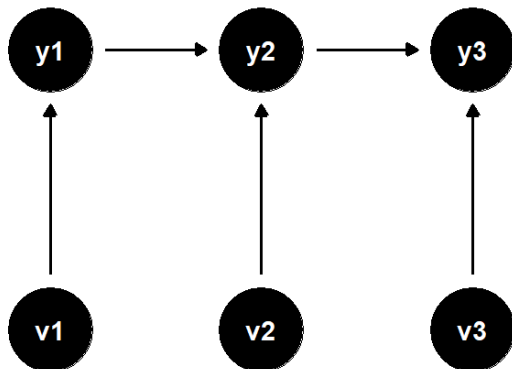 - ▶ Panel conditioning effects

Research Overview

(1) Do we replicate the overall pattern regarding the Settled Disposition Model (SDM)?

(2) Do we replicate the findings regarding age groups?

(3) Do we replicate the findings regarding high-profile issues?
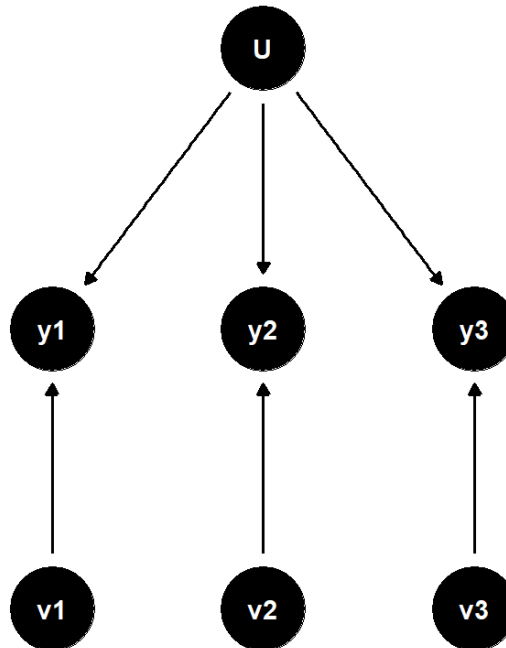
Our Study Design

- Three panel waves (more to come)

- 47 attitudes and behaviors

- Distance of 2-3 months between the panel waves

- German non-probability sample (online access panel)

- Quotas for age, gender and education

- About 400 respondents (more to come)

Comparison of the Two Models (based on 3 panel waves)

Active Updating Model

Settled Dispositions Model

yi = response in Wave i
vi = considerations influencing yi
u = settled tendency to respond to yi

Kiley & Vaisey (2020)

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Analyses 1

- Settled Disposition Model

$$E(y_{i3}) = U_i = \frac{y_{i2} + y_{i1}}{2}$$

- Generalized Model (SDM & AUM)

$$E(y_{i3}) = \alpha + \phi\beta y_{i2} + (1 - \phi)\beta y_{i1}$$

→ φ should be close to 0.5 if SDM is preferred because wave 1 and 2 should be equally predictive

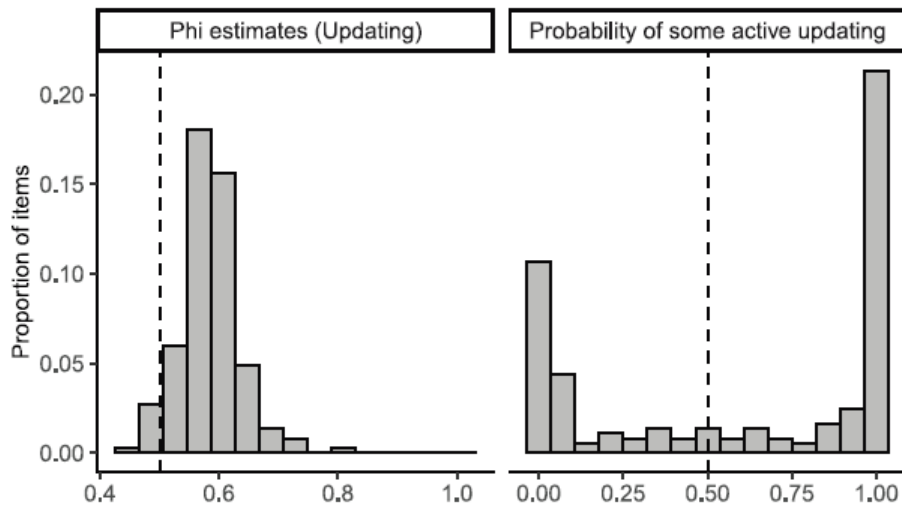→ φ should be closer to 1 if AUM is preferred because wave 2 is more predictive

→ β estimates the consistency of individual responses across the three waves (close to 1 for high consistency and close to 0 for pure randomness)
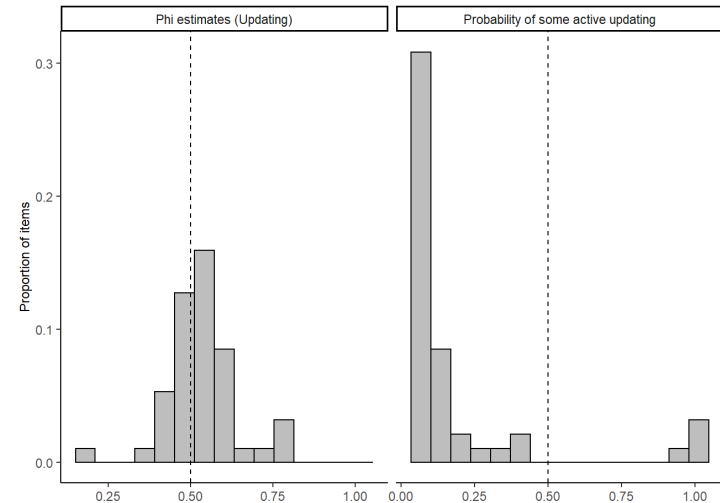
Analyses 2

- All analyses were conducted using R
- To find the optimal coefficients, two non-linear least squares (nls) regression models were estimated
  - ▸ Model 1: zero constraints
  - ▸ Model 2: ϕ is constrained to 0.5
- Model selection based on the Bayesian Information Criterion (BIC)
- If Model 2 is preferred SDM is more likely and if Model 1 is preferred AUM is more likely
- Calculation of posterior probability that the model with free estimates fits better
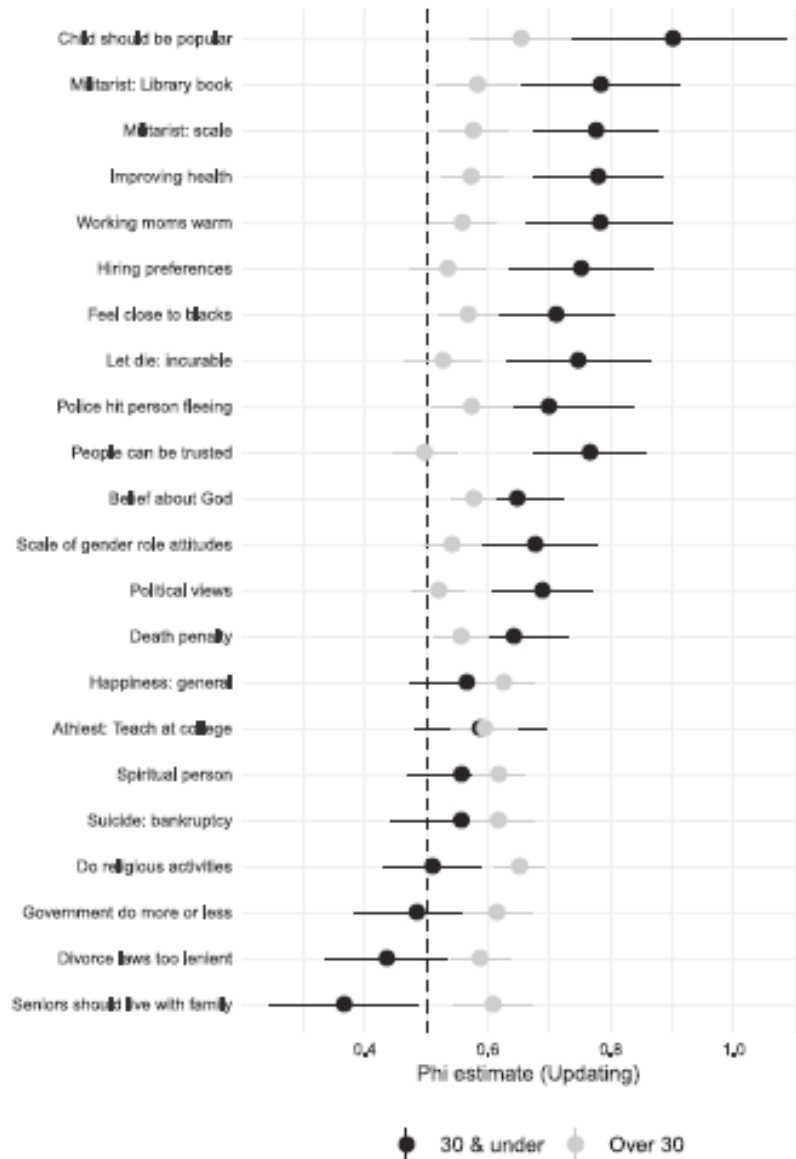
Probability of Phi Estimates

Original Study

Our Study

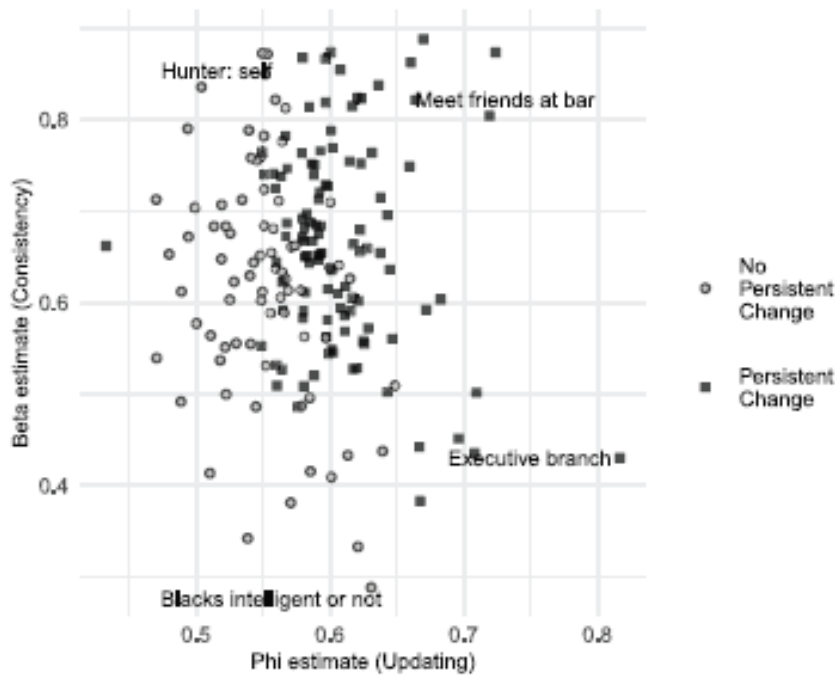![gesis Leibniz Institute for the Social Sciences]
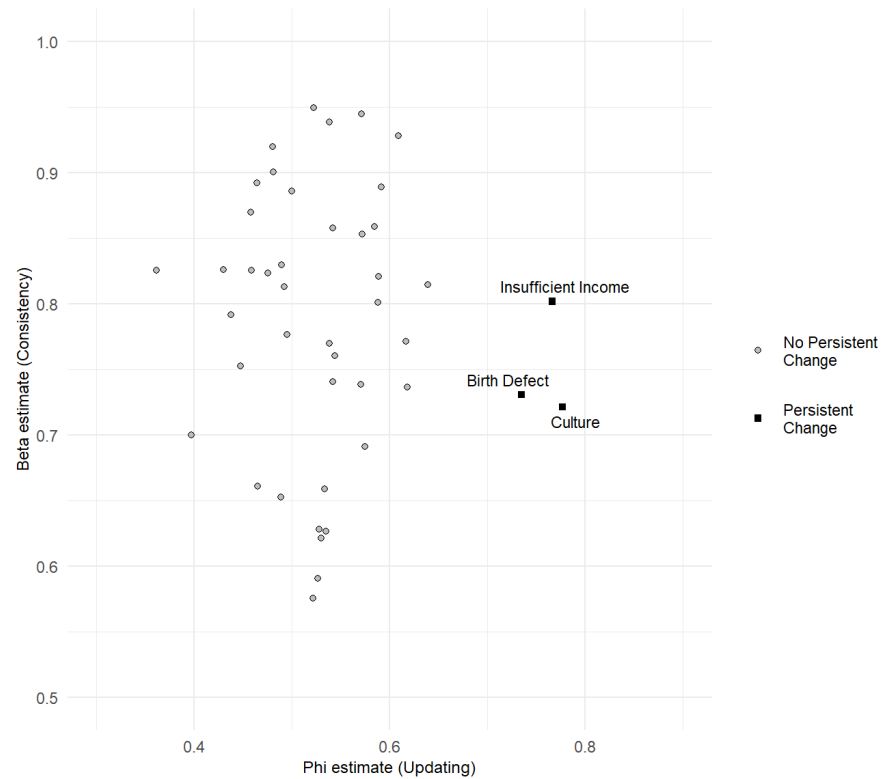
Age Group Differences

Original
Study

- We did not find age differences in our study
- Only four items showed persistent change
- Yet, due to the low number of items that were eligible for active updating, we had a low chance of seeing age differences
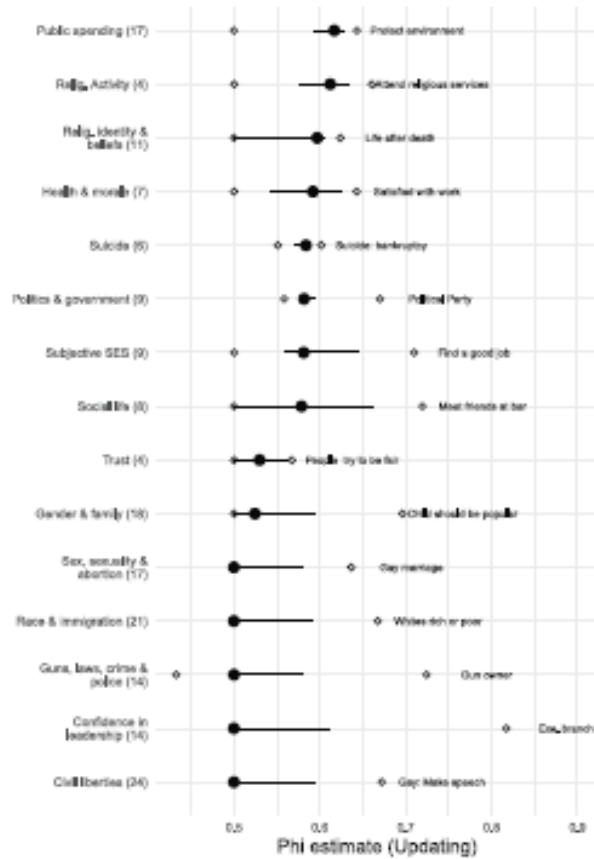
Distributions of Beta and Phi

Original Study

Our Study

Black dots show persistent change

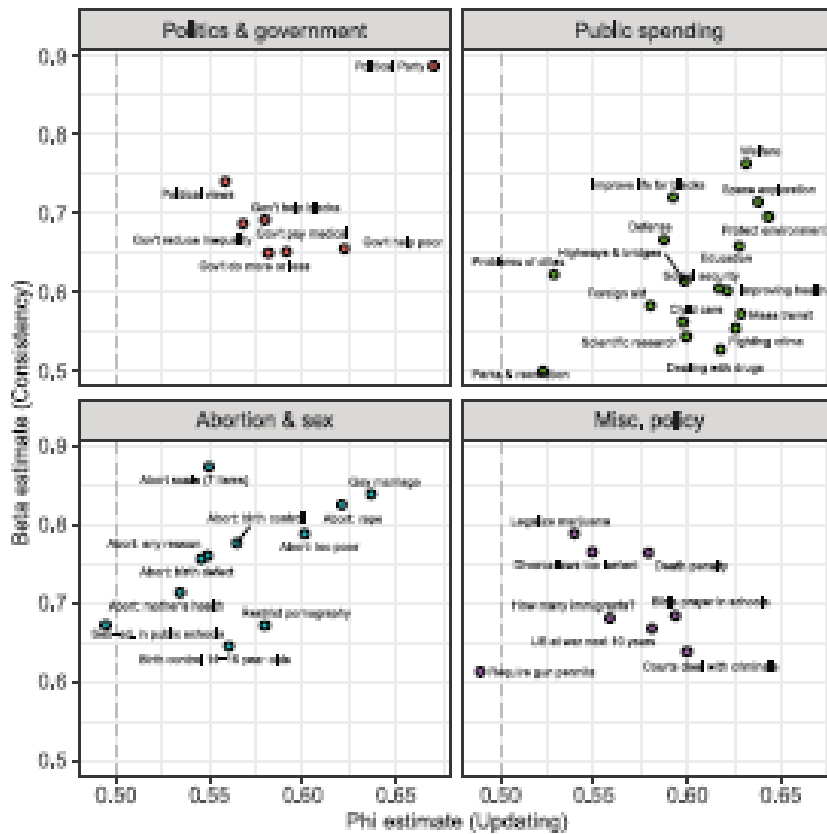# Summary of Active Updating

Original Study

Our Study

Selected Items

Original Study

Our Study

Summary of Results

- Replication of the general pattern of the settled disposition model

- Less active updating than in original study

- No differences regarding age groups

- Only very few differences regarding individual items, but they were high profile-issues (abortion, sensitive behaviors, and attitudes toward foreigners)

- Results indicate that panel surveys produce reliable estimates

Limitation and future research

- Limitation:

  ▶ Three months difference between waves instead of one year; change less likely

  ▶ Lower number of variables and respondents than in the original study

- Future research:

  ▶ Extension using the full study with six waves and an experimental design

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References

- Kiley, K., & Vaisey, S. (2020). Measuring stability and change in personal culture using panel data. *American Sociological Review*, *85*(3), 477-506.

- Vaisey, S., & Kiley, K. (2021). A model-based method for detecting persistent cultural change using panel data. *Sociological Science*, *8*, 83-95.