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Desires vs. desirability

Studying predictors of online pornography use in Germany with a combination of surveys and web tracking

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Introduction

Use of sexually explicit media (SEM)



- Has been measured (and defined) consistently inconsistent (Marshall & Miller, 2019)
- Has been found to be related to both more physical and verbal sexual violence (e.g., Wright, Tokunaga, & Kraus, 2016)
- Effects are quite heavily but also reasonably disputed (Ferguson & Hartley, 2009)
- Previous studies based on self-report → issue of social desirability

Previous research

- Young men appear to be the most heavy users of SEM (Price, Patterson, Regnerus, & Walley, 2016)
- Fewer women consume it but women who watch tend to see more extreme content compared to men (e.g., Pornhub Insights, 2018)
- Religious men watch more SEM (than nonreligious men), religious women almost not at all (Short, Kasper & Wetterneck, 2015)

Sexual Strategies Theory

- The sexes faced different adaptive problems for choosing the right mate in evolutionary history
- Different selective pressures resulted in:
 - ▶ Women are, on average, the (by far) pickier sex in both short- and long-term mating
 - ▶ Women put, on average, more emphasis on status and wealth
 - ▶ Men put, on average, more emphasis on fertility/youth and general physical appearance
 - ▶ ...

Human Sperm Competition

- Post copulatory sexual selection
- Men produce different kind of sperms (physical adaptation)
- Cognitive adaptations
 - ▶ Jealousy
 - ▶ Sexual behavior
- Men seem to adapt their masturbation patterns

Research Questions

- Can the findings from previous studies—which used different kinds of self-report data—be replicated with tracking data?
- What are the predictors of the use of online pornography?

Web Tracking Study

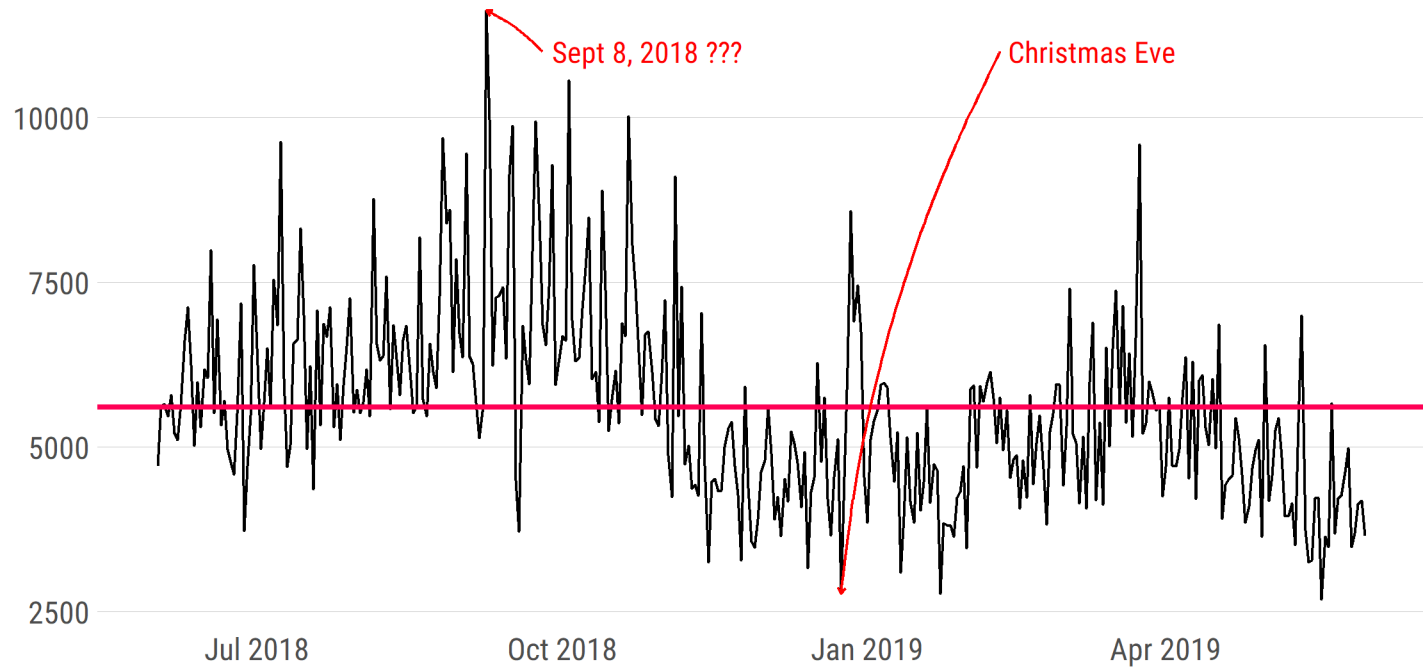
Web tracking data

- *responDi* **web tracking panel** (non-probability)
- **website visits** on the **domain level** (e.g., youporn.com)
- $N \sim 2000$ participants per month
- Data from **June 2018 to May 2019**
 - ▶ **$N = 3047$** unique participants
 - 50.72% female, age 14 to 65 ($M = 41.44$, $SD = 13.77$)
 - ▶ **~ 94 million website visits**

Online pornography use

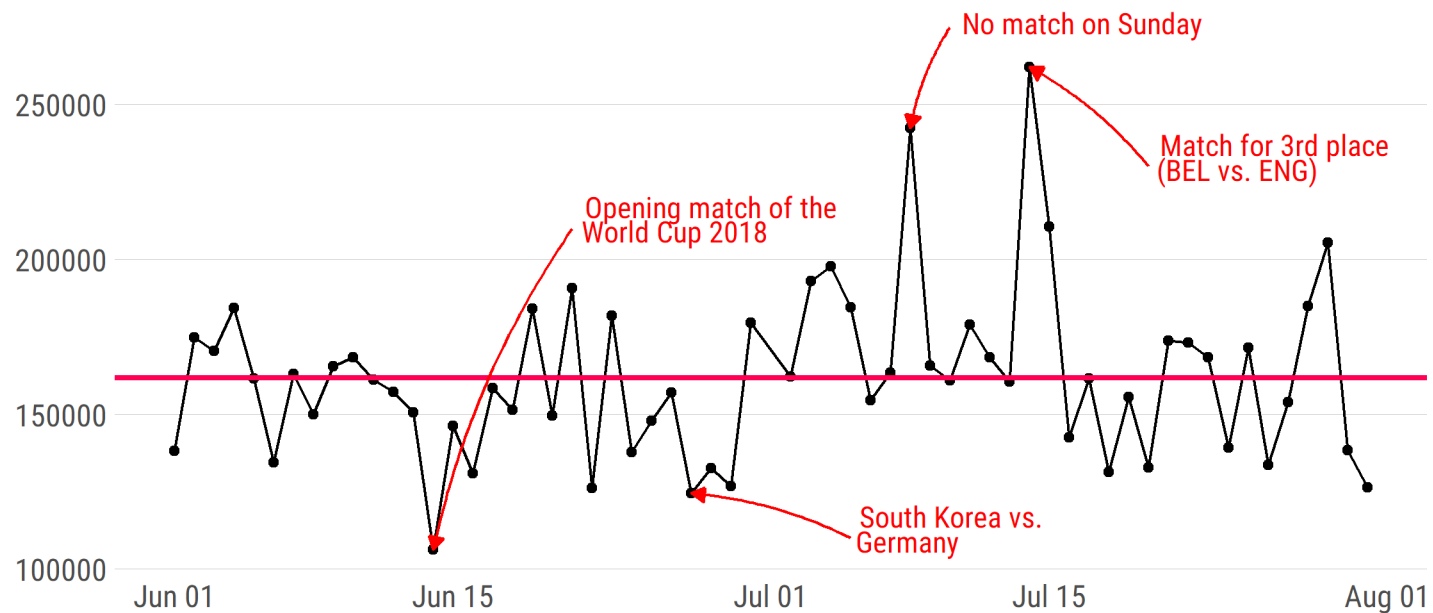
- *responDI* tracking data contains website categories: only websites from category “adult” (ranked 8th out of 781 in terms of total visits)
- manual coding of websites with > 1000 total visits in our sample (→ $N = 284$ websites)
 - ▶ For our analyses we only included websites from the categories “video portal”, “photo portal”, “camera portal” (excluding, e.g., casual dating sites)
- online pornography user = person who visited one of these website at least once in the time she/he participated in the web tracking

Total number of visits to porn websites per day

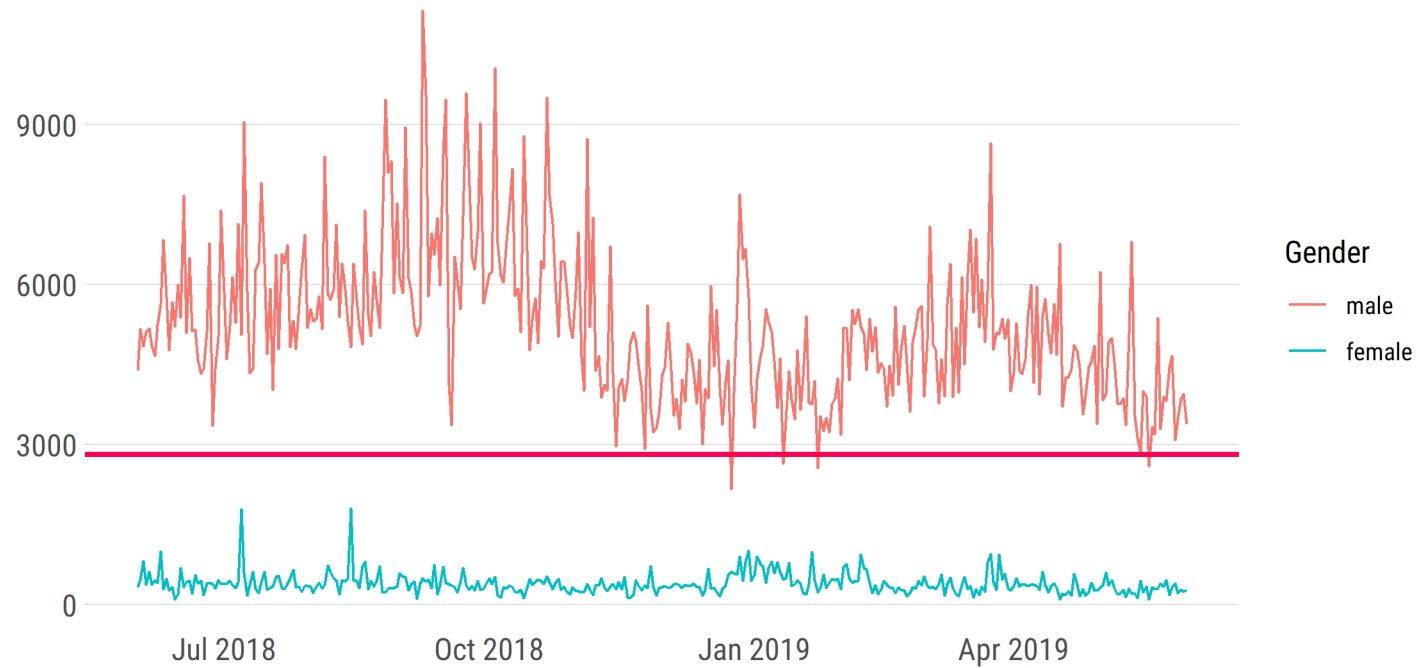


Total amount of time spent on porn websites per day, June & July 2018

in seconds

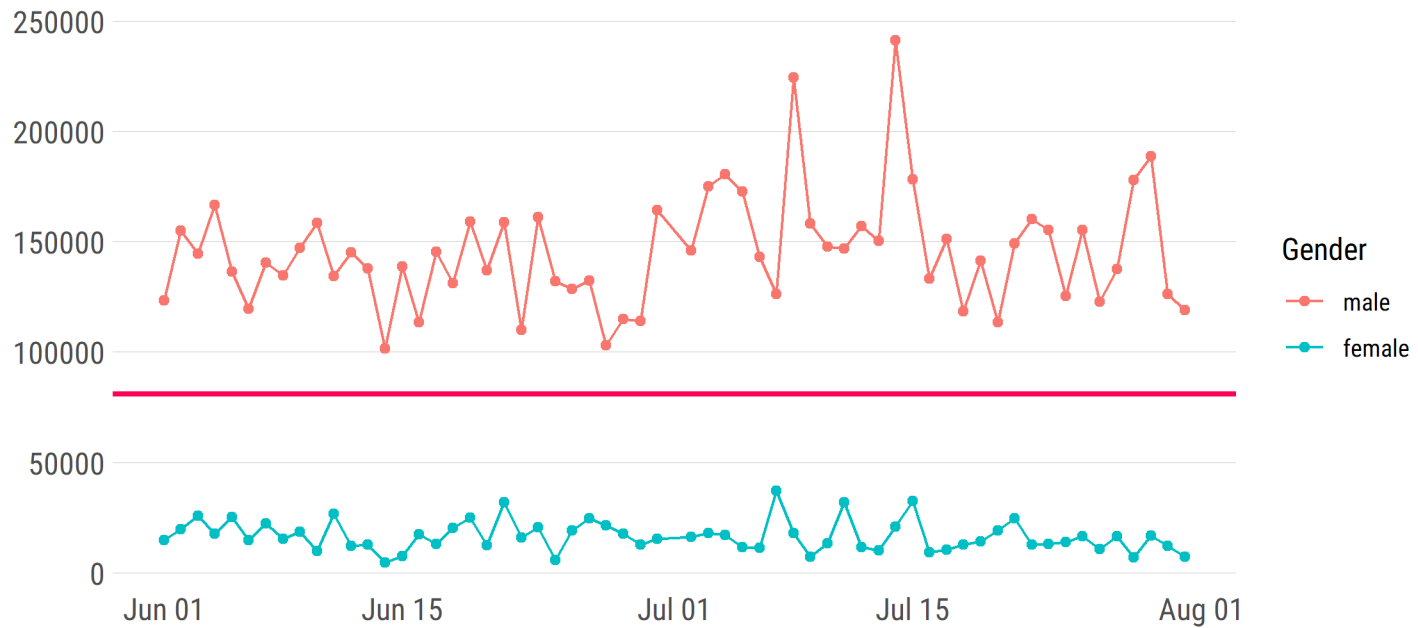


Total number of visits to porn websites per day



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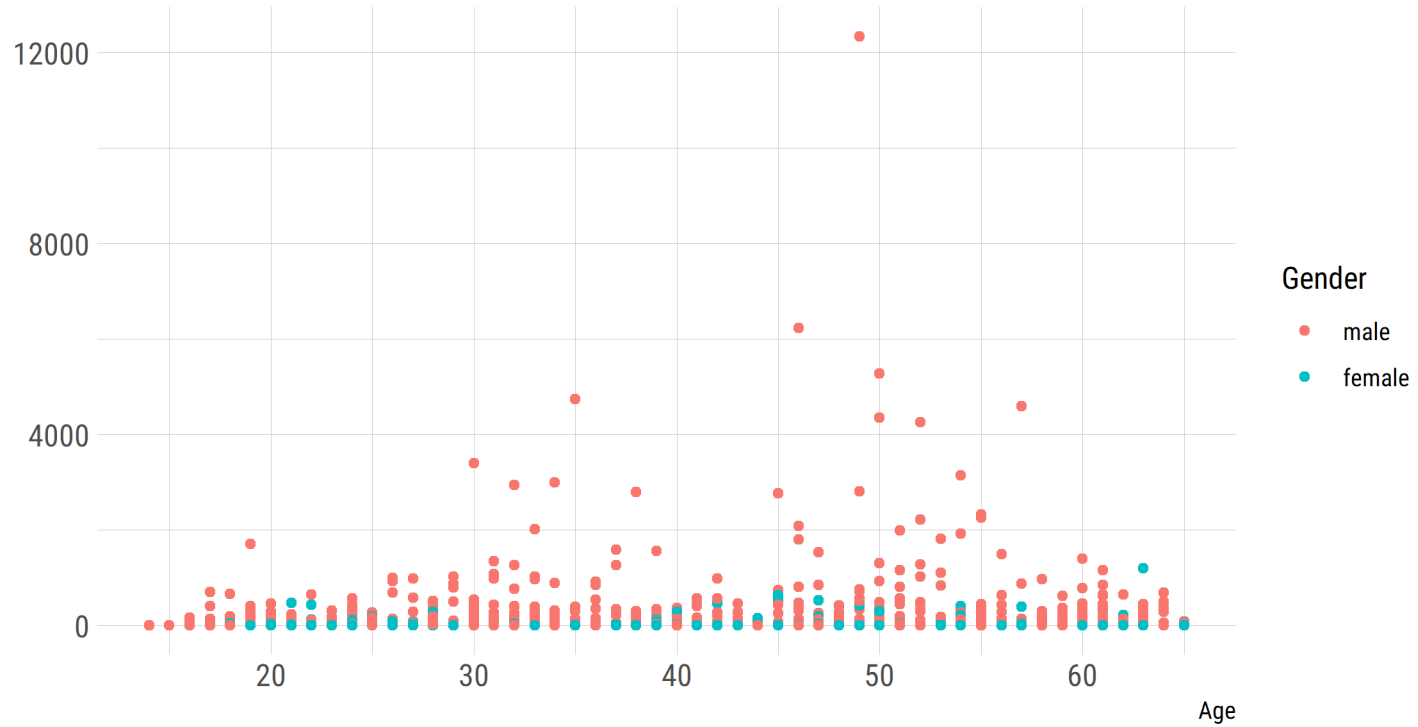


Share of online pornography users

| Users | Non-Users |
|---------------|---------------|
| 1418 (46.13%) | 1656 (53.87%) |

| | Users | Non-Users |
|--------|--------------|---------------|
| Male | 1003 (66.2%) | 512 (33.8%) |
| Female | 415 (26.62%) | 1144 (73.38%) |

Avg. number of porn website visits per month



Linking Web Tracking and Survey Data

Individual level correlates of SEM

- Tracking data confirms strong difference in SEM consumption between men and women
 - ▶ Especially heavy SEM users are exclusively men

- Are there social and psychological factors that can explain the difference between women and men?

- Three “blocks” of individual level covariates:
 - ▶ Demographic attributes (needs and opportunities)
 - ▶ Gender and social attitudes
 - ▶ Moral Foundations & Religion

Survey data

- 3 online surveys
- Focus here on data from **3rd online survey**
 - ▶ collected 22/05/2019 – 03/06/2019
 - ▶ ***N* = 1323** (completed surveys)
 - 48.15% female, age 17 to 87 ($M = 45.21$, $SD = 12.79$)
 - ▶ different topics incl. demographics, attitudes, & values

Operationalization I: structural variables

- ▶ Sex (men=0; women=1)
- ▶ Age (years)
- ▶ Relationship status
 - Married in common household (Reference category)
 - Relationship in common household
 - Relationship no common household
 - Single
- ▶ Education (highest general school degree)
- ▶ Income (net household income in 13 categories)

Operationalization II: Gender attitudes & SDO

- ▶ **Hostility** dimension from Ambivalent Sexism Inventory (ASI) (selection of 4 items)
 - “Frauen übertreiben im Allgemeinen die Probleme, die sie am Arbeitsplatz mit Männern haben.” (1=disagree, 5=agree)
- ▶ **Modern Sexism Inventory** (MSI) (selection of 6 items)
 - „Diskriminierung von Frauen ist in Deutschland immer noch ein Problem.“ (1=disagree, 5=agree)
- ▶ **Gender role attitudes** from World Values Survey
 - „Alles in allem sind Männer bessere Politiker (Manager) als Frauen.“ (1=disagree, 5=agree)
- ▶ **Social Dominance Orientation**
 - „Unterlegene Gruppen sollten unter sich bleiben.“ (1=disagree, 5=agree)

Operationalization III: Moral foundations

► **Moral foundations questionnaire (MFQ):**

- „Oft bewerten wir, ob das, was andere Menschen tun, richtig oder falsch ist. Dabei sind verschiedenen Menschen ganz unterschiedliche Dinge wichtig. Wenn Sie entscheiden, ob etwas richtig oder falsch ist, inwieweit sind folgende Überlegungen für Sie von Bedeutung?“
- **Care:** “Ob die Gefühle von jemandem verletzt werden“(1=disagree, 6=agree)
- **Purity:** “Menschen sollten keine Dinge tun, die eklig sind, auch wenn keiner dabei gestört oder verletzt wird.“ (1=disagree, 6=agree)

Operationalization III: Moral foundations

► **Self-rated religiosity**

- „Unabhängig davon, ob Sie einer Kirche oder Gemeinde angehören, würden Sie von sich sagen, dass Sie eher religiös oder eher nicht religiös sind?“ (1=not religious, 7=very religious)

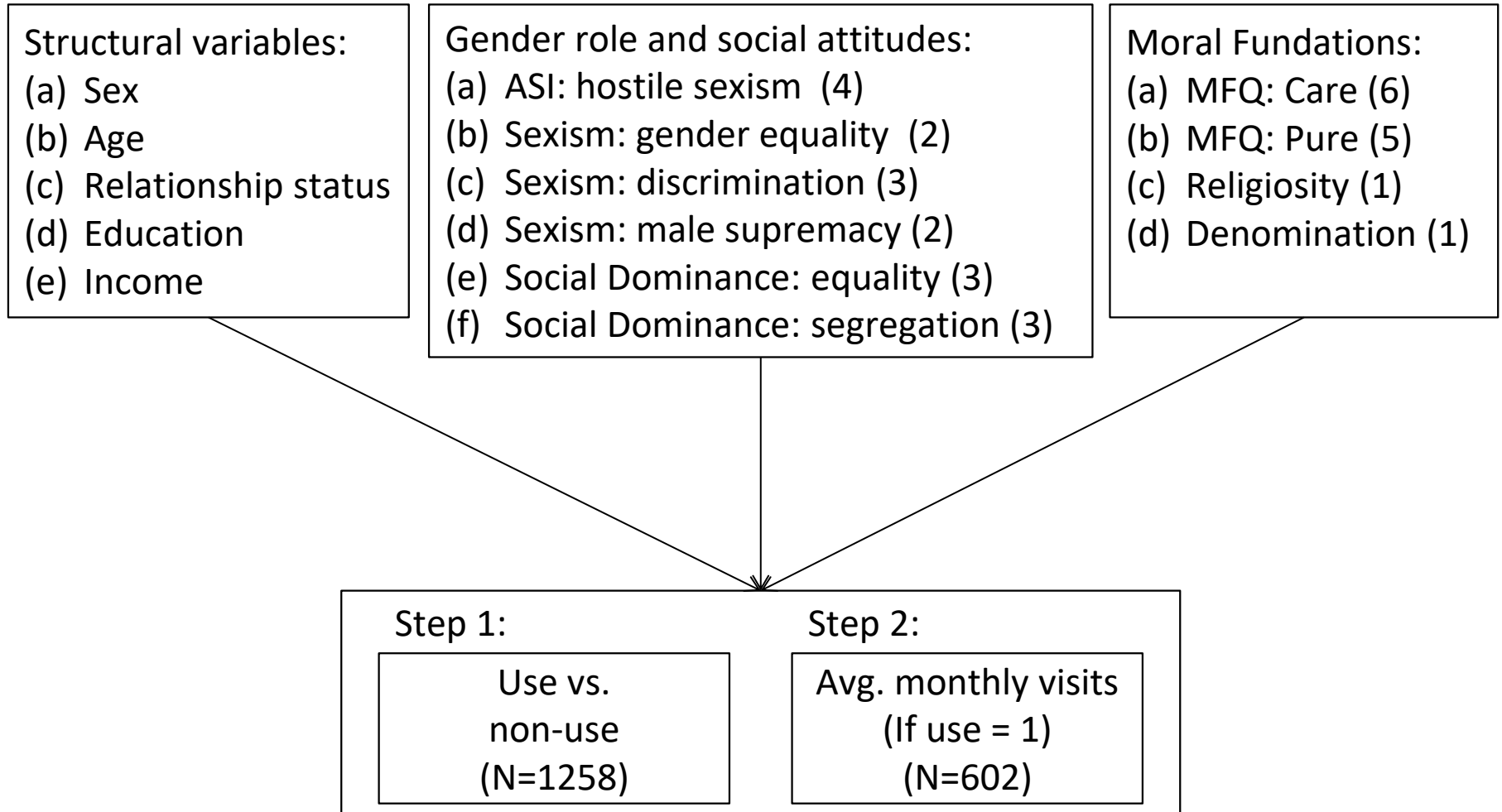
► **Religious denomination (Church membership)**

- Protestants
- Free Churches
- Catholics
- Other denomination
- *No denomination (reference category)*

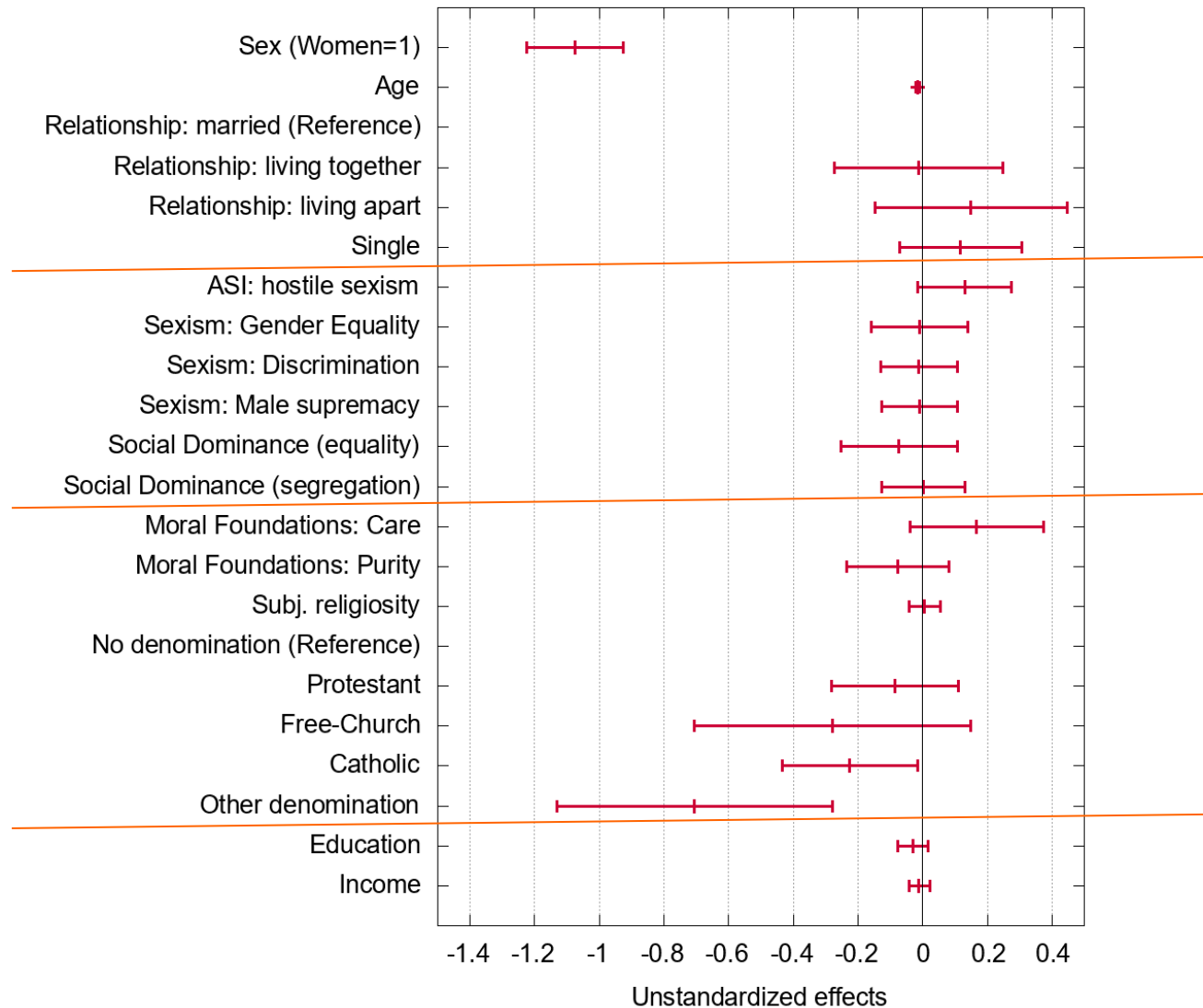
Modelling strategy

- Exclusion of “influential cases” with a deviation of more than 2 SD in monthly average visits of porn sites (~780 monthly average visits).
- Measurement part of the model:
 - ▶ Latent variables for Hostility (ASI), Gender attitudes (three scales), Social Dominance Orientation (SDO), Moral Foundations
- Two step approach
 - ▶ First, logistic regression of individual level covariates on online pornography consumption vs. non-use
 - ▶ Second, linear regression on average monthly SEM-visits if respondent had at least 1 visit during the tracking period

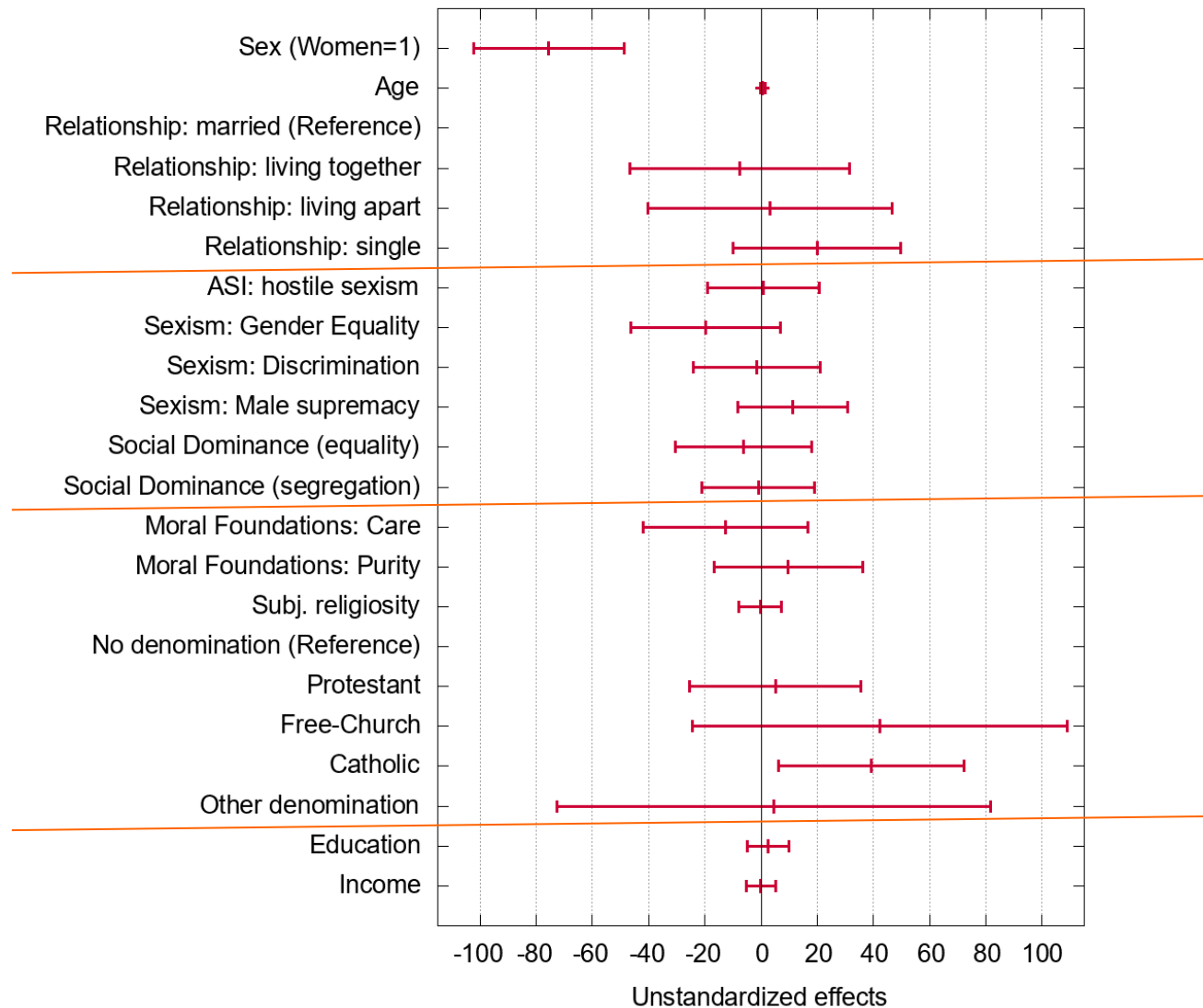
Model overview



DV: Usage vs. Non-usage



DV: avg. frequency per month (users only)



Discussion

Discussion

- Web tracking data confirm that men consume more SEM than women
- Gender attitudes, Social Dominance Orientation and Moral Foundations are unrelated to SEM consumption in our sample
- Relevant social and psychological factors included, but only sex and religiosity emerge significant predictors.
 - ▶ Sexual Strategies Theory
 - ▶ Human Sperm Competition
- However:
 - ▶ Ex post facto explanation

Limitations

- type of sample: non-probability, web tracking opt-in (e.g., younger, more highly educated than population avg.)
- participants can turn tracking off
 - ▶ no use vs. not tracked?
 - ▶ Social attitudes and moral foundations might be related to hiding SEM consumption in web tracking
- tracking data only on domain level
 - ▶ distinction between different types of content not easily possible
 - ▶ E.g., violent SEM cannot be identified
- No data on motivation for use or effects of use

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