

Gender and Political Representation

Session 11: Language

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What we did in the last session...

- we discussed the idea of ‘critical masses’
- we engaged with empirical literature on how women serve as role models for other women who are considering pursuing political careers
- from a research design perspective, we clarified how to construct good research questions and arguments

Plan for today

1. We are talking about how language shapes our understanding of social realities and discuss how gender-inclusive language challenges these perceptions
2. Again, we seek guidance on how to write a term paper, focusing on the choice of the right design

The formation of gendered stereotypes



Figure: Children and gender roles (YouTube)

What does the video show? How is it related to our session today?

On linguistic relativity

Based on prior literature, Boroditsky, Schmidt, and Phillips (2003) applied the theory of linguistic relativity to grammatical gender

- general argument: thought is affected by language
- “categories and distinctions of each language enshrine a way of perceiving, analyzing, and acting in the world” (Boroditsky, Schmidt, and Phillips 2003, p. 61)
- grammatical gender is one form of categorization in language

What do you think? Why might language be relevant? Why not?

On linguistic relativity

- grammatical gender is often arbitrary (e.g., *das Mädchen* in German is a neuter although girl describes feminity)
- grammatical gender differs across languages (e.g., *das Problem* vs. *il problema*)
- but: in socialization, children may try to connect grammatical differences with real-world differences; looking for confirmation why "der Chef" (the boss) is male

Evolution of gendered features in language

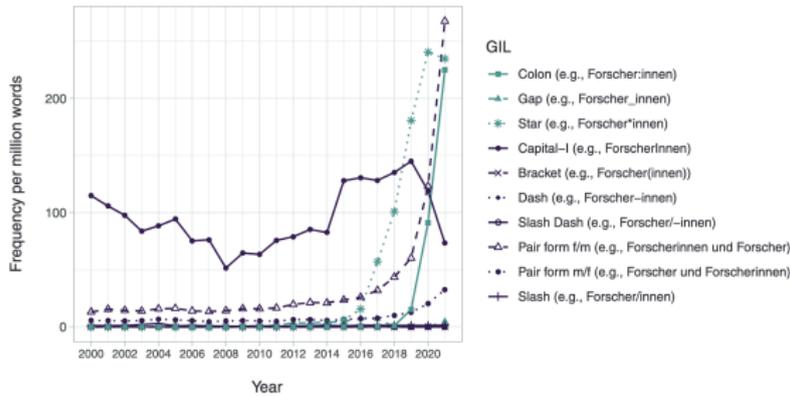


Figure 2 Frequency of different types of gender-inclusive language. Data: DeReKo

Figure: Evolution of gender-inclusive language in the German news media (Waldendorf 2024, p. 364)

What's the research about and what do the findings show, @Louis?

Evolution of gendered features in language

“I will not join in this language rape!”⁷

“Kiss my ass with your sick gender shit! Your equally sick coders should stop this bed-wetting whining and get used to life.”

“I hate this gender shit!”

Figure: Reactions to imposing usage of GIL on German voters (Marx 2025)

Indication for a backlash or not, @Ákos?

Survey on the reading



Language and public attitudes

In relation to the studies discussed before, what's the novelty of Pérez and Tavits (2019)?

Language and public attitudes

- **Research Question:** How do gendered features in language affect opinions on gender equality?
- **Main Argument:**
- **Data and Method:**
- **Results:**
- **Implications:**

Dissecting this week's argument

In groups of four, try to dissect the argument by Tavits and Pérez (2019) into the four parts we discussed two weeks ago. [5 minutes]

Dissecting this week's argument

1. **Expectations:** If people are approached by a genderless language, they held more progressive attitudes on gender.
2. **Causal mechanisms:**
 - 2.1 Grammatical gender incentivizes gender-based distinctions that could affect thinking (e.g., *linguistic relativity*)
3. **Assumptions:** Language affects how people perceive their surroundings
4. **Scope conditions** (study 1 + 2):
 - Bilingual respondents (what would we expect for monolingual respondents?)
 - Specific region (and meaning of linguistic origins)

Pérez and Tavits (2019) are less explicit about other potential mechanisms: through which alternative paths could language feature evoke more liberal/progressive attitudes?

Dissecting this week's argument

- **Research Question:** How do gendered features in language affect opinions on gender equality?
- **Main Argument:** Genderless languages make people more progressive on gender.
- **Data and Method:**
- **Results:**
- **Implications:**

Excursion On choosing a research design

In the empirical social sciences, we can choose between two types of research designs:

1. quantitative designs
2. qualitative designs

The design should be selected based on your research question and theory and not the other way around!

What are the advantages of quantitative and qualitative approaches?

Excursion On choosing a research design

Oftentimes, both types of designs are possible, both allow to test causality and follow a positivist-empirical approach to the social sciences. Their research goals might, however, slightly differ:

Quantitative designs

- ...aim to identify systemic patterns across cases; disregards non-systemic, residual part
- ...focus on average effects
- ...zoom in on how on a specific cause X that leads to outcome Y
- ...often involves large- N (many cases)

Excursion On choosing a research design

Qualitative designs

- ...emphasize more often on the non-systemic, idiosyncratic part
- ...dedicate more space to case/event knowledge
- ...establishes nuances, seeks to explain within-case variation and occurrence of rare cases
- ...typically involve small- to medium-N

Excursion On choosing a research design

Quantitative analysis

Qualitative analysis

Type of Data

Survey (experiments), annotated text and/or audio, administrative data, web data

(Un)structured interview data, archival text or audio sources, data on processes

Methods

- cross-tabulation
- regression
- scaling models (e.g. item-response, factor analyses)
- quantitative content analyses and machine-learning approaches (text, images, audio)

- *within-analysis*: process tracing, analytic narratives, ethnography
- *between-analysis*: structured comparisons (most-similar / most-differences)
- *medium-N*: qualitative content analysis

Data and Method

Pérez and Tavits (2019) propose a three-staged design. Which methods do they use, which functions do their studies fulfill?

Data and Method

1. Survey experiment in Estonia
2. Replication experiment with placebo test and social norm enforcement (again in Estonia)
3. Cross-country comparison for generalization

Data and Method

At the core of their study, they pursue a survey-experiment in Estonia:

- they only select bilinguals who speak Estonian (genderless) and Russian (gendered)
- randomly assigned to one of these languages
- asked about their opinion on gender stereotypes (emotions), policy (paternity leave) and representation in politics (defense minister, political recruitment)

The second study analyses whether social norm enforcement mitigates the role of language. How do they implement the social norm framework?

Data and Method

- study 2 focuses on the empirical expectations introduced by Bicchieri, Muldoon, and Sontuoso (2011)
- treatment condition: respondents are either exposed to state their agreement on “calling on party leaders to encourage more women to run for office” or on the same statement with norm supplement “a proposal that about 80% of the people in Estonia favor.”

Data and Method

In the third study,

- similar items from the World Values Study
- comparison between respondents in countries with genderless language from those with gendered languages
- control for various factors (e.g. education, income, employment, marital status)

Data and Method

- **Research Question:** How do gendered features in language affect opinions on gender equality?
- **Main Argument:** Genderless languages make people more progressive on gender.
- **Data and Method:** Threefold quantitative design with experiments in Estonia and cross-country study
- **Results:**
- **Implications:**

Findings

Table 1. Effect of Genderless Language on Opinions toward Gender Equality (Study 1)

	Model 1: Emotional Women, Relative Rating (OLS)	Model 2: Paternity Leave (Probit)	Model 3: Female Defense Minister (Probit)	Model 4: Female Political Recruitment (Ordered Probit)
Estonian interview	-.20* (.12)	.21** (.08)	.22** (.08)	.14** (.06)
Constant	1.34*** (.09)	-.38*** (.05)	.40*** (.05)	
N	1,153	1,140	1,156	1,154

Note. Dependent variables are indicated in column headings. OLS = ordinary least squares. All two-tailed tests.

* $p < .10$.

** $p < .05$.

*** $p < .01$.

Figure: Main results from Study 1

Let's try to read these results together.

Findings

Table 2. Effect of Genderless Language on Opinions toward Gender Equality (Study 2)

	Replication			Placebo Test	Social Norms Experiment	
	Model 1: Paternity Leave (Probit)	Model 2: Female Defense Minister (Probit)	Model 3: Female Political Recruitment (Ordered Probit)	Model 4: Suicide Placebo Item (OLS)	Model 5: Run for Office, No Norm (Ordered Probit)	Model 6: Run for Office, with Norm (Ordered Probit)
Estonian interview	.41** (.16)	.26* (.19)	.01 (.14)	.15 (.28)	.36** (.21)	.22 (.22)
Constant	-.20 (.11)	.74** (.12)		2.14** (.19)		
N	251	248	253	243	134	123

Note. Dependent variables are indicated in column headings. OLS = ordinary least squares.

* $p < .10$, one-tailed tests.

** $p < .05$.

Figure: Main results from Study 2

How do their results from study 2 differ?

Findings

- **Research Question:** How do gendered features in language affect opinions on gender equality?
- **Main Argument:** Genderless languages make people more progressive on gender.
- **Data and Method:** Threefold quantitative design with experiments in Estonia and cross-country study
- **Results:** Exposure to genderless languages makes participants more liberal in terms of gender attitudes
- **Implications:**

An alternative design?

In the remaining minutes, discuss in groups through which alternative design you could test the effects of languages on gender equality.

An alternative design?

Alternative designs...

- ...
- ...
- ...

Implications

Our world is increasingly reliant by language – as becomes evident in the rise of language models.

```

▶ unmasker = pipeline("fill-mask", model="bert-base-uncased")
  result = unmasker("This man works as a [MASK].")
  print([r"token_str" for r in result])

  result = unmasker("This woman works as a [MASK].")
  print([r"token_str" for r in result])

🔄 config.json: 100% ██████████ 570/570 [00:00<00:00, 67.6kB/s]
  model.safetensors: 100% ██████████ 440M/440M [00:02<00:00, 260MB/s]
  Some weights of the model checkpoint at bert-base-uncased were not used when initializing Bert
  - This IS expected if you are initializing BertForMaskedLM from the checkpoint of a model train
  - This IS NOT expected if you are initializing BertForMaskedLM from the checkpoint of a model
  tokenizer_config.json: 100% ██████████ 48.0/48.0 [00:00<00:00, 5.64kB/s]
  vocab.txt: 100% ██████████ 232k/232k [00:00<00:00, 1.03MB/s]
  tokenizer.json: 100% ██████████ 466k/466k [00:00<00:00, 28.4MB/s]
  Device set to use cuda:0
  ['carpenter', 'lawyer', 'farmer', 'businessman', 'doctor']
  ['nurse', 'maid', 'teacher', 'waitress', 'prostitute']
  
```

Figure: How language models replicate biases (here: Bert)

Implications

```
unmasker = pipeline("fill-mask", model="bert-base-uncased", top_k=10)
result = unmasker("The politician's name is [MASK].")
print([r["token_str"] for r in result])
```

Some weights of the model checkpoint at bert-base-uncased were not used when initializing BertForMaskedLM. This IS expected if you are initializing BertForMaskedLM from the checkpoint of a model trained on masked language modeling. This IS NOT expected if you are initializing BertForMaskedLM from the checkpoint of a model trained on causal language modeling. Device set to use cuda:0

['unknown', '{UNK}', 'peter', 'george', 'c', 'joseph', 'christian', 'hon', 'uncertain', 'david']

Figure: How language models replicate biases in politics (here: Bert)

Is there a solution to this?

Implications

Moderation is all it needs...

- until then, be aware that language might replicate discriminatory priors

Implications

- **Research Question:** How do gendered features in language affect opinions on gender equality?
- **Main Argument:** Genderless languages make people more progressive on gender.
- **Data and Method:** Threefold quantitative design with experiments in Estonia and cross-country study
- **Results:** Exposure to genderless languages makes participants more liberal in terms of gender attitudes
- **Implications:** Language shapes how we perceive and assess the world.

What we've learned today...

- we introduced the concept of linguistic relativity
- on a meta level, we talked about different ways to craft research designs

To prepare for the week after next...

- next week, there is one more session in which we try to wrap-up the seminar
- in addition, you should prepare an elephant pitch for your term paper:
 - two minutes maximum presentation to your peers about a preliminary idea
 - the idea should include a potential research design
 - next week, you'll first present your ideas in small groups before discussing them in class

Thank you for your attention!
Any further questions?

Literature

-  **Bicchieri C, Muldoon R, and Sontuoso A (2011)** Social Norms.
-  **Boroditsky L, Schmidt LA, and Phillips W (2003)** Sex, Syntax, and Semantics. *Language in Mind: Advances in the Study of Language and Thought*. Ed. by D Gentner and S Goldin-Meadow. Cambridge: MIT Press, 2003, 61–79.
-  **Marx P (2025)** Is There a Backlash Against Identity Politics? Experimental and Focus Group Evidence on the Conflict Over Gender-Neutral Language in Germany. *Comparative Political Studies*, 00104140251328038.
-  **Pérez EO and Tavits M (2019)** Language Influences Public Attitudes toward Gender Equality. *The Journal of Politics* **81** (1), 81–93.

Literature

-  **Tavits M and Pérez EO** (2019) Language Influences Mass Opinion toward Gender and LGBT Equality. *Proceedings of the National Academy of Sciences* **116** (34), 16781–16786.
-  **Waldendorf A** (2024) Words of Change: The Increase of Gender-Inclusive Language in German Media. *European Sociological Review* **40** (2), 357–374.