

CONJOINT ANALYSIS IN STUDYING DESCRIPTIVE POLITICAL REPRESENTATION

Laura V. Felone[†], Elliott D. August[‡], and Khasan Redjaboev[†]

[‡]School of Human Ecology and [†]Department of Political Science, University of Wisconsin - Madison



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Why Study Political Representation?

- Equality in political representation is a core value of democracy, and descriptive representation often leads to better substantial representation.
 - Normatively underachieved: As of 2019, women held 40% or more of legislative mandates in only 11 democracies (UN Women).
 - Empirically important: Improved political representation brings direct public good benefits.

Our Contribution

Replicate Teele et al.'s (APSR, 2018) substantively important question about political representation with what can/cannot be done given recent methodological developments on conjoint experiments [8]

- Primary findings (based on AMCEs) from paired conjoint survey experiment of U.S. voter and legislator preferences about gender representation:
 - No outright hostility or double standards towards female candidates.
 - Voters and legislators prefer candidates who are married with children.
- Preference causes double bind → women underrepresented in politics.

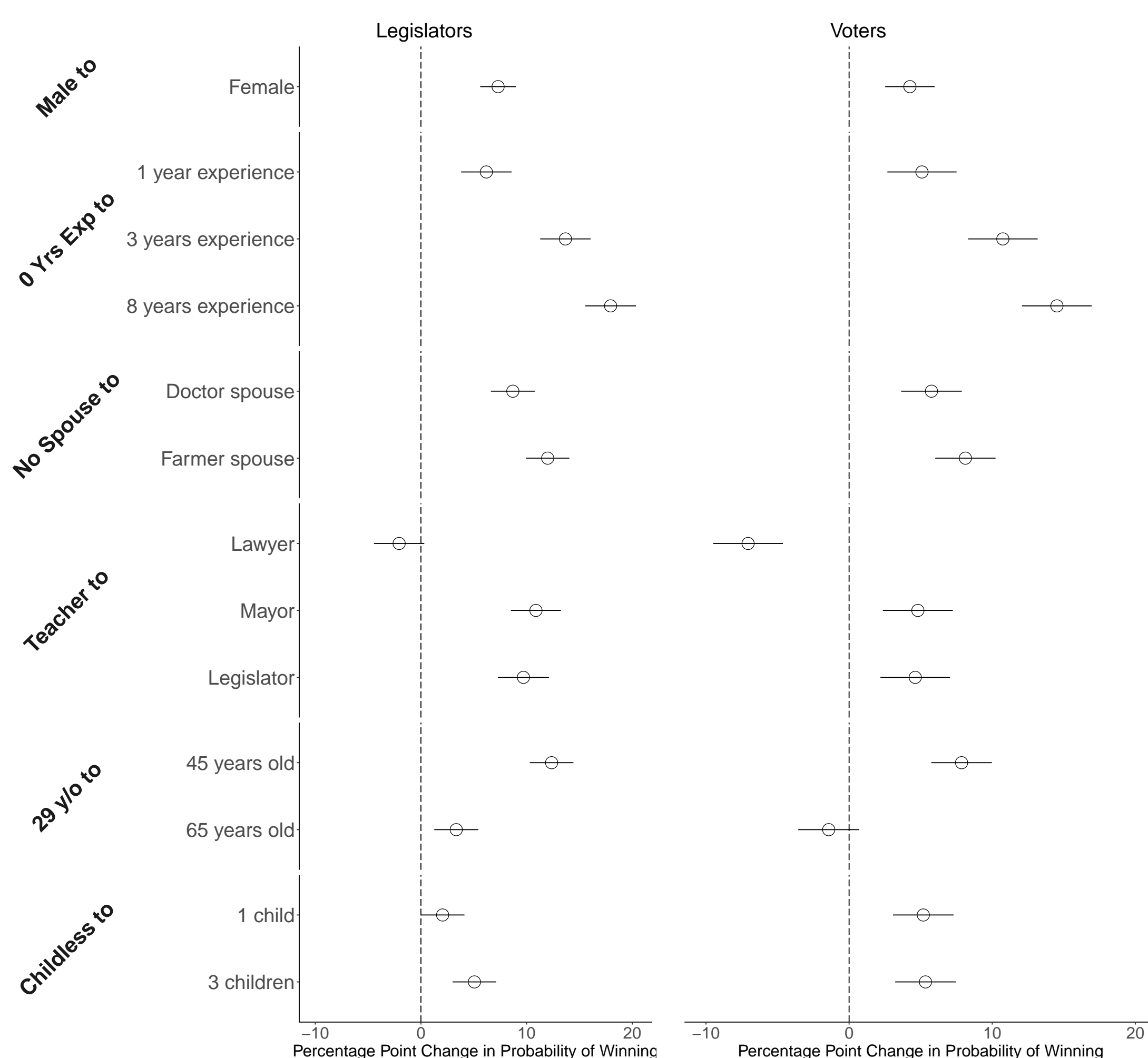


Fig. 1: Replication of Teele et al.'s AMCE results

- Average Marginal Component Effect (AMCE):** marginal effect of a specific attribute of a profile averaged over the joint distribution of the remaining attributes of the profile [5].
 - I.e. the estimate of relative favorability of profiles of certain attributes with counterfactual levels of an attribute.
- Issue: AMCEs cannot give conclusive causal story.

Conjoint Outcomes (AMCEs) with Limitations

- AMCEs provide insight about:
 - descriptive variation in preferences within a group and across features;
 - the degree to which a feature increases or decreases respondents' favorability toward a conjoint profile relative to a reference category.
- AMCEs do NOT provide generalizable insights about absolute levels of preferences (the level of support for a feature) between groups [6].
- A positive AMCE of candidate-feature A over A' does NOT indicate that [1]:
 - A majority of voters prefer candidates featuring A to A' ;
 - All else equal, median voter prefers candidates with A to ones with A' ;
 - Feature A beats feature A' in most elections.
- AMCE takes into account both an individual respondent's direction of preference (A or A') AND the intensity of that preference (how much they prefer A to A').
- AMCEs share two problematic characteristics with Borda scores [1]:
 - AMCEs fail to always capture or reflect a majority population preference;
 - AMCEs for one category/attribute are susceptible to skew based on the introduction of other attributes (i.e. fails independence of irrelevant alternatives).

Critical Re-evaluation of Conjoint Designs

- Proposition 2 uses the relationship between AMCEs and the Borda rule to calculate bounds on an AMCE, which display the reasonable proportion of the population who prefer the feature examined in the AMCE to the baseline of that feature [1].
 - E.g. from Fig 2.: proportion of voter population in sample that prefers female candidates over males could be anywhere between 5-100%.
- Bounds account for potential skew in AMCEs caused by ranking feature preferences among respondents (e.g. a single issue voter who always supports women independent of other characteristics such as age, experience, etc.).

| | | AMCE | Lower Bnd. | Upper Bnd. | Features |
|---------------|------------|--------|------------|------------|----------|
| Male to | Voter | 0.0425 | 0.0526 | 1 | 2 |
| Female | Legislator | 0.073 | 0.1141 | 1 | 2 |
| Single to | Voter | 0.0576 | 0.0561 | 1 | 3 |
| MD Spouse | Legislator | 0.087 | 0.1008 | 1 | 3 |
| Single to | Voter | 0.0812 | 0.0917 | 1 | 3 |
| Farmer Spouse | Legislator | 0.1199 | 0.1504 | 1 | 3 |
| Child-free to | Voter | 0.0518 | 0.0476 | 1 | 3 |
| 1 Child | Legislator | 0.0205 | 0.0014 | 1 | 3 |
| Child-free to | Voter | 0.0534 | 0.0499 | 1 | 3 |
| 3 Children | Legislator | 0.0506 | 0.0464 | 1 | 3 |

Fig. 2: Bounds on Teele et al. AMCEs utilizing Proposition 2 (N=856)

Implications of Re-evaluation of Teele et al.

Issues with Teele et al. results based on AMCEs:

- Cannot conclude a majority preference for candidates that are married with children.
- Cannot conclude that candidates who are male, married, and with children will beat candidates who are female, married, and with children; therefore, cannot conclude that there is a double bind.

Issue behind basing both initial conclusions on AMCEs hinges on not knowing the intensity of preferences and if the intensity of preferences for these characteristics (married and with children) is homogeneous.

Suggestions for Future Research

- Conjoint use in future:
 - Internal validity and experimental realism are still key. Follow recommendations in [1] about clear language to help this.
 - A conservative randomization design and a small number of binary attributes → sufficiently small bounds on an estimated AMCE to reflect majority preference (difficult).
 - AMCE violates the IIA axiom → researchers must include the full set of theoretically relevant attributes in their randomization scheme (difficult).
- Replicate and revisit other articles utilizing conjoins and AMCEs to make claims about aspects of representation like gender [4, 7], class [2], and social characteristics more generally [3].
- Re-consider natural and field experiments as alternatives.

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