

Tutorial 04, Michaelmas Term

Research Methods for Political Science (PO3600)

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<http://muellerstefan.net/research-methods>

- Dependent variable: the characteristic you wish to explain (outcome variable)
- Independent variable: the explanation or one of the explanations (explanatory variable)

Covariation vs Causality

- Covariation: two or more variables tend to change together (direction is unknown)
- Causality: change in one or more variables leads to or 'forces' changes in one or more other concepts or variables.

- What is a hypothesis?

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- Testable statements derived from a theory
- Assuming (direction of) relationship between two variables

Validity

- Measures and/or cases correspond to the concepts they are intended to reflect?
- Are we really measuring the concept?
- Internal and/vs external validity

Reliability

- Consistency (repeatability) with which a measuring instrument allows assignment of values to cases
- Inter-rater reliability; test-retest reliability; parallel forms reliability

Examples of Validity and Reliability



**Reliable
Not Valid**



**Low Validity
Low Reliability**



**Not Reliable
Not Valid**



**Both Reliable
and Valid**

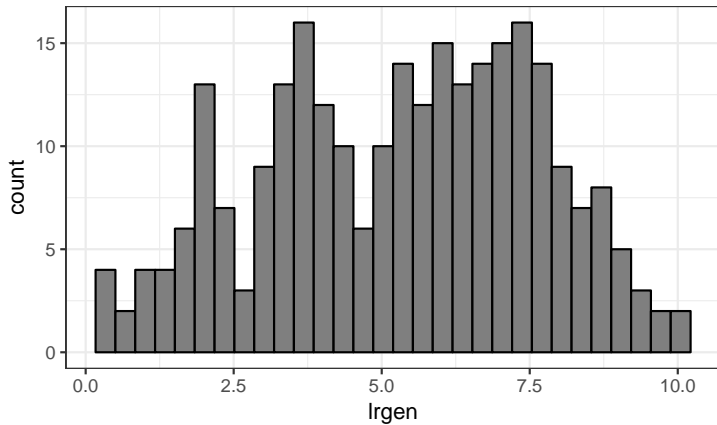
by Experiment-Resources.com

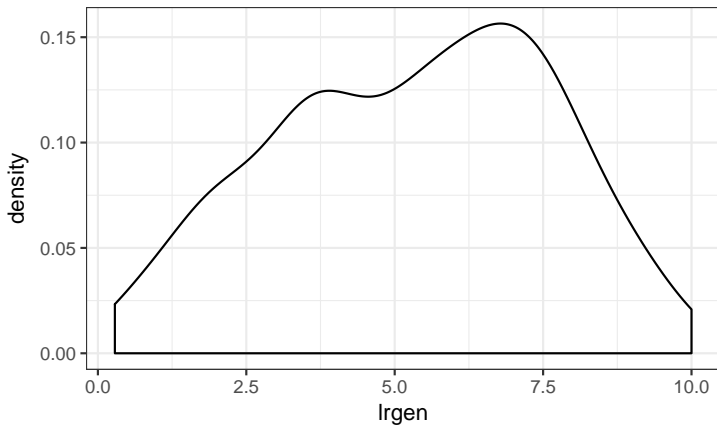
- Download and load the following dataset:
`http://tinyurl.com/chesdata2014`
- Download the codebook: `http://tinyurl.com/chescodebook`
- What does the variables `eu_position` and `lrngen` mean?
- Visualise the distribution of `lrngen`!
- Is there a relationship between `lrngen` and `eu_position`? Create a plot!
- Visualise the relationship between `lrngen` and `eu_position` or Irish parties and add a label for the party (`party_name`)

Short Survey

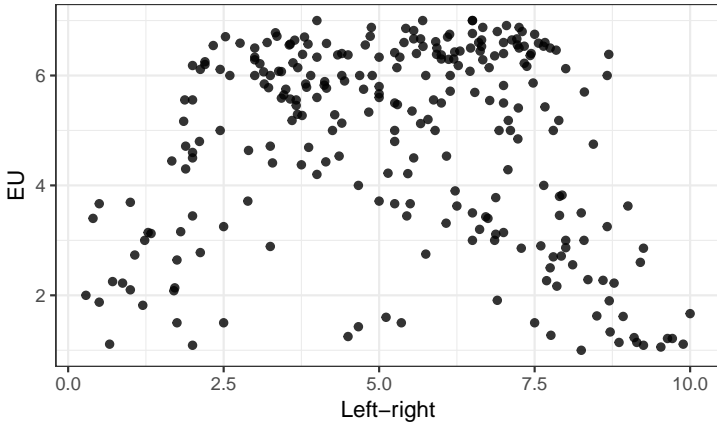
Please load the following page and fill in the survey:

<http://tinyurl.com/po3600survey>

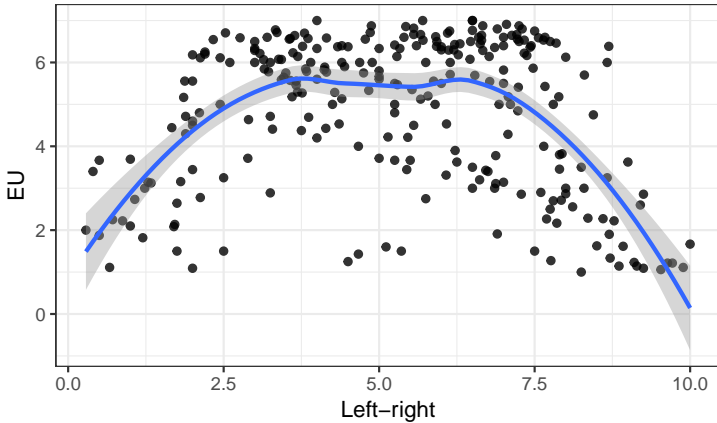


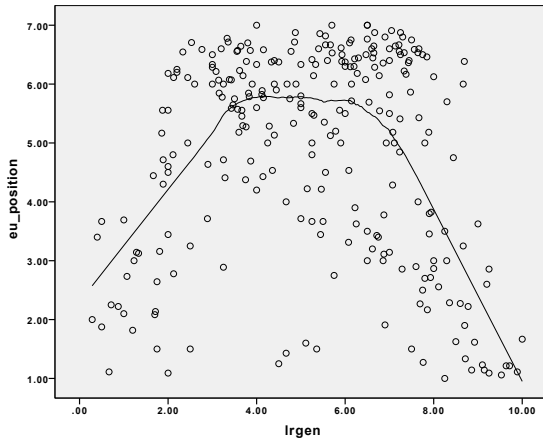


Plots

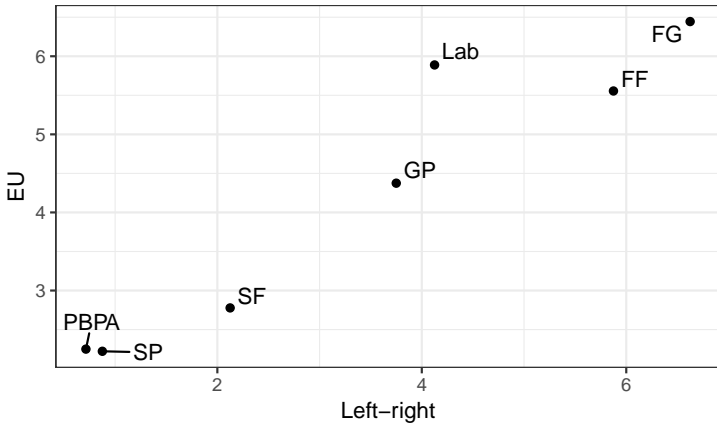


Plots





Plots



Plots

