Tutorial 1

Research Methods for Political Science

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Trinity College Dublin,
https://andrsalvi.github.io/research-methods/

Table of contents

Administrative Stuff

Focus of Tutorials

- Furthering what we did in class;
- Hands-on SPSS;
- Real-world applications of theories, concepts and quantitative methods;
- Revision of Homeworks;
- Q&A;
- **NB: tutorials do not replace the lectures!**;

Assessment

1. 60% of mark based on end-of-term exam (covers methods and statistics).
2. 1 papers counting 16% (Deadline: 30/11 @ 11:59pm). Work will be done *in groups* submitting joint papers.
3. 4 homework exercises (4 per term), worth 20% of overall mark. Submit online via Turnitin *on the Monday evening (11:59pm) preceding the tutorial session*.
4. Tutorial participation is worth 4% of your overall mark. They should also attend the presentation sessions (weeks 9 and 10 in lecture).
    - Absence policy: **Two unexcused absences in tutorials and 1 in the presentation will be tolerated. Beyond that, the student will receive a zero for participation**.

Late Submissions

- 5 points per day will be taken off your mark on assignments submitted late without a valid excuse (capped at 30 points).

Practical Information

Assignements and Turnitin

All the work should be submitted on Turnitin

- LaTeX, Word/Open Office and submitted as **PDFs** (Screenshots are not sufficients!)
- If you include tables, do not use a screenshot, but use the "export" function from SPSS. Please save figures appropriately in high resolution.
- Statistical Software: SPSS. You can use alternatives such as R or STATA if you want, but not Excel!
- If you include tables, do not use a screenshot, but use the "export" function from SPSS. Please save figures appropriately in high resolution

Turnitin Credentials

Class ID: 19060845

Password: po3110

Please register ASAP!

Important Dates

Available on the Syllabus. Google Calendar on the tutorials' website.

- Week 4: HW 1 (next Monday!)
- Week 6: HW 2 (15 October)
- Week 9: HW 3 (5 November)
- Week 11: HW 4 (19 November)

Paper:

- 30/11 @ 11:59pm

Support

- I am happy to receive your feedback at any time! (content, teaching and tutorial style, too fast/slow?)
  - Short Surveys?
- Online Resources: `http://andrsalvi.github.io/research-methods`
- Questions:
  1. salvia@tcd.ie
  2. Slack Channel
  3. In class!
  4. Office Hours

Brief Review of Research Design

Discussion of Lecture Topics

Central Terms and Definitions

- Population
- Sample
- Random sample
- Distribution of Sample Mean: `http://onlinestatbook.com/stat_sim/sampling_dist/`
- Probability

Central Terms and Definitions

- Concept
- Theory
- Deduction
- Induction
- Levels of measurement: nominal, ordinal, interval-ratio

Measures Central Tendency

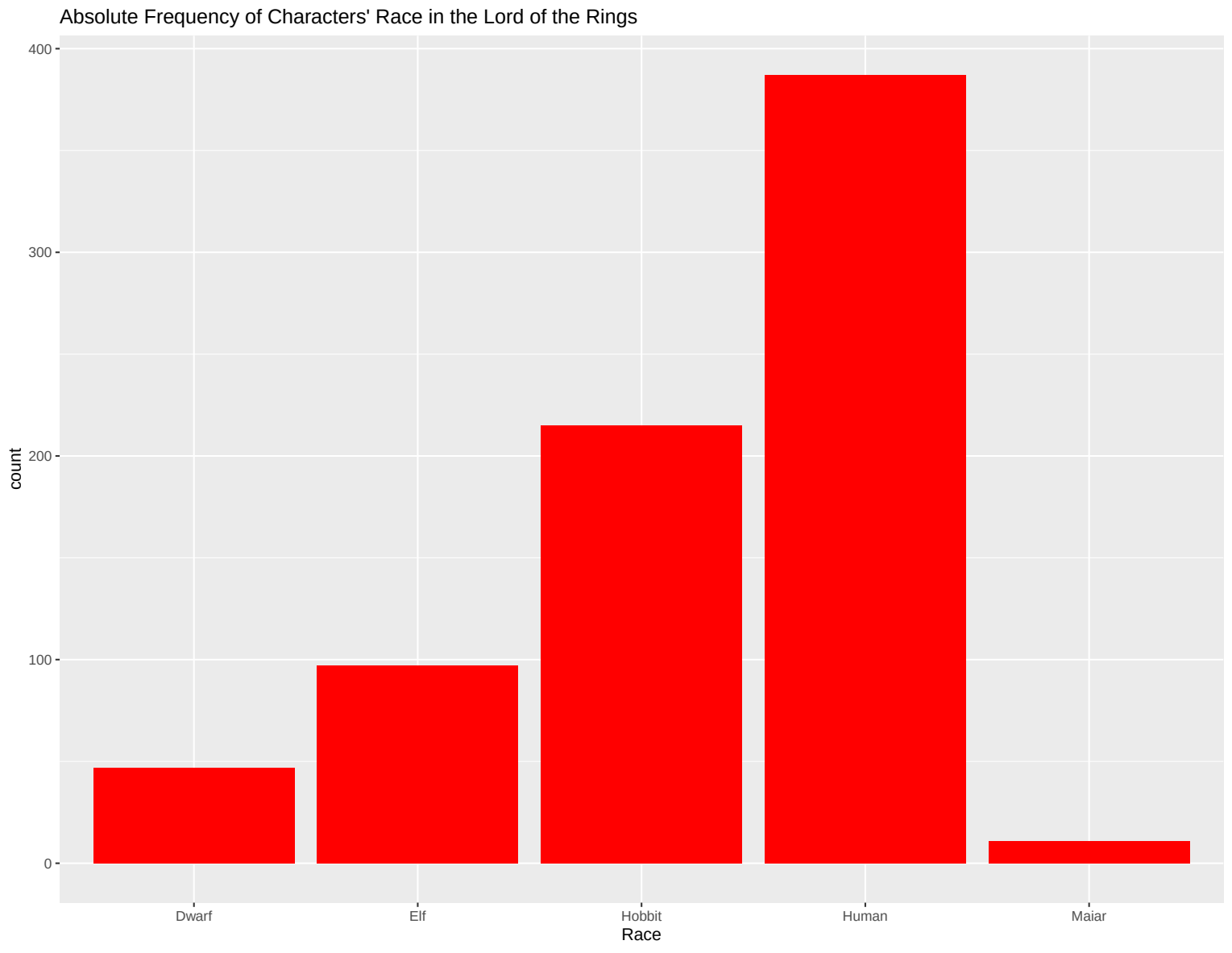
Central Tendency

- Convenient way to describe a variable through a single number
- Gives us a sense of the where to locate the *"centre"* of the distribution
- Measures:
    1. Mode
    2. Median
    3. Mean

Mode

- In a nutshell: the most frequent value;
- In a more elegant way: ”the value that is most likely to be sampled”.
- Particularly intuitive and easy to spot in a frequency table
- We can have more than one mode (or none).
- Useful for nominal data! Why?

A Fantasy Example



A Fantasy Example

Race	Frequencies	Relative Frequencies
Dwarf	47	0.062
Elf	97	0.128
Hobbit	215	0.284
Human	387	0.511
Maiar	11	0.015
	757	1

Median

- The value at the midpoint of a distribution.
- It splits the distribution in half.
- How to find it?
  1. Data need to be ordered!
  2. If the number of observations is *odd*: value at position $\frac{n+1}{2}$
  3. If the number of observations is *even*: average between the value at position $\frac{n}{2}$ and the value at position $\frac{n+1}{2}$
- Several tricks to do it quickly in SPSS
- Can we find the median in the previous example?

Mean

- Estimate mean: $\bar{x} = \frac{\sum x}{n}$
- We need an interval ratio!
- Influenced by outliers, while mode and median are not.
- Always ”internal” with regards to the interval.

Short Exercise: find the mean and the median

Movie	Box Office Revenue (in Millions)
The Fellowship of the Ring	871.5
The Two Towers	926.0
The Battle of Five Armies	956.4
The Desolation of Smaug	958.4
The Unexpected Journey	1021.0
The Return of the King	1120.0

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What if the ”Return of the King” had a Revenue of 12000.0 ?

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Now some exercise on pen and paper

SPSS 101

SPSS 101

- Getting Started: How to open SPSS?
- Importing Data
- ”The code”

Getting the data

- LoTR Words by Characters Dataset: `https://github.com/AndrSalvi/research-methods/raw/master/course/data/wordsbycharacters.sav`
  - Original version from `https://www.kaggle.com/mokosan/lord-of-the-rings-character-analysis/data`
  - (Kaggle - Mokosan)
- UCDP Dataset: `https://github.com/AndrSalvi/research-methods/raw/master/course/data/UCDP.sav`
  - Original version from Pettersson, Therése and Kristine Eck (2018)
  - `http://ucdp.uu.se/`