# Introduction to $\mathcal{R}$

## Session 5: Basic Statistics

Dag Tanneberg[1]

Potsdam Center for Quantitative Research
University of Potsdam, Germany
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[1]Chair of Comparative Politics, UP, dag.tanneberg@uni-potsdam.de

# Introduction

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- You are now ready to unleash $\mathcal{R}$ on real data.

# What are we going to do?

We are going to plunge head first into data analysis, taking advantage of a data set which includes all *named* characters from George R.R. Martin's "A Song of Ice and Fire".[2] In the end, you will be able to offer much insight on the mother of all cocktail party questions: **Is Jon Snow going to die?**

To get started:

1. Quit & reopen $\mathcal{R}$.
2. Load "./05/dta/asoiaf.csv" from the course material.
   - **Note**: Uncheck the option "Strings as factors".

[2] O'Neill, M. 2016. Game of Thrones. https://bit.ly/2qjUfQ2 (last access: 10/08/2018).

# Outline

# Descriptive Statistics

# Glancing at the data

Enter each of the following commands. Explain the output.

```
str(asoiaf); summary(asoiaf)
mean(asoiaf[, "book_intro_chapter"], na.rm = TRUE)
sd(asoiaf[, "book_intro_chapter"], na.rm = TRUE)
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  data = asoiaf[, 6:7],
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- by() may create summary statistics by group

# Contingency Tables

# Simple N-way Contingency Tables

- table() creates N-way contingency tables

```
table(asoiaf[, "death_year"]) # 1way
table(asoiaf[, "death_year"], asoiaf[, "gender"]) # 2way
table(asoiaf[, "death_year"], asoiaf[, "gender"], asoiaf[,
```

Do you notice anything about the output? Check summary(asoiaf[, "death_year"]) if necessary.

# Test

# Adventures in Covariance

# Simple Hypotheses Tests

# Summary