



Operationalizing



Or, the use of measurement in history,
literature, and studying the social
world



Credits

I am indebted to Heather Haveman (sociology) and Rebecca Barter (statistics) who allowed me to borrow and modify their slides.

Operationalization

Concepts



**Attributes of
Text
(or variables)**

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 - Protestants will have higher suicide rates than Catholics.
 - Verbal conflict happened in dialogues between Antigone and the chorus, not between Antigone and Creon. (Maybe Hegel's not wrong, but Moretti? The "beautiful tragedy" of *Antigone* was self-destruction.)

Example: Operationalizing Prejudice

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- How can we measure prejudice?
 - Behaviors
 - Attitudes/beliefs
 - Implicit associations
 - Language

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 - Implicit prejudice?

Pitfalls

- Multi-dimensional concepts
 - Geographic imagination
 - Number of places mentioned
 - Centrality of location within a text
 - Importance of places mentioned to the plot
 - Importance of novel in the popular imagination

Pitfalls

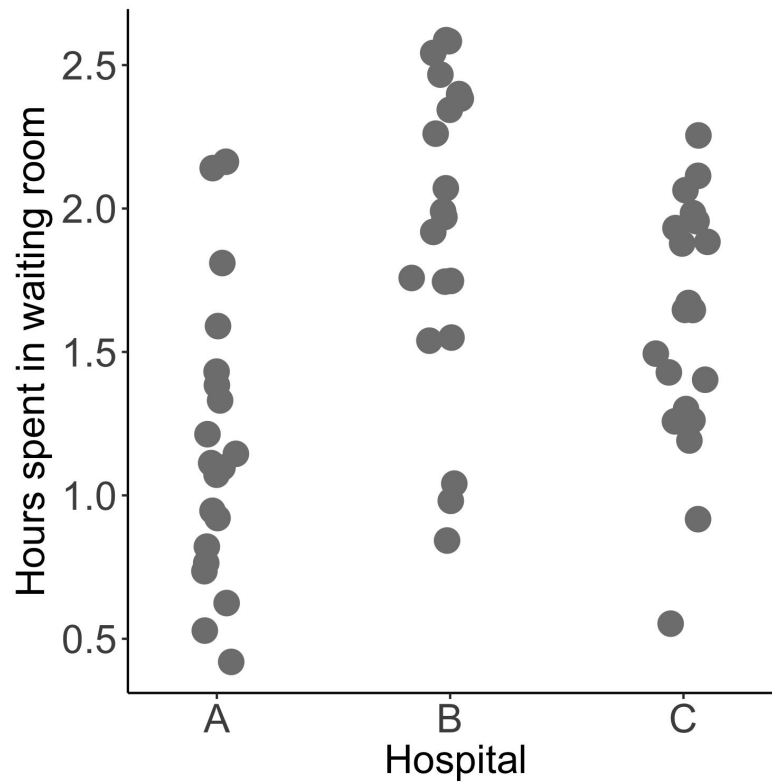
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 - Importance of novel in the popular imagination
- Imprecise measurements
 - Numbers do not indicate importance
 - People who are prejudiced may not use prejudiced language
 - Prejudiced *statements* might not include prejudiced *words*

Levels of Measurement

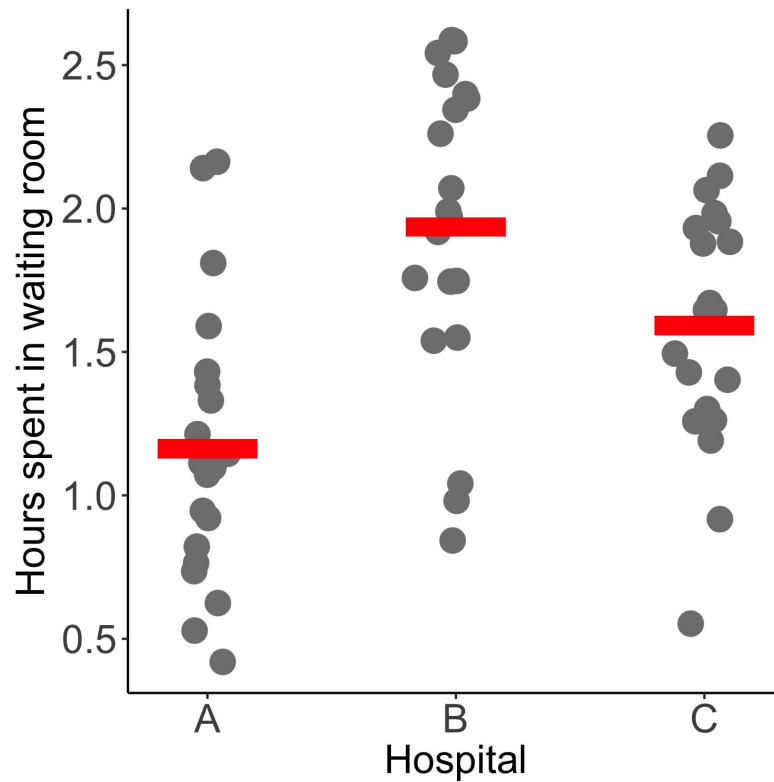
Level of Measurement	Relationship among Attributes	Examples
Ratio	A true zero point exists	Age, income, years of education, # correct items on a test
Interval	Distance from one attribute to the next can be expressed in standardized units. Distances between adjacent attributes are equal.	Standardized test scores (IQ, SAT), socio-economic status (SES)
Ordinal	Can be arranged in order, from lower to higher, from less to more, etc.	Letter grades, political orientation from liberal to conservative, organizational culture from strong to weak
Nominal	The same or different	Type of school, gender, political party, religion, industry

Reminder: Means and Standard Deviation

Data points

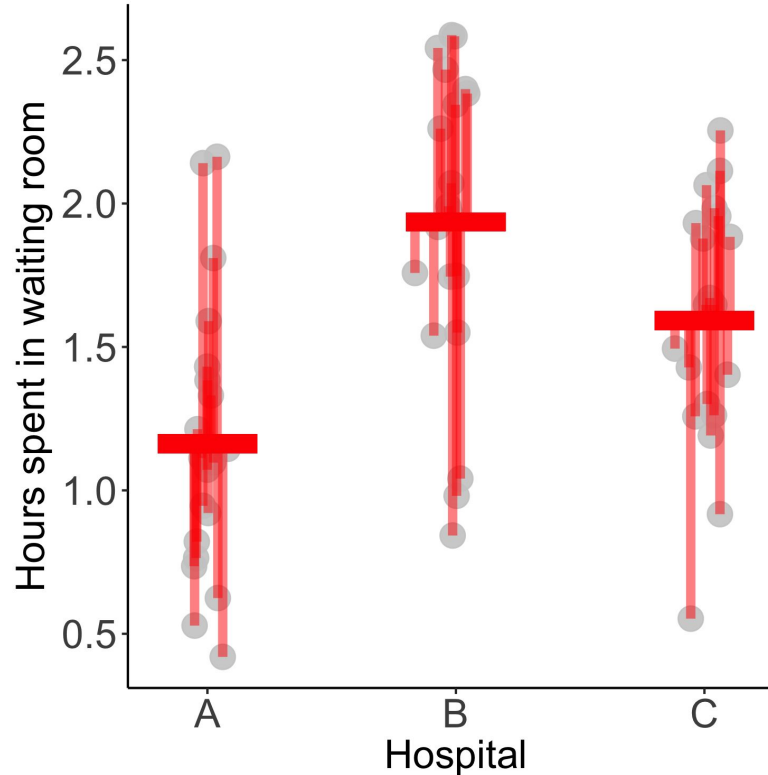


Group means



Group means and variance

**Within
group
variance**



Standard Deviation

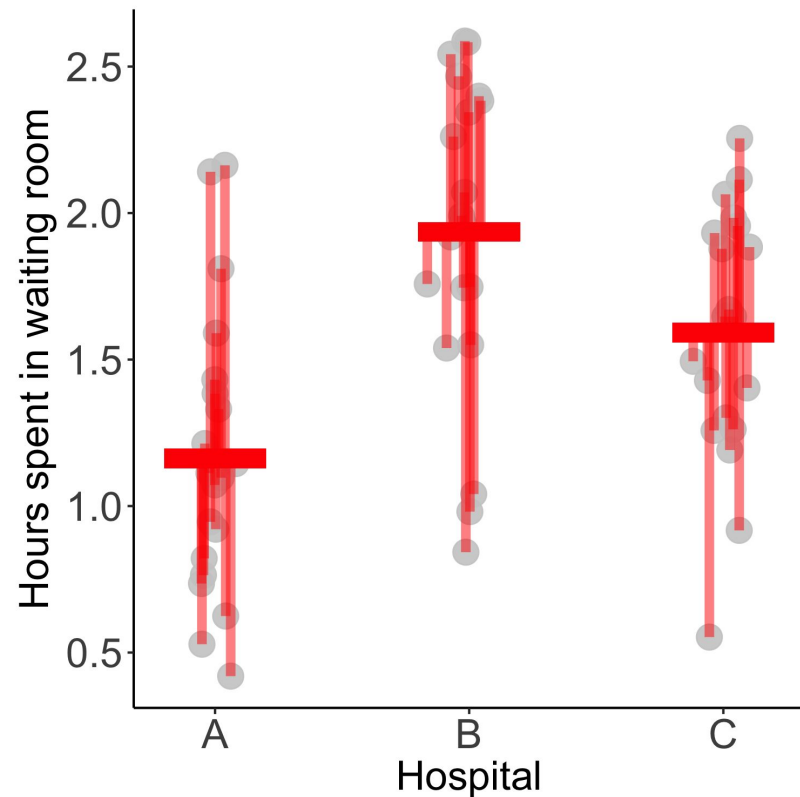
Step 1: Find the mean.

Step 2: For each data point, find the square of its distance to the mean.

Step 3: Sum the values from Step 2.

Step 4: Divide by the number of data points.

Step 5: Take the square root.



Standard Deviation

