Defining Validity
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Dimensions of TDQ: The Big Picture!

Measurement

Construct

Validity

Variable / Field

Data Origin

Data Value

Processing

Edited Data

Representation

Target Population

Data Access

Available Data Sources

Data Source

Available Data

Missing Data

Selected Data

Data Analysis

Reports, Papers, Presentations, Etc.

*Inspired by Groves et al. 2009, Survey Methodology (Second Edition)*
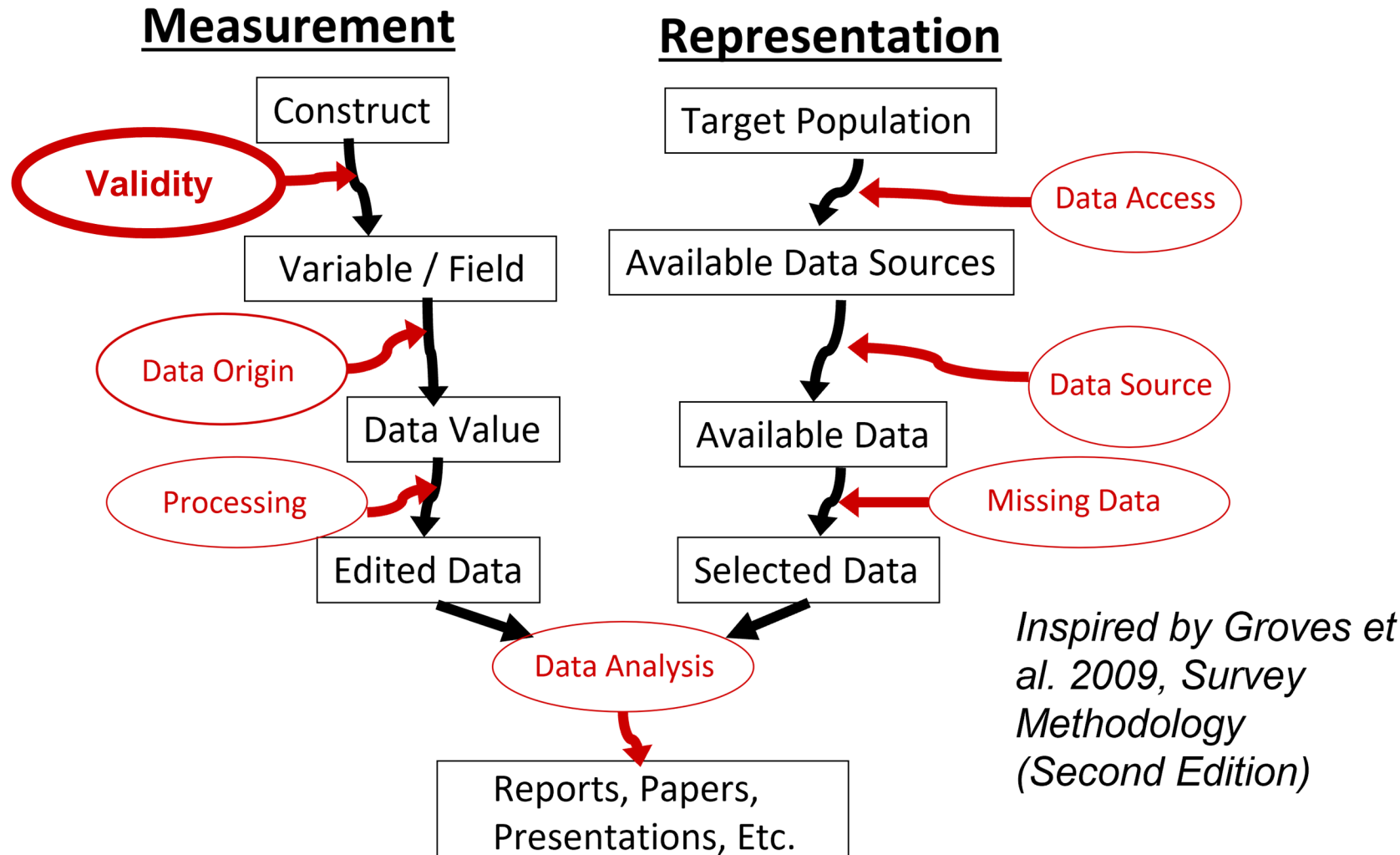
Validity: Definition

- **Validity:** A variable for analysis is accurately measuring what it is supposed to measure in theory.

- This concept could pertain to **construct validity** (for designed surveys) or **face validity** (for gathered data: on the surface, is something measuring what it is supposed to measure?)

- **Construct:** a theoretical trait, or characteristic, that we attempt to quantify for the different units under study (e.g., physical functioning, personality, Socio-Economic Status, etc.)

Example: Designed Data

- Does a measure of **socio-economic status (SES)** derived from other variables measured in a survey (e.g., household income, education, wealth, etc.) accurately measure the "construct" known as someone's overall SES?
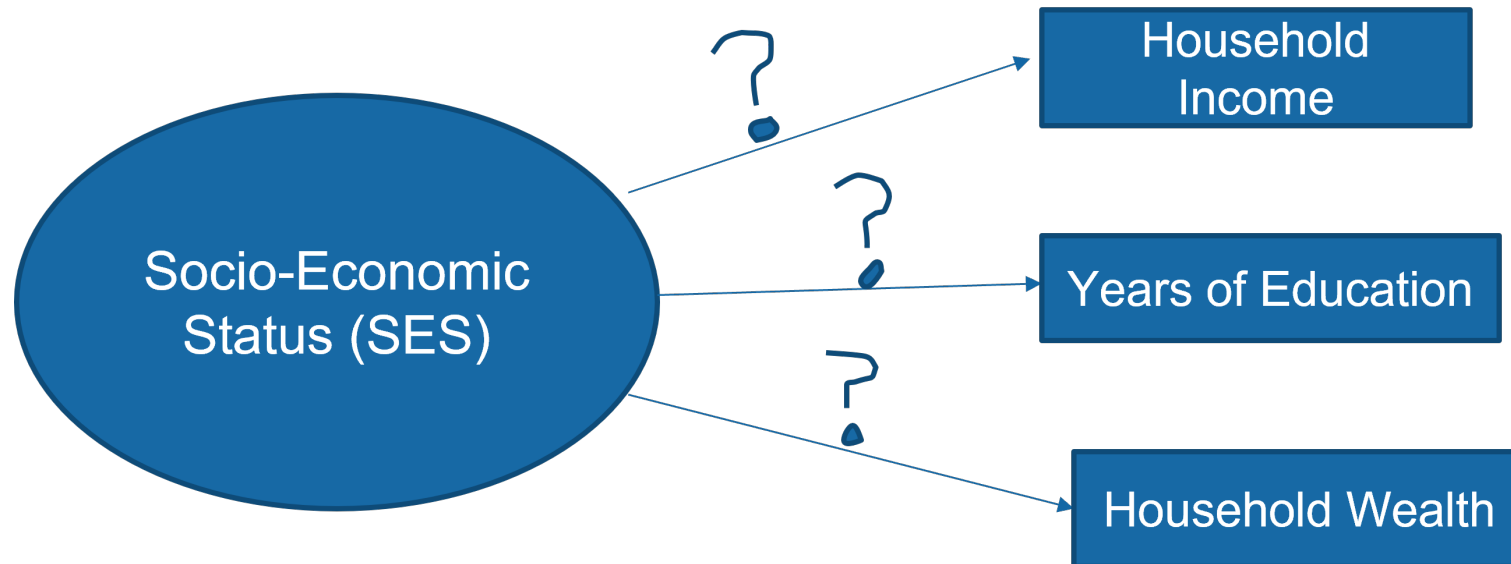
Example: Gathered Data

- Does a qualitative analysis of the text gathered from a collection of tweets about mental health difficulties with the pandemic provide valid measures of the mental health of Twitter users with particular characteristics?

Mental Health

"This pandemic really has me feeling blue."
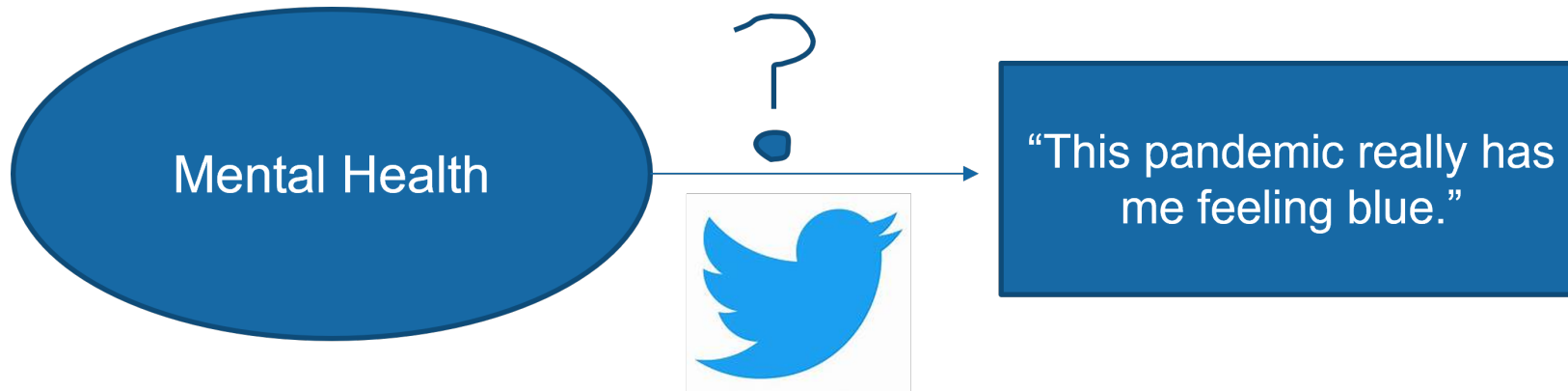
A Fun (?) Example

- What's wrong with using the number of deaths attributed to COVID-19 in the first 100 days of the presidency as a comparative measure of performance for the last two presidents?

- Is this a valid measure of performance?

COVID-19 deaths 1st 100 days in office
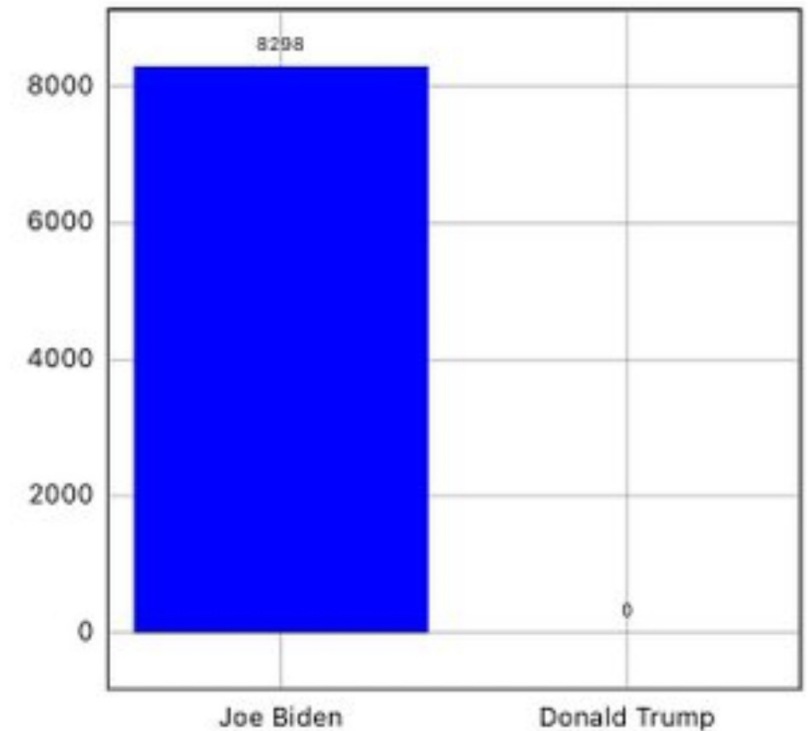
What's Next?

- Validity is crucial when designing a research study: we need to make sure that our measures are valid!

- This week, we will continue to learn about threats to validity for both designed and gathered data

- Then, we will turn to the **data origin** and **data processing** measurement dimensions of the TDQ framework

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