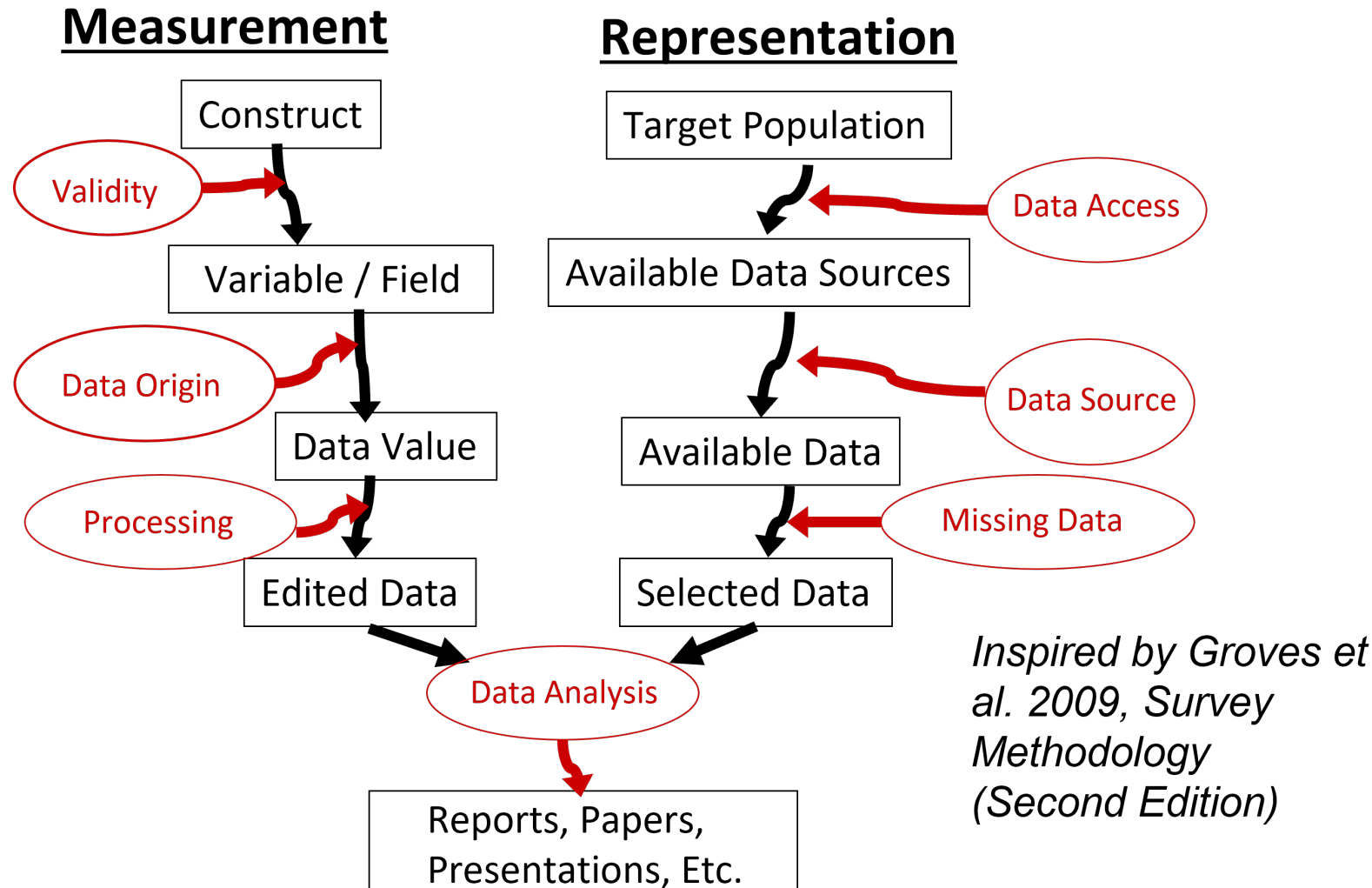


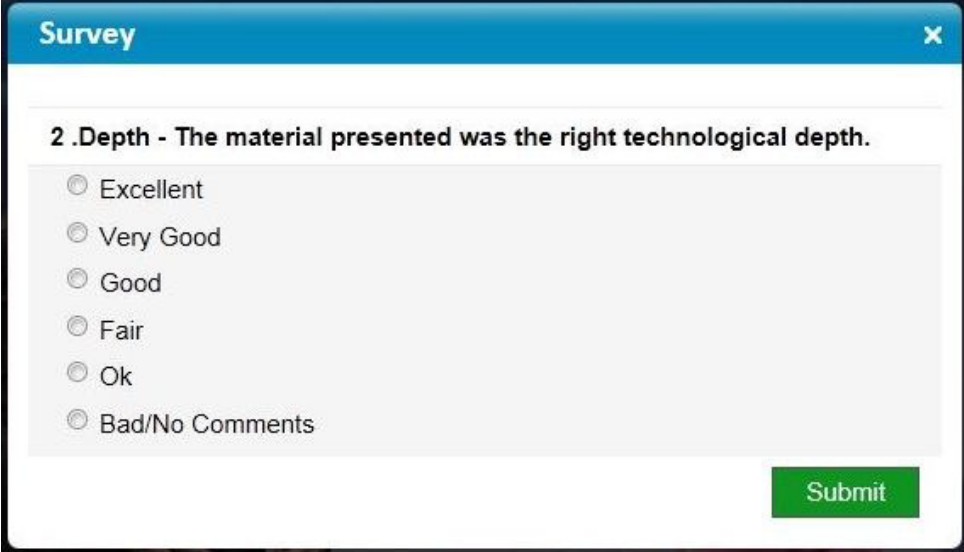
# **Threats to Validity for Designed Data By Brady T. West**

# Dimensions of TDQ: The Big Picture!



# Threats to Validity for Designed Data

- **What reduces the validity of survey items / questions?**
  - Poor questionnaire construction
  - Lack of questionnaire pretesting
  - Translation issues (different cultures may interpret question text differently)
  - **Specification error:** a gap between the construct of interest and what is actually measured
  - Construct bias (e.g., non-identical constructs are measured across cultures or countries)



The image shows a screenshot of a web-based survey interface. At the top is a blue header bar with the word "Survey" and a close button (X). Below the header, the question text reads: "2 .Depth - The material presented was the right technological depth." Underneath the question, there is a list of six response options, each preceded by a radio button: "Excellent", "Very Good", "Good", "Fair", "Ok", and "Bad/No Comments". At the bottom right of the survey area, there is a green rectangular button labeled "Submit".

# Examples: Threats to Validity for Designed Data (1)

- Questions related to **euthanasia** posed a challenge in several countries such as Ethiopia, **where the concept does not exist (World Values Survey, 2005): *specification error***
- The interpretation of "**filial piety**" (i.e., behaviors associated with being a “good” son or daughter) differs between Western societies and Chinese Society (**Van de Vijver and Tanzer, 1997**): *translation issues, construct bias*

# Examples: Threats to Validity for Designed Data (2)

- In the World Values Survey, dramatic between-country differences in support for military rule were found (with higher support in Vietnam, Iran, and Albania)
  - This was explained by substantive changes to the translations of these items in these countries (**Kurzman, 2014**): *translation issues, poor questionnaire pre-testing*
- Difficulties in understanding the survey questions are more frequent among ethnic minorities (e.g., **Dutwin and Lopez, 2014**): *translation issues, construct bias, pre-testing*

# Examples: Threats to Validity for Designed Data (3)

- **Another example:** consider the case of a measure with *perfect validity* that still produces a biased survey estimates:
  - Ask a person's weight in pounds, and suppose that everyone answers with their weight, minus 10 pounds
  - The correlation of these responses with their true values (as a measure of validity) is *unchanged* by subtracting 10 from the truth
  - ***BUT*** the resulting mean weight will be biased low!

# What's Next?

- Given these threats to validity for **designed data**, we'll start to think about tools for mitigating these threats, starting with **cognitive interviewing**
- We will also discuss **automated question scoring tools** for designed surveys
- We will then turn to a discussion of threats for **gathered data**



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