



**INSTITUTE FOR SOCIAL RESEARCH  
SURVEY RESEARCH CENTER**

UNIVERSITY OF MICHIGAN

**Methodological and Operational Challenges for  
Surveys in Multicultural and Multinational Contexts:  
an Integrated Total Survey Error Model**

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\*\*Many thanks to our colleague, Nancy Bylica for help with our diagrams and the slides.

# Presentation Outline

1. Background
2. Integrated Total Survey Error Model
  - Contribution to Errors:
    - Representation: Coverage, Sampling, Nonresponse errors
    - Measurement: Validity, Measurement errors
  - Measurement error – expanded view
3. Conclusion

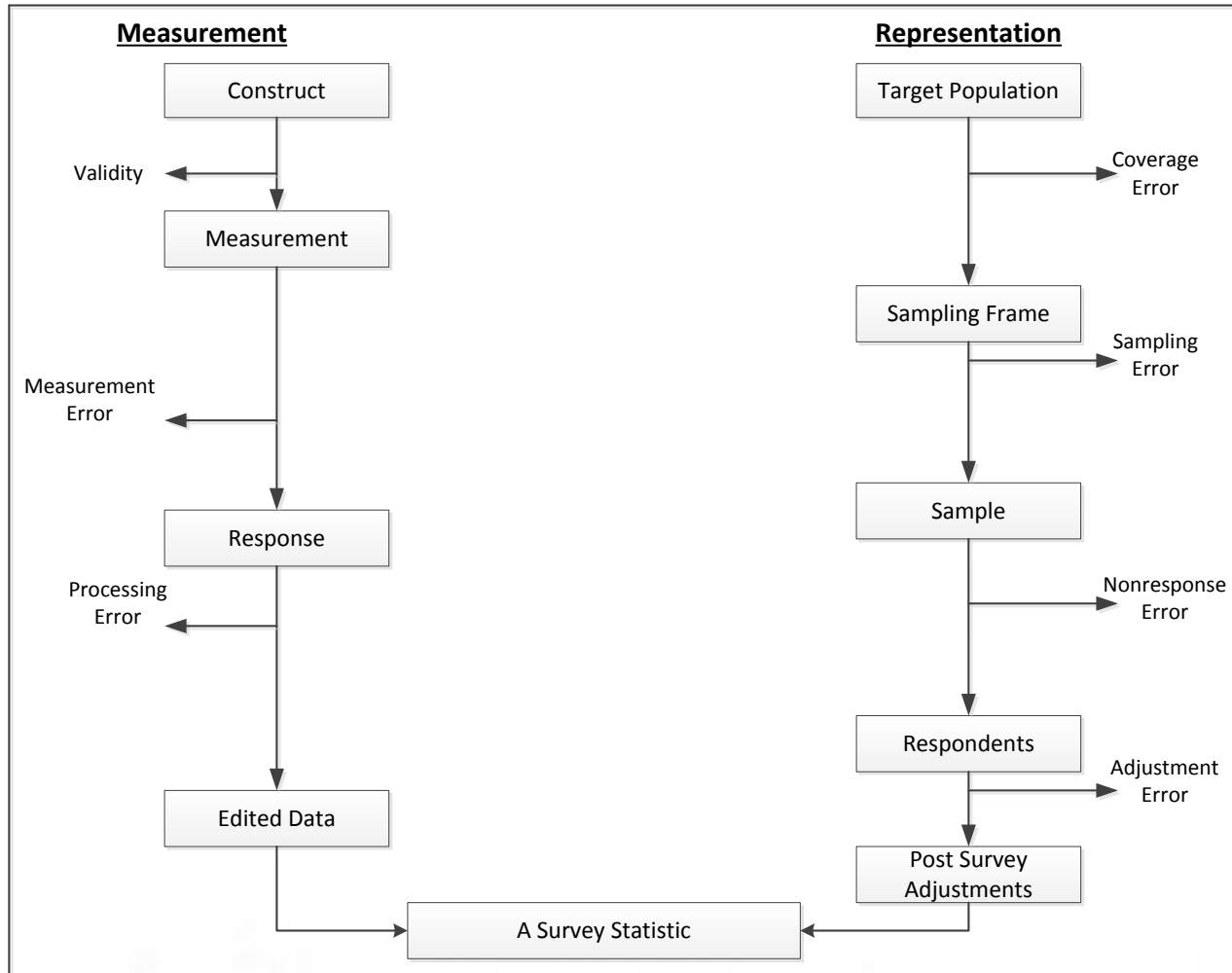


# Background

1. The Total Survey Error framework (Groves et al., 2004) has become an important paradigm for describing the properties of estimates and organizing error sources
2. Few attempts have been made to adapt the TSE framework to multicultural, multinational surveys
3. Smith's (2011) refined TSE model incorporates comparison error.



# Total Survey Error (Groves et al., 2004)





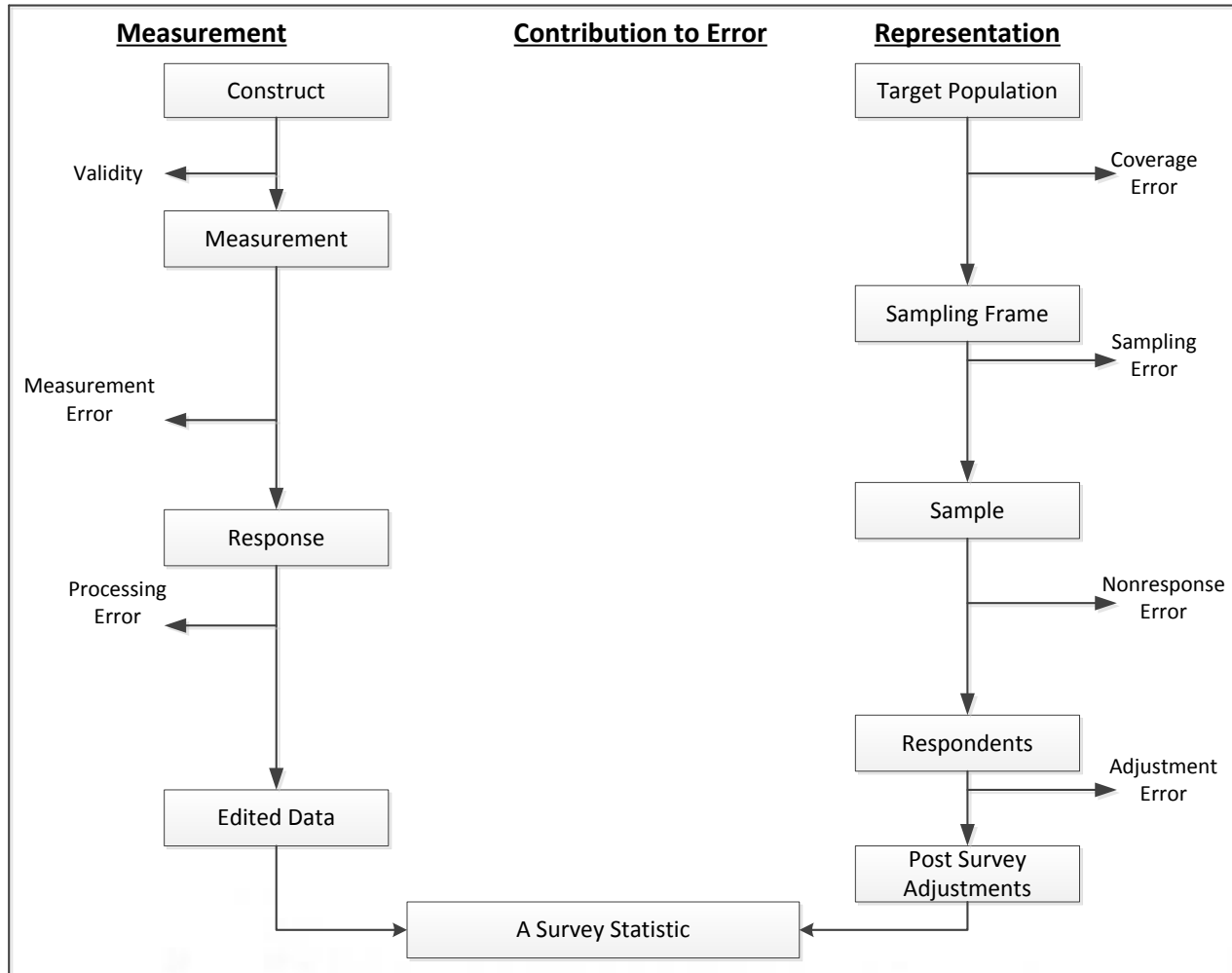
# An Integrated TSE Model

Some general points:

1. The framework is statistic specific
2. Error sources often interact
3. Bias/Variance
4. Not all error sources can be quantified

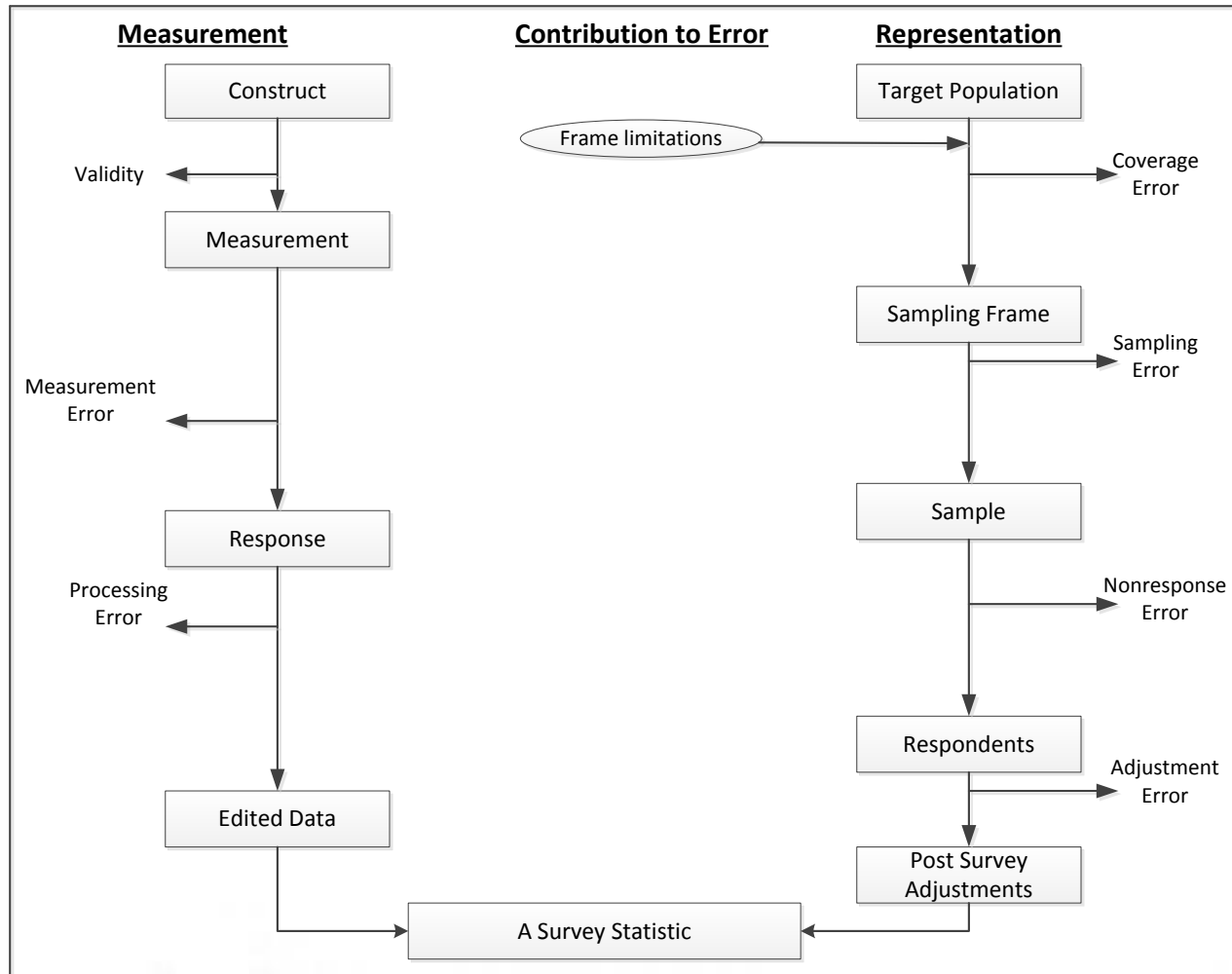


# An Integrated Total Survey Error Framework



Modified from Groves et al. (2004)

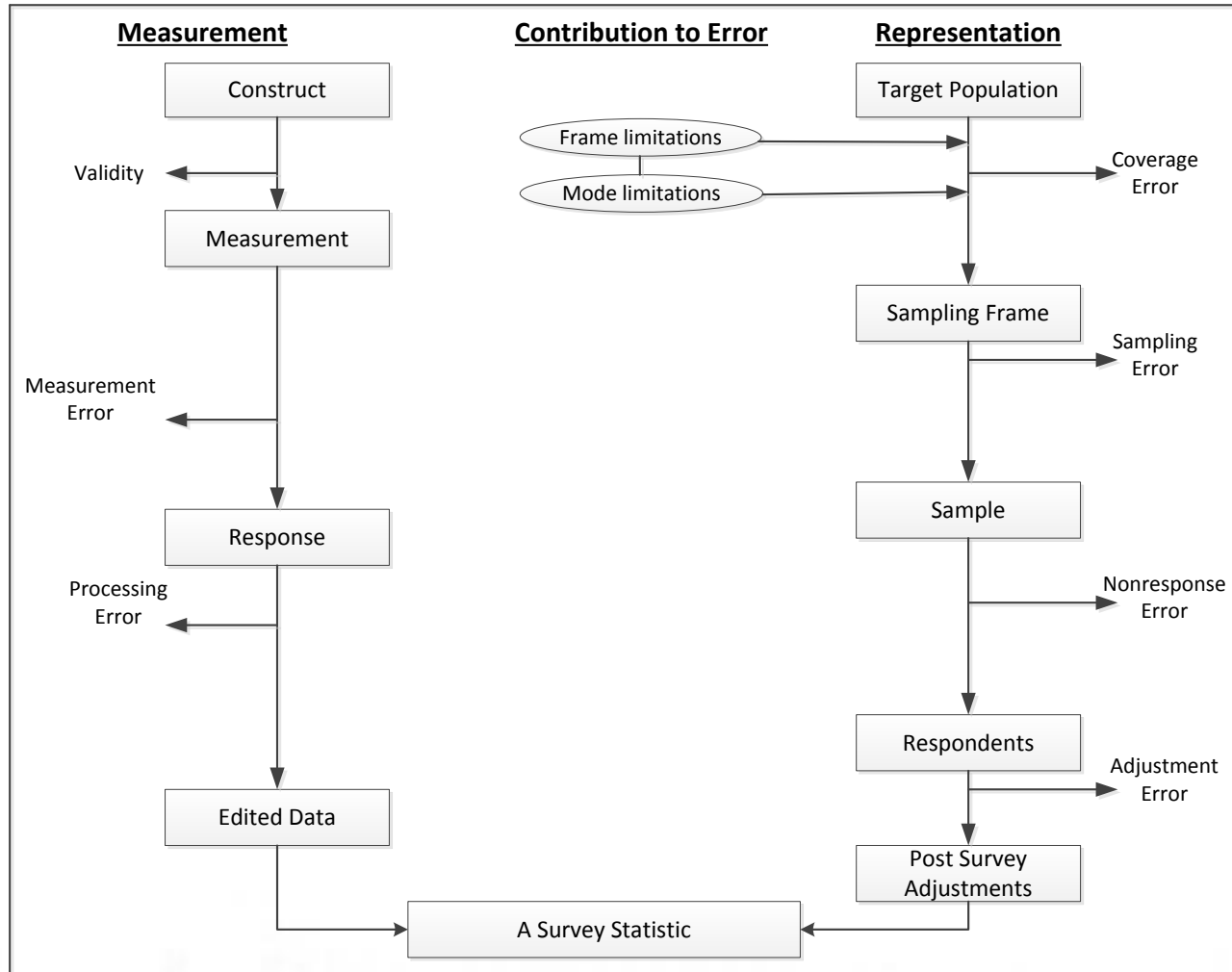
# An Integrated TSE Model: Coverage Error



Modified from Groves et al. (2004)



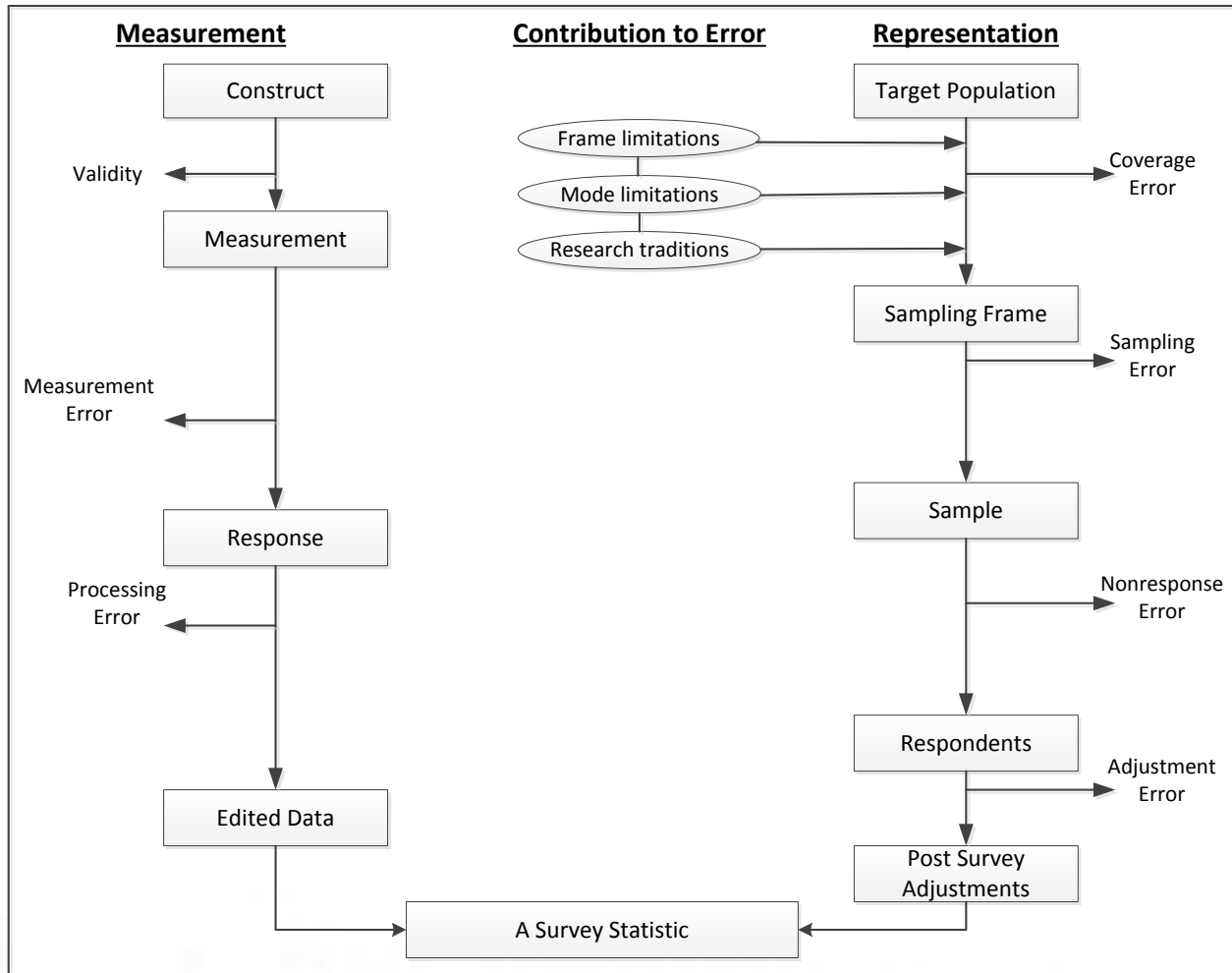
# An Integrated TSE Model: Coverage Error



Modified from Groves et al. (2004)

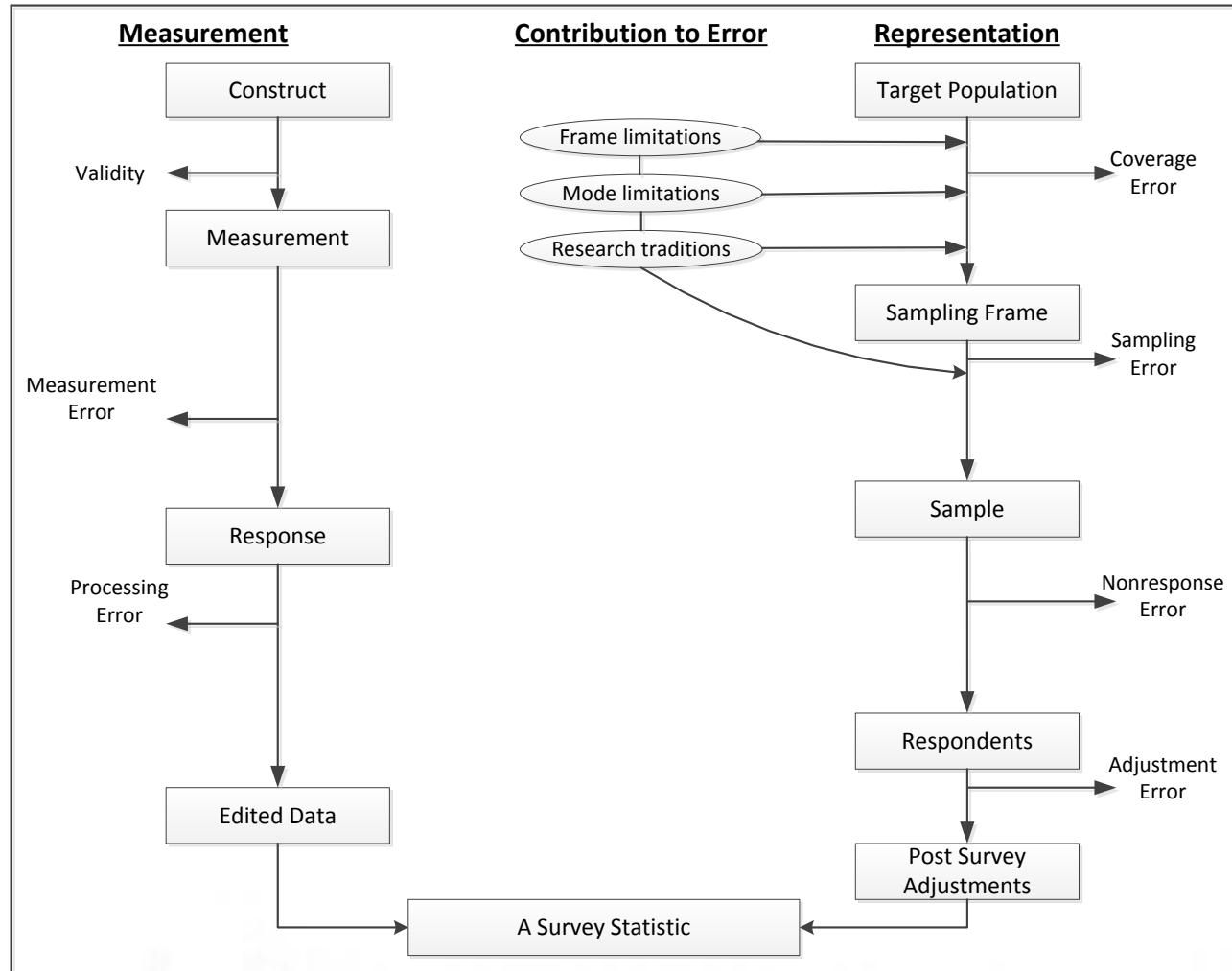


# An Integrated TSE Model: Coverage Error



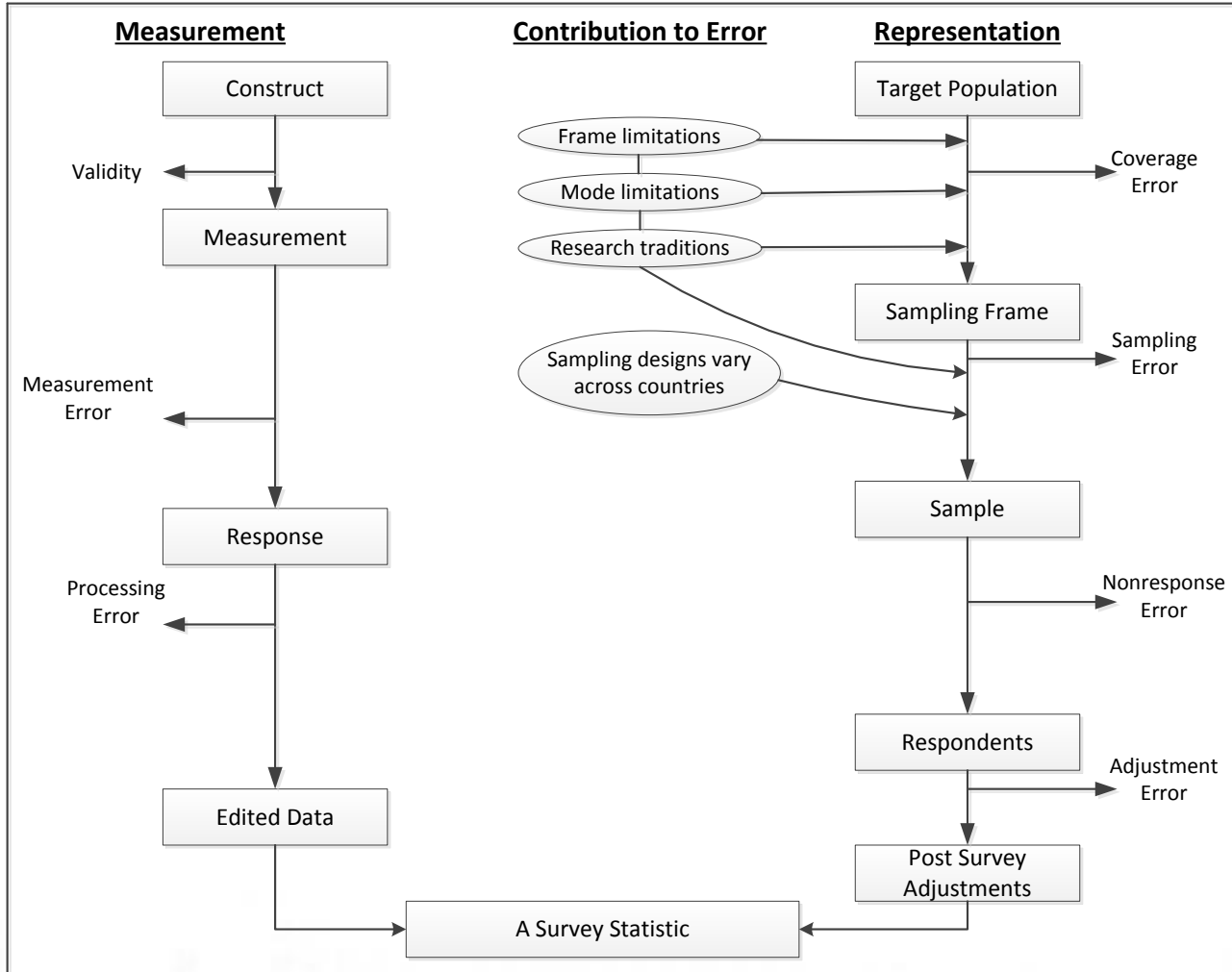
Modified from Groves et al. (2004)

# An Integrated TSE Model: Sampling Error



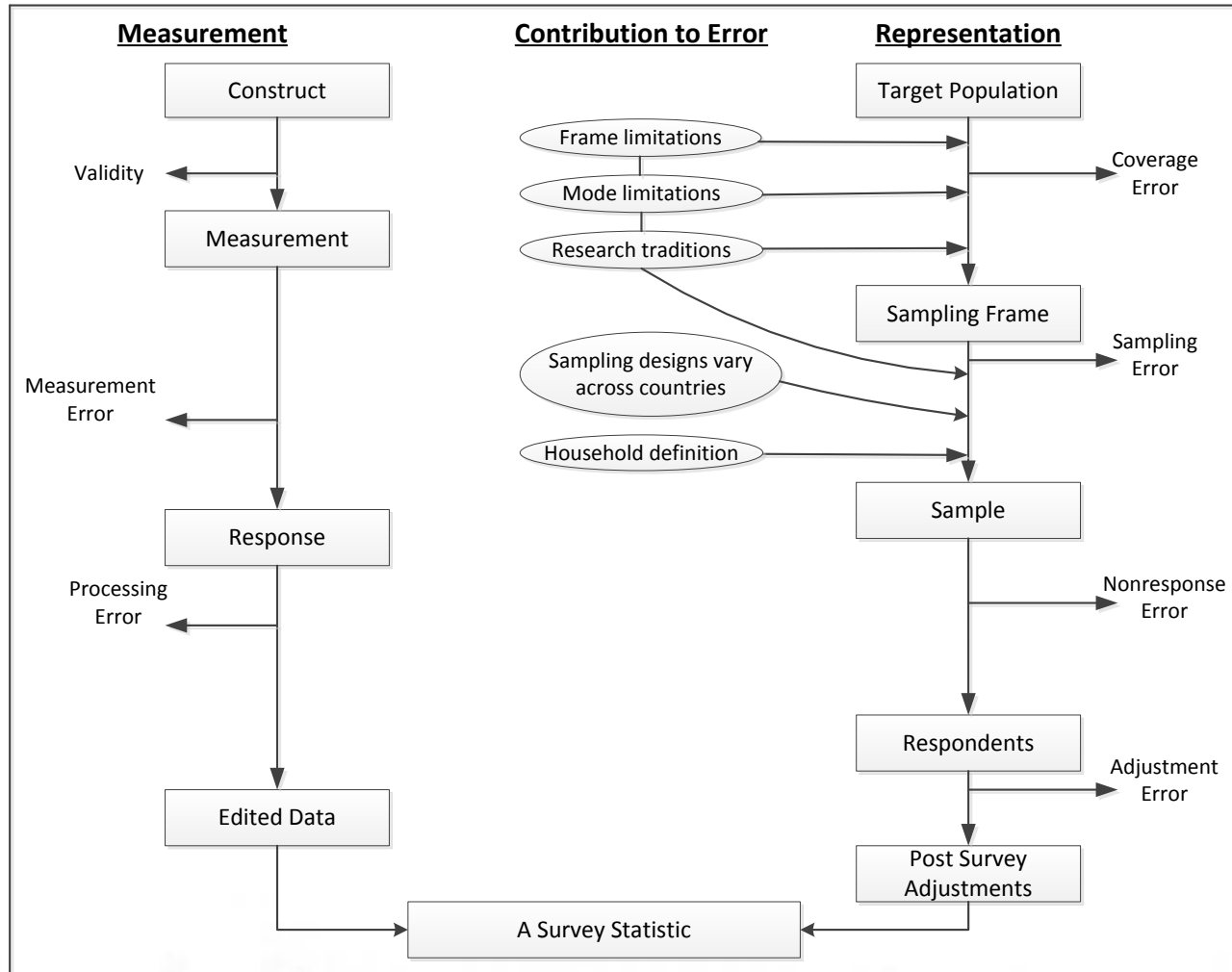
Modified from Groves et al. (2004)

# An Integrated TSE Model: Sampling Error



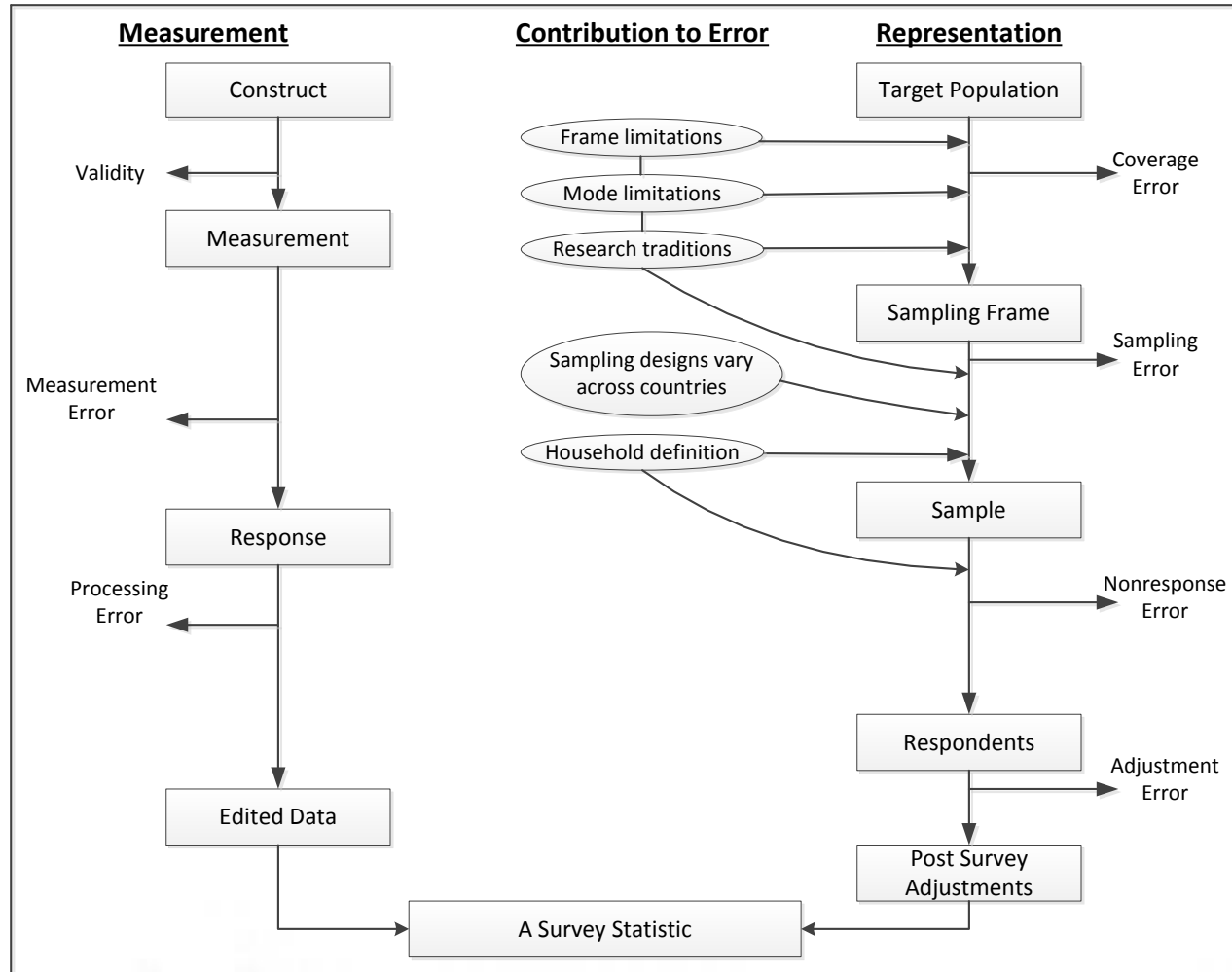
Modified from Groves et al. (2004)

# An Integrated TSE Model: Sampling Error



Modified from Groves et al. (2004)

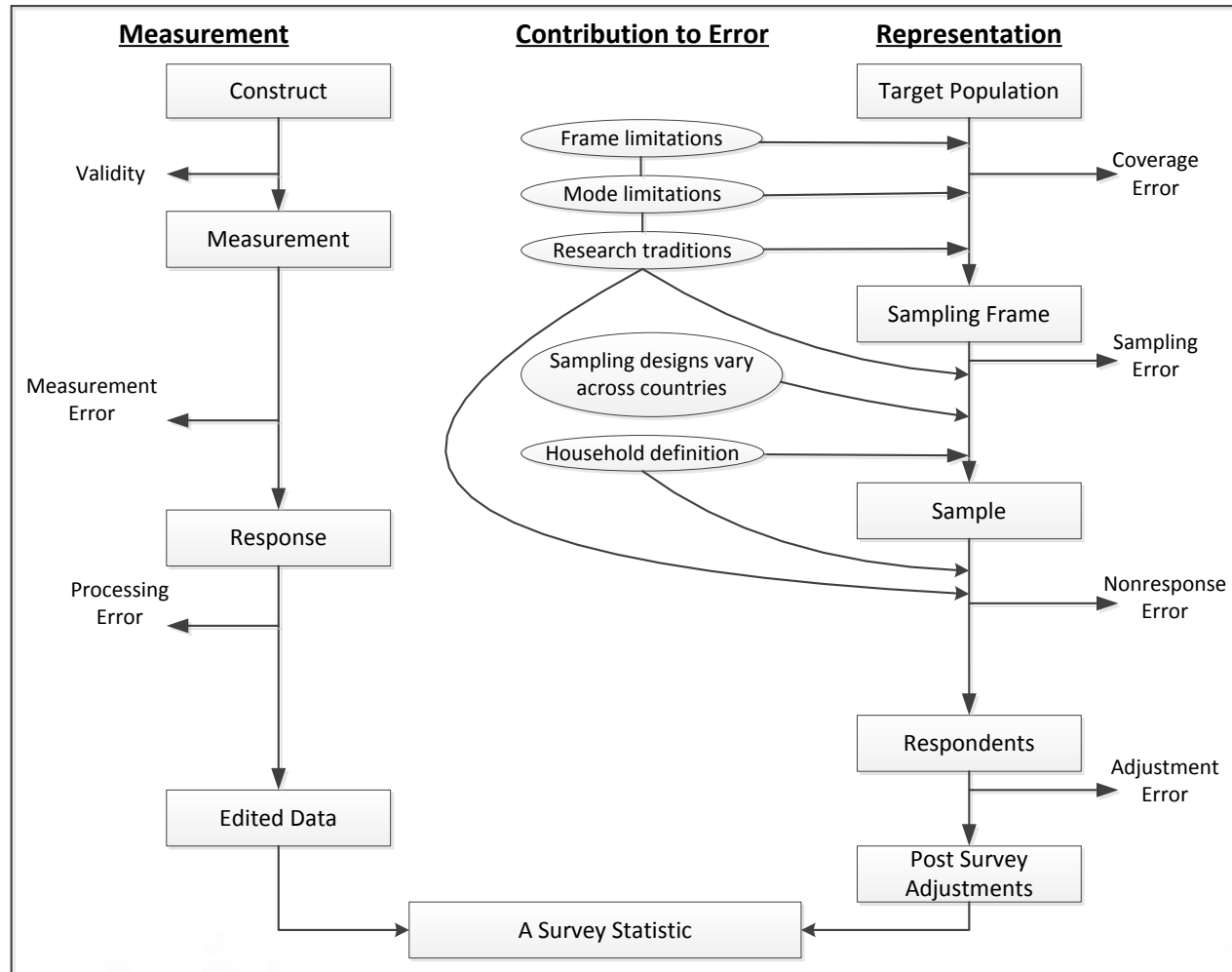
# An Integrated TSE Model: Nonresponse Error



Modified from Groves et al. (2004)

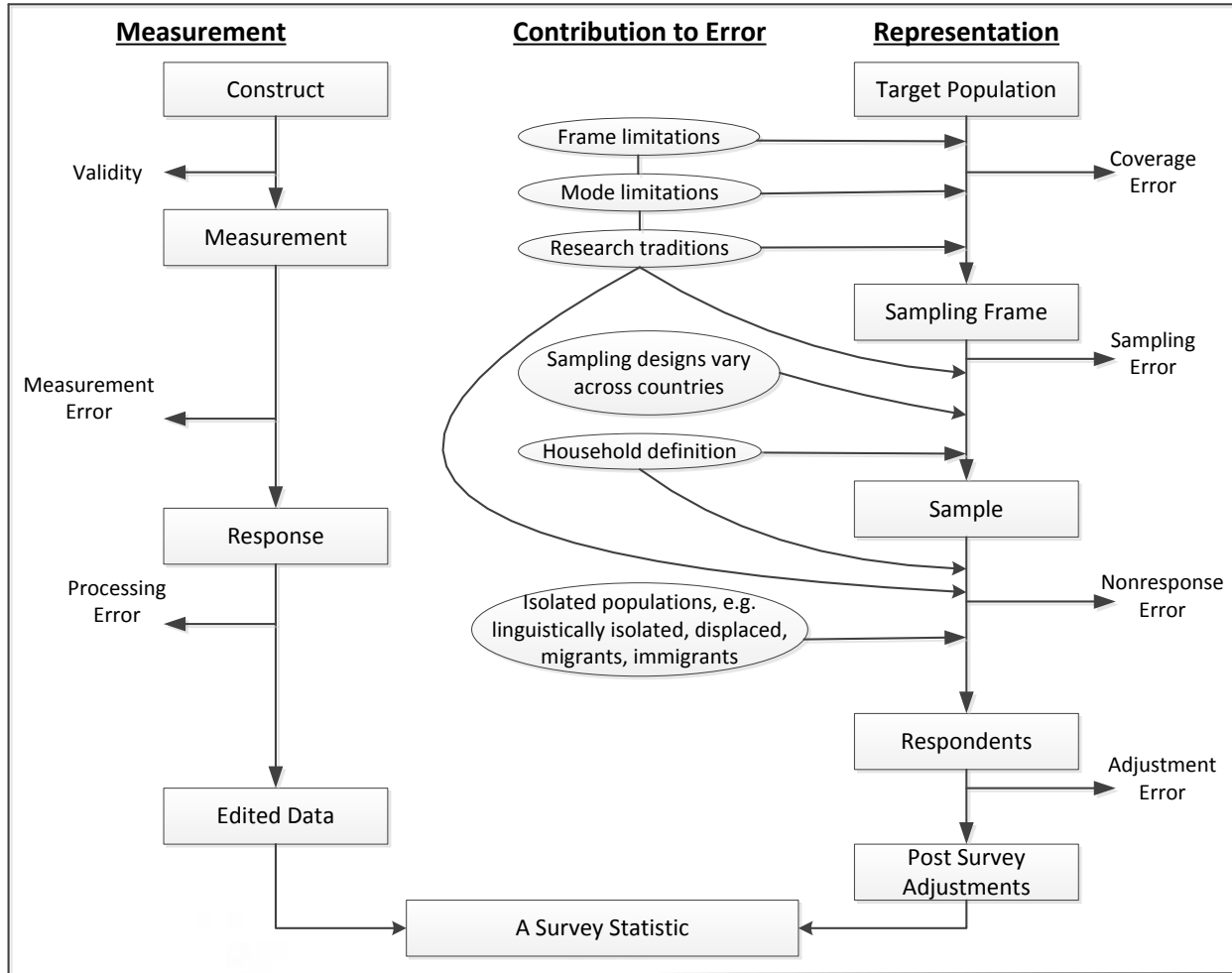


# An Integrated TSE Model: Nonresponse Error



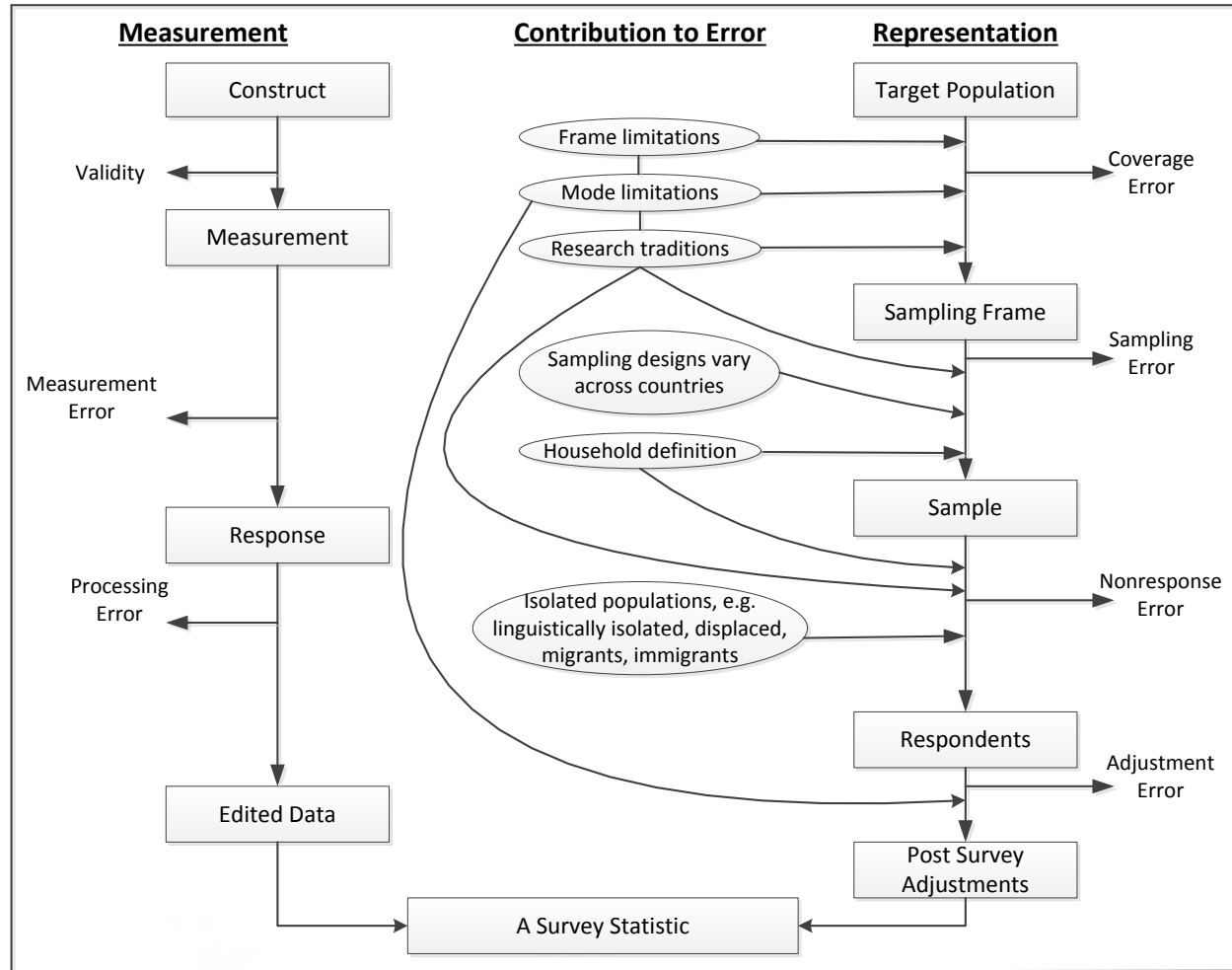
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# An Integrated TSE Model: Nonresponse Error



Modified from Groves et al. (2004)

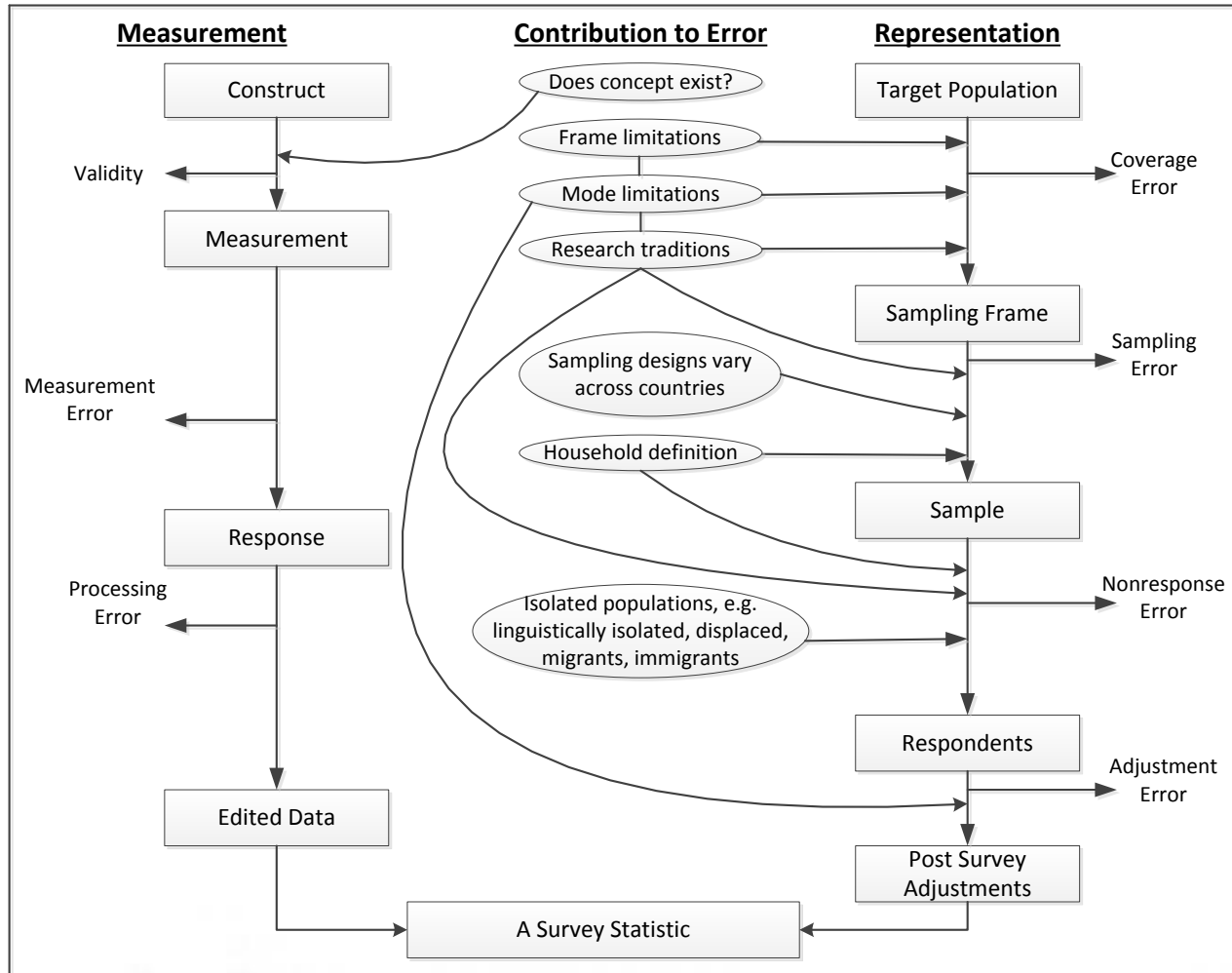
# An Integrated TSE Model: Adjustment Error



Modified from Groves et al. (2004)

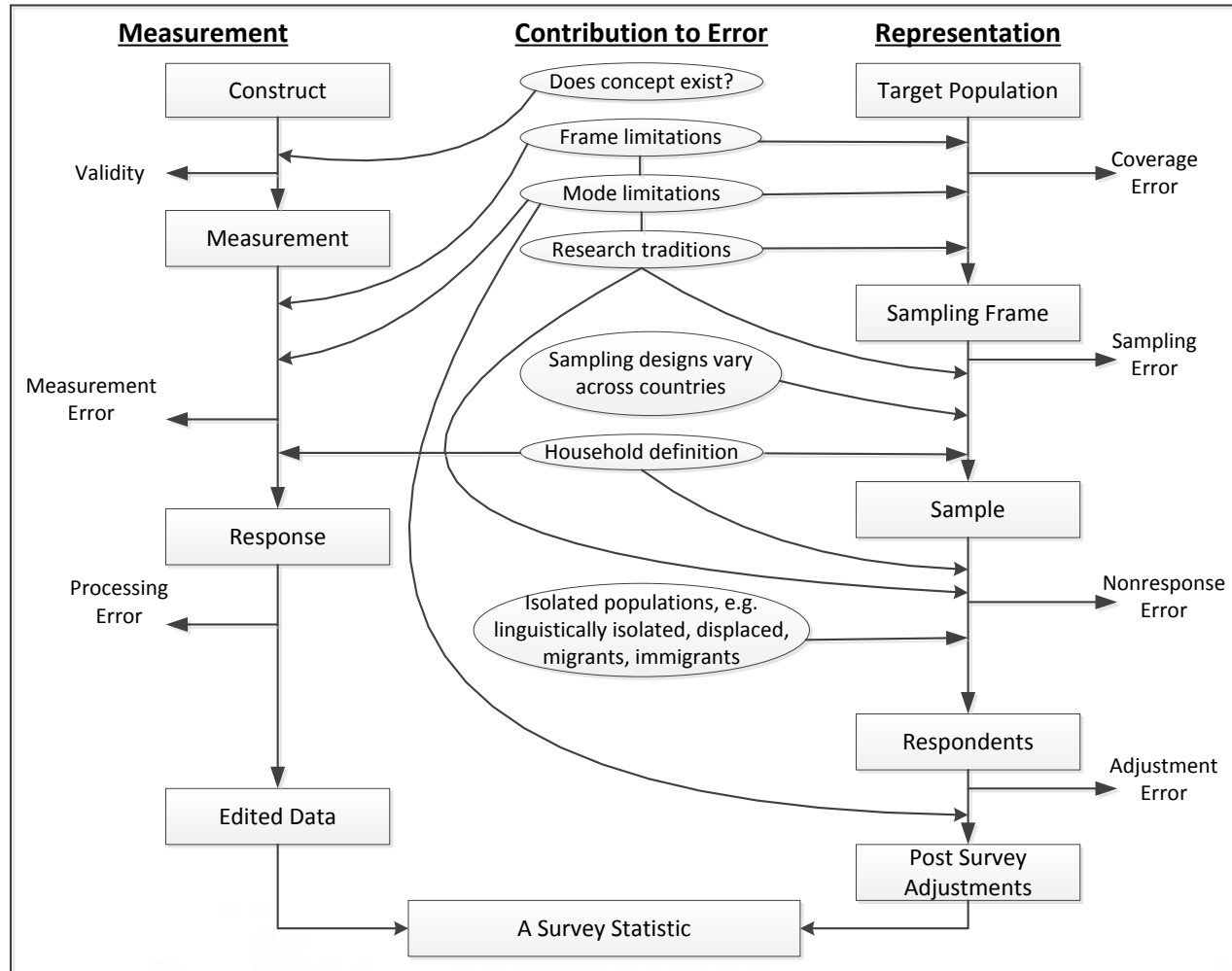


# An Integrated TSE Model: Validity Error



Modified from Groves et al. (2004)

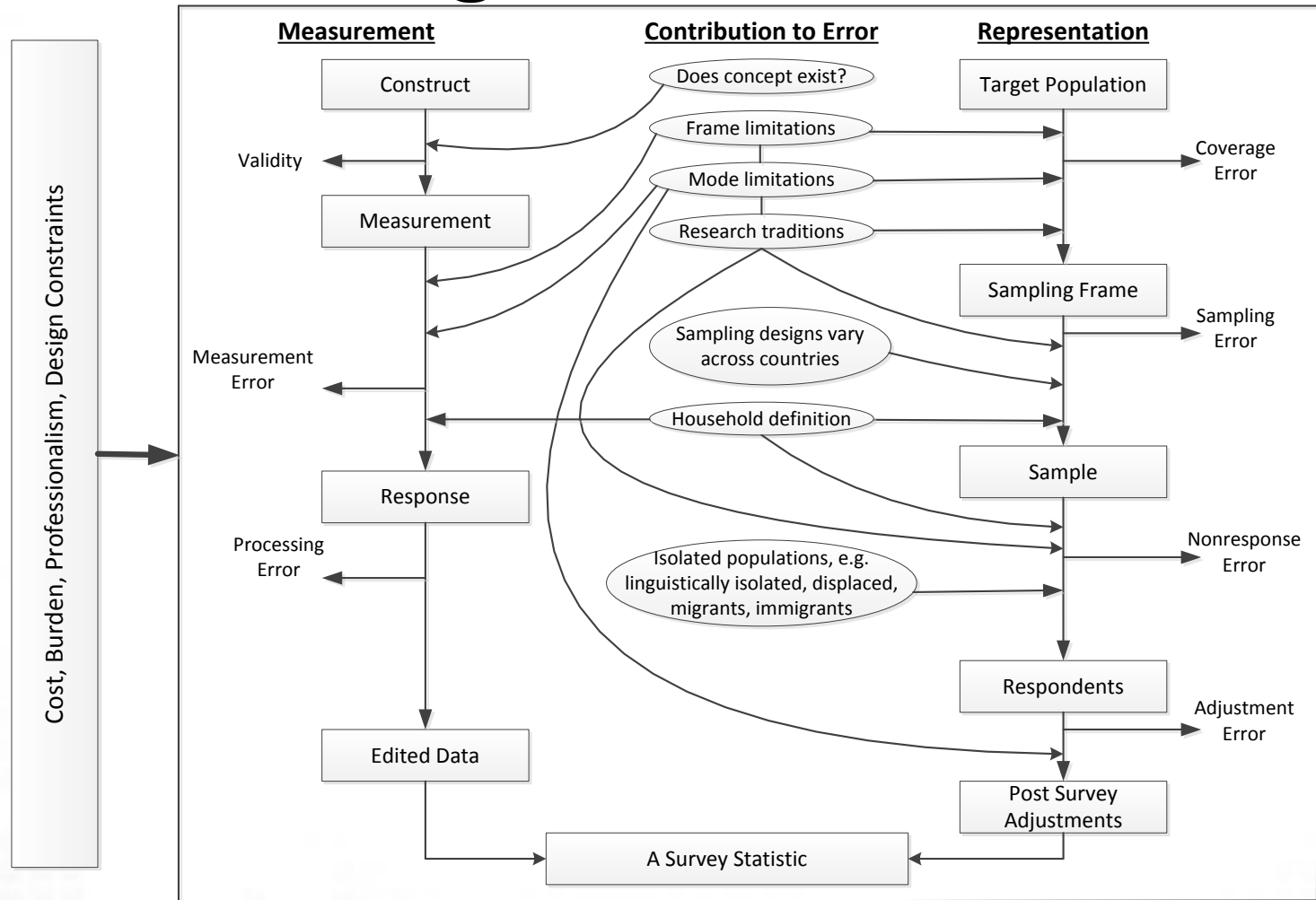
# An Integrated TSE Model: Measurement Error



Modified from Groves et al. (2004)

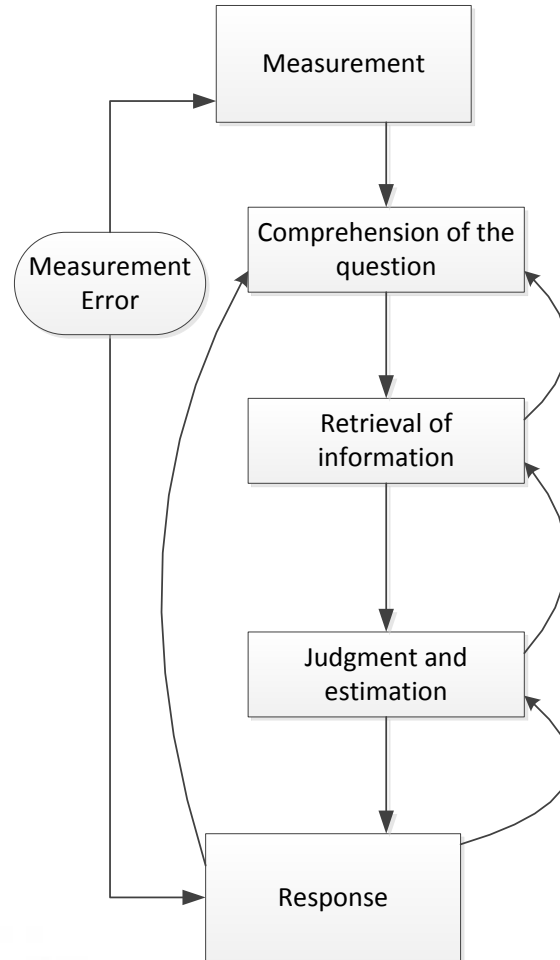


# An Integrated TSE Model



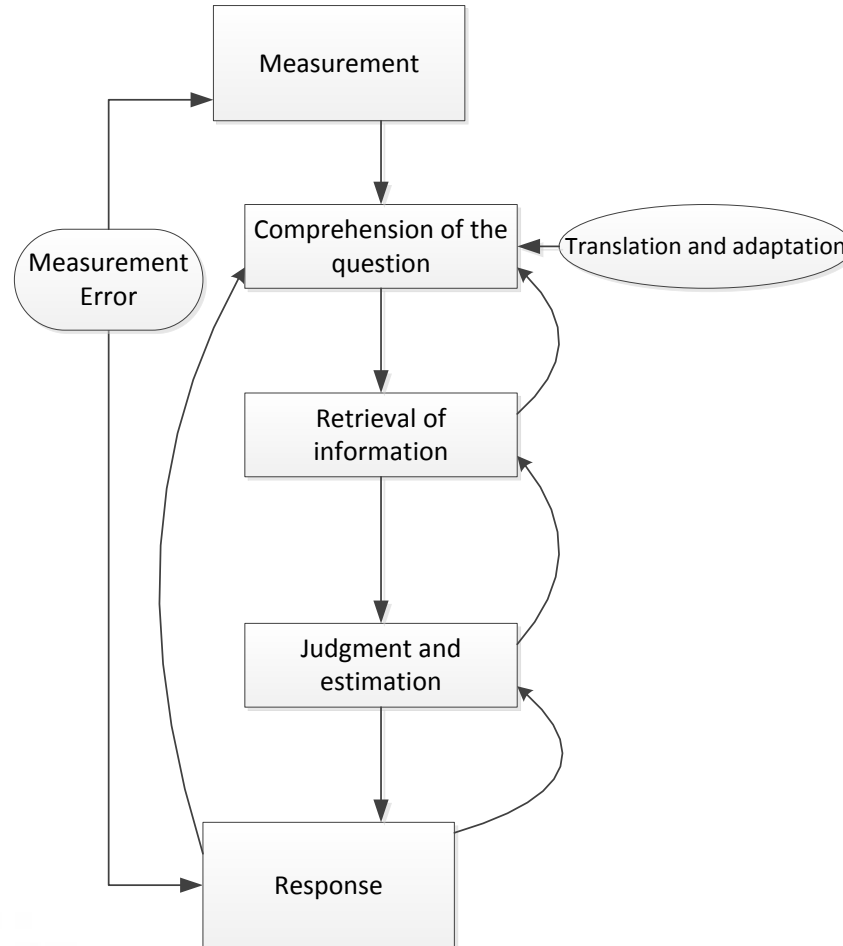
Modified from Groves et al. (2004)

# Measurement Error: Expanded View



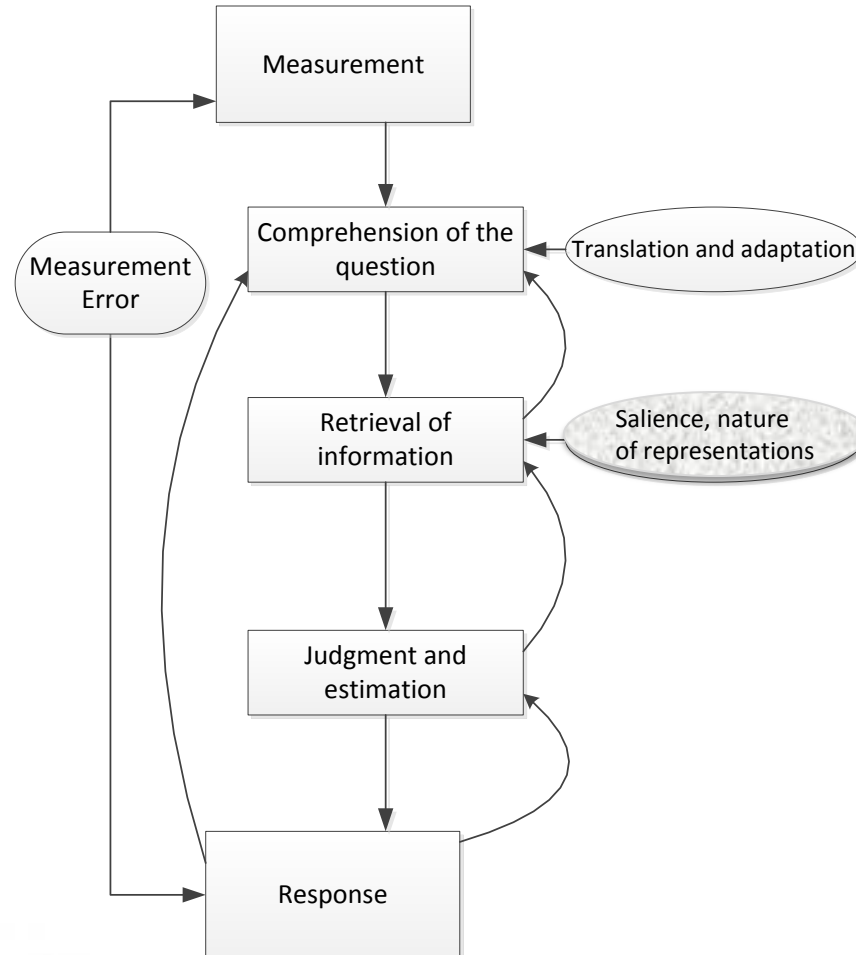
Modified from Groves et al. (2004) and Tourangeau et al. (2000)

# Error Sources: Comprehension



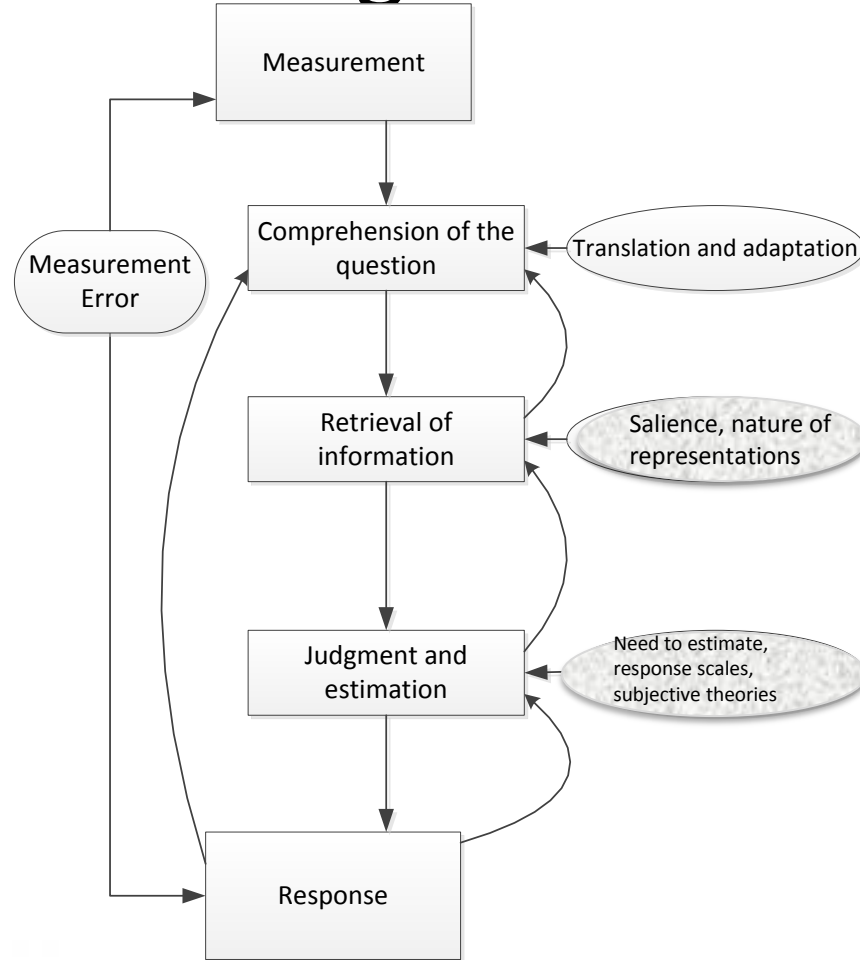
Modified from Groves et al. (2004) and Tourangeau et al. (2000)

# Error Sources: Retrieval



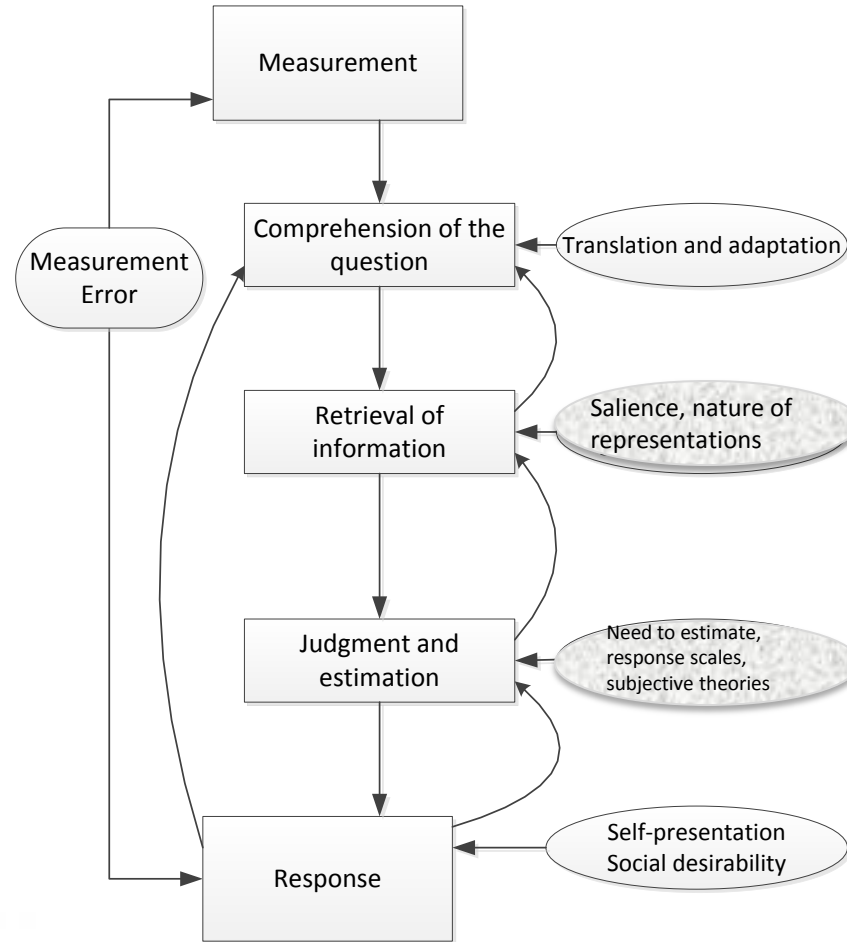
Modified from Groves et al. (2004) and Tourangeau et al. (2000)

# Error Sources: Judgment and Estimation



Modified from Groves et al. (2004) and Tourangeau et al. (2000)

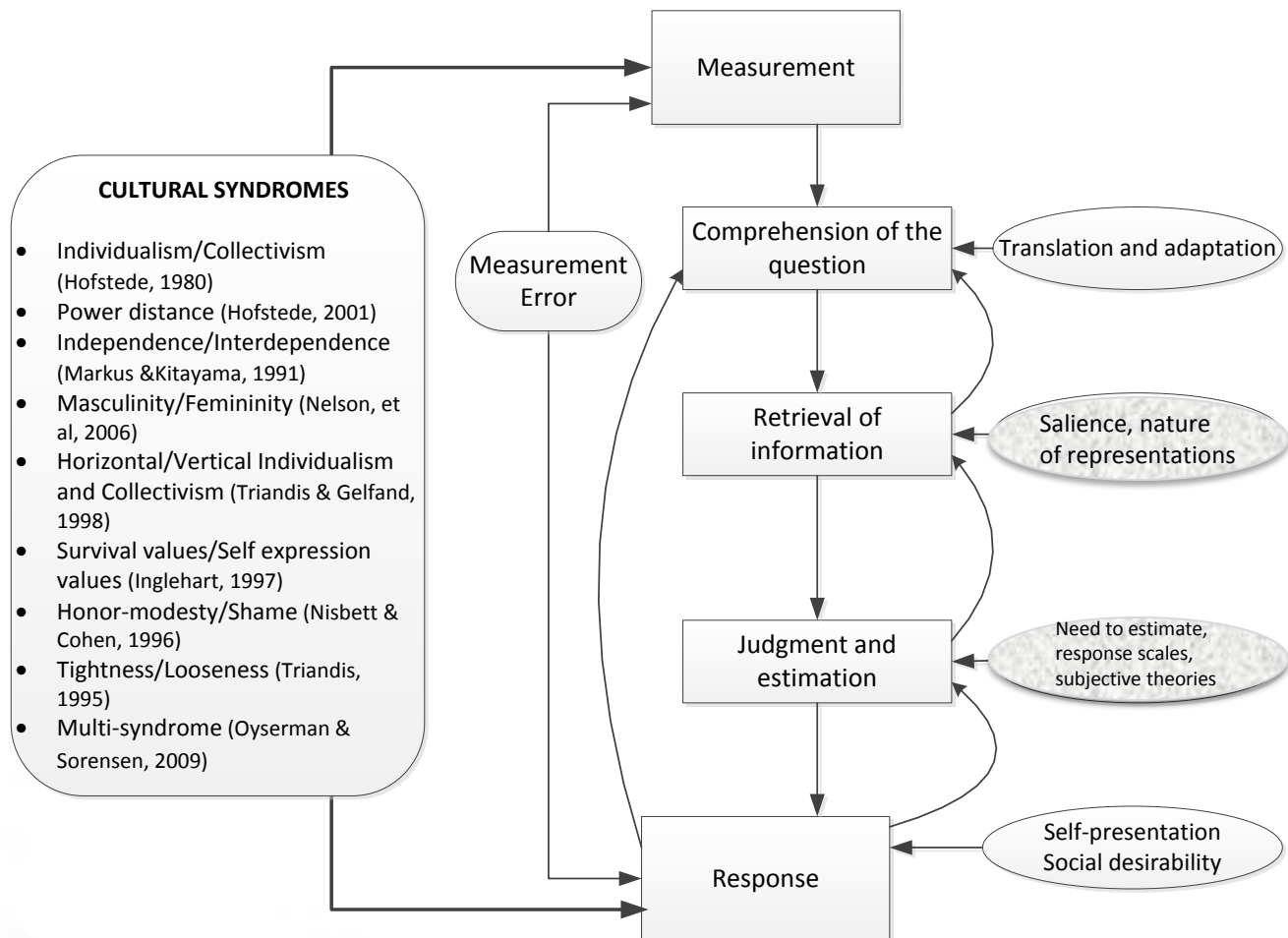
# Error Sources: Response



Modified from Groves et al. (2004) and Tourangeau et al. (2000)



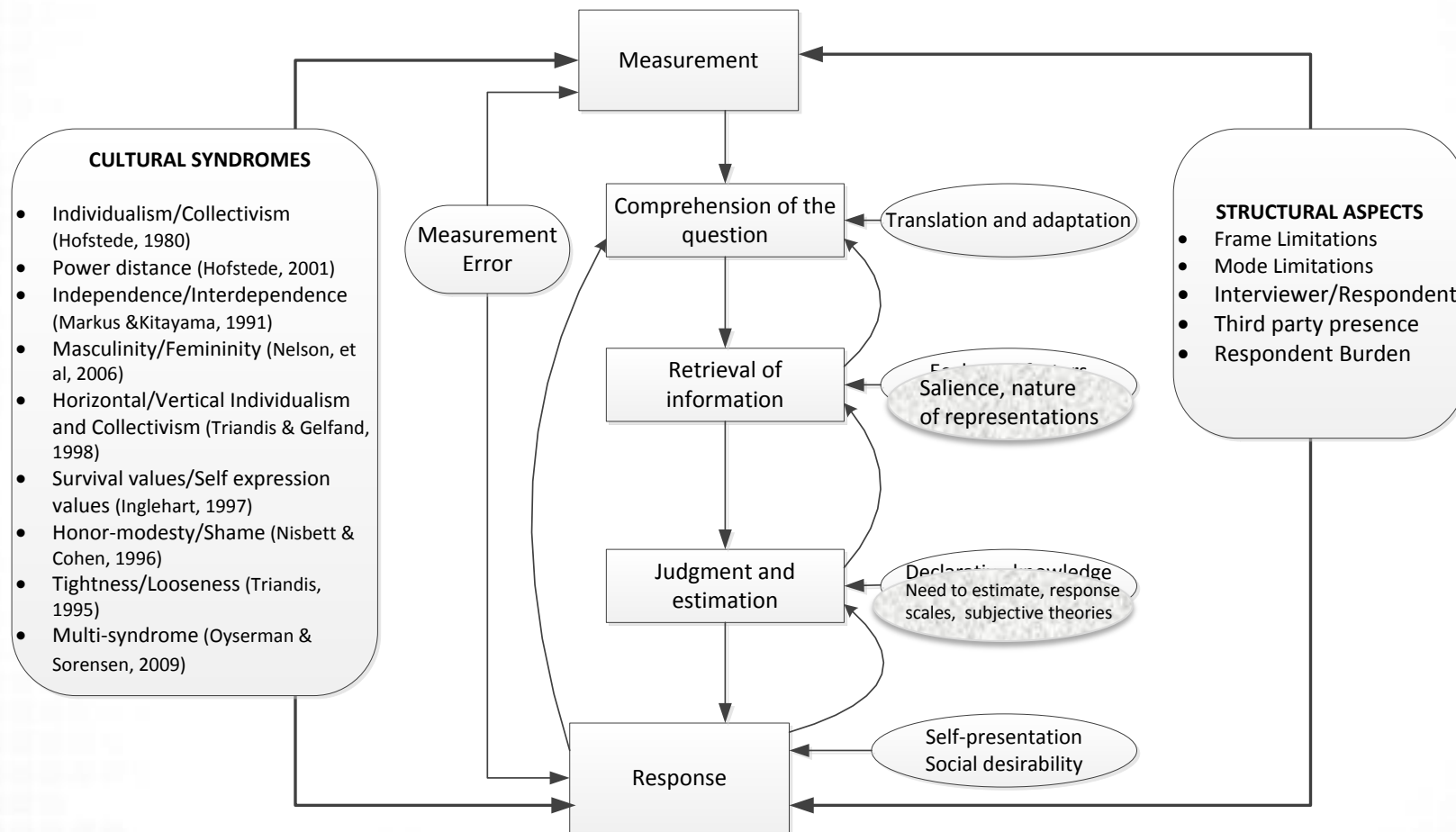
# Error Sources: Cultural Syndromes



Modified from Groves et al. (2004) and Tourangeau et al. (2000)



# Error Sources: Structural Aspects



Modified from Groves et al. (2004) and Tourangeau et al. (2000)



# Conclusion

Thank you very much!

We welcome your comments and suggestions

Please send queries to:

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