LESLEY RUTKOWSKI (INDIANA UNIVERSITY, USA): 
EMBRACING HETEROGENEITY IN CROSS-COUNTRY MEASUREMENT MODELS: ONE WAY TO STRENGTHEN SCIENTIFIC EVIDENCE IN ICCS.

The IEA’s International Civics and Citizenship Study (ICCS) is notable among international studies for its close connections and appropriately substantial reliance on a guiding theoretical framework and abundance of supporting literature. This theoretical orientation lends strength to, especially, the attitude, belief, and perception scales that are developed and reported in ICCS. In spite of the care with which this information is collected, scaled, and reported, ICCS, like all international studies, is necessarily fraught with the complexities associated with measuring constructs across dozens of heterogeneous countries. These complexities include issues of measurement error, missing data, and heterogeneity of model parameter estimates. Based on recent research, I discuss the potential impacts of measurement error and missingness in the background data on proficiency estimates of civic knowledge. And I support the existence of these problems with several examples from recent international assessments. Further, I briefly note that all scale score comparisons rest on a strong assumption of measurement equivalence. I illustrate, using a simulation study, the impact on country rankings and proficiency estimates when the equivalence assumption is not met. I also show that embracing and explicitly modeling heterogeneity can be one way to at least partially attend to these issues. To that end, I propose drawing on a hybrid approach that includes country-specific item parameters and some country specific items along with a core of universal items and parameters for the attitude and perception scales in ICCS. This approach combines recently used methods in PISA and those proposed by Olivieri and von Davier (2011). I conclude by acknowledging that this will necessarily increase the number of items per scale; however, given the importance of accurate attitude and perception information to all sides of the input/processes/output equation, the increased cost of more items might be well worthwhile.