

Psychology 9556B. Longitudinal Methods
Lecture 3 Outline: A Review of SEM for Longitudinal Models (January 22, 2014)

Chapter 1

1. "Constructs are only as good as the indicators..." (p. 3)
2. Models are necessarily simplifications of reality (p. 3)
3. Expanding on CTT: Item variance = $C + M + O + S + e$ (p. 8)
4. Type of Indicators: Dimensionality (p. 10)
5. Types of Indicators: Degree of Explicitness (p. 10)
6. Types of correlations: artificially converted vs. naturally occurring categories (p. 13)
7. How should covariates be treated (p. 15-16)
8. Rescaling: nonlinear transformations, changing the metric, standardization (p. 17-20)
9. Parceling: when to use (p. 20-25)
10. Four aspects of change: correlation, mean, variance, intraindividual change (p. 26-27)

Chapter 3

1. Understanding relationships between LISREL matrix notation (p. 75) and RAM model
2. Setting the Scale (p. 79) implications in longitudinal designs
3. Identification and number of indicators (p. 85)
4. Review of mean structure and identification (p. 90-91)
5. Longitudinal model – allowing residuals to correlate (p. 94-96)
6. Phantom constructs – rationale (p. 96-102)

Chapter 4

1. Continuum of model fit (Fig 4.1) from saturated model to null model
2. RMSEA and statistical test of model fit (p. 108-111)
3. Longitudinal null model (p. 112-117)
4. New? guidelines for sample size (p. 119-127) – what you can do with 100 subjects
5. Power: the ability to detect that a parameter is not 0 (p. 127)
6. Power: the ability to detect good or bad fitting models (p. 127-134)