

Types of change in longitudinal data

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Abstract

The assessment of change in self-reported attributes is hindered by the fact that there are different types of change, among which different types of response shift. Golembiewski, Billingsley, and Yeager (1976), researching organizational change, described three types of change, which they labeled alpha, beta, and gamma change (1976). Howard et al. (1979), who conducted research on educational training interventions, coined the term response shift. Sprangers and Schwartz (1999), working in the field of medical psychology, distinguished three types of response shift: recalibration, reprioritization, and reconceptualization.

Here we will try to solve the confusion caused by the mix of change typologies, definitions, interpretations, operationalizations, and detection procedures. When the linear latent variable model (LLVM) is applied to the measurement of change (Oort, 2001), each of its parameters is subject to change. In this way, we obtain an inventory of possible types of change. By linking the LLVM types of change to the change typologies that originated from substantive fields of research, we obtain a procedure for the detection of these “substantive” types of change through structural equation modeling.

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