

Consider the twolevel 1-1-1 moderated mediation situation where  $w$  is a Between-level moderator and  $y$  and  $m$  are within-between variables that get latent variable decomposed and  $m$  ON  $x$  has a random slope. Observed variables that are latent variable decomposed are given the same name on both levels while factors with indicators that are latent variable decomposed have to be given different factor names on the two levels:

```
%Within%  
y ON m (beta)  
x;  
s | m ON x;
```

```
% Between%  
y ON m w;  
m ON w;  
s ON w (sw);  
[s] (ms);
```

Model constraint:

```
New (ind); ! Indirect effect with 1-1-1 moderated mediation  
Ind = beta*(ms + sw*w);  
! values have to be inserted for the w moderator
```

For more information, see also:

Asparouhov, T. & Muthén, B. (2019). [Latent variable centering of predictors and mediators in multilevel and time-series models](#). Structural Equation Modeling: A Multidisciplinary Journal, 26, 119-142. DOI: 10.1080/10705511.2018.1511375 ([Download scripts](#)).

The section Twolevel mediation starting on page 19 discusses the case where  $y$  ON  $m$  has a random slope.