**Path Tracing**

Correlations (needs standardized model)

The correlation is equal to the sum of the contribution of all the pathways through which the two variables are connected. The strength of each of these contributing pathways is calculated as the product of the path-coefficients along that pathway.

The rules for path tracing are:

1. You can trace backward up an arrow and then forward along the next, or forwards from one variable to the other, but never forward and then back. Another way to think of this rule is that you can never pass out of one arrow head and into another arrowhead: heads-tails, or tails-heads, not heads-heads.
2. You can pass through each variable only once in a given chain of paths.
3. No more than one bi-directional arrow can be included in each path-chain.

Addon Covariances (needs unstandardized model)

Same as for correlation with two additional path tracing rules:

1. Compute the product of coefficients in each route between the variables of interest, tracing backwards, changing direction at a two-headed arrow, then tracing forwards.
2. Sum over all distinct routes, where pathways are considered distinct if they contain different coefficients, or encounter those coefficients in a different order.