

Errata, first printing

This document contains corrections to errors in the first printing of *Introduction to Mediation, Moderation, and Conditional Process Analysis* that slipped through editorial screening. The correction is in **bold and underlined**. The book is currently in its fourth printing. To determine your printing number, look at the copyright page. You will see a string of numbers such as “10 9 8 7 6 . . .”. If this string of numbers ends in “1”, for example, you have a first printing. This document was produced **July 1, 2015**.

Page 48, middle of the page

Rejection of the null hypothesis that $\tau b = 0$ also implies that τr and $\tau \tilde{b}$ are also not zero, because the mathematics of the tests are identical.

Page 112, bottom of the page

The upper bound of a 95% confidence interval is the value in the distribution of the 10,000 estimates corresponding to the $100(0.979) = 97.9$ th percentile, which is the 9,790th value in the sorted distribution, or 0.528. Thus, a 95% bias-corrected bootstrap confidence interval for $\tau a_{\tau} b$ is **0.017** to 0.528.

Page 148, just below the equation in the middle of the page

“where $se_{a_1}^2$, $se_{d_{21}}^2$, and $se_{b_2}^2$ are the squared standard errors of a_1 , d_{21} , and b_2 , respectively.”

Page 156, top of the page

The interpretation of the bootstrap confidence interval is poorly worded. The text should read

As can be seen, the indirect effect of X on Y through M_1 is statistically different from the indirect effect of X on Y through

both M_1 and M_2 in serial, as the 95% bias-corrected bootstrap confidence interval for this contrast is entirely above zero (0.011 to 0.421).

Page 196, middle of the page

One of the constraints programmed into PROCESS is that only a single X variable can be listed in the $\mathbf{x=}$ part of the command line. However, compare Figure 6.5 to **Figure 6.2**. Mathematically, these are the same model. The only difference is in the construal of the additional variables sending arrows to M and Y —as either covariates and not of substantive interest or as additional causal influences whose effects are very much of interest. As discussed in section 6.2, PROCESS can estimate a mediation model with statistical controls as in **Figure 6.2**, so it follows that it can also estimate a model with multiple X variables.

Page 196, middle of the page

“The set of SPSS PROCESS commands below would estimate the effects of IV1, IV2, and **IV3** on Y1 directly and indirectly through MED1:”

Page 197, last line of the page

A close examination shows that this model really is just k simple mediation models with a common X and M .

Page 212, Table 7.1

In the last column, the value in the second row should be 3.5 rather than 3, and the value in the 8th row should be 8.5 rather than 8.

Page 212, middle of the page

For instance, when $X = 1$ and $M = 0$, $\hat{Y} = 5$, and when $X = 1$ and $M = 1$, $\hat{Y} = 7$.

Page 218, Figure 7.4 caption

A visual representation of b_1 , b_2 , and b_3 in a model of the form $\hat{Y} = i_1 + b_1X + b_2M + b_3XM$. In this figure, $b_1 = 1.00$, $b_2 = 2.00$, and $b_3 = 1.50$.

Page 236, middle of the page

The equation is incorrect. It should read

$$Y = i_1 + b_1\underline{X} + b_2\underline{M'} + b_3XM'$$

Page 244, middle of the page

There is simply not enough data in this end of the distribution to be confident in the claim that the protesting lawyer is liked less than the nonprotesting lawyer among those...

Page 274

Three of the equations for the main effect are incorrect. The correct formulas should be

$$\text{Main effect of } X = \bar{Y}_{24} - \bar{Y}_{13} = 1.877 - 2.084 = -0.207$$

$$\text{Main effect of } M = \frac{(\bar{Y}_4 - \bar{Y}_2) + (\bar{Y}_3 - \bar{Y}_1)}{2} = \frac{0.960 + 0.600}{2} = 0.780$$

$$\text{Main effect of } M = \bar{Y}_{34} - \bar{Y}_{12} = 2.370 - 1.590 = 0.780$$

Page 277, middle of the page

b_3 still properly estimates the interaction between X and \underline{M} , as can be seen...

Page 292, top of the page

Observe that b_1 and b_2 are different relative to when X and M are mean centered (Table 9.1, model 2) or kept in their original metric (Table 9.1, model 1).

Page 297, bottom of the page

$$\begin{aligned} se_{\theta_{(X \rightarrow Y)|Z_M=-1}} &= \sqrt{se_{b_1}^2 - 2COV_{b_1b_3} + se_{b_3}^2} \\ se_{\theta_{(X \rightarrow Y)|Z_M=0}} &= \sqrt{se_{b_1}^2} \\ se_{\theta_{(X \rightarrow Y)|Z_M=1}} &= \sqrt{se_{b_1}^2 + 2COV_{b_1b_3} + se_{b_3}^2} \end{aligned}$$

Page 306, middle of the page

PROCESS also calculates the standard errors of these conditional effects, estimated as

$$se_{\theta_{X \rightarrow Y}} = \sqrt{se_{b_1}^2 + M^2 se_{b_4}^2 + W^2 se_{b_5}^2 + (2M)COV_{b_1 b_4} + (2W)COV_{b_1 b_5} + (2MW)COV_{b_4 b_5}}$$

Note: The equation is correct. But in the book, this equation is referred to as the standard error of conditional *indirect* effects.

Page 307, toward the bottom

...which shows that X 's effect on Y is a function of \underline{M} , W , and their product and defined by $b_1 + b_4 M + b_5 W + b_7 MW$.

Page 350, just under Table 10.3

As can be seen, among teams moderate ($V = -0.060$), high ($V = 0.500$), and very high ($\underline{V = 0.840}$) in negative nonverbal expressivity...

Page 382, last line

If b is statistically different from zero and c'_3 is closer to zero than c_3 , this establishes that the interaction between X and \underline{W} in determining Y is mediated by M .

Page 387, top of the page

This difference between the total and direct effect of the interaction is the indirect effect of the interaction through perceived response appropriateness...

Appendix A, page 437, top of the page

As described in section 12.3, an inference about the indirect effect of this highest-order interaction can also be interpreted as a test of whether the indirect effect of $xvar$ on $yvar$ through the variable(s) in $mvlist$ is moderated by \underline{wvar} .

Errata, second and third printings

This document contains corrections to errors that are in the second and third printings of *Introduction to Mediation, Moderation, and Conditional Process Analysis*. The correction is in **bold and underlined**. The book is currently in its fourth printing. To determine your printing number, look at the copyright page. You will see a string of numbers such as “10 9 8 7 6 . . .”. If this string of numbers ends in “2” or “3”, you have a second or third printing. If it ends in a “1”, your copy is from the first printing. This document was produced **July 1, 2015**.

Page 48, middle of the page

Rejection of the null hypothesis that $\tau b = 0$ also implies that τr and $\tau \tilde{b}$ are also not zero, because the mathematics of the tests are identical.

Page 112, bottom of the page

The upper bound of a 95% confidence interval is the value in the distribution of the 10,000 estimates corresponding to the $100(0.979) = 97.9$ th percentile, which is the 9,790th value in the sorted distribution, or 0.528. Thus, a 95% bias-corrected bootstrap confidence interval for $\tau a_{\tau} b$ is **0.017** to 0.528.

Page 196, middle of the page

One of the constraints programmed into PROCESS is that only a single X variable can be listed in the $\mathbf{x=}$ part of the command line. However, compare Figure 6.5 to **Figure 6.2**. Mathematically, these are the same model. The only difference is in the construal of the additional variables sending arrows to M and Y —as either covariates and not of substantive interest or as additional causal influences whose effects are very much of interest. As discussed in section 6.2, PROCESS can estimate a mediation model with

statistical controls as in **Figure 6.2**, so it follows that it can also estimate a model with multiple X variables.

Page 197, last line of the page

A close examination shows that this model really is just k simple mediation models with a common X and M .

Page 212, Table 7.1

In the last column, the value in the second row should be 3.5 rather than 3, and the value in the 8th row should be 8.5 rather than 8.

Page 212, middle of the page

For instance, when $X = 1$ and $M = 0$, $\hat{Y} = 5$, and when $X = 1$ and $M = 1$, $\hat{Y} = 7$.

Page 236, middle of the page

The equation is incorrect. It should read

$$Y = i_1 + b_1\underline{X} + b_2\underline{M'} + b_3XM'$$

Page 244, middle of the page

There is simply not enough data in this end of the distribution to be confident in the claim that the protesting lawyer is liked less than the nonprotesting lawyer among those...

Page 274

Two of the equations for the main effect are incorrect. The correct formulas should be

$$\text{Main effect of } X = \bar{Y}_{24} - \bar{Y}_{13} = 1.877 - 2.084 = -0.207$$

$$\text{Main effect of } M = \bar{Y}_{34} - \bar{Y}_{12} = 2.370 - 1.590 = 0.780$$

Page 277, middle of the page

b_3 still properly estimates the interaction between X and \underline{M} , as can be seen...

Page 292, top of the page

Observe that b_1 and b_2 are different relative to when X and M are mean centered (Table 9.1, model 2) or kept in their original metric (Table 9.1, model 1).

Page 306, middle of the page

PROCESS also calculates the standard errors of these conditional effects, estimated as

$$se_{\theta_{X \rightarrow Y}} = \sqrt{\frac{se_{b_1}^2 + M^2 se_{b_4}^2 + W^2 se_{b_5}^2 + (2M)COV_{b_1 b_4} + (2W)COV_{b_1 b_5} + (2MW)COV_{b_4 b_5}}{(2W)COV_{b_1 b_5} + (2MW)COV_{b_4 b_5}}}$$

Note: The equation is correct. But in the book, this equation is referred to as the standard error of conditional *indirect* effects.

Page 307, toward the bottom

...which shows that X 's effect on Y is a function of \underline{M} , W , and their product and defined by $b_1 + b_4 M + b_5 W + b_7 MW$.

Page 382, last line

If b is statistically different from zero and c'_3 is closer to zero than c_3 , this establishes that the interaction between X and \underline{W} in determining Y is mediated by M .

Page 387, top of the page

"This difference between the total and direct effect of the interaction is the indirect effect of the interaction through perceived response appropriateness..."

Errata, fourth printing

This document contains corrections to errors that remain in the fourth printing of *Introduction to Mediation, Moderation, and Conditional Process Analysis*. The correction is in **bold and underlined**. The book is currently in its fourth printing. To determine your printing number, look at the copyright page. You will see a string of numbers such as “10 9 8 7 6 . . .”. If this string of numbers ends in “4”, you have a fourth printing. If it ends in a “1,” “2,” or “3,” your copy is from the first, second, or third printing. This document was produced **July 1, 2015**.

Page 48, middle of the page

Rejection of the null hypothesis that $\tau b = 0$ also implies that τr and $\tau \tilde{b}$ are also not zero, because the mathematics of the tests are identical.

Page 212, Table 7.1

In the last column, the value in the second row should be 3.5 rather than 3, and the value in the 8th row should be 8.5 rather than 8.

Page 236, middle of the page

The equation is incorrect. It should read

$$Y = i_1 + b_1 \underline{X} + b_2 \underline{M'} + b_3 XM'$$

Page 277, middle of the page

b_3 still properly estimates the interaction between X and \underline{M} , as can be seen...

Page 307, toward the bottom

...which shows that X 's effect on Y is a function of \underline{M} , W , and their product and defined by $b_1 + b_4 M + b_5 W + b_7 MW$.

Page 382, last line

If b is statistically **different** from zero and c'_3 is closer to zero than c_3 , this establishes that the interaction between X and W in determining Y is mediated by M .