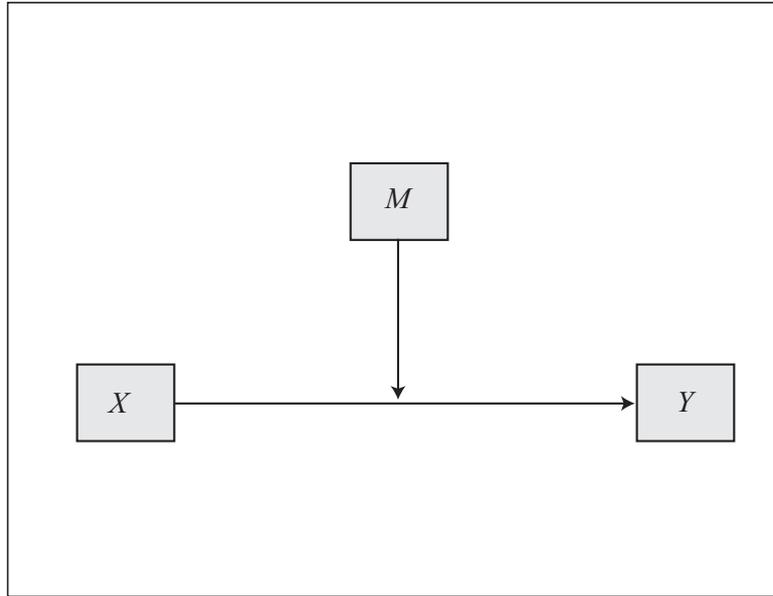
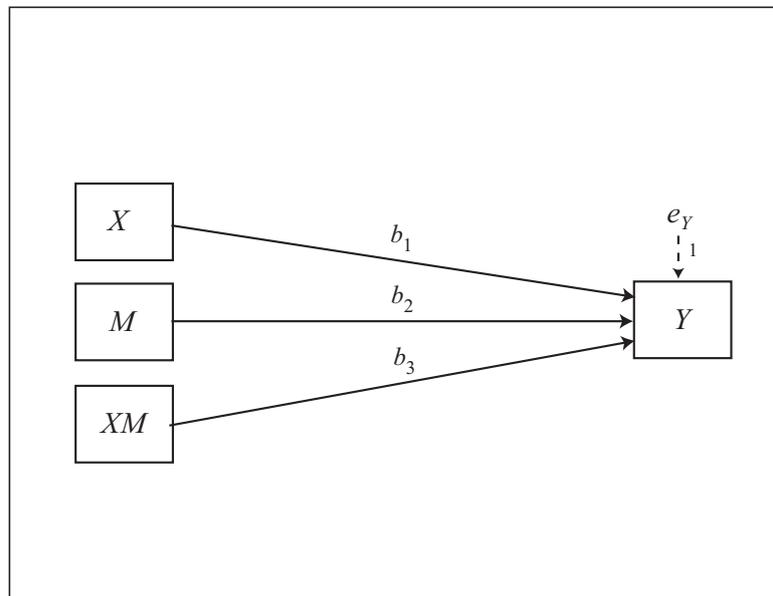


### Model 1

Conceptual Diagram



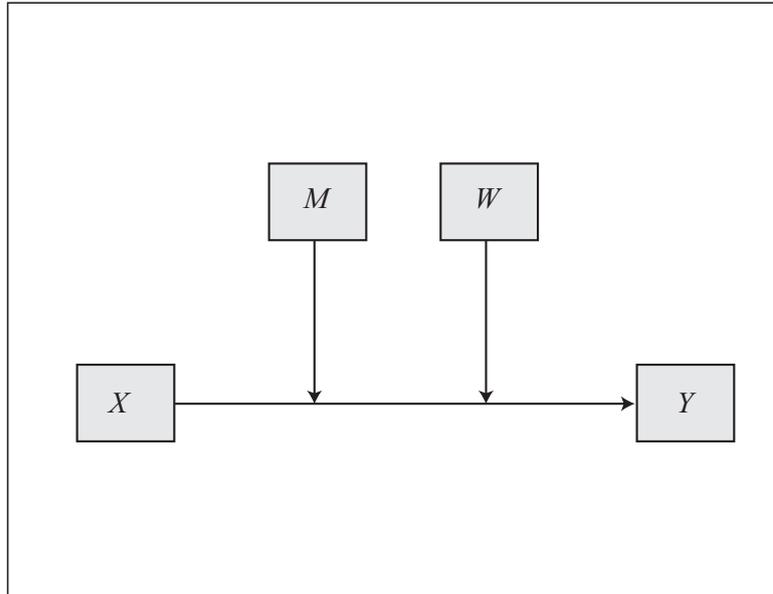
Statistical Diagram



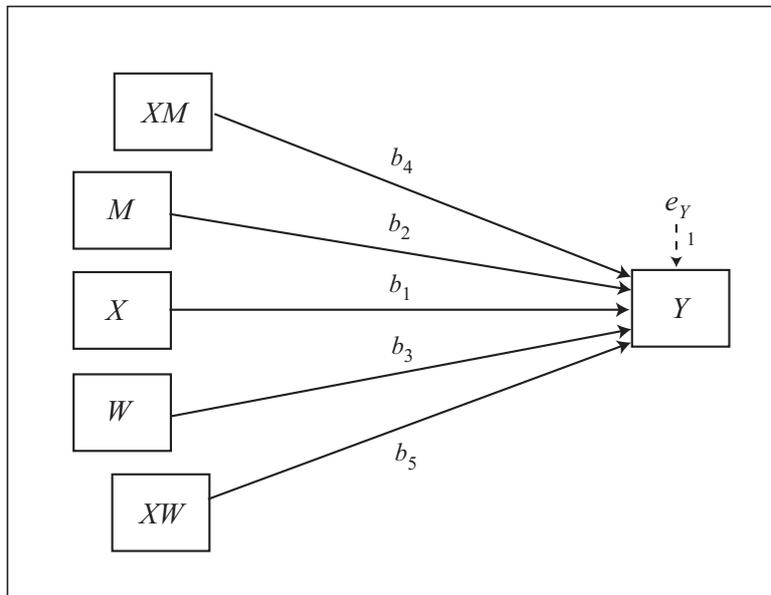
Conditional effect of  $X$  on  $Y = b_1 + b_3M$

## Model 2

Conceptual Diagram



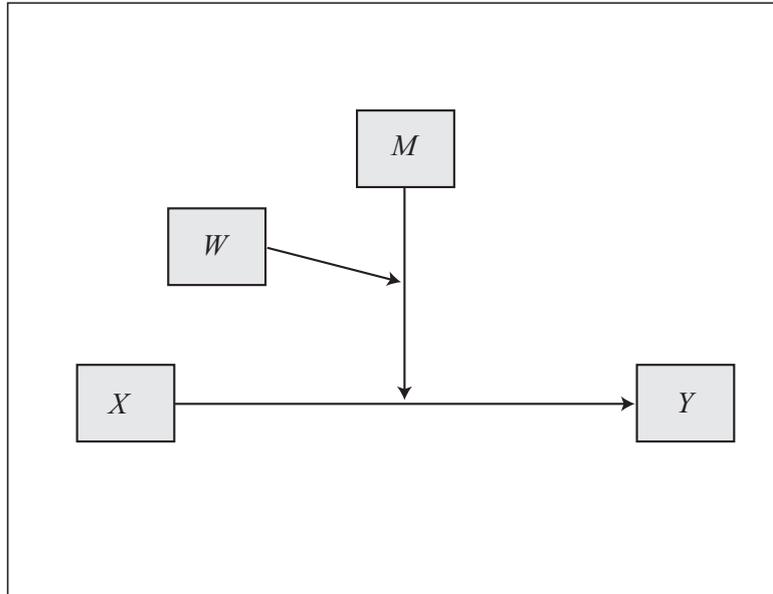
Statistical Diagram



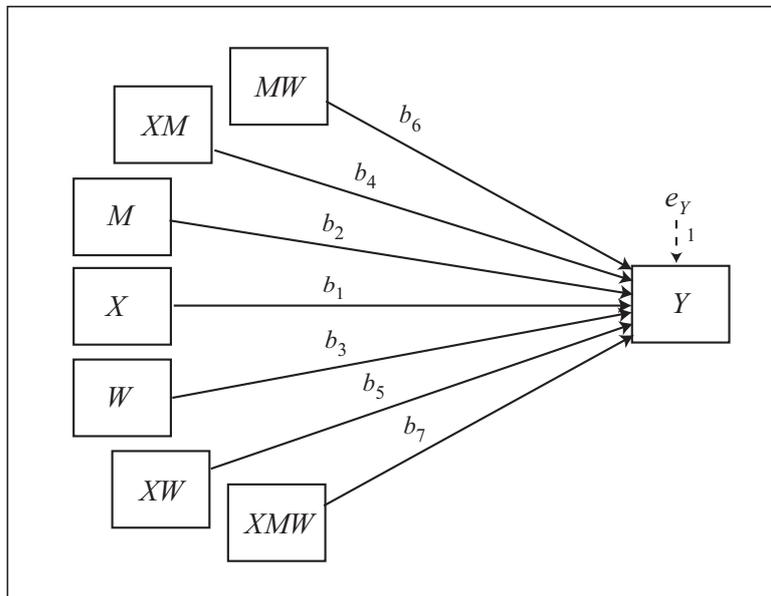
Conditional effect of  $X$  on  $Y = b_1 + b_4M + b_5W$

### Model 3

Conceptual Diagram



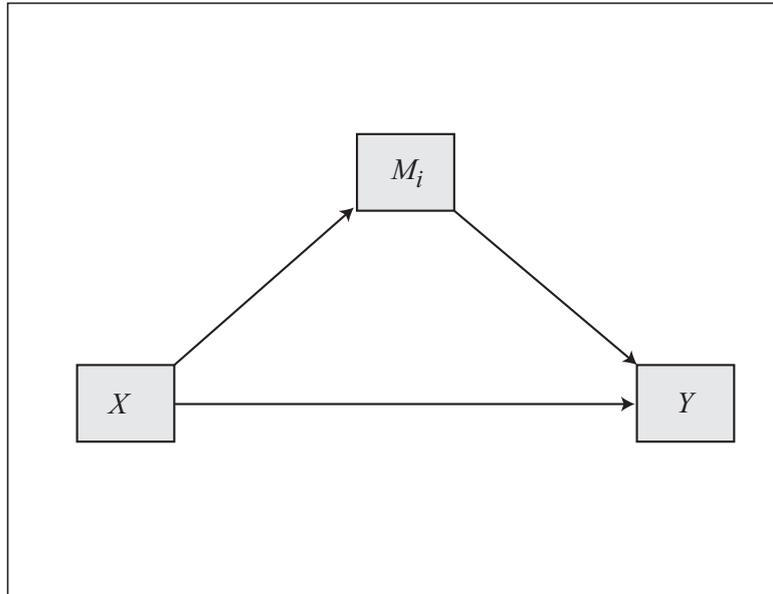
Statistical Diagram



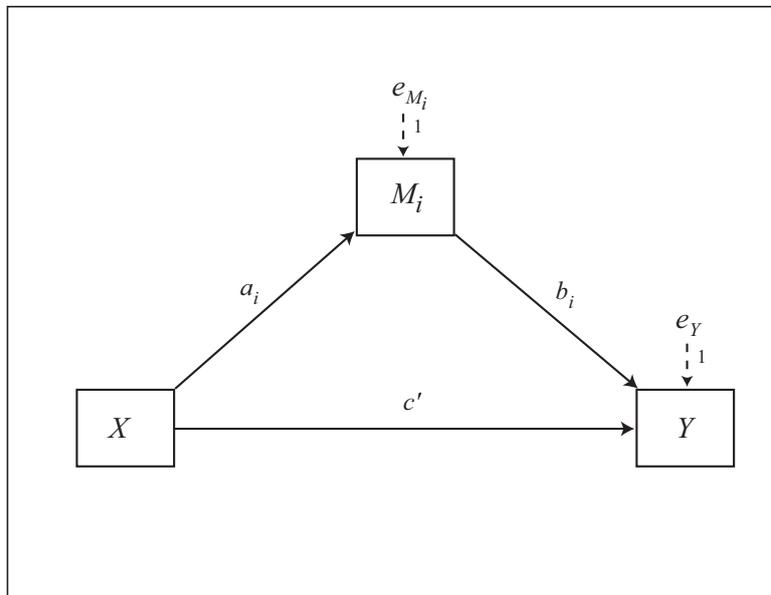
$$\text{Conditional effect of } X \text{ on } Y = b_1 + b_4M + b_5W + b_7MW$$

### Model 4

Conceptual Diagram



Statistical Diagram



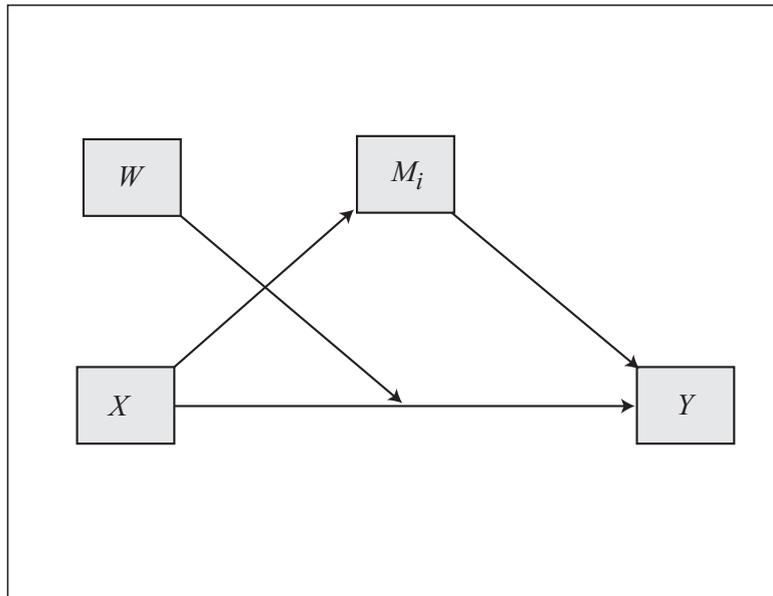
Indirect effect of  $X$  on  $Y$  through  $M_i = a_i b_i$

Direct effect of  $X$  on  $Y = c'$

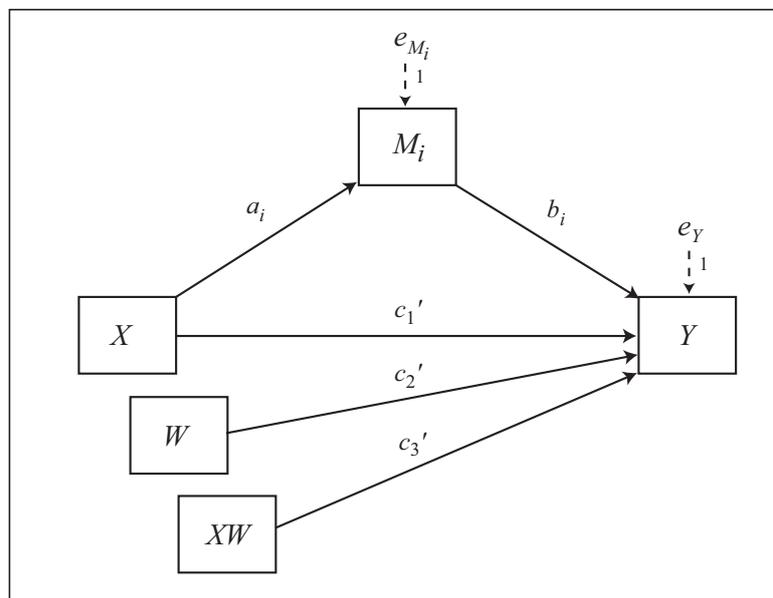
Note: Model 4 allows up to 10 mediators operating in parallel.

### Model 5

Conceptual Diagram



Statistical Diagram



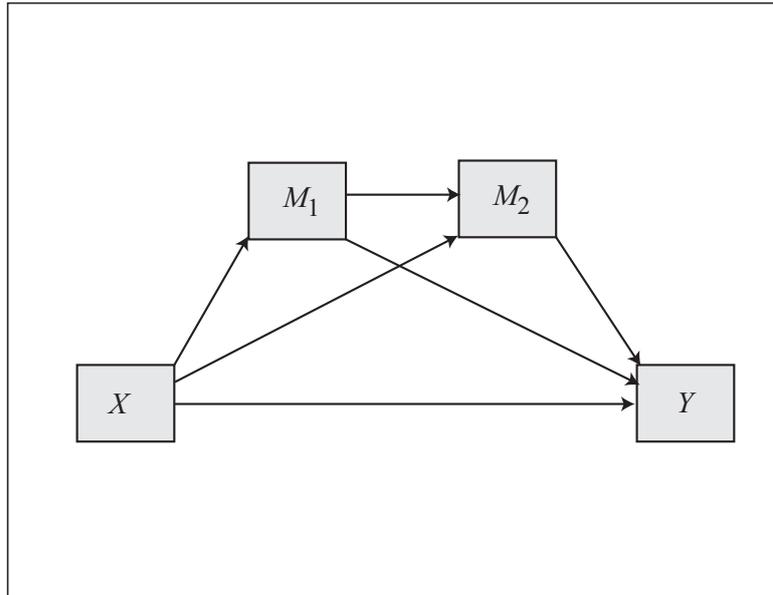
Indirect effect of  $X$  on  $Y$  through  $M_i = a_i b_i$

Conditional direct effect of  $X$  on  $Y = c_1' + c_3'W$

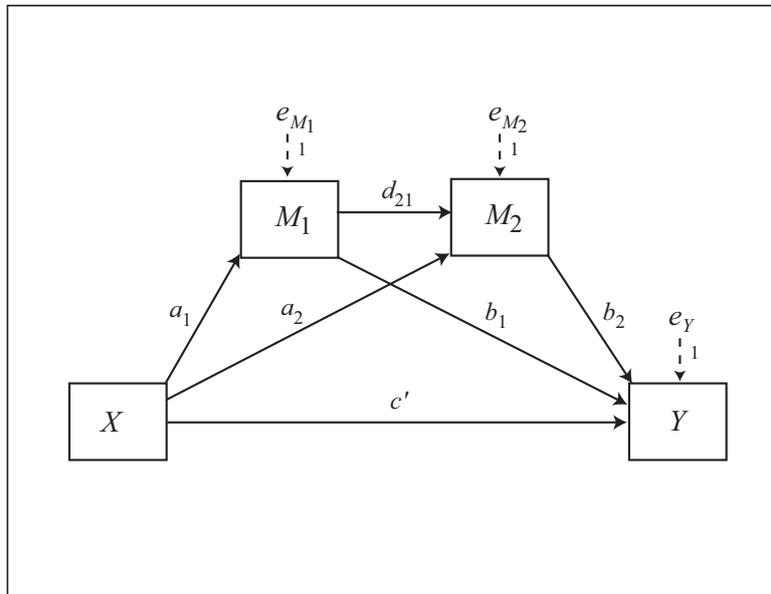
\*Model 5 allows up to 10 mediators operating in parallel

**Model 6**  
(2 mediators)

Conceptual Diagram



Statistical Diagram



Indirect effect of  $X$  on  $Y$  through  $M_i$  only =  $a_i b_i$

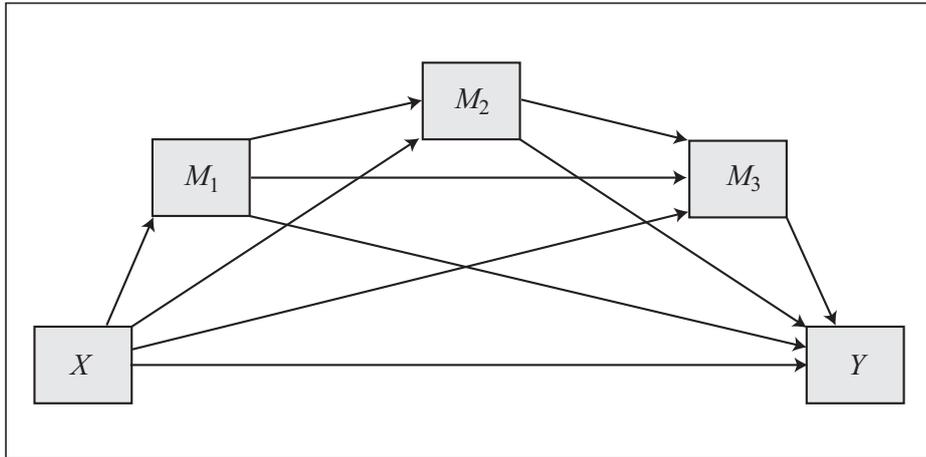
Indirect effect of  $X$  on  $Y$  through  $M_1$  and  $M_2$  in serial =  $a_1 d_{21} b_2$

Direct effect of  $X$  on  $Y$  =  $c'$

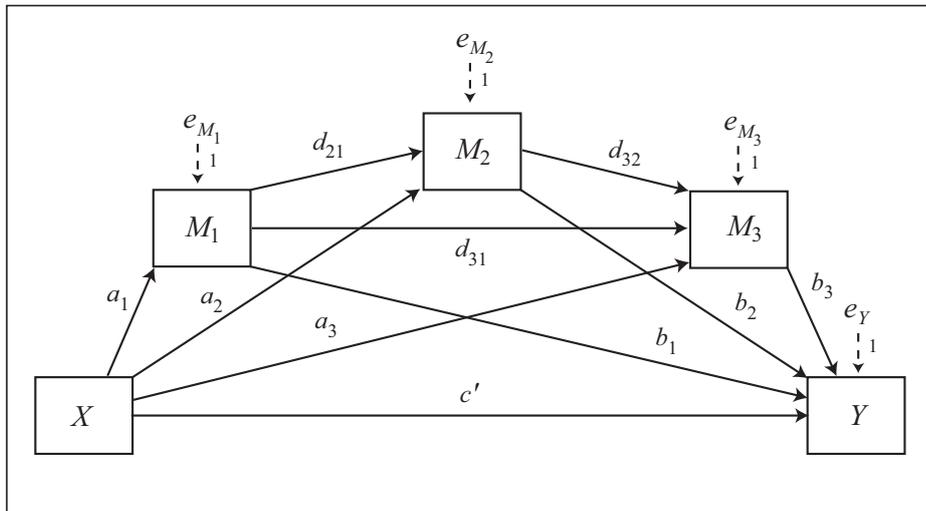
Note: Model 6 allows up to 4 mediators operating in serial.

**Model 6**  
 (3 mediators)

Conceptual Diagram



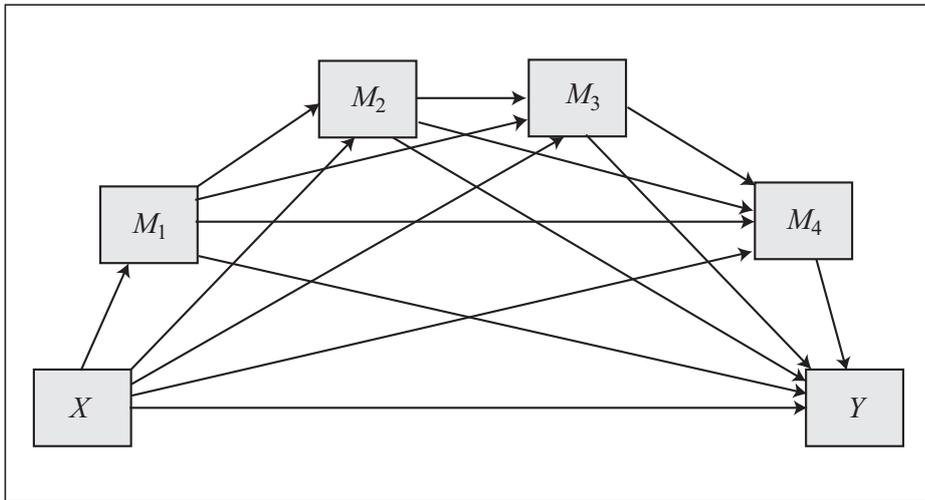
Statistical Diagram



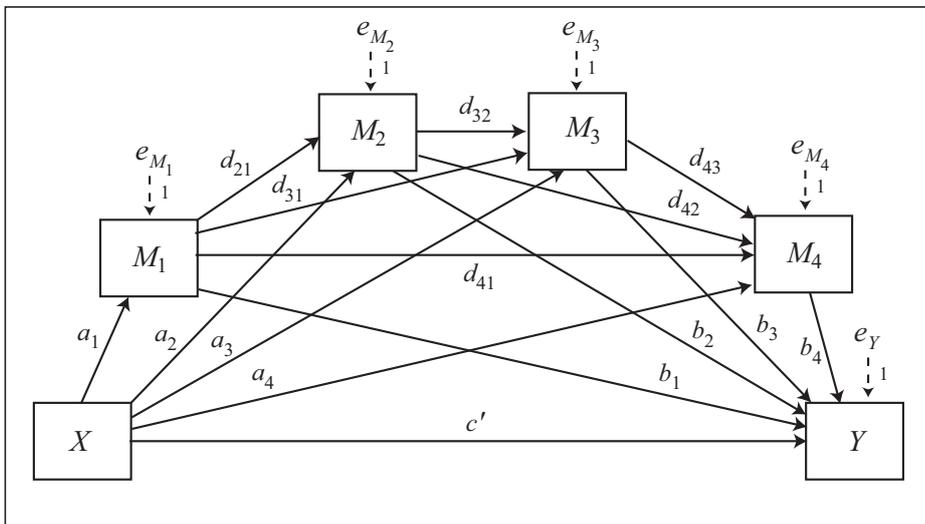
- Indirect effect of  $X$  on  $Y$  through  $M_i$  only =  $a_i b_i$
- Indirect effect of  $X$  on  $Y$  through  $M_1$  and  $M_2$  in serial =  $a_1 d_{21} b_2$
- Indirect effect of  $X$  on  $Y$  through  $M_1$  and  $M_3$  in serial =  $a_1 d_{31} b_3$
- Indirect effect of  $X$  on  $Y$  through  $M_2$  and  $M_3$  in serial =  $a_2 d_{32} b_3$
- Indirect effect of  $X$  on  $Y$  through  $M_1$ ,  $M_2$ , and  $M_3$  in serial =  $a_1 d_{21} d_{32} b_3$
- Direct effect of  $X$  on  $Y$  =  $c'$

**Model 6**  
 (4 mediators)

Conceptual Diagram



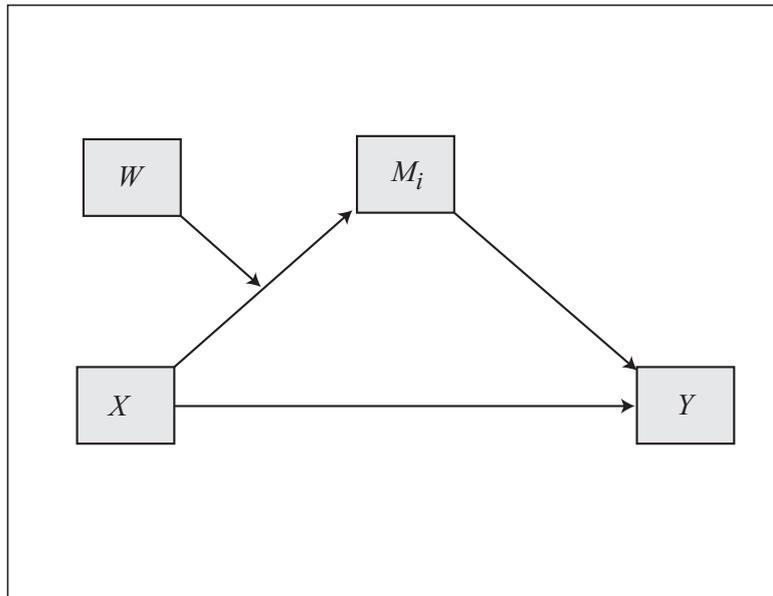
Statistical Diagram



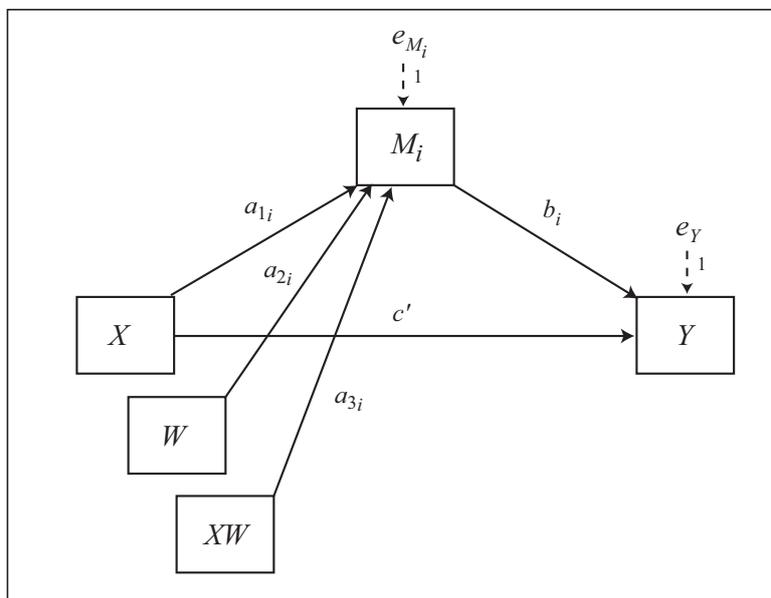
- Indirect effect of  $X$  on  $Y$  through  $M_i$  only =  $a_i b_i$
- Indirect effect of  $X$  on  $Y$  through  $M_1$  and  $M_2$  in serial =  $a_1 d_{21} b_2$
- Indirect effect of  $X$  on  $Y$  through  $M_1$  and  $M_3$  in serial =  $a_1 d_{31} b_3$
- Indirect effect of  $X$  on  $Y$  through  $M_1$  and  $M_4$  in serial =  $a_1 d_{41} b_4$
- Indirect effect of  $X$  on  $Y$  through  $M_2$  and  $M_3$  in serial =  $a_2 d_{32} b_3$
- Indirect effect of  $X$  on  $Y$  through  $M_2$  and  $M_4$  in serial =  $a_2 d_{42} b_4$
- Indirect effect of  $X$  on  $Y$  through  $M_3$  and  $M_4$  in serial =  $a_3 d_{43} b_4$
- Indirect effect of  $X$  on  $Y$  through  $M_1, M_2,$  and  $M_3$  in serial =  $a_1 d_{21} d_{32} b_3$
- Indirect effect of  $X$  on  $Y$  through  $M_1, M_2,$  and  $M_4$  in serial =  $a_1 d_{21} d_{42} b_4$
- Indirect effect of  $X$  on  $Y$  through  $M_1, M_3,$  and  $M_4$  in serial =  $a_1 d_{31} d_{43} b_4$
- Indirect effect of  $X$  on  $Y$  through  $M_2, M_3,$  and  $M_4$  in serial =  $a_2 d_{32} d_{43} b_4$
- Indirect effect of  $X$  on  $Y$  through  $M_1, M_2, M_3,$  and  $M_4$  in serial =  $a_1 d_{21} d_{32} d_{43} b_4$
- Direct effect of  $X$  on  $Y = c'$

### Model 7

Conceptual Diagram



Statistical Diagram



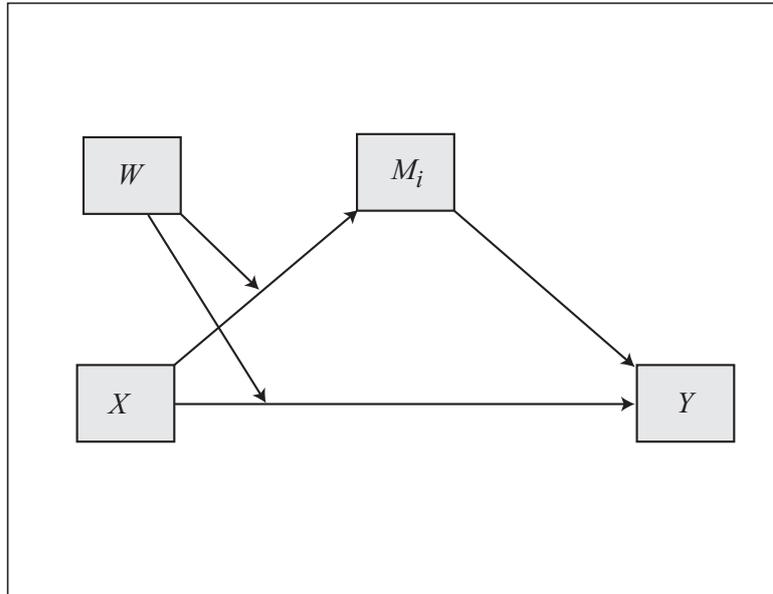
Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{3i}W)b_i$

Direct effect of  $X$  on  $Y = c'$

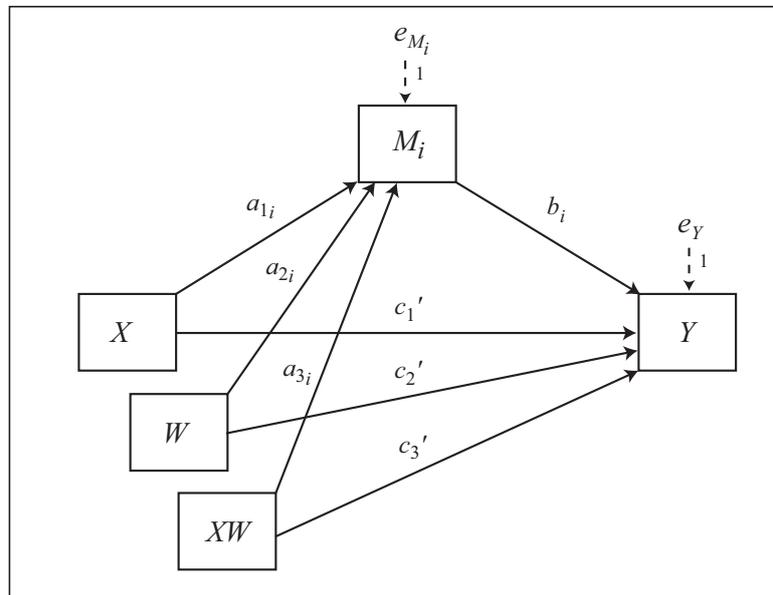
Note: Model 7 allows up to 10 mediators operating in parallel.

### Model 8

Conceptual Diagram



Statistical Diagram



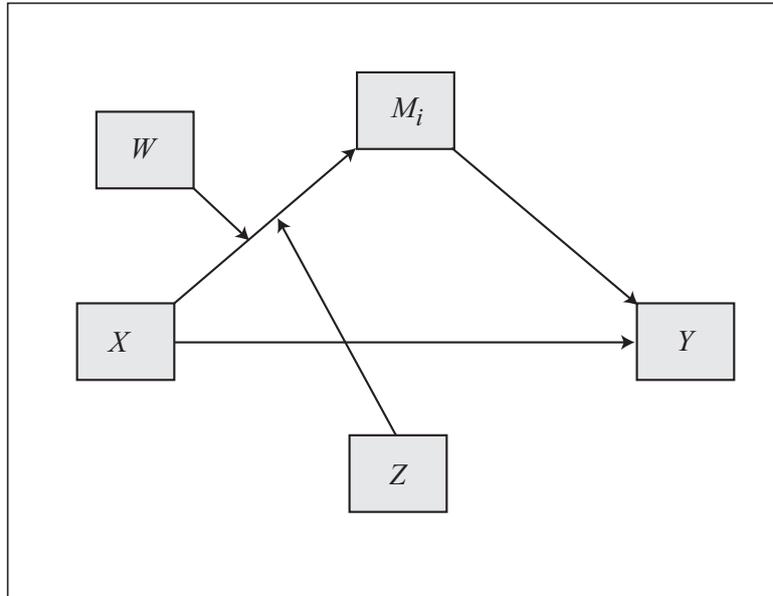
Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{3i}W)b_i$

Conditional direct effect of  $X$  on  $Y = c_1' + c_3'W$

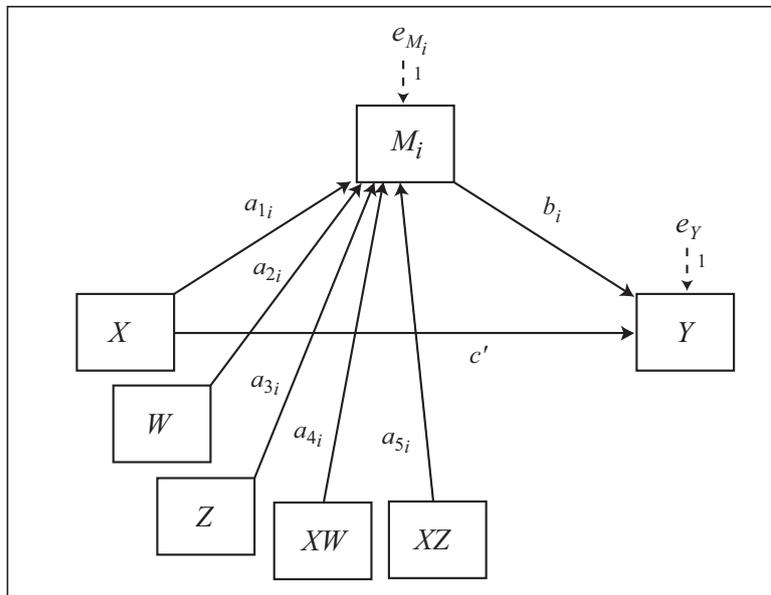
Note: Model 8 allows up to 10 mediators operating in parallel.

### Model 9

Conceptual Diagram



Statistical Diagram



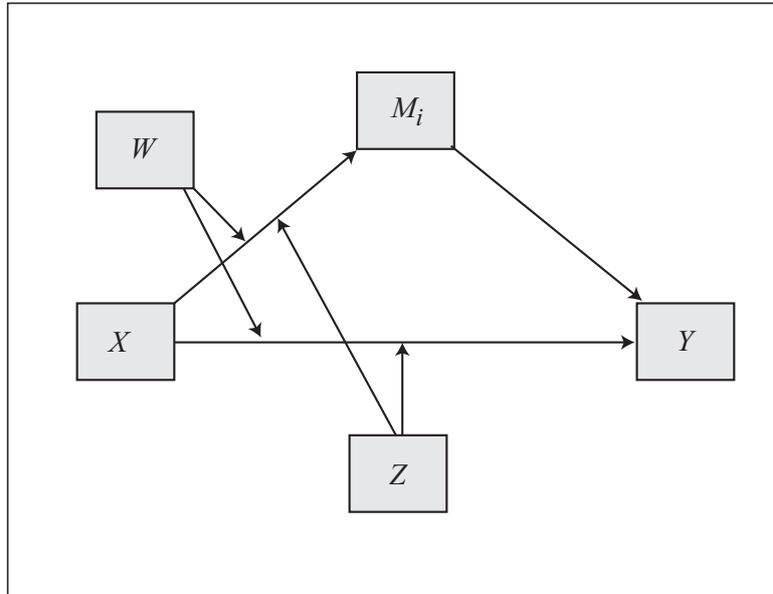
Conditional indirect effect of X on Y through  $M_i = (a_{1i} + a_{4i}W + a_{5i}Z) b_i$

Direct effect of X on Y =  $c'$

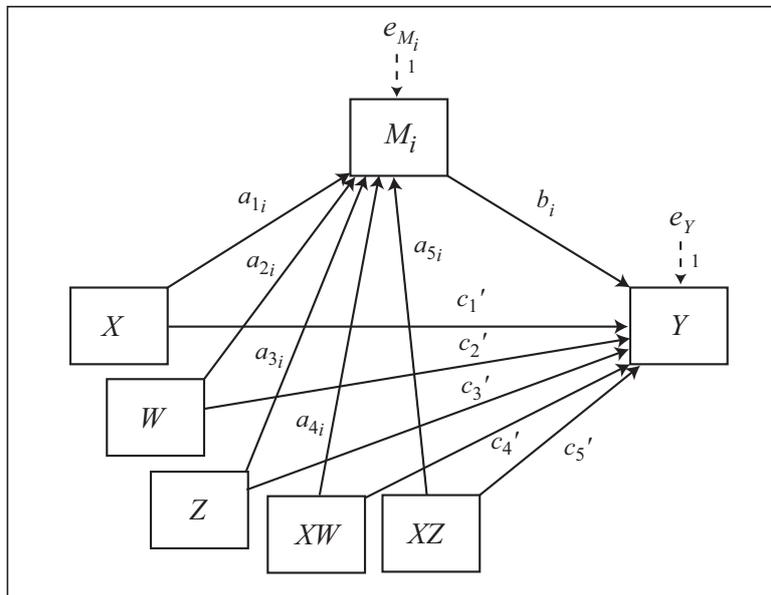
\*Model 9 allows up to 10 mediators operating in parallel

### Model 10

Conceptual Diagram



Statistical Diagram



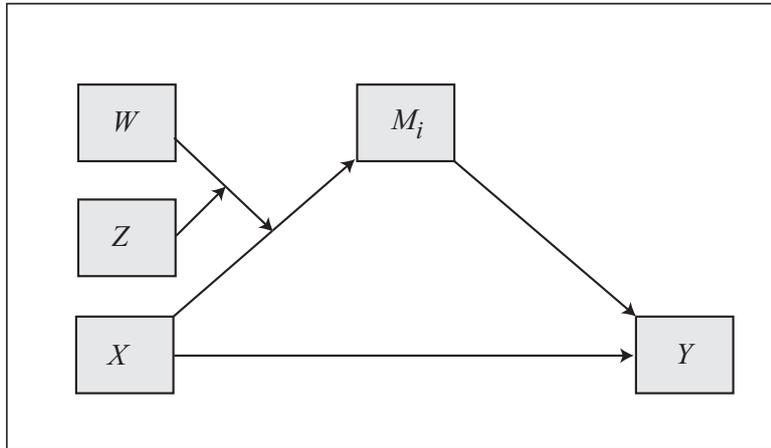
Conditional indirect effect of X on Y through  $M_i = (a_{1i} + a_{4i}W + a_{5i}Z) b_i$

Conditional direct effect of X on Y =  $c_1' + c_4'W + c_5'Z$

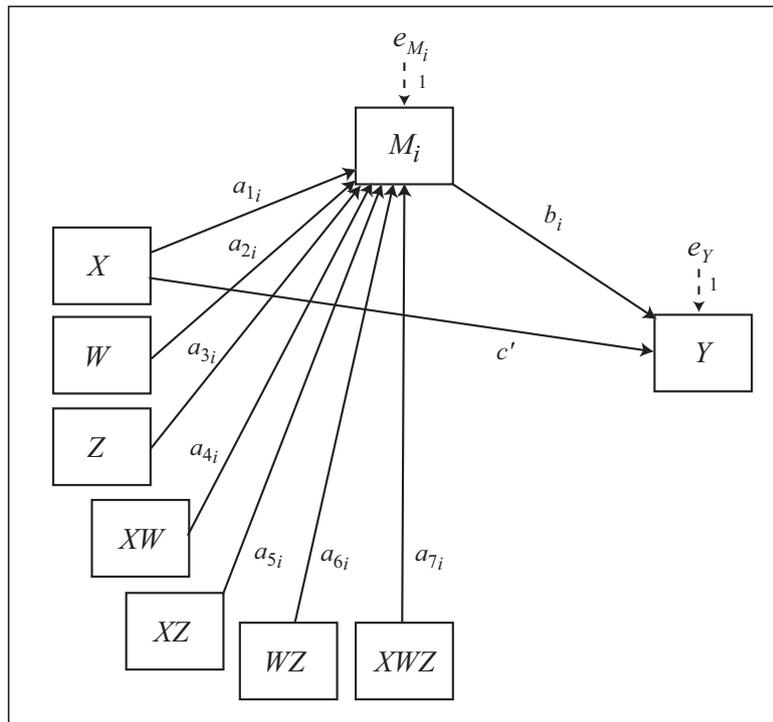
\*Model 10 allows up to 10 mediators operating in parallel

### Model 11

Conceptual Diagram



Statistical Diagram

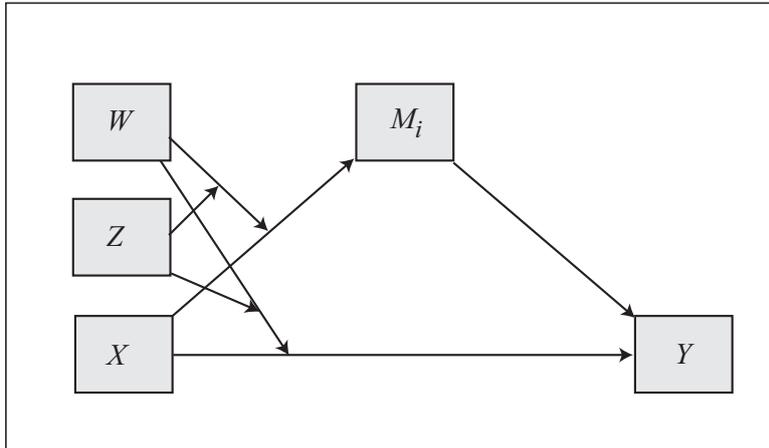


Conditional indirect effect of X on Y through  $M_i = (a_{1i} + a_{4i}W + a_{5i}Z + a_{7i}WZ) b_i$   
 Direct effect of X on Y =  $c'$

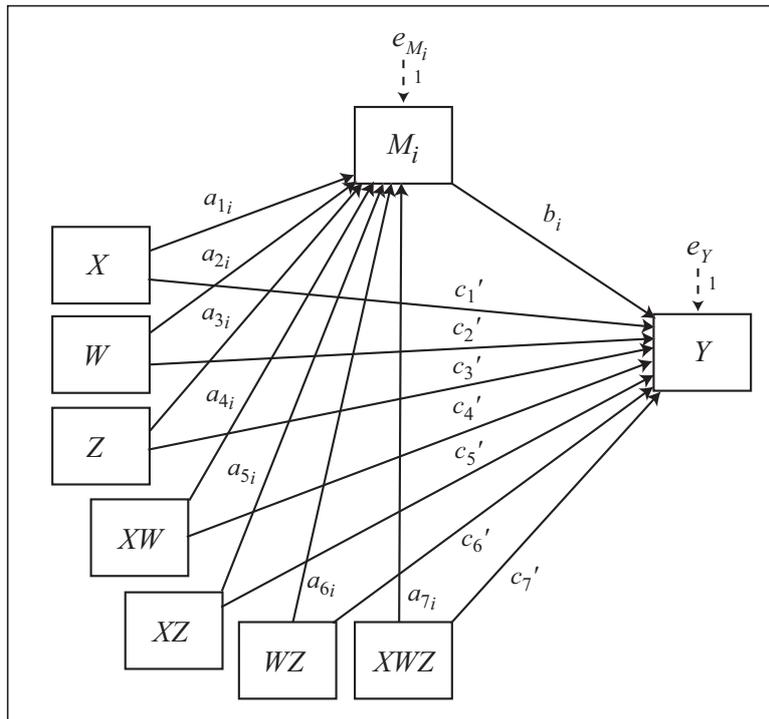
\*Model 11 allows up to 10 mediators operating in parallel

### Model 12

Conceptual Diagram



Statistical Diagram



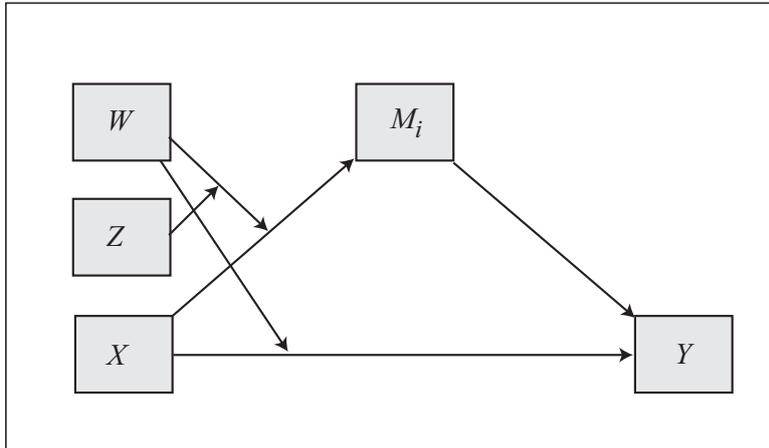
Conditional indirect effect of X on Y through  $M_i = (a_{1i} + a_{4i}W + a_{5i}Z + a_{7i}WZ) b_i$

Conditional direct effect of X on Y =  $c_1' + c_4'W + c_5'Z + c_7'WZ$

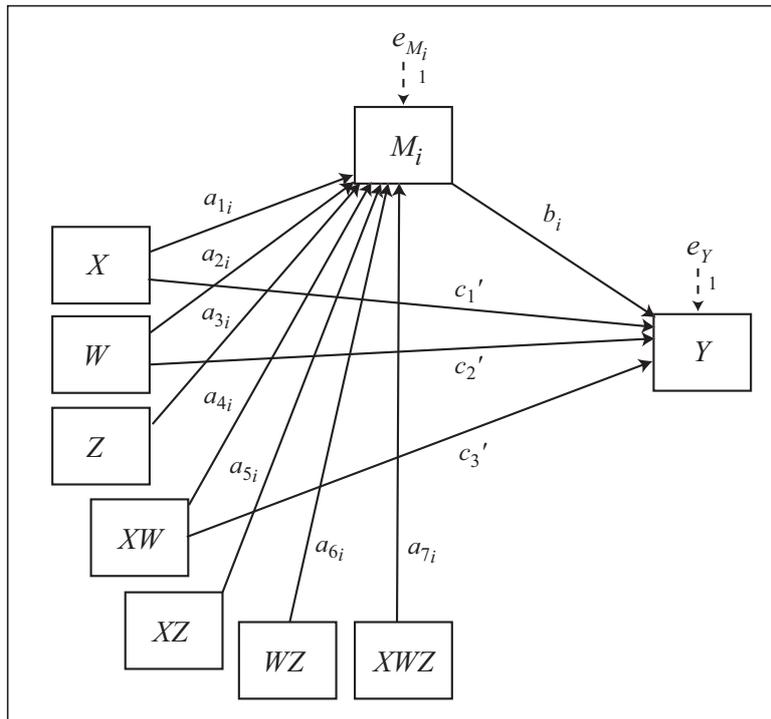
Note: Model 12 allows up to 10 mediators operating in parallel.

### Model 13

Conceptual Diagram



Statistical Diagram

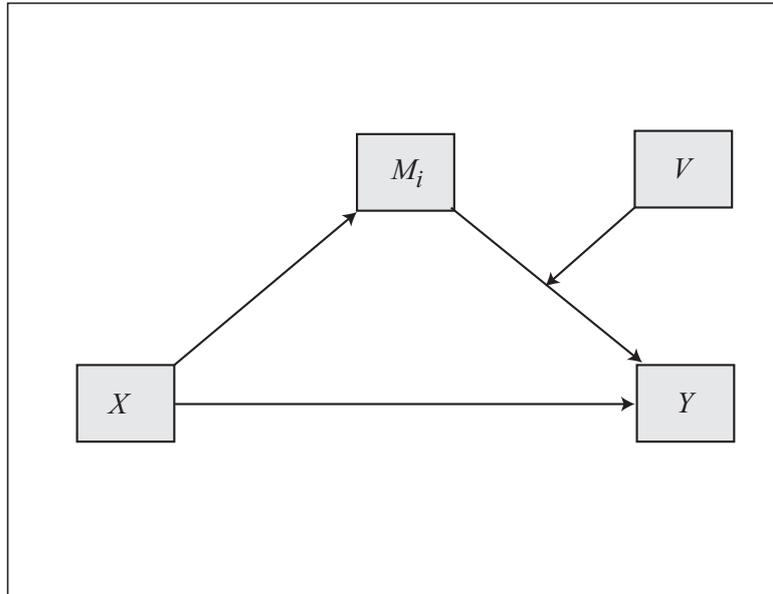


Conditional indirect effect of X on Y through  $M_i = (a_{1i} + a_{4i}W + a_{5i}Z + a_{7i}WZ) b_i$   
 Conditional direct effect of X on Y =  $c_1' + c_3'W$

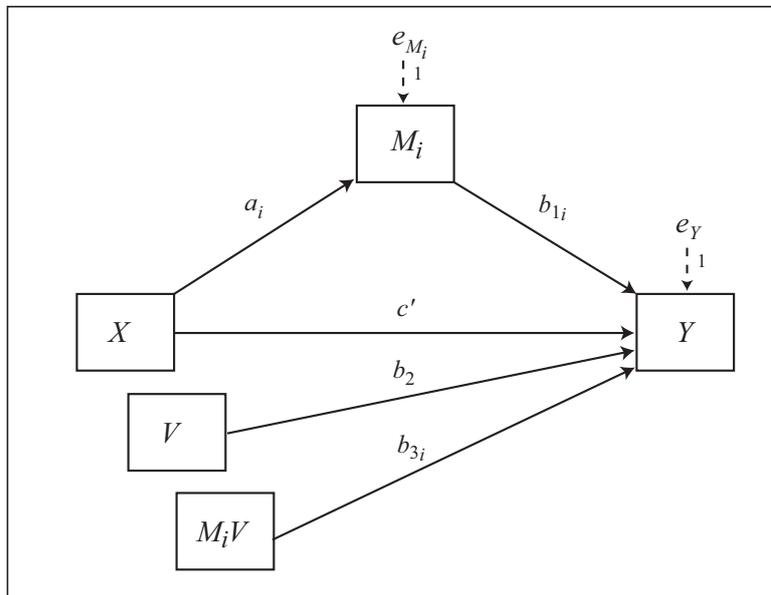
\*Model 13 allows up to 10 mediators operating in parallel

### Model 14

Conceptual Diagram



Statistical Diagram



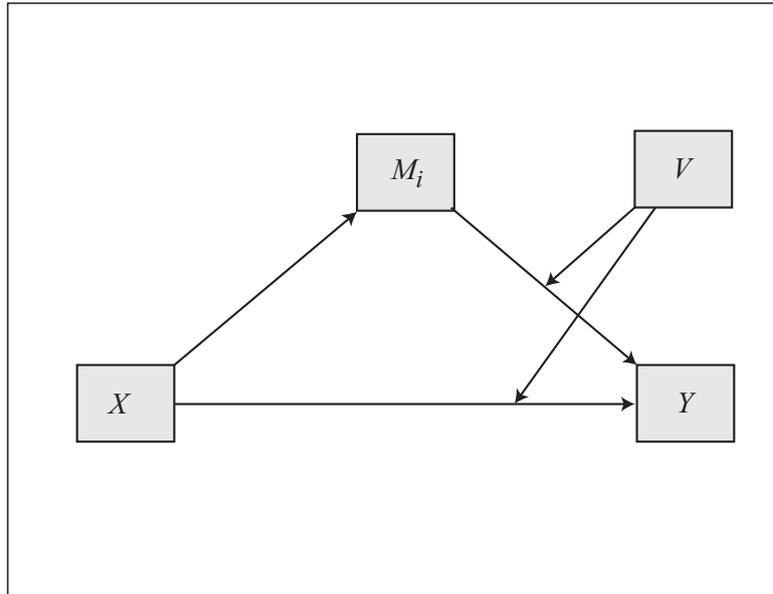
Conditional indirect effect of  $X$  on  $Y$  through  $M_i = a_i (b_{1i} + b_{3i}V)$

Direct effect of  $X$  on  $Y = c'$

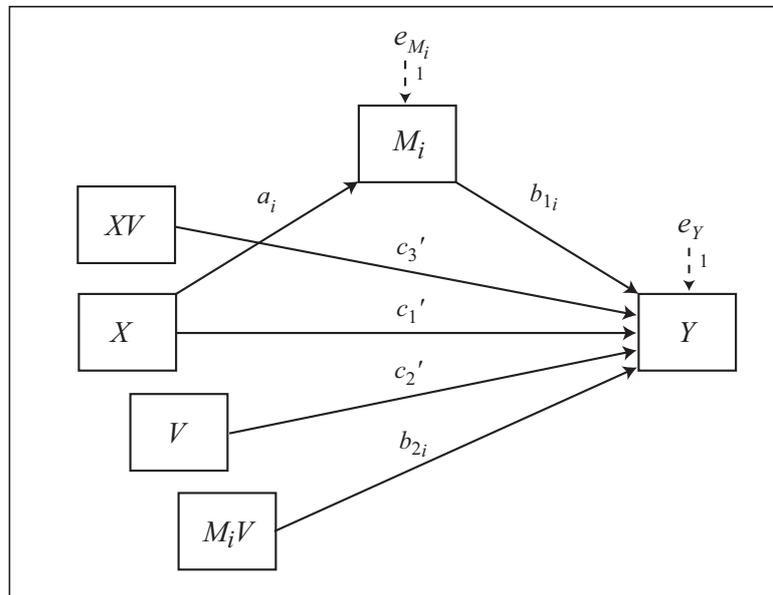
Note: Model 14 allows up to 10 mediators operating in parallel.

### Model 15

Conceptual Diagram



Statistical Diagram



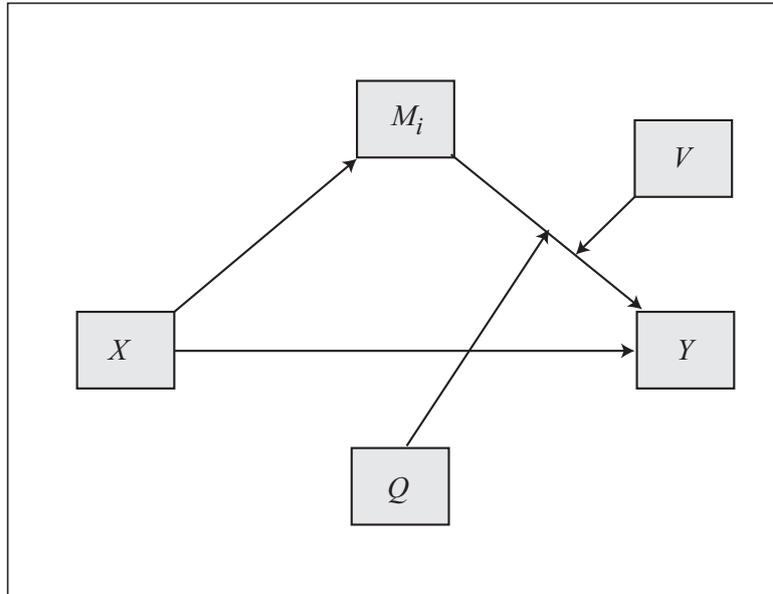
Conditional indirect effect of  $X$  on  $Y$  through  $M_i = a_i (b_{1i} + b_{2i}V)$

Conditional direct effect of  $X$  on  $Y = c_1' + c_3'V$

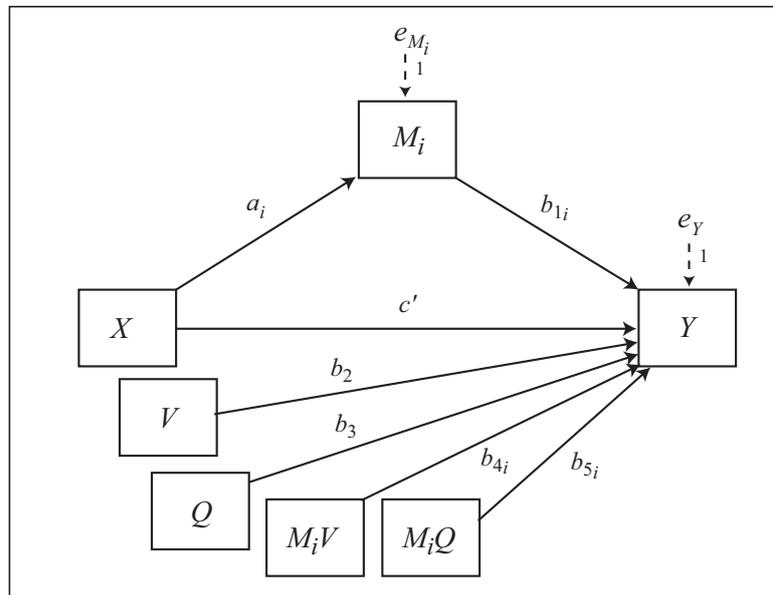
Note: Model 15 allows up to 10 mediators operating in parallel.

### Model 16

Conceptual Diagram



Statistical Diagram



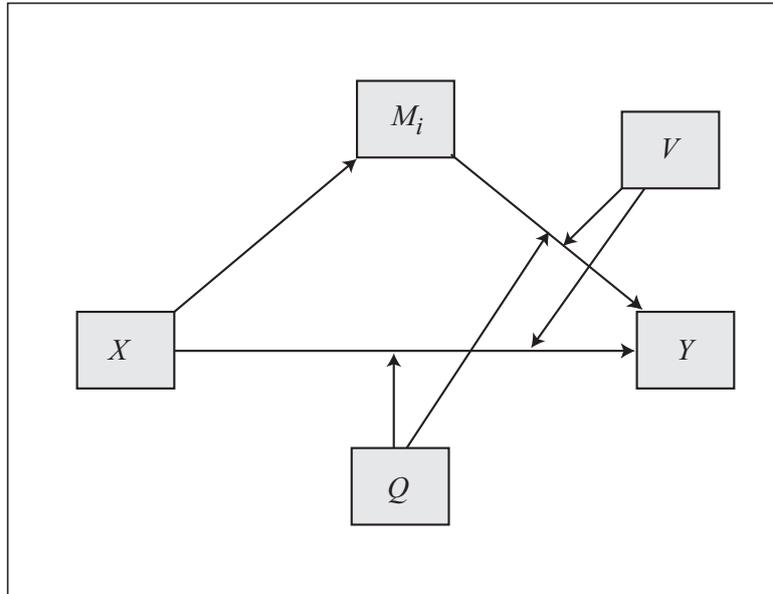
Conditional indirect effect of  $X$  on  $Y$  through  $M_i = a_i (b_{1i} + b_{4i}V + b_{5i}Q)$

Direct effect of  $X$  on  $Y = c'$

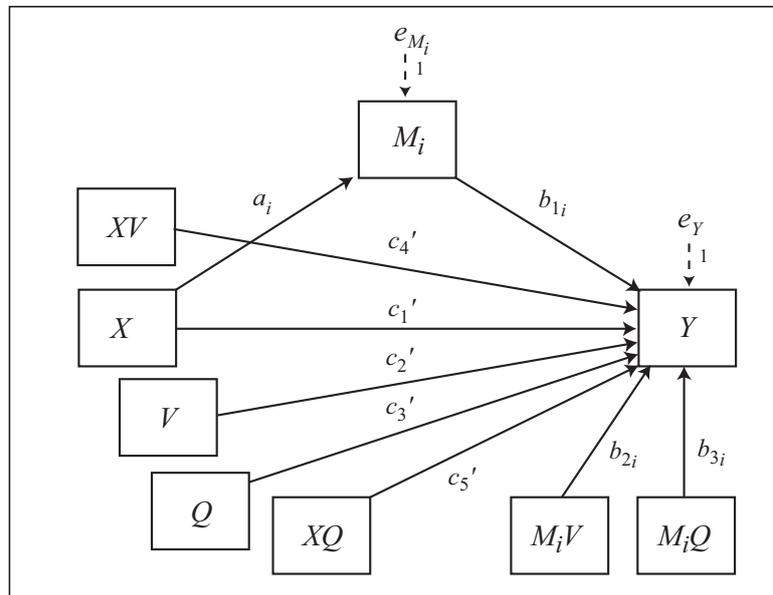
\*Model 16 allows up to 10 mediators operating in parallel

### Model 17

Conceptual Diagram



Statistical Diagram



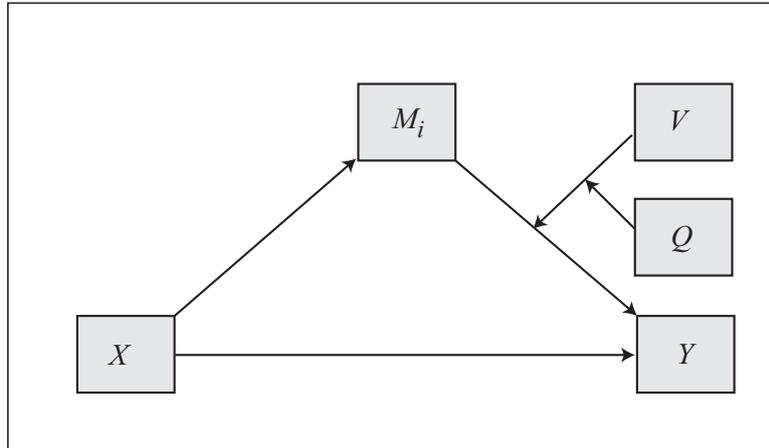
Conditional indirect effect of  $X$  on  $Y$  through  $M_i = a_i (b_{1i} + b_{2i}V + b_{3i}Q)$

Conditional direct effect of  $X$  on  $Y = c_1' + c_4'V + c_5'Q$

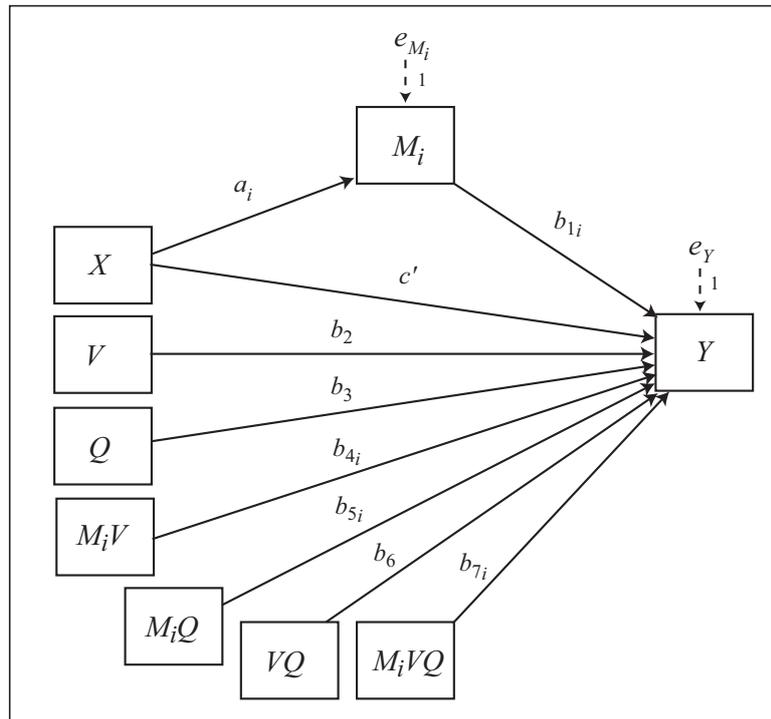
\*Model 17 allows up to 10 mediators operating in parallel

### Model 18

Conceptual Diagram



Statistical Diagram



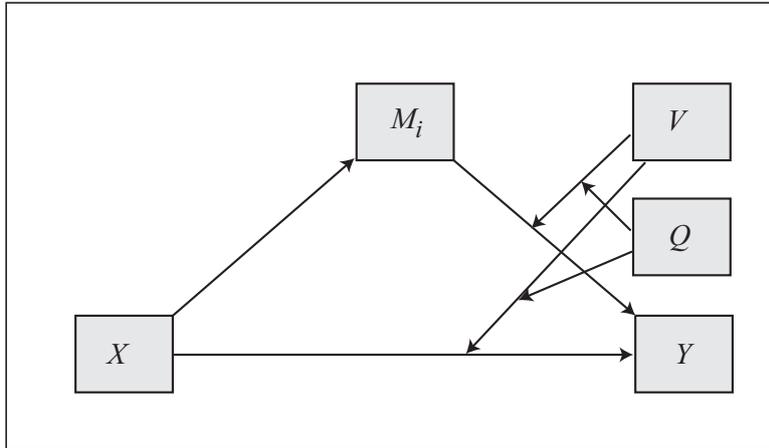
Conditional indirect effect of  $X$  on  $Y$  through  $M_i = a_i(b_{1i} + b_{4i}V + b_{5i}Q + b_{7i}VQ)$

Direct effect of  $X$  on  $Y = c'$

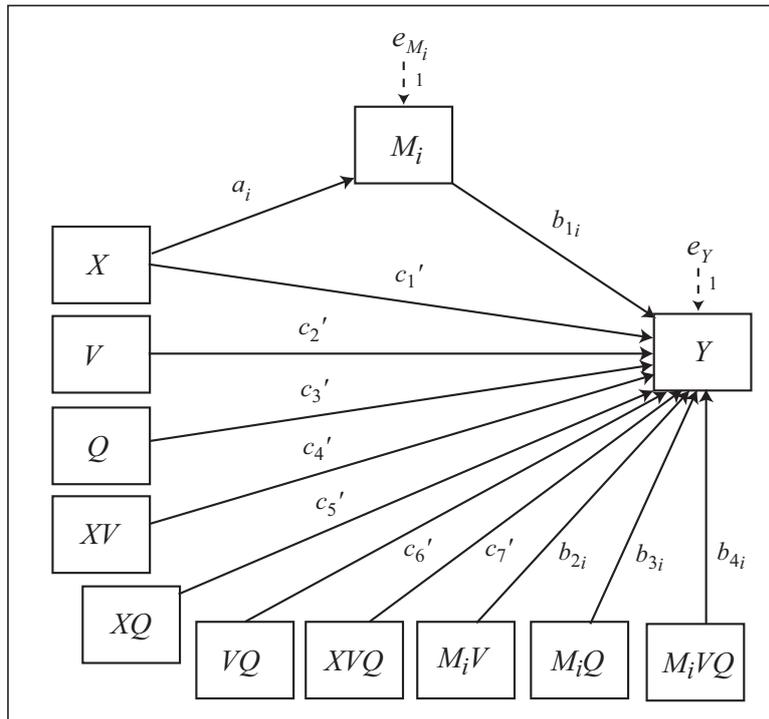
\*Model 18 allows up to 10 mediators operating in parallel

### Model 19

#### Conceptual Diagram



#### Statistical Diagram



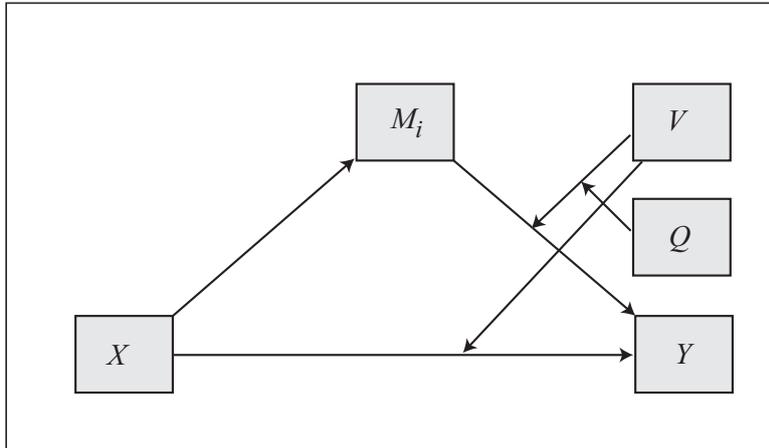
Conditional indirect effect of  $X$  on  $Y$  through  $M_i = a_i(b_{1i} + b_{2i}V + b_{3i}Q + b_{4i}VQ)$

Conditional direct effect of  $X$  on  $Y = c_1' + c_4'V + c_5'Q + c_7'VQ$

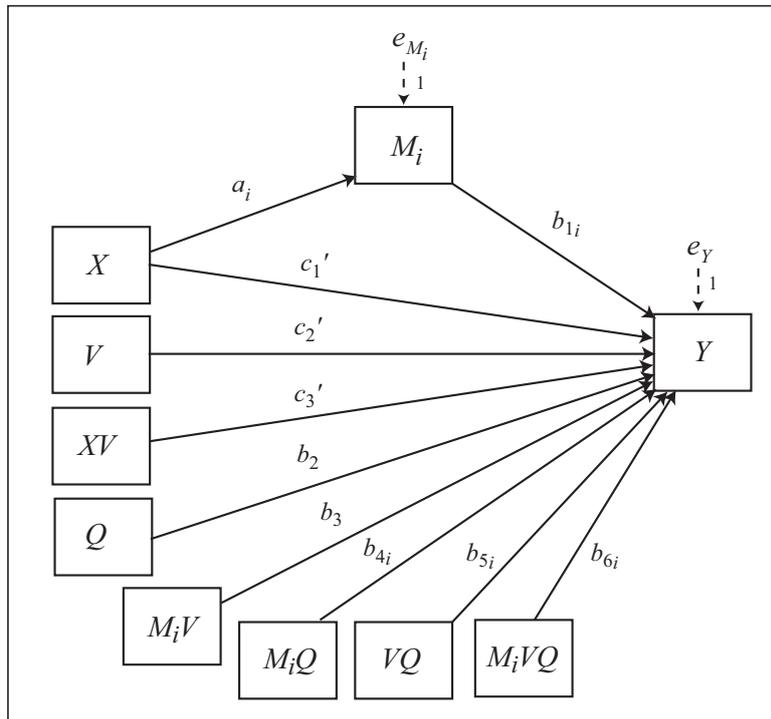
\*Model 19 allows up to 10 mediators operating in parallel

### Model 20

Conceptual Diagram



Statistical Diagram



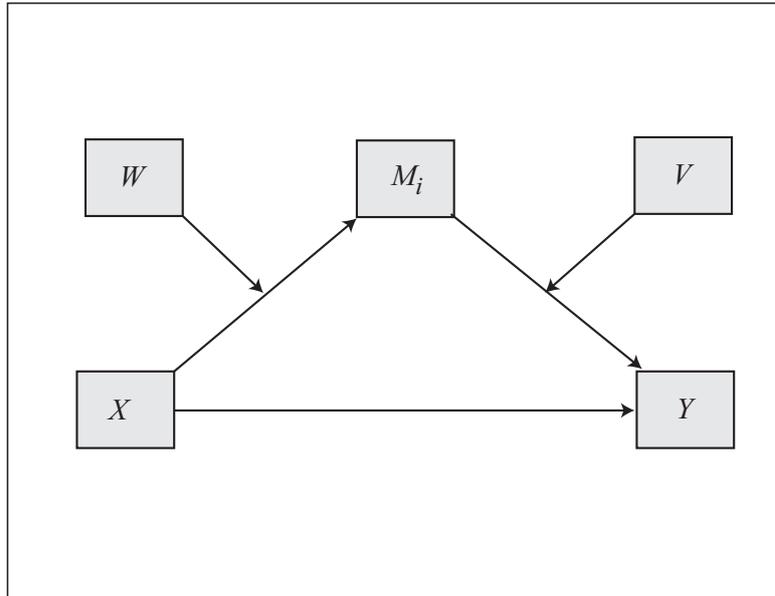
Conditional indirect effect of  $X$  on  $Y$  through  $M_i = a_i(b_{1i} + b_{3i}V + b_{4i}Q + b_{6i}VQ)$

Conditional direct effect of  $X$  on  $Y = c_1' + c_3'V$

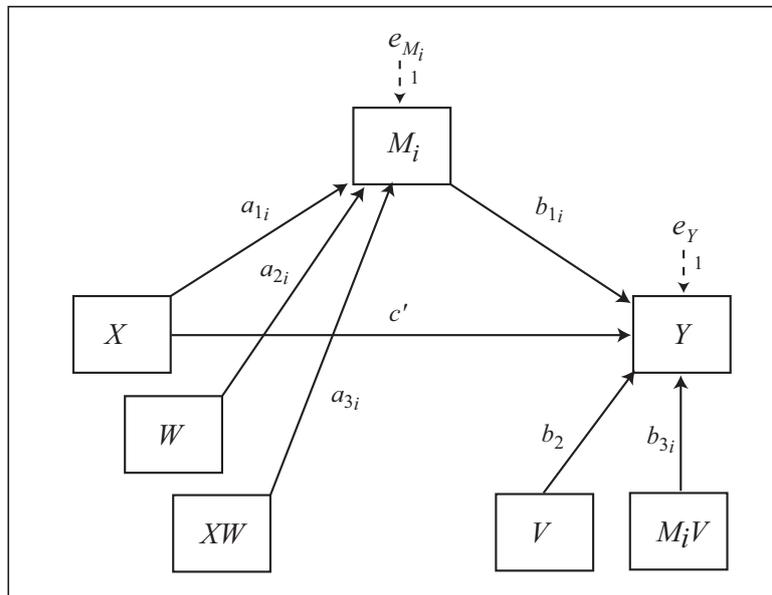
\*Model 20 allows up to 10 mediators operating in parallel

### Model 21

Conceptual Diagram



Statistical Diagram



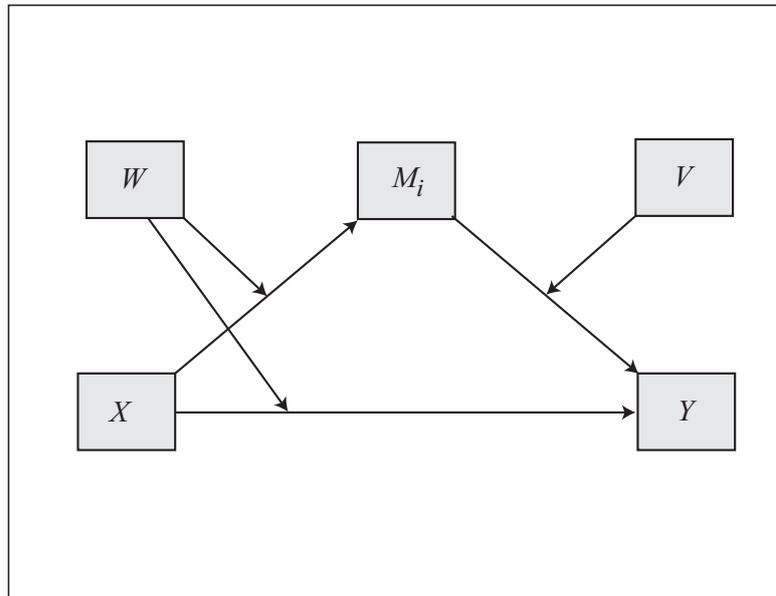
Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{3i}W)(b_{1i} + b_{3i}V)$

Direct effect of  $X$  on  $Y = c'$

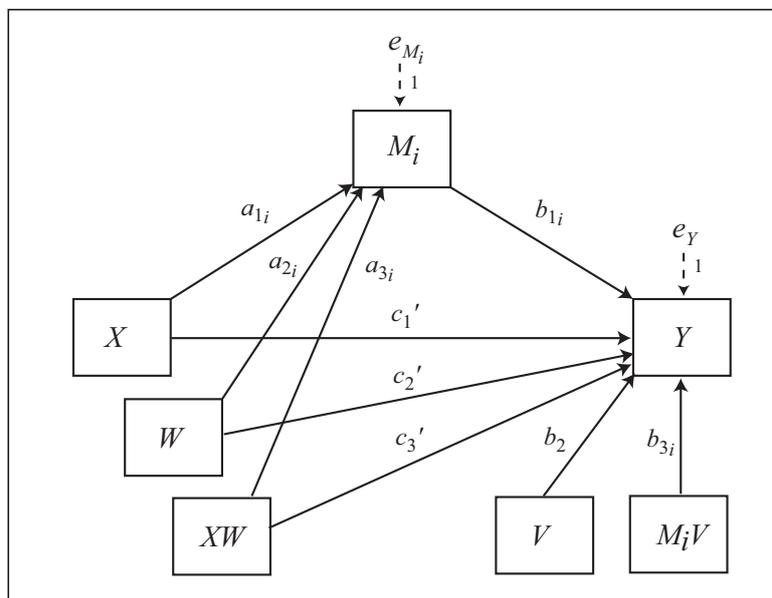
Note: Model 21 allows up to 10 mediators operating in parallel.

### Model 22

Conceptual Diagram



Statistical Diagram



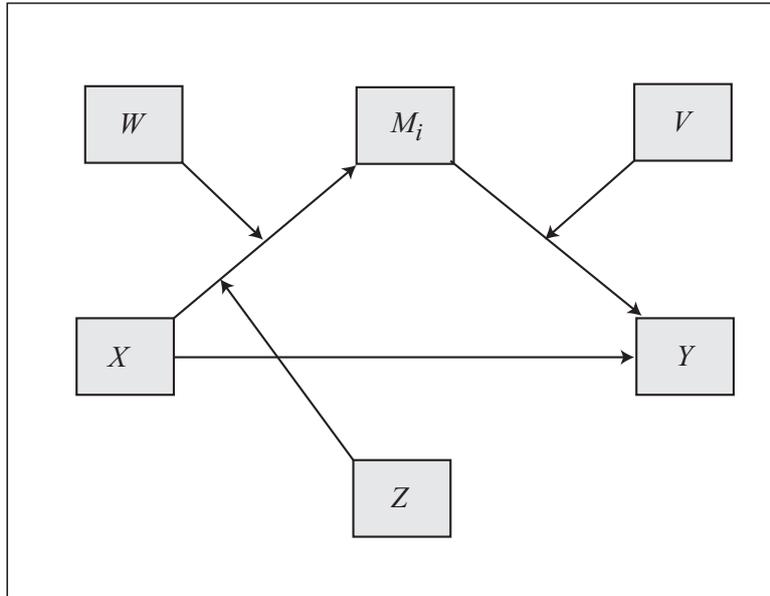
Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{3i}W)(b_{1i} + b_{3i}V)$

Conditional direct effect of  $X$  on  $Y = c_{1'} + c_{3'}W$

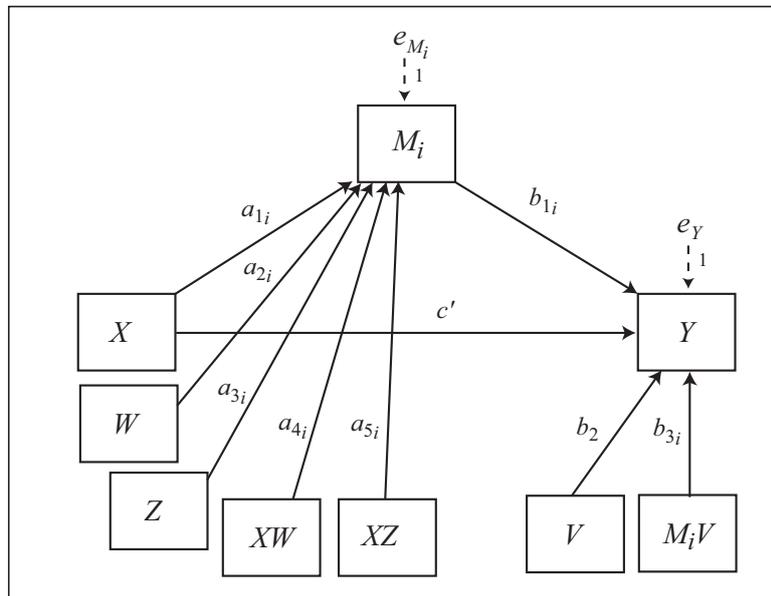
Note: Model 22 allows up to 10 mediators operating in parallel.

### Model 23

Conceptual Diagram



Statistical Diagram



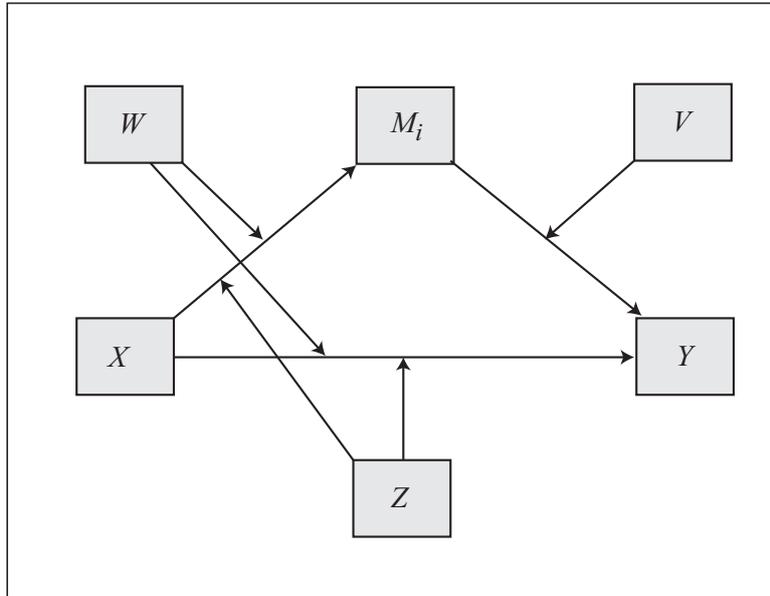
Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{4i}W + a_{5i}Z)(b_{1i} + b_{3i}V)$

Direct effect of  $X$  on  $Y = c'$

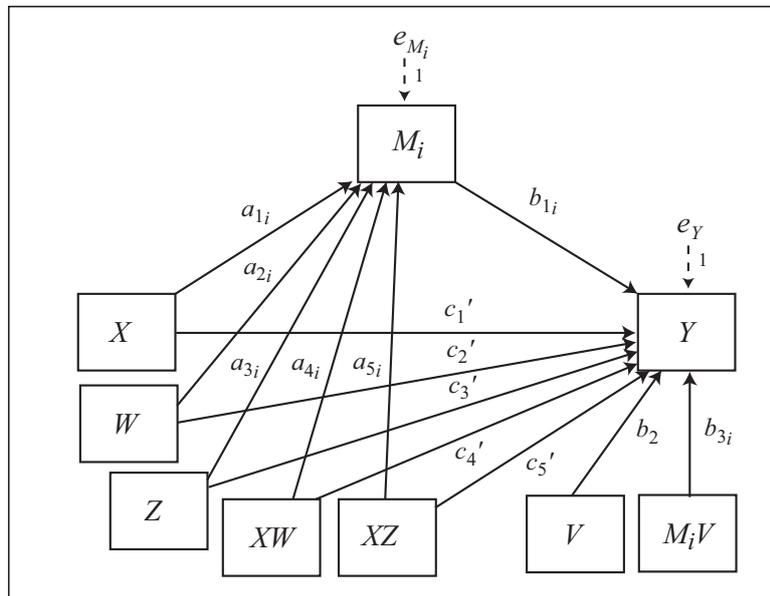
\*Model 23 allows up to 10 mediators operating in parallel

### Model 24

Conceptual Diagram



Statistical Diagram



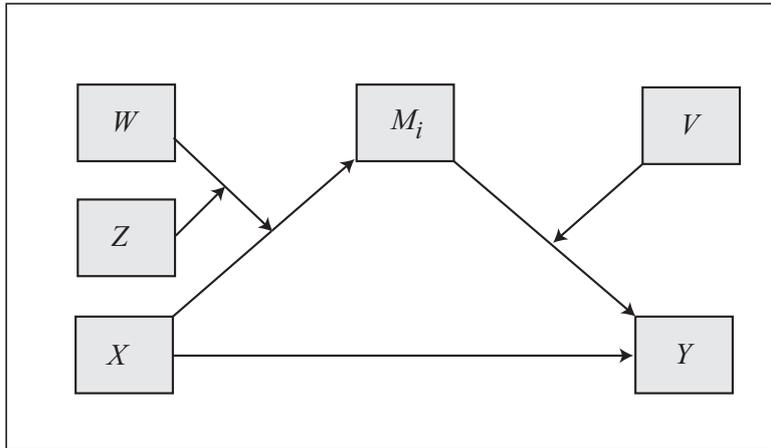
Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{4i}W + a_{5i}Z)(b_{1i} + b_{3i}V)$

Conditional direct effect of  $X$  on  $Y = c_1' + c_4'W + c_5'Z$

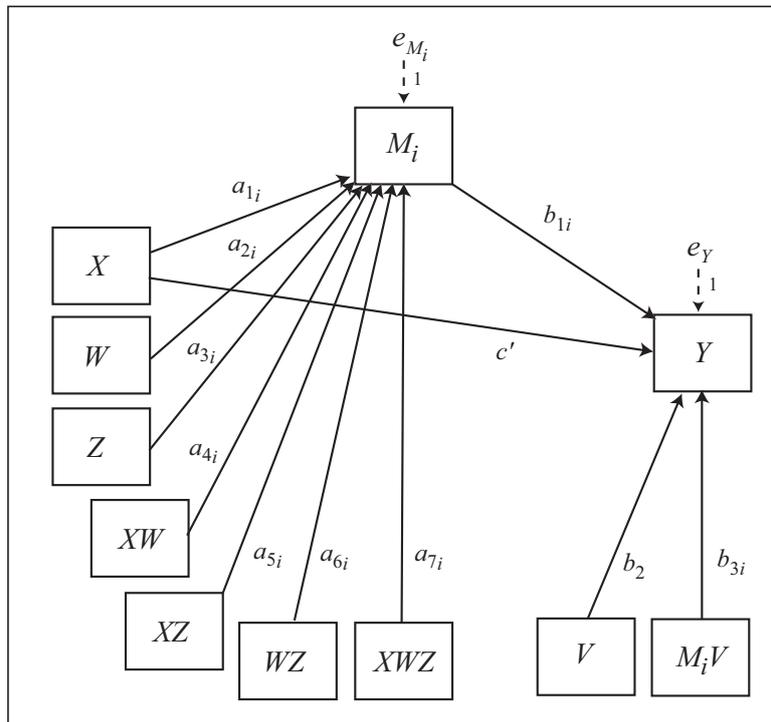
\*Model 24 allows up to 10 mediators operating in parallel

### Model 25

Conceptual Diagram



Statistical Diagram

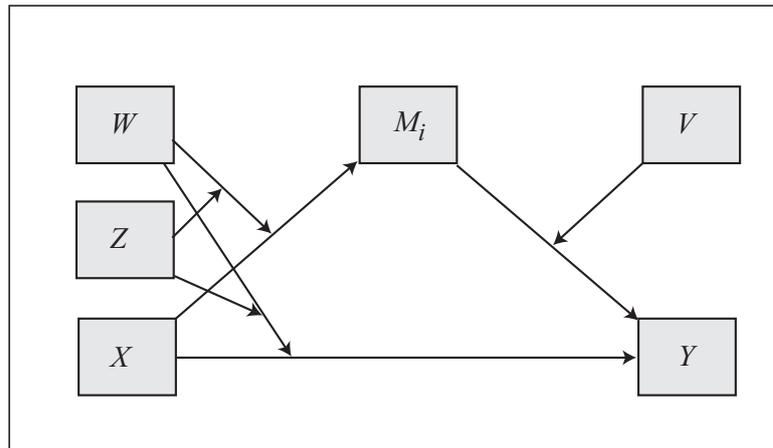


Conditional indirect effect of X on Y through  $M_i = (a_{1i} + a_{4i}W + a_{5i}Z + a_{7i}WZ)(b_{1i} + b_{3i}V)$   
 Direct effect of X on Y =  $c'$

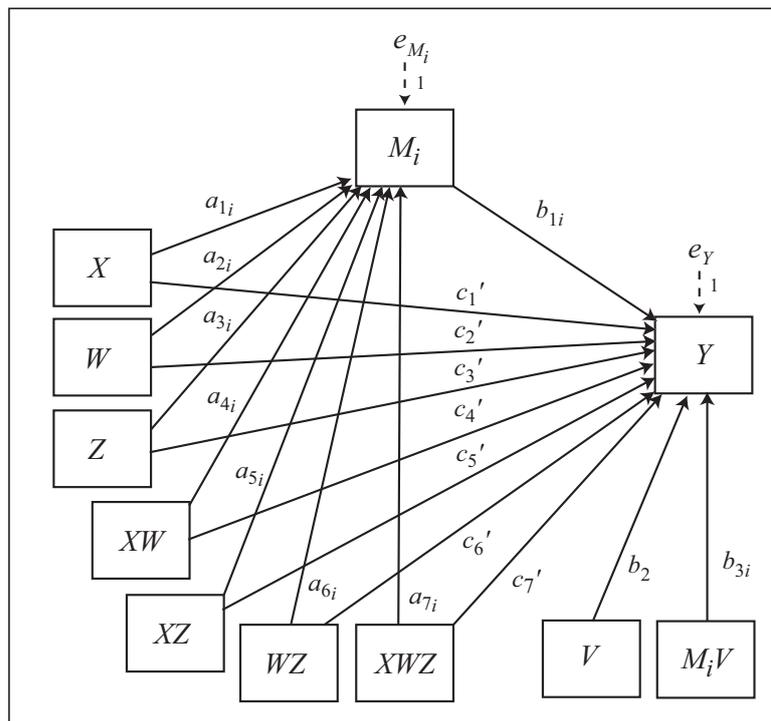
\*Model 25 allows up to 10 mediators operating in parallel

### Model 26

Conceptual Diagram



Statistical Diagram



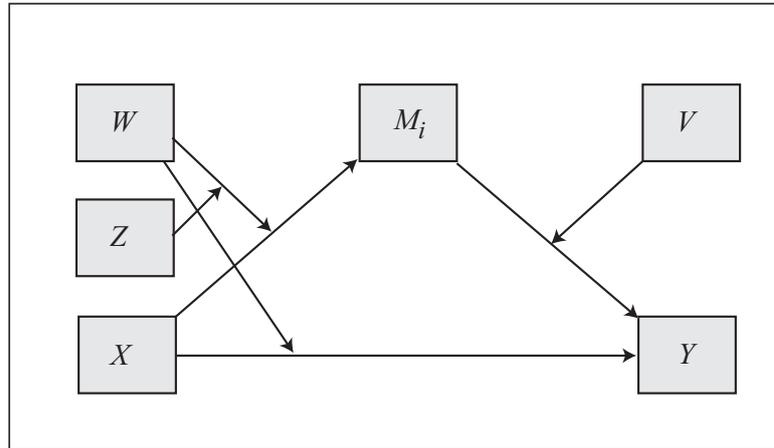
Conditional indirect effect of X on Y through  $M_i = (a_{1i} + a_{4i}W + a_{5i}Z + a_{7i}WZ)(b_{1i} + b_{3i}V)$

Conditional direct effect of X on Y =  $c_1' + c_4'W + c_5'Z + c_7'WZ$

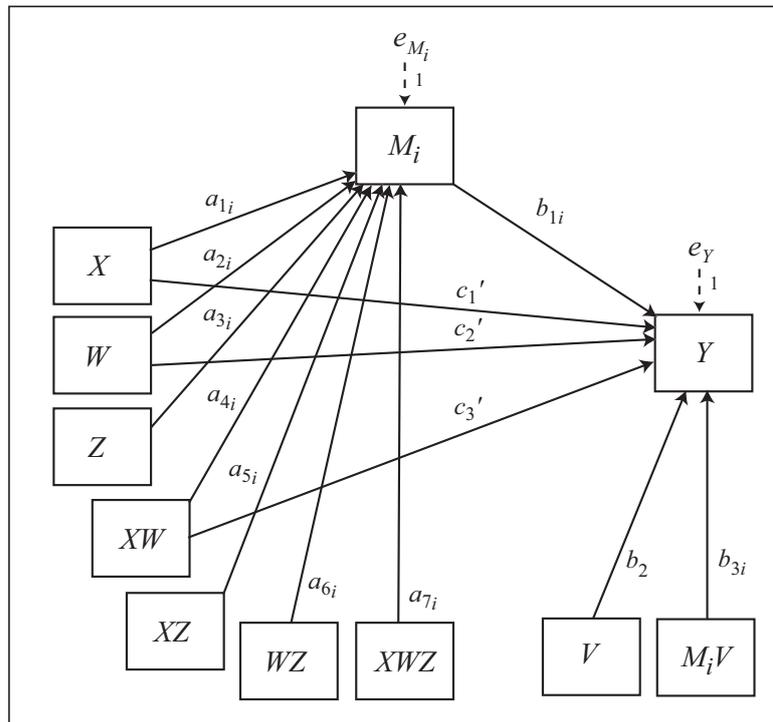
\*Model 26 allows up to 10 mediators operating in parallel

### Model 27

Conceptual Diagram



Statistical Diagram



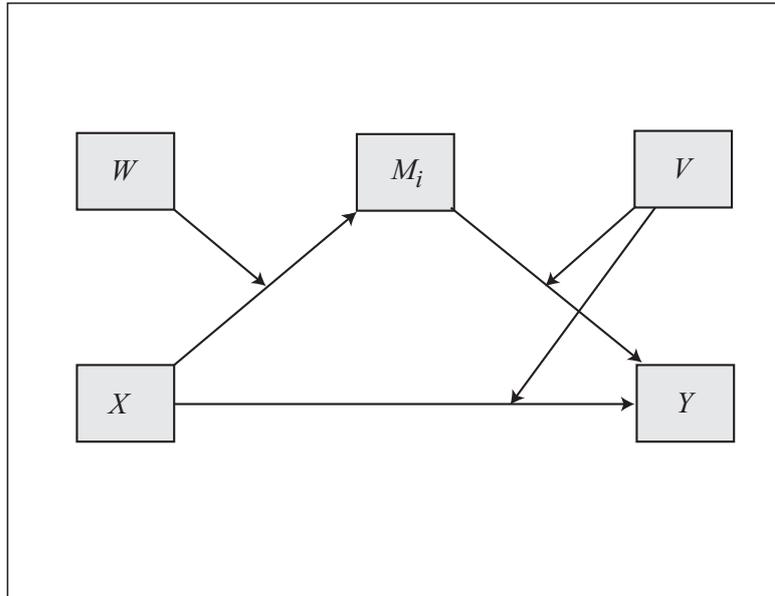
Conditional indirect effect of X on Y through  $M_i = (a_{1i} + a_{4i}W + a_{5i}Z + a_{7i}WZ)(b_{1i} + b_{3i}V)$

Conditional direct effect of X on Y =  $c_1' + c_3'W$

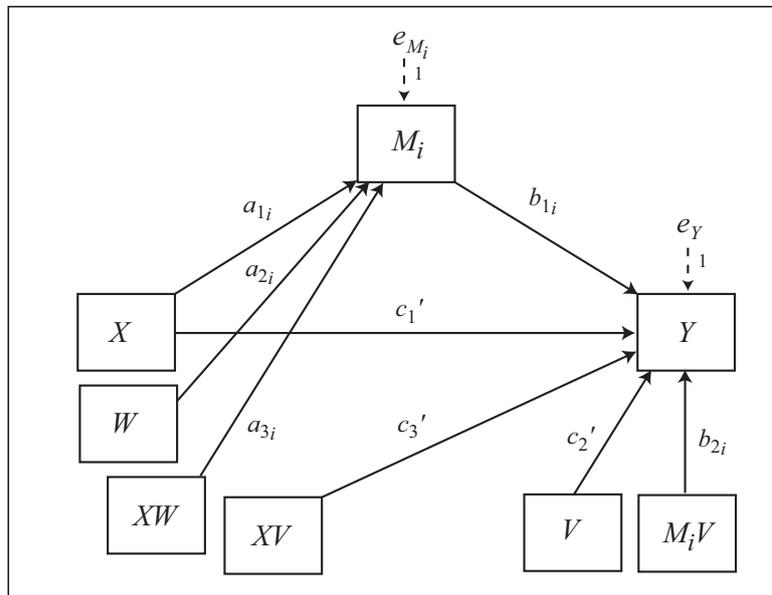
\*Model 27 allows up to 10 mediators operating in parallel

### Model 28

Conceptual Diagram



Statistical Diagram



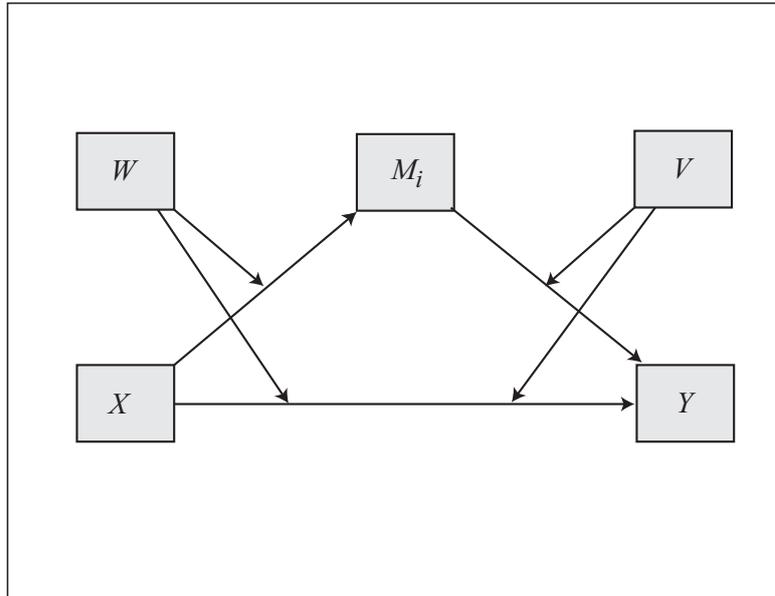
Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{3i}W)(b_{1i} + b_{2i}V)$

Conditional direct effect of  $X$  on  $Y = c_1' + c_3'V$

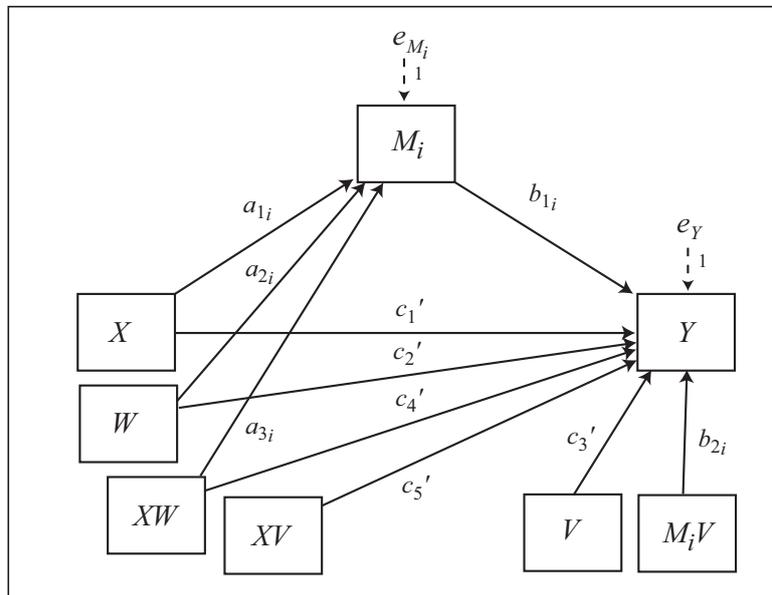
\*Model 28 allows up to 10 mediators operating in parallel

### Model 29

Conceptual Diagram



Statistical Diagram



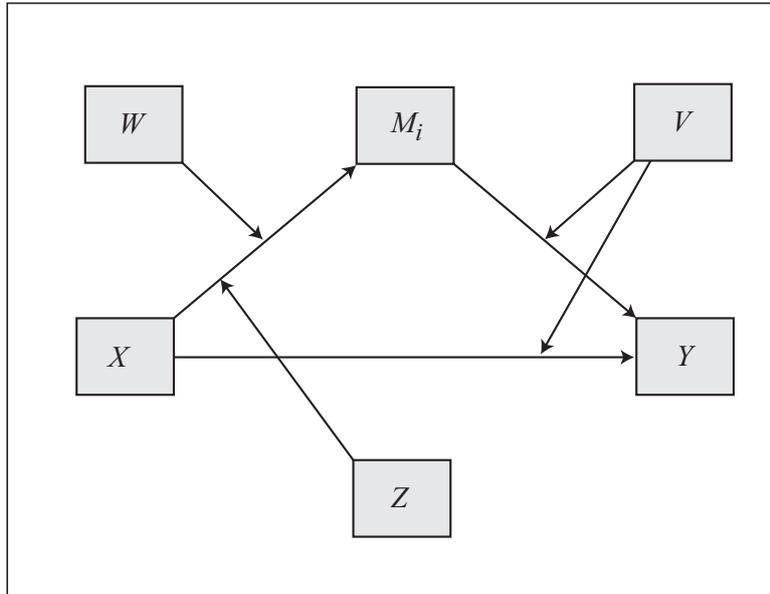
Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{3i}W)(b_{1i} + b_{2i}V)$

Conditional direct effect of  $X$  on  $Y = c_1' + c_4'W + c_5'V$

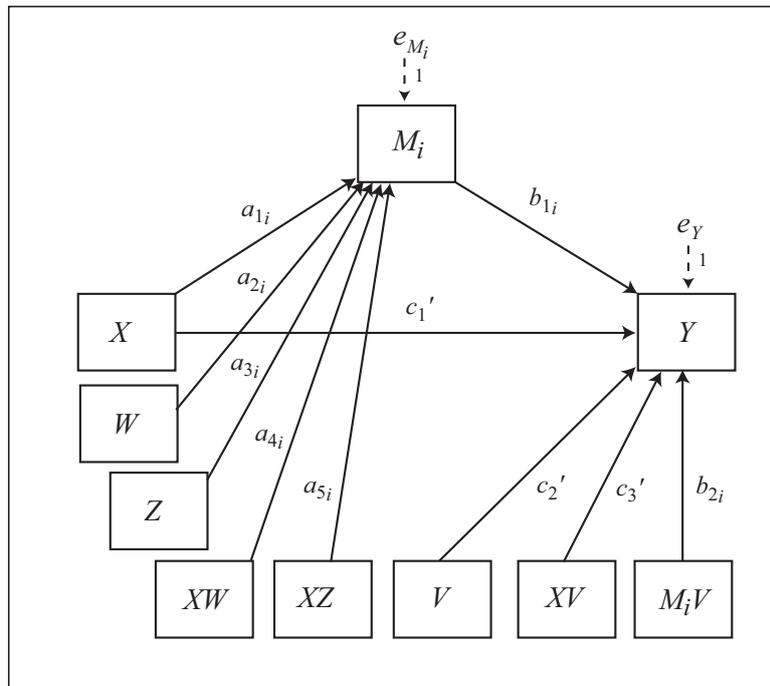
\*Model 29 allows up to 10 mediators operating in parallel

### Model 30

Conceptual Diagram



Statistical Diagram



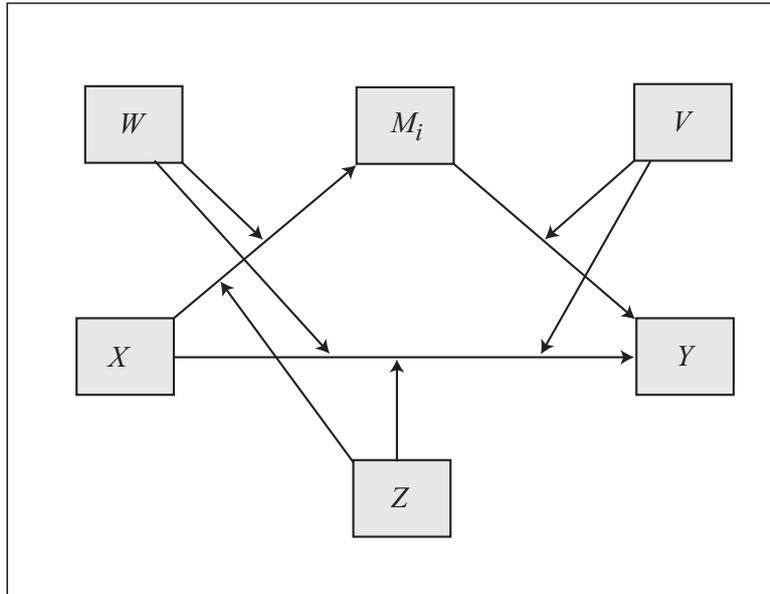
Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{4i}W + a_{5i}Z)(b_{1i} + b_{2i}V)$

Conditional direct effect of  $X$  on  $Y = c_1' + c_3'V$

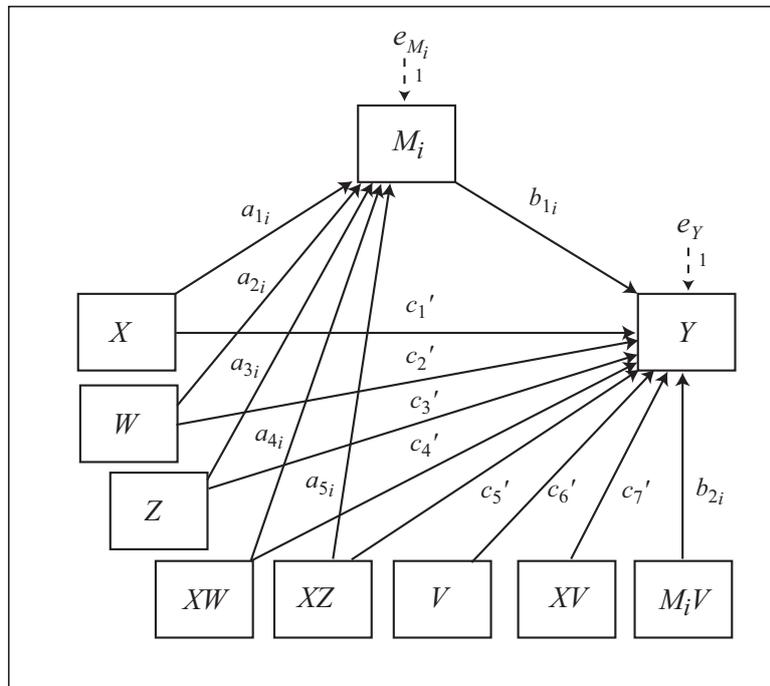
\*Model 30 allows up to 10 mediators operating in parallel

### Model 31

Conceptual Diagram



Statistical Diagram



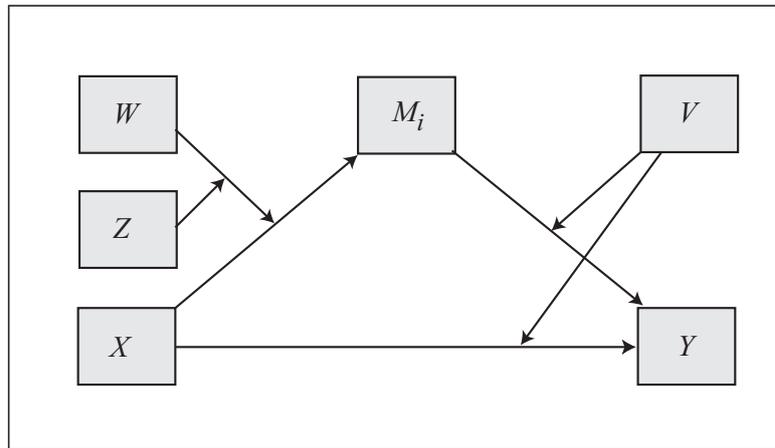
Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{4i}W + a_{5i}Z)(b_{1i} + b_{2i}V)$

Conditional direct effect of  $X$  on  $Y = c_1' + c_4'W + c_5'Z + c_7'V$

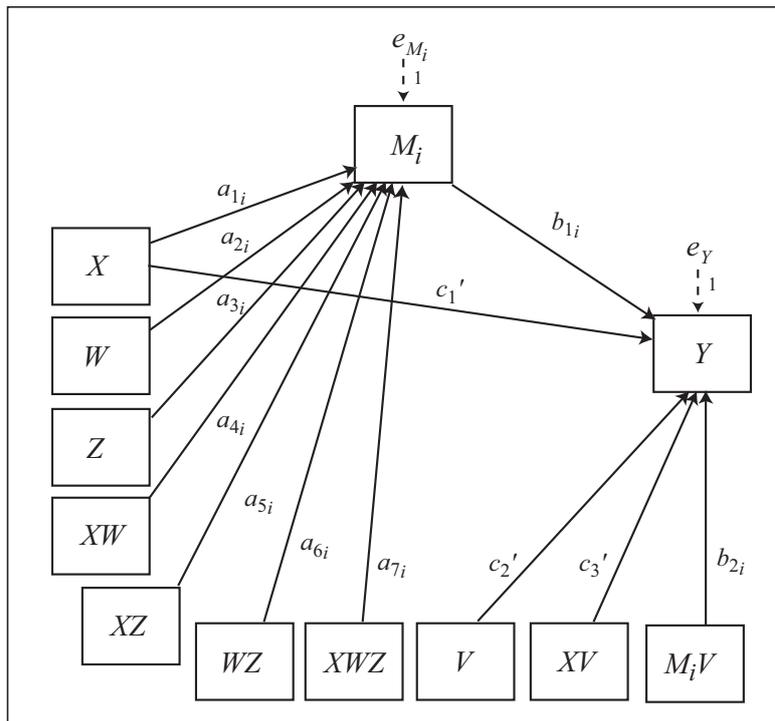
\*Model 31 allows up to 10 mediators operating in parallel

### Model 32

#### Conceptual Diagram



#### Statistical Diagram



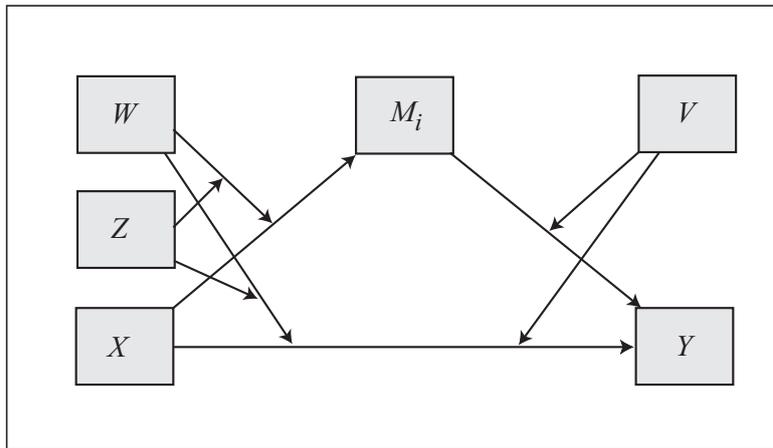
Conditional indirect effect of X on Y through  $M_i = (a_{1i} + a_{4i}W + a_{5i}Z + a_{7i}WZ)(b_{1i} + b_{2i}V)$

Conditional direct effect of X on Y =  $c_1' + c_3'V$

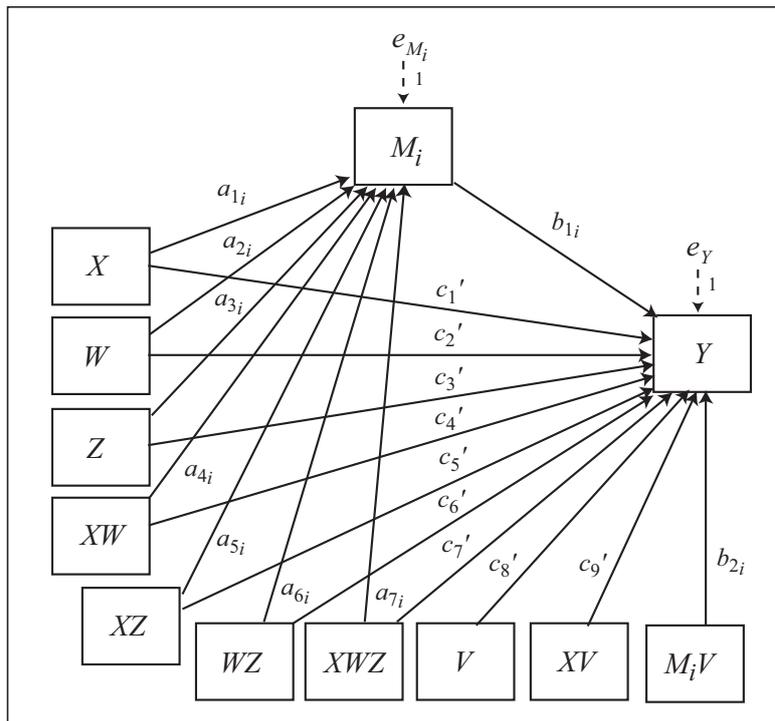
\*Model 32 allows up to 10 mediators operating in parallel

### Model 33

#### Conceptual Diagram



#### Statistical Diagram



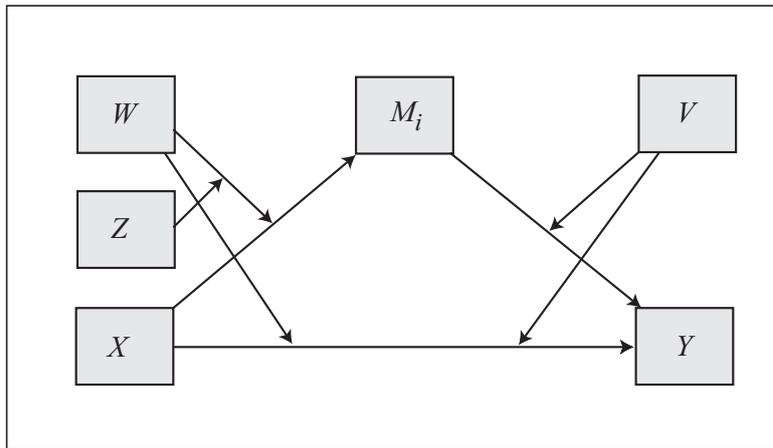
Conditional indirect effect of X on Y through  $M_i = (a_{1i} + a_{4i}W + a_{5i}Z + a_{7i}WZ)(b_{1i} + b_{2i}V)$

Conditional direct effect of X on Y =  $c_1' + c_4'W + c_5'Z + c_7'WZ + c_9'V$

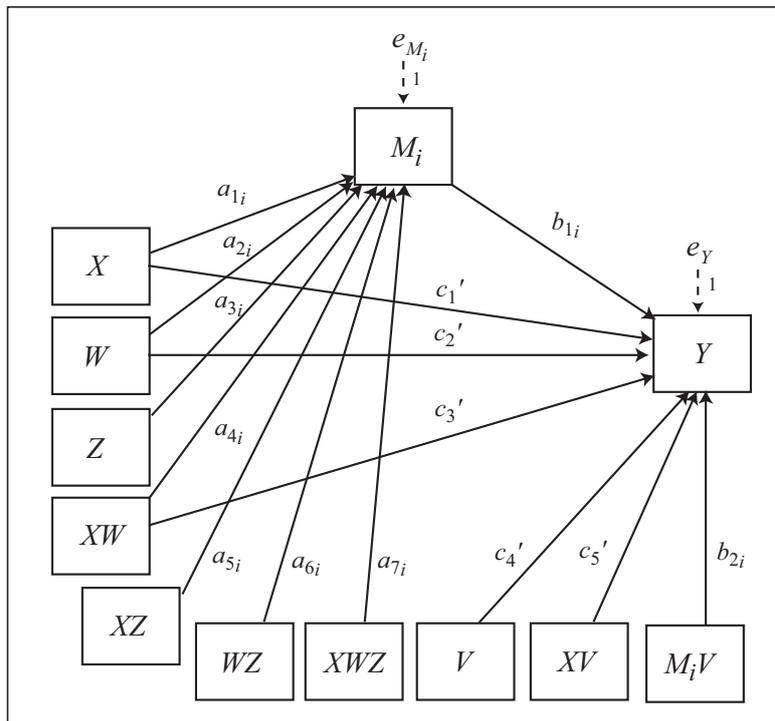
\*Model 33 allows up to 10 mediators operating in parallel

### Model 34

#### Conceptual Diagram



#### Statistical Diagram



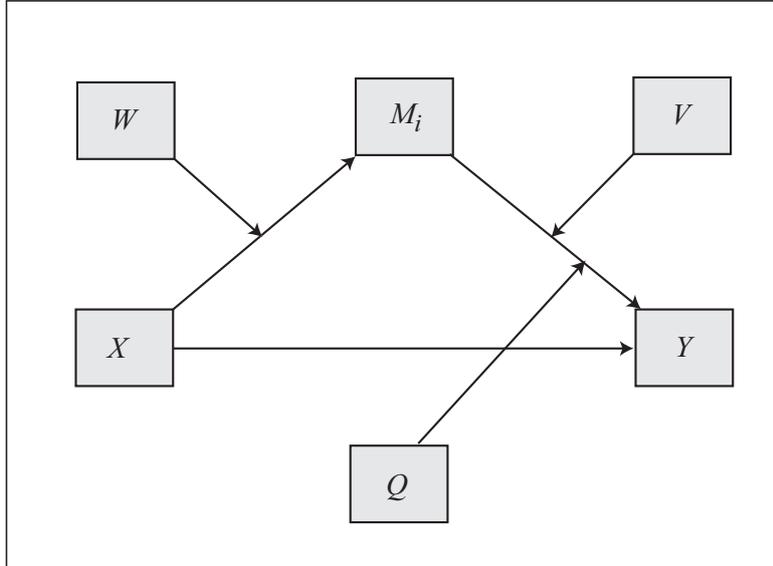
Conditional indirect effect of X on Y through  $M_i = (a_{1i} + a_{4i}W + a_{5i}Z + a_{7i}WZ)(b_{1i} + b_{2i}V)$

Conditional direct effect of X on Y =  $c_1' + c_3'W + c_5'V$

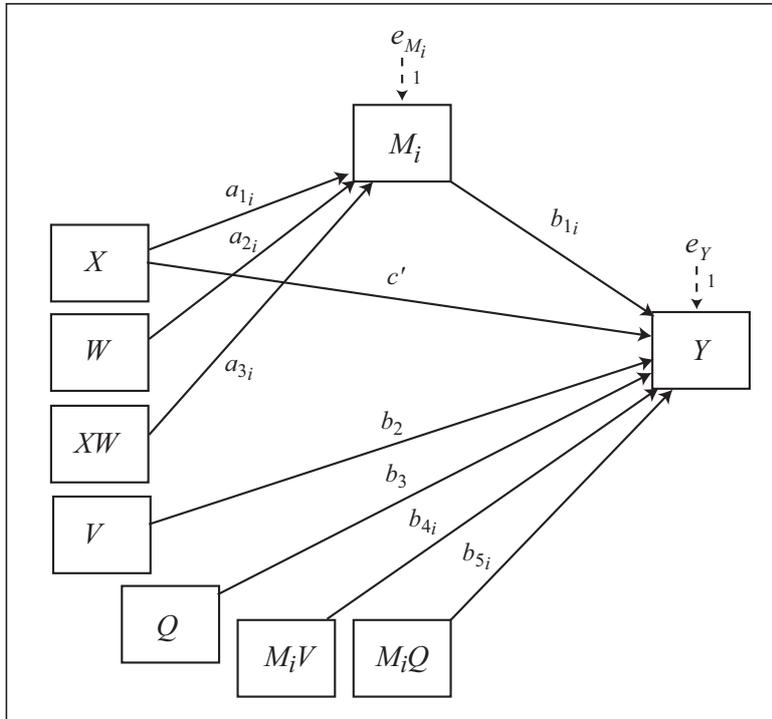
\*Model 34 allows up to 10 mediators operating in parallel

### Model 35

Conceptual Diagram



Statistical Diagram



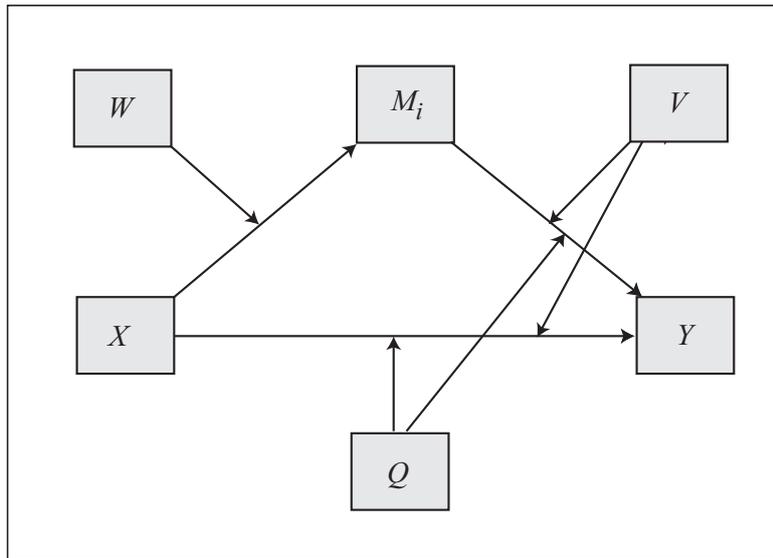
Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{3i}W)(b_{1i} + b_{4i}V + b_{5i}Q)$

Direct effect of  $X$  on  $Y = c'$

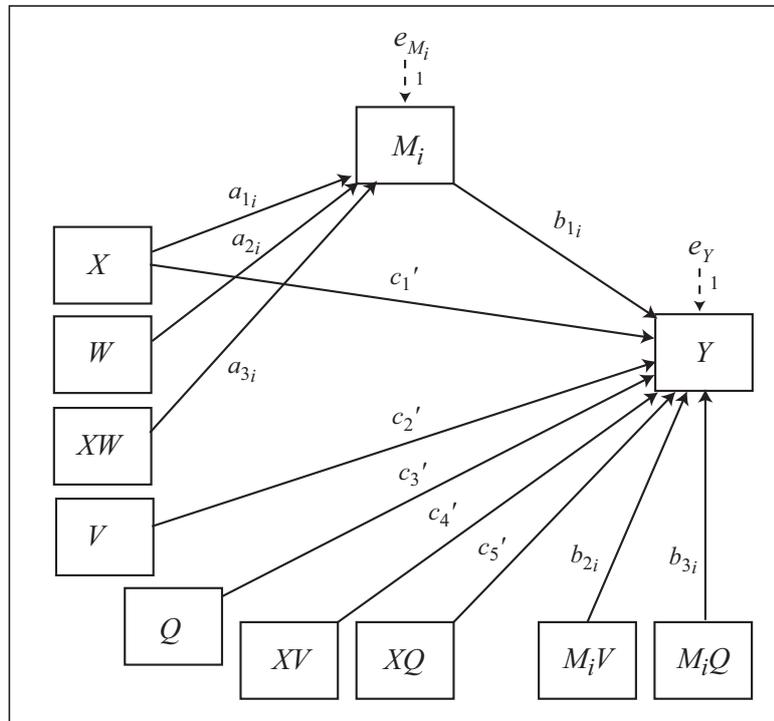
\*Model 35 allows up to 10 mediators operating in parallel

### Model 36

Conceptual Diagram



Statistical Diagram



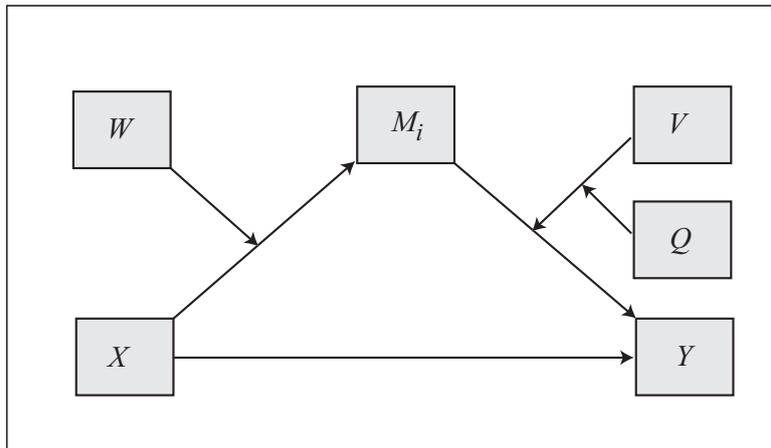
Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{3i}W)(b_{1i} + b_{2i}V + b_{3i}Q)$

Conditional direct effect of  $X$  on  $Y = c_1' + c_4'V + c_5'Q$

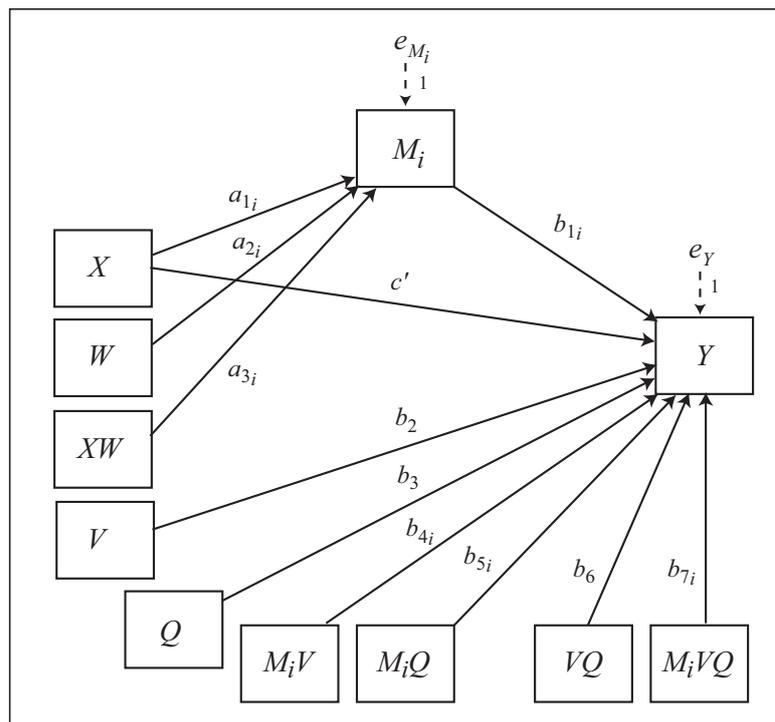
\*Model 36 allows up to 10 mediators operating in parallel

### Model 37

Conceptual Diagram



Statistical Diagram



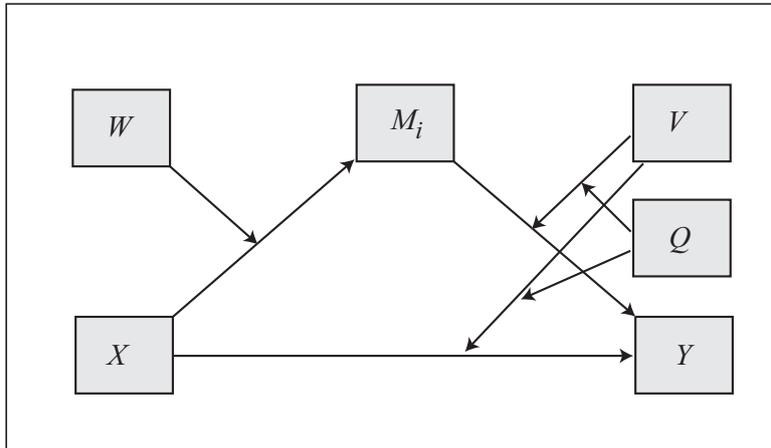
Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{3i}W)(b_{1i} + b_{4i}V + b_{5i}Q + b_{7i}VQ)$

Direct effect of  $X$  on  $Y = c'$

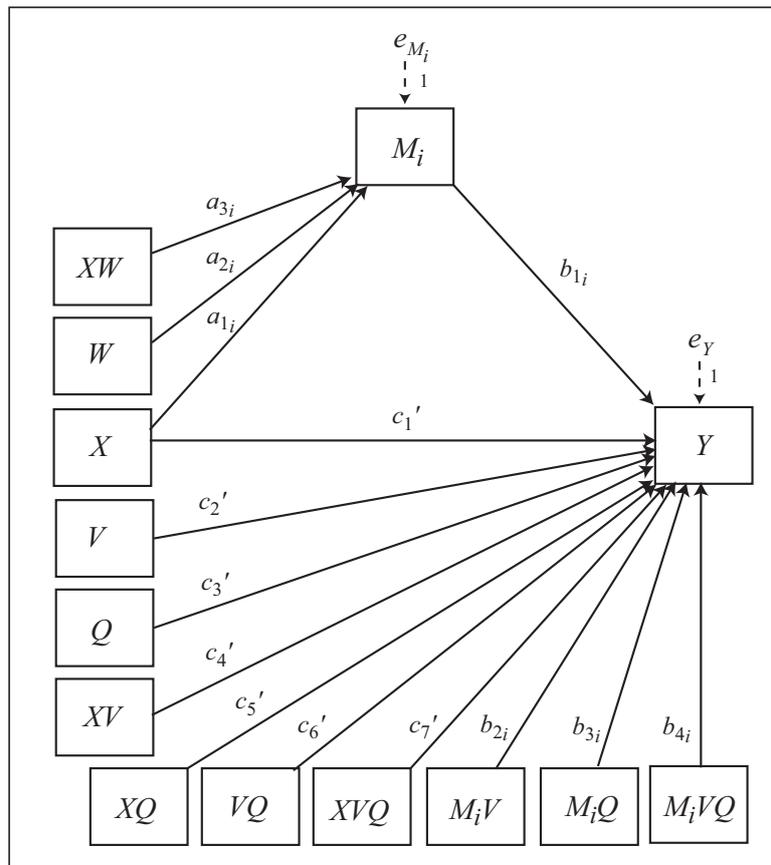
\*Model 37 allows up to 10 mediators operating in parallel

### Model 38

Conceptual Diagram



Statistical Diagram



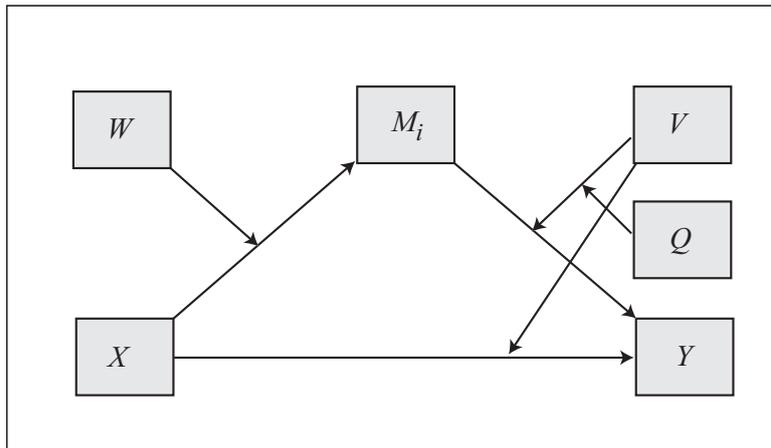
Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{3i}W)(b_{1i} + b_{2i}V + b_{3i}Q + b_{4i}VQ)$

Conditional direct effect of  $X$  on  $Y = c_{1'} + c_{4'}V + c_{5'}Q + c_{7'}VQ$

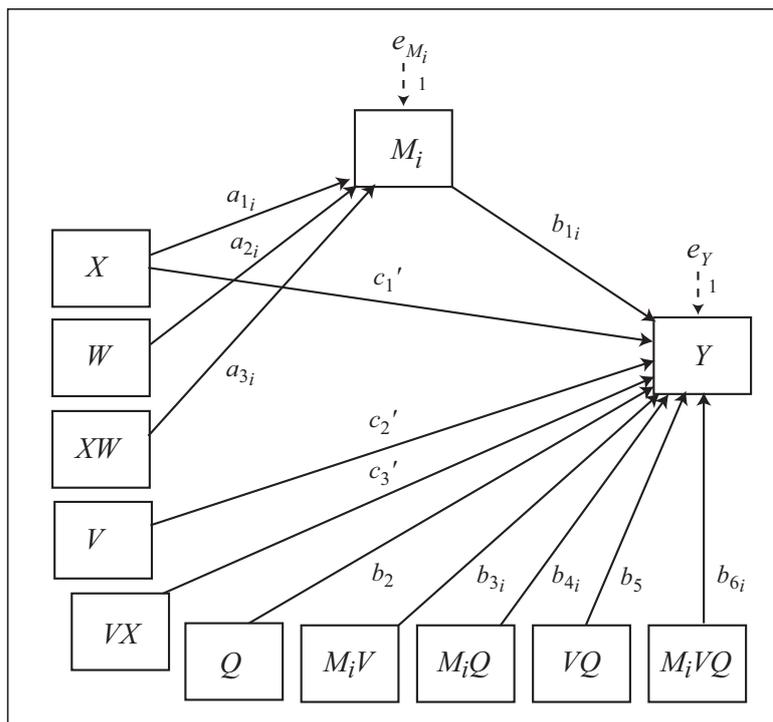
\*Model 38 allows up to 10 mediators operating in parallel

### Model 39

Conceptual Diagram



Statistical Diagram

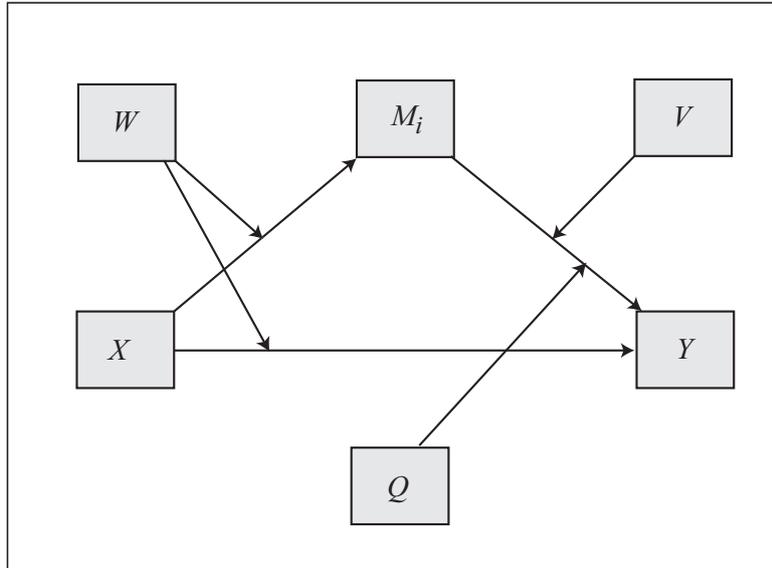


Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{3i}W)(b_{1i} + b_{3i}V + b_{4i}Q + b_{6i}VQ)$   
 Conditional direct effect of  $X$  on  $Y = c_1' + c_3'V$

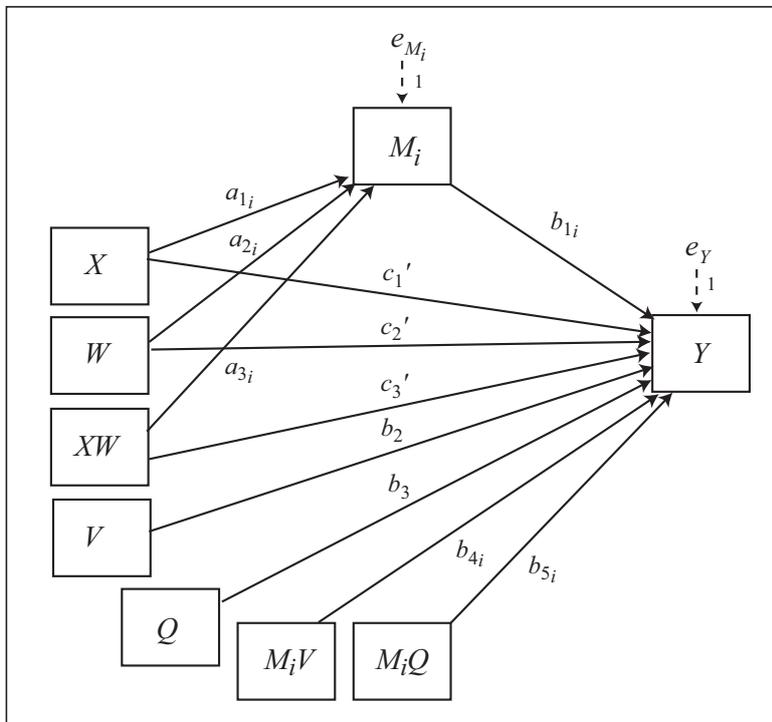
\*Model 39 allows up to 10 mediators operating in parallel

### Model 40

Conceptual Diagram



Statistical Diagram

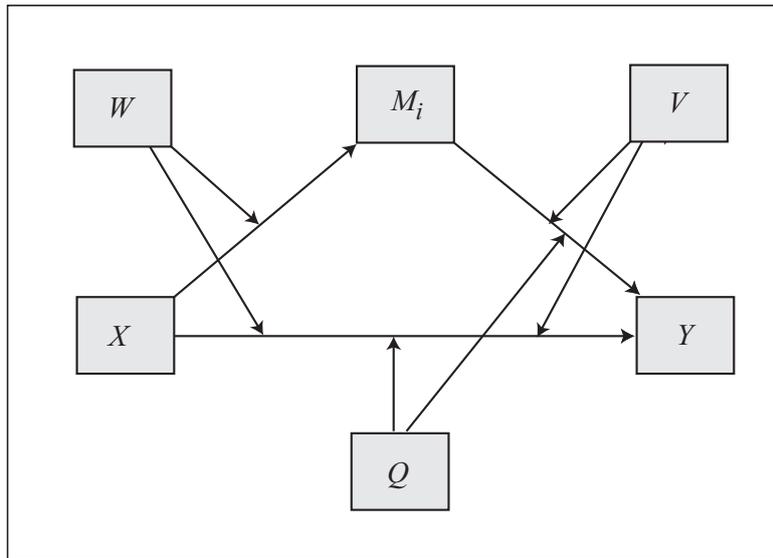


Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{3i}W)(b_{1i} + b_{4i}V + b_{5i}Q)$   
 Conditional direct effect of  $X$  on  $Y = c_1' + c_3'W$

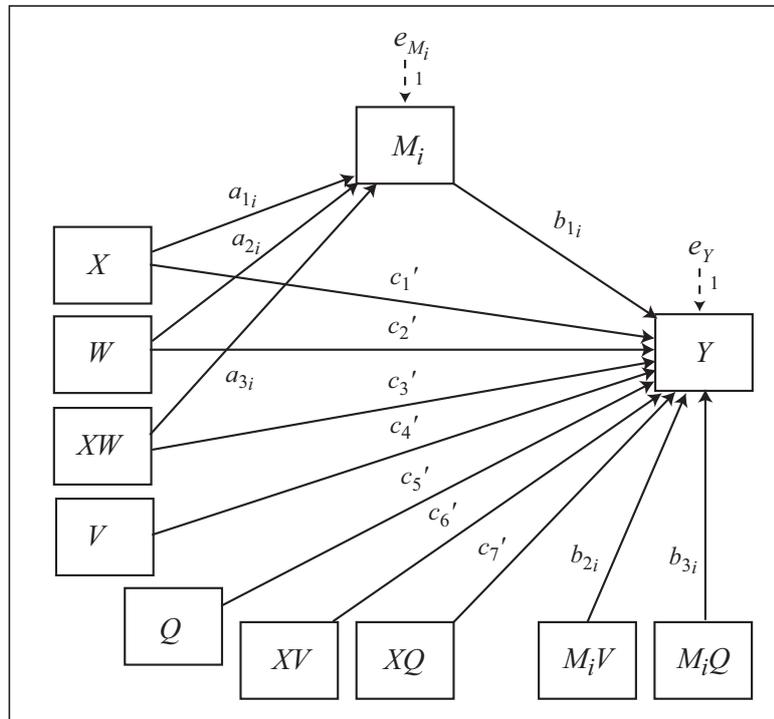
\*Model 40 allows up to 10 mediators operating in parallel

### Model 41

Conceptual Diagram



Statistical Diagram



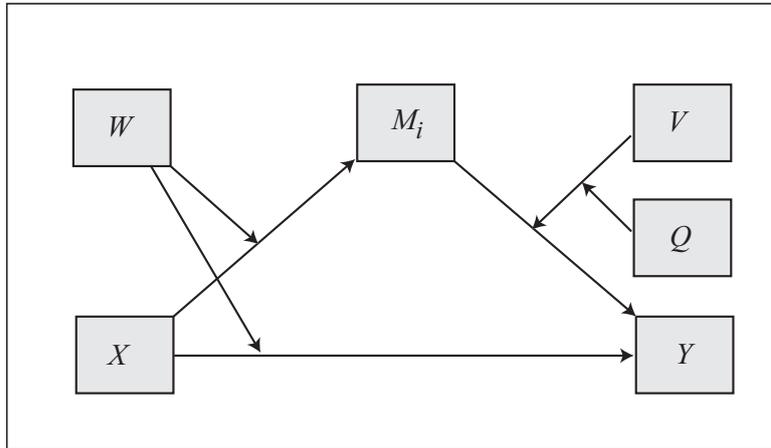
Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{3i}W)(b_{1i} + b_{2i}V + b_{3i}Q)$

Conditional direct effect of  $X$  on  $Y = c_1' + c_3'W + c_6'V + c_7'Q$

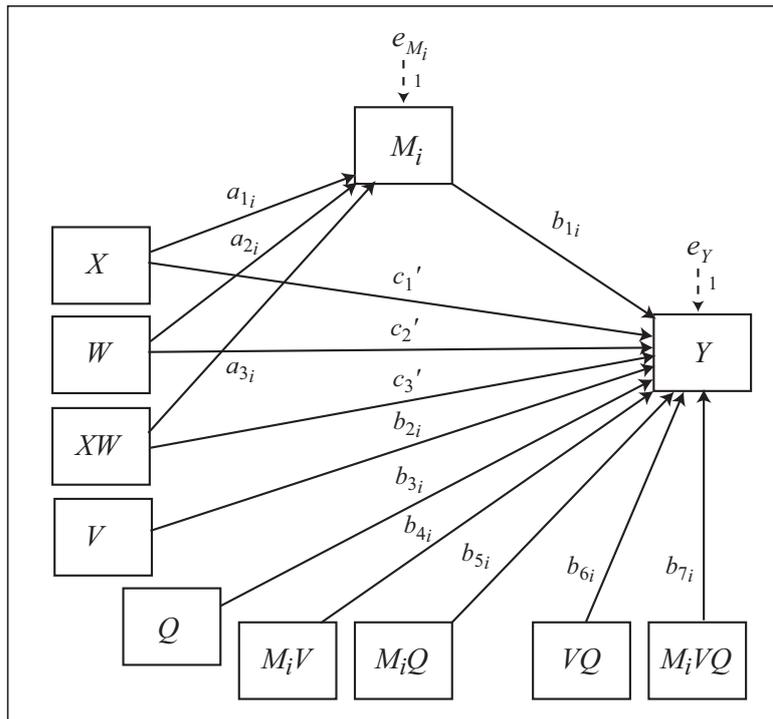
\*Model 41 allows up to 10 mediators operating in parallel

### Model 42

Conceptual Diagram



Statistical Diagram

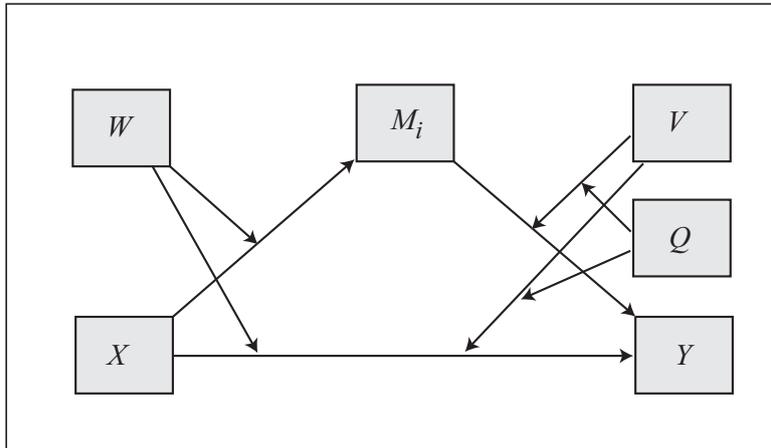


Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{3i}W)(b_{1i} + b_{4i}V + b_{5i}Q + b_{7i}VQ)$   
 Conditional direct effect of  $X$  on  $Y = c_1' + c_3'W$

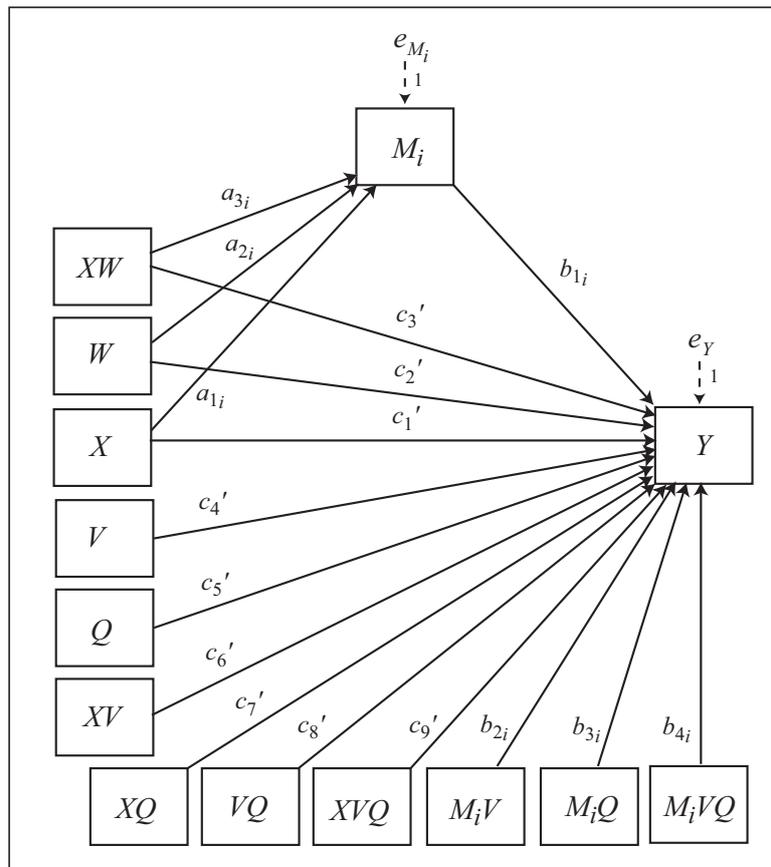
\*Model 42 allows up to 10 mediators operating in parallel

### Model 43

#### Conceptual Diagram



#### Statistical Diagram



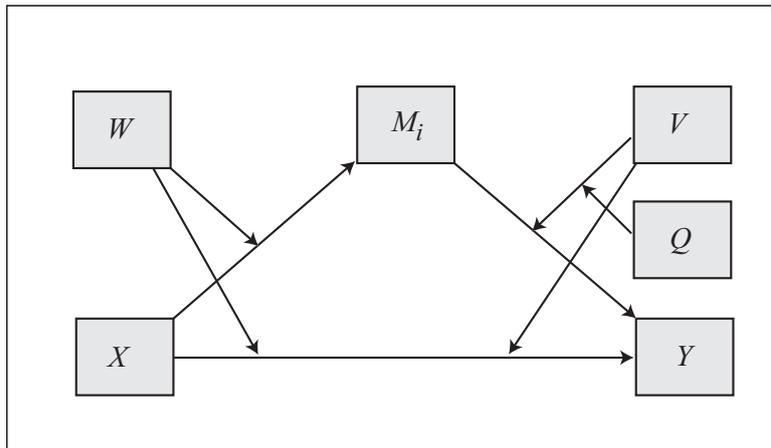
Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{3i}W)(b_{1i} + b_{2i}V + b_{3i}Q + b_{4i}VQ)$

Conditional direct effect of  $X$  on  $Y = c_1' + c_3'W + c_6'V + c_7'Q + c_9'VQ$

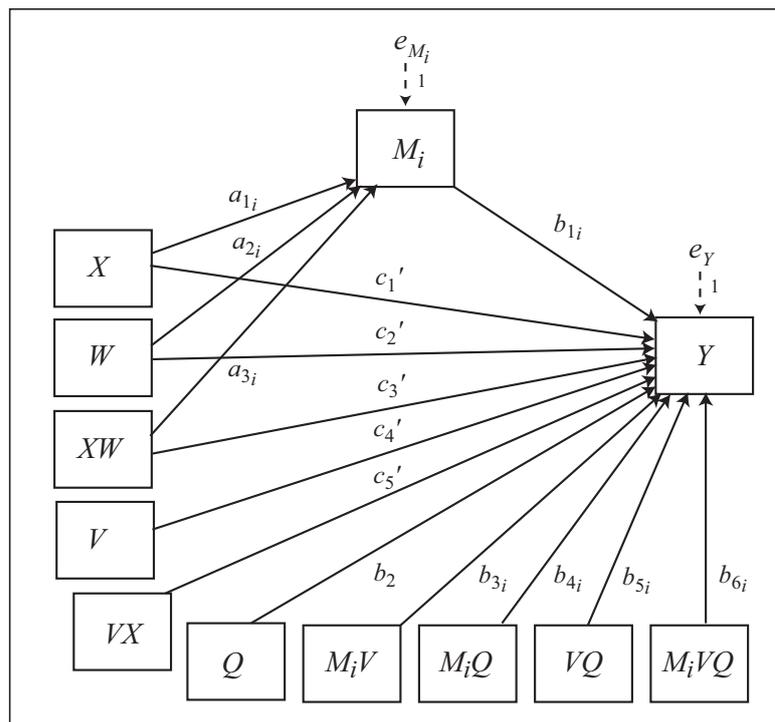
\*Model 43 allows up to 10 mediators operating in parallel

### Model 44

Conceptual Diagram



Statistical Diagram



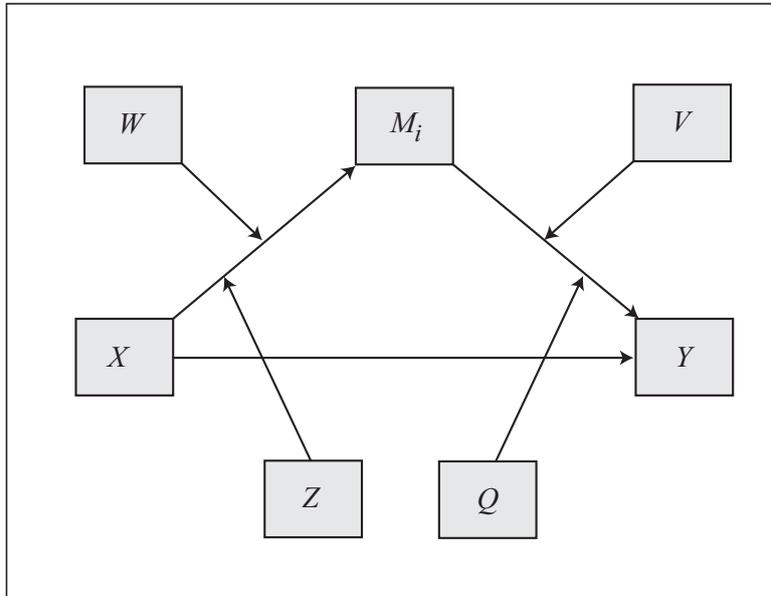
Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{3i}W)(b_{1i} + b_{3i}V + b_{4i}Q + b_{6i}VQ)$

Conditional direct effect of  $X$  on  $Y = c_1' + c_3'W + c_5'V$

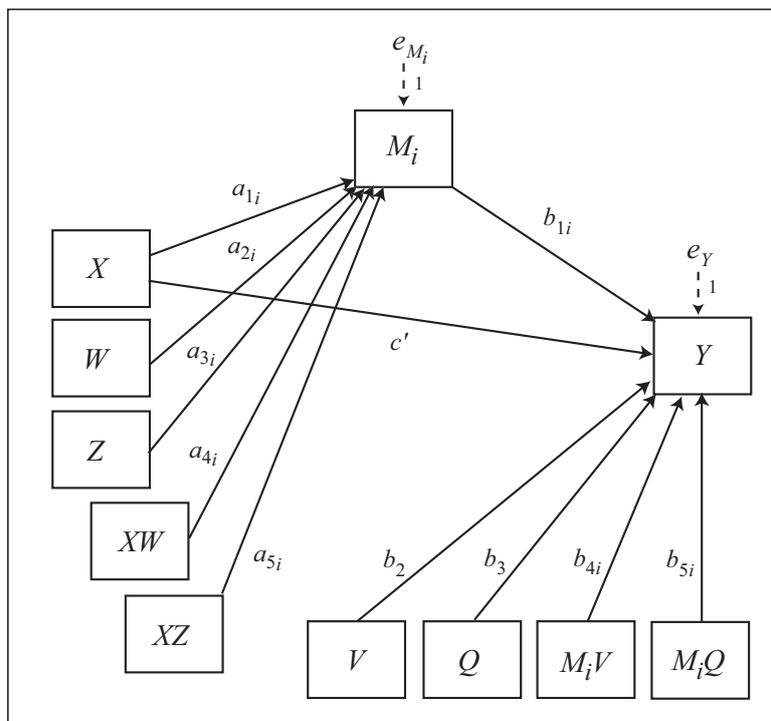
\*Model 44 allows up to 10 mediators operating in parallel

### Model 45

Conceptual Diagram



Statistical Diagram



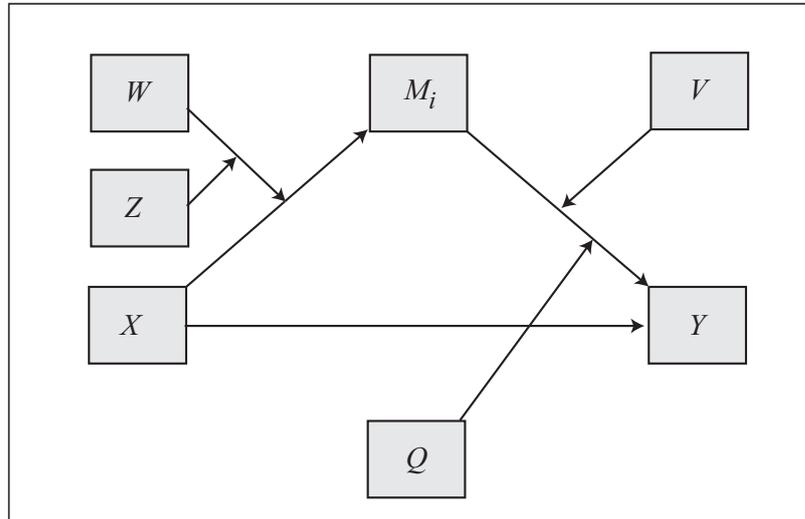
Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{4i}W + a_{5i}Z)(b_{1i} + b_{4i}V + b_{5i}Q)$

Direct effect of  $X$  on  $Y = c'$

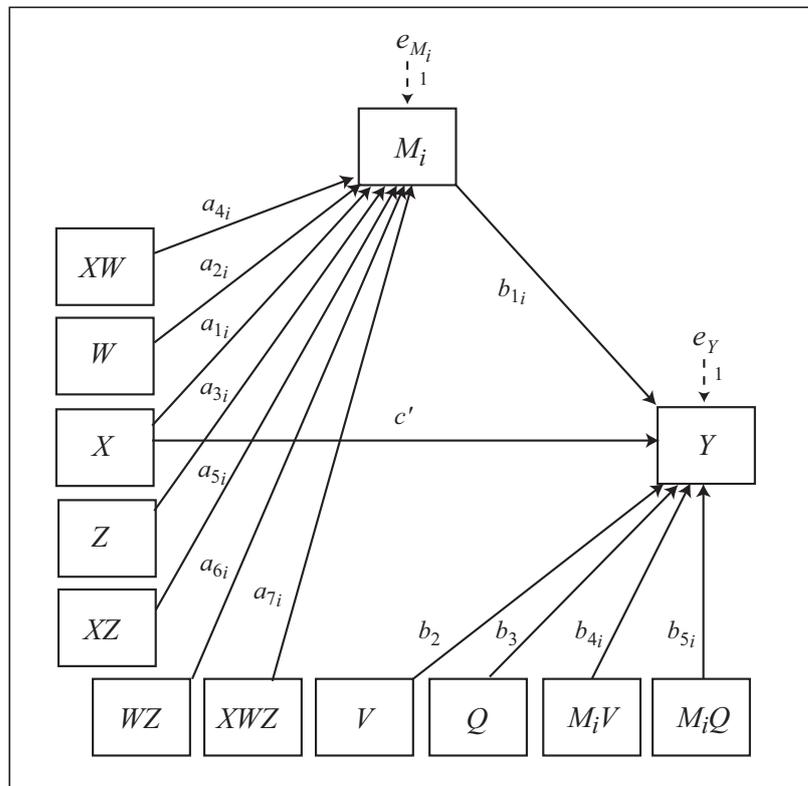
\*Model 45 allows up to 10 mediators operating in parallel

### Model 46

Conceptual Diagram



Statistical Diagram

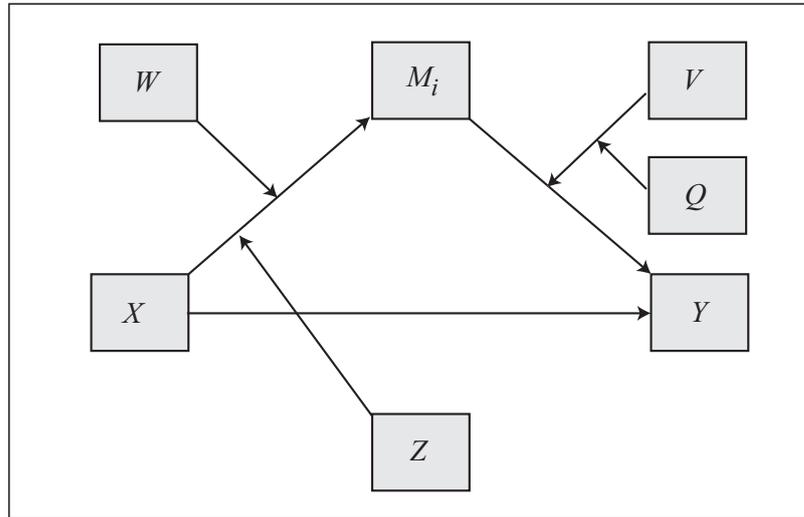


Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{4i}W + a_{5i}Z + a_{7i}WZ)(b_{1i} + b_{4i}V + b_{5i}Q)$   
 Direct effect of  $X$  on  $Y = c'$

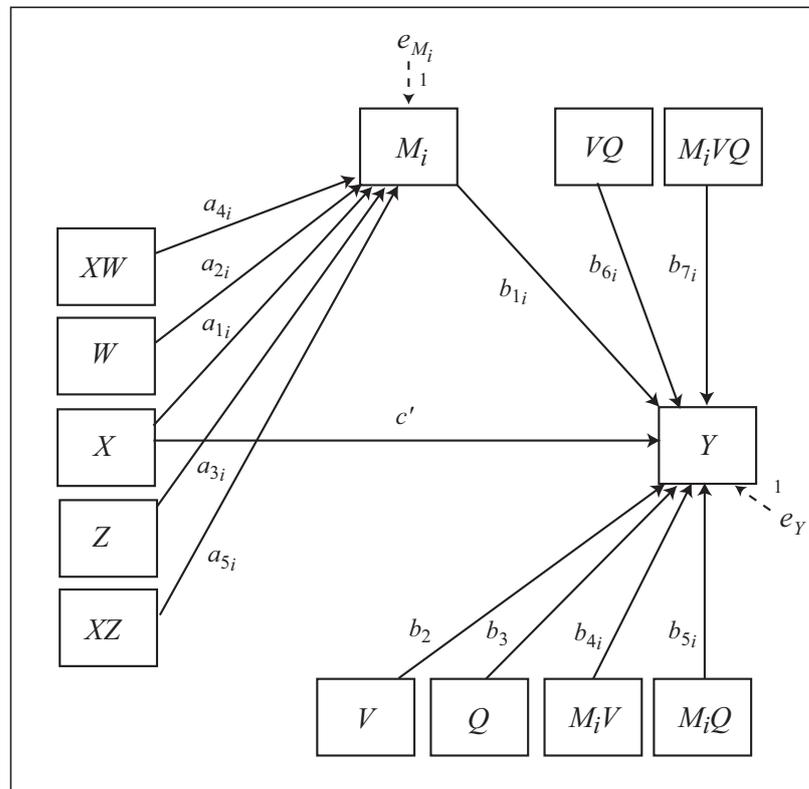
\*Model 46 allows up to 10 mediators operating in parallel

### Model 47

#### Conceptual Diagram



#### Statistical Diagram

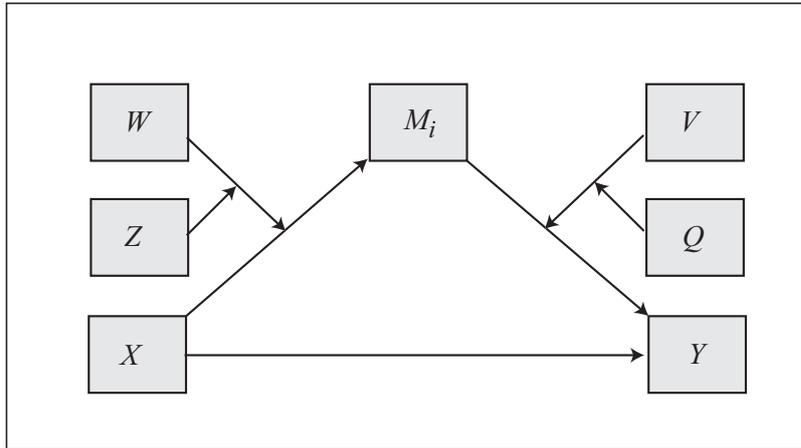


Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{4i}W + a_{5i}Z)(b_{1i} + b_{4i}V + b_{5i}Q + b_{7i}VQ)$   
 Direct effect of  $X$  on  $Y = c'$

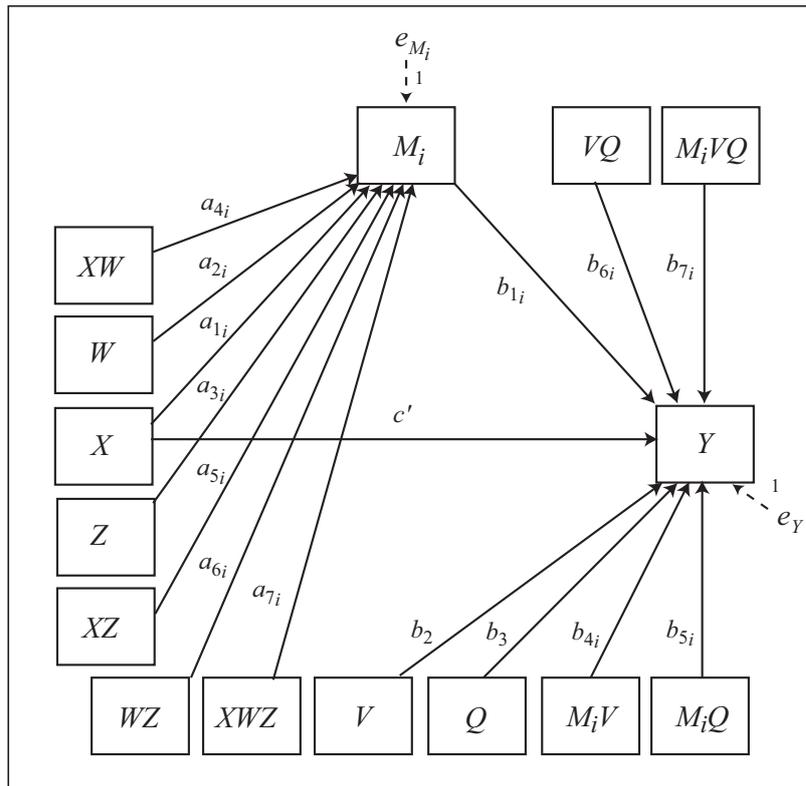
\*Model 47 allows up to 10 mediators operating in parallel

### Model 48

Conceptual Diagram



Statistical Diagram

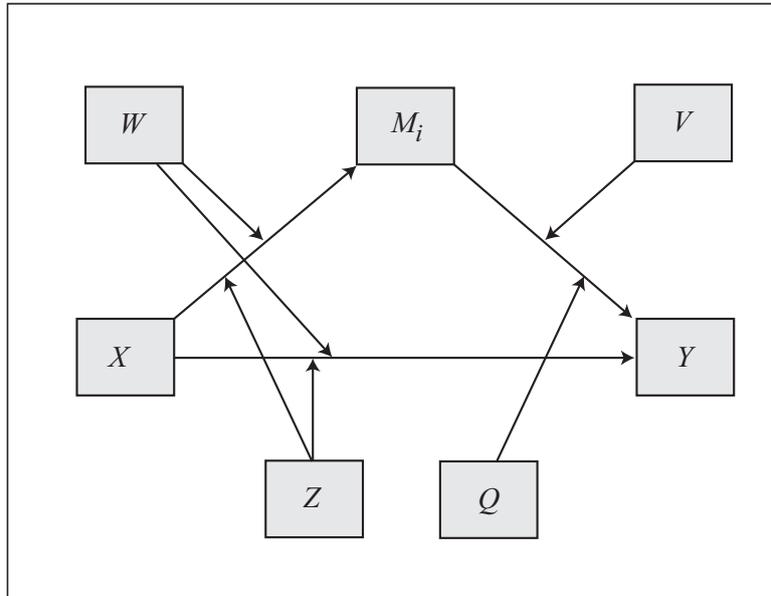


Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{4i}W + a_{5i}Z + a_{7i}WZ) \cdot (b_{1i} + b_{4i}V + b_{5i}Q + b_{7i}VQ)$   
 Direct effect of  $X$  on  $Y = c'$

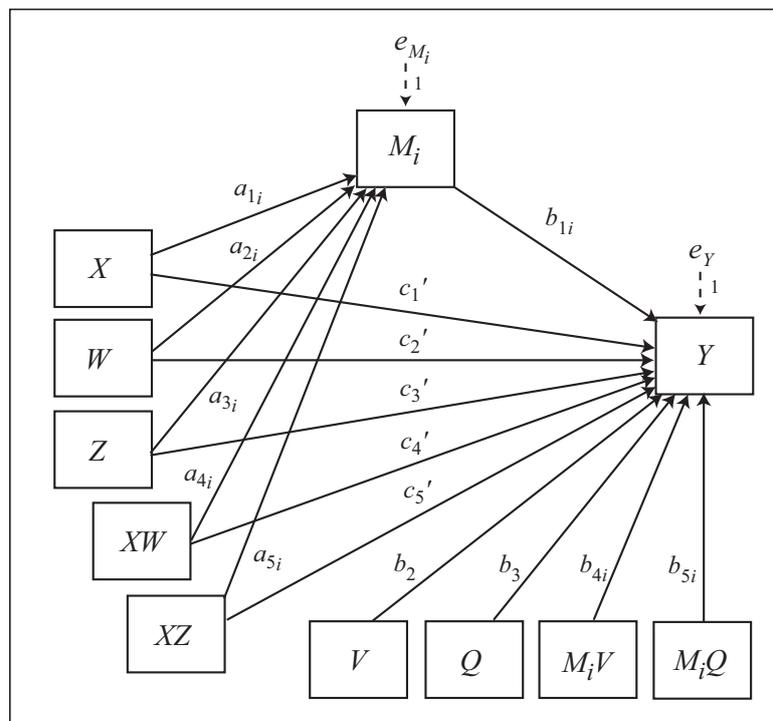
\*Model 48 allows up to 10 mediators operating in parallel

### Model 49

Conceptual Diagram



Statistical Diagram



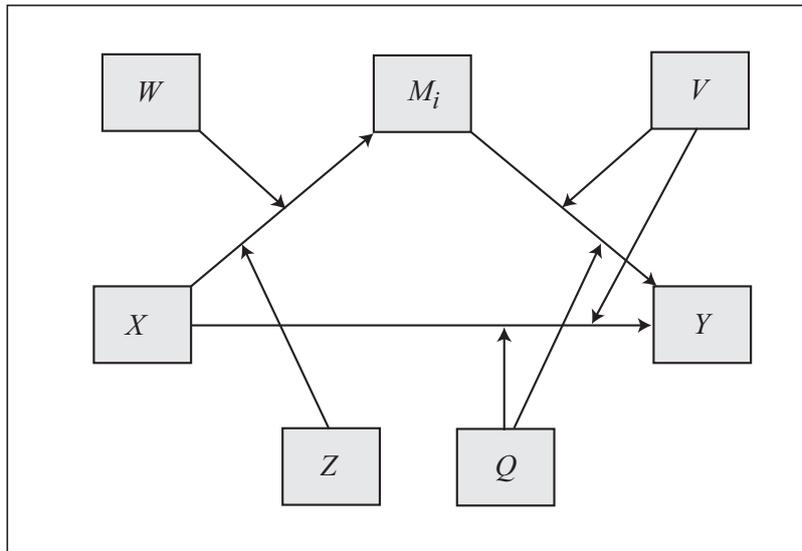
Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{4i}W + a_{5i}Z)(b_{1i} + b_{4i}V + b_{5i}Q)$

Conditional direct effect of  $X$  on  $Y = + c_1' + c_4'W + c_5'Z$

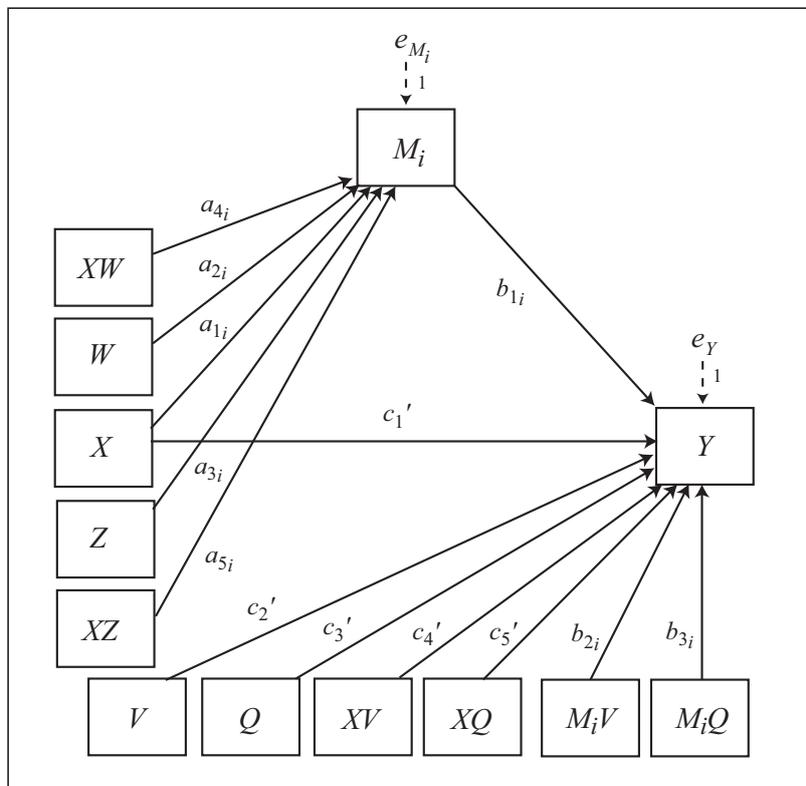
\*Model 49 allows up to 10 mediators operating in parallel

### Model 50

#### Conceptual Diagram



#### Statistical Diagram



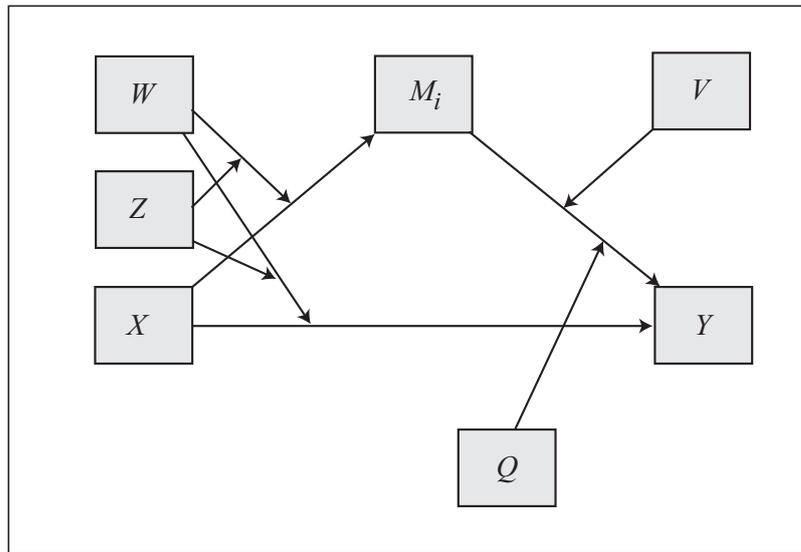
Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{4i}W + a_{5i}Z)(b_{1i} + b_{2i}V + b_{3i}Q)$

Conditional direct effect of  $X$  on  $Y = c_1' + c_4'V + c_5'Q$

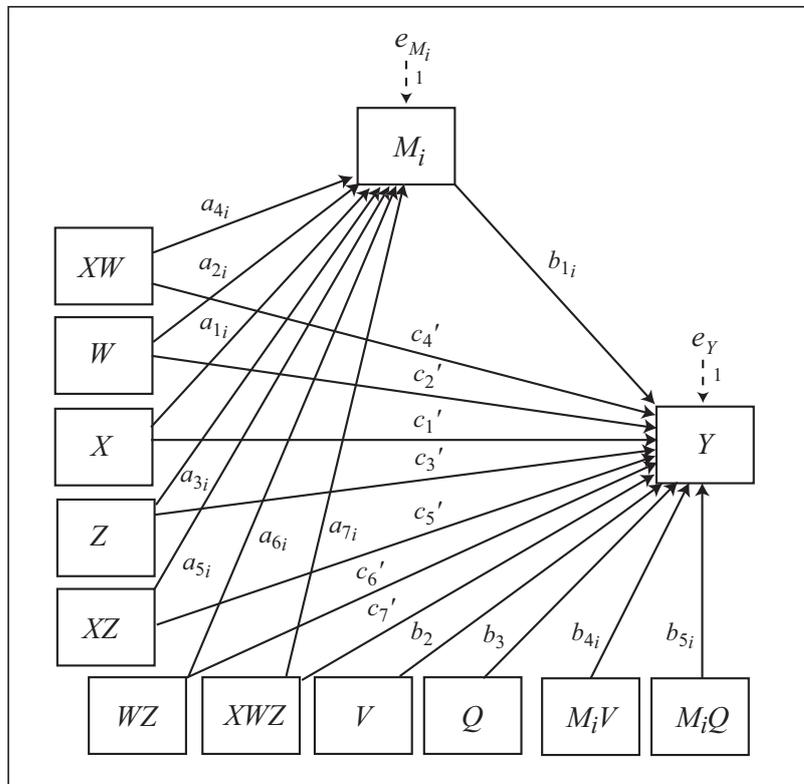
\*Model 50 allows up to 10 mediators operating in parallel

### Model 51

#### Conceptual Diagram



#### Statistical Diagram



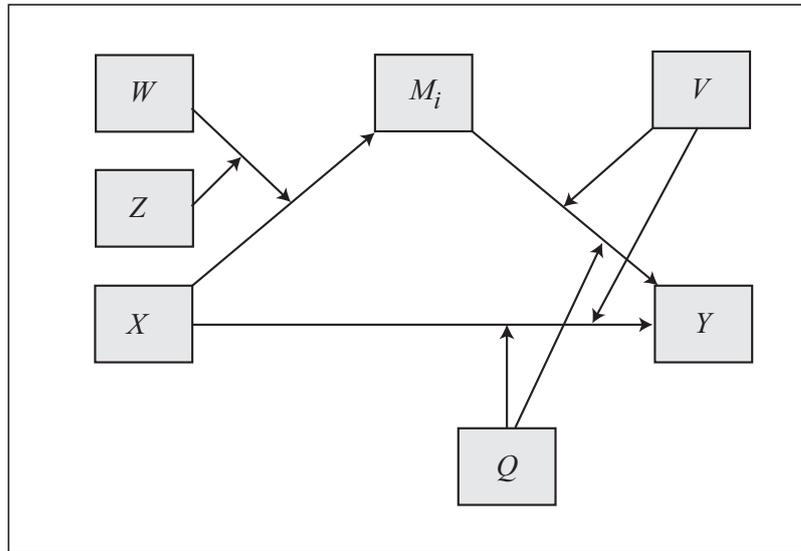
Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{4i}W + a_{5i}Z + a_{7i}WZ)(b_{1i} + b_{4i}V + b_{5i}Q)$

Conditional direct effect of  $X$  on  $Y = c_1' + c_4'W + c_5'Z + c_7'WZ$

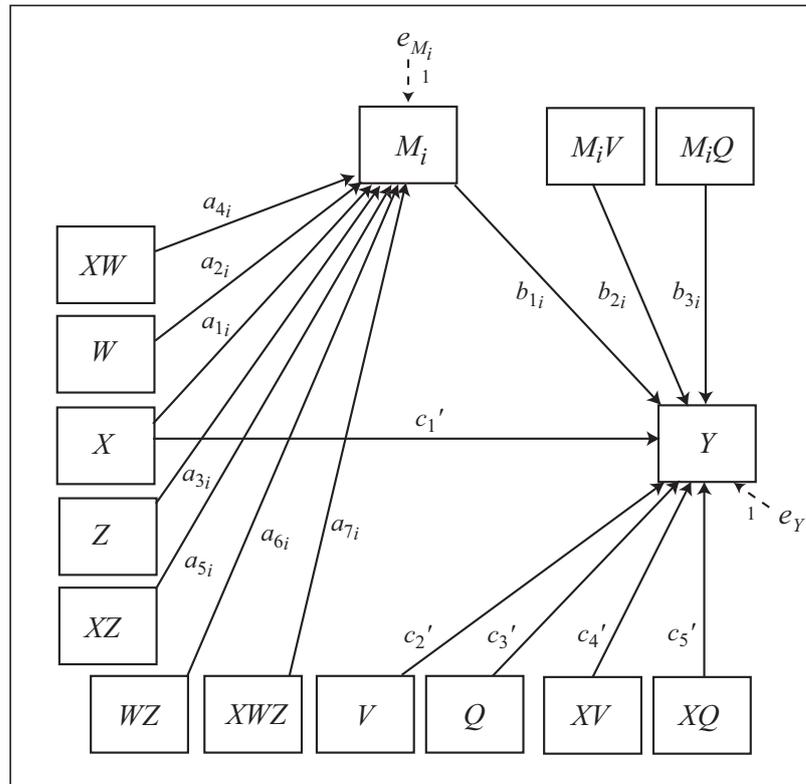
\*Model 51 allows up to 10 mediators operating in parallel

### Model 52

Conceptual Diagram



Statistical Diagram



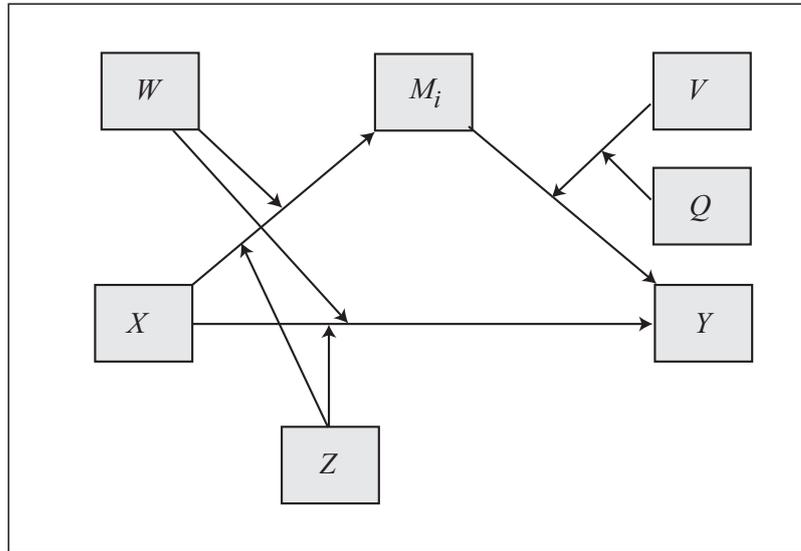
Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{4i}W + a_{5i}Z + a_{7i}WZ)(b_{1i} + b_{2i}V + b_{3i}Q)$

Conditional direct effect of  $X$  on  $Y = c_1' + c_4'V + c_5'Q$

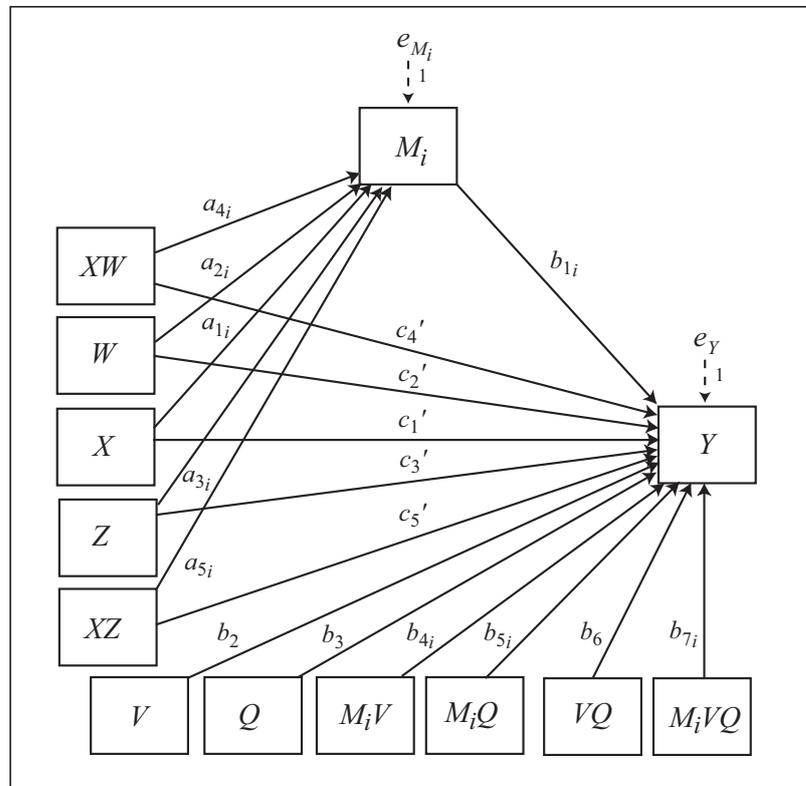
\*Model 52 allows up to 10 mediators operating in parallel

### Model 53

Conceptual Diagram



Statistical Diagram



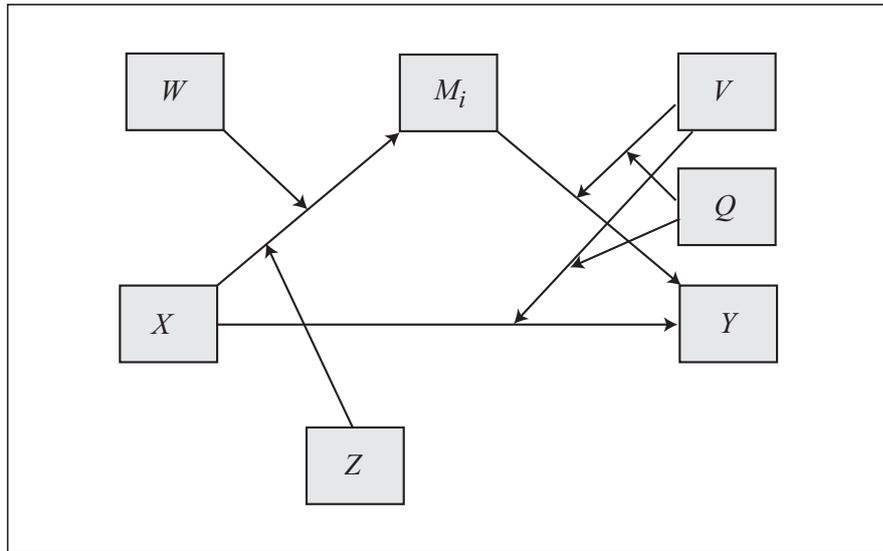
Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{4i}W + a_{5i}Z)(b_{1i} + b_{4i}V + b_{5i}Q + b_{7i}VQ)$

Conditional direct effect of  $X$  on  $Y = c_1' + c_4'W + c_5'Z$

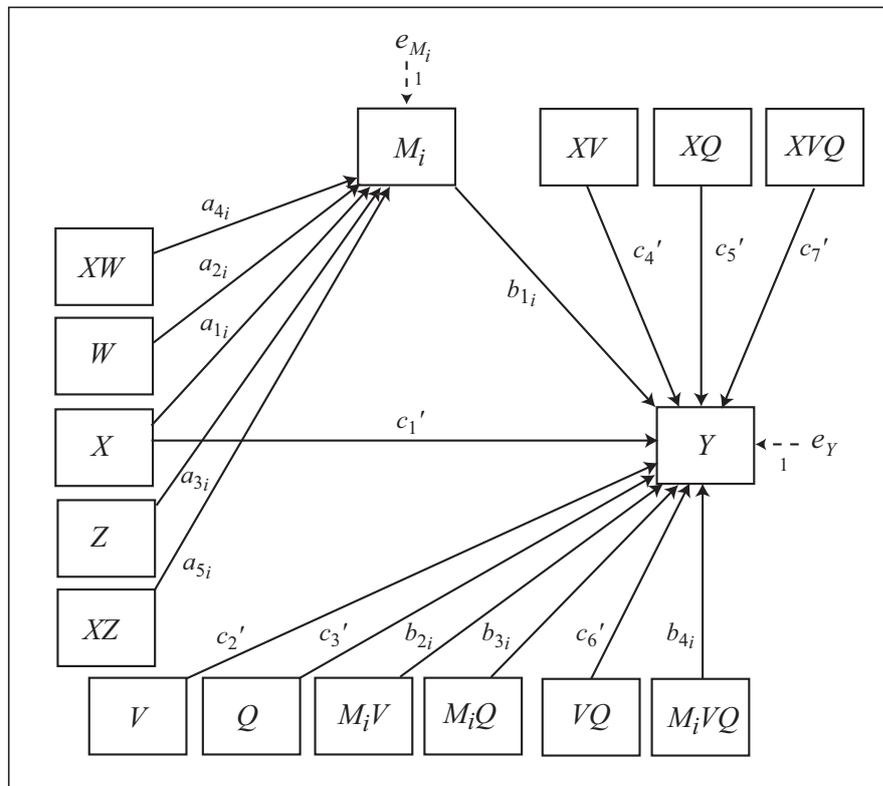
\*Model 53 allows up to 10 mediators operating in parallel

### Model 54

#### Conceptual Diagram



#### Statistical Diagram



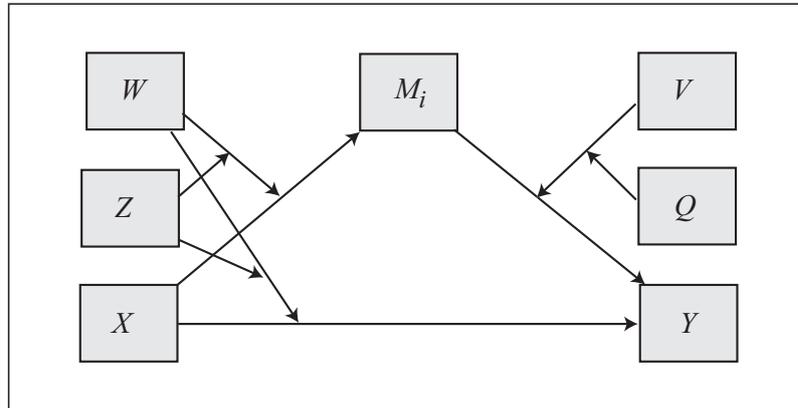
Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{4i}W + a_{5i}Z)(b_{1i} + b_{2i}V + b_{3i}Q + b_{4i}VQ)$

Conditional direct effect of  $X$  on  $Y = c_1' + c_4'V + c_5'Q + c_7'VQ$

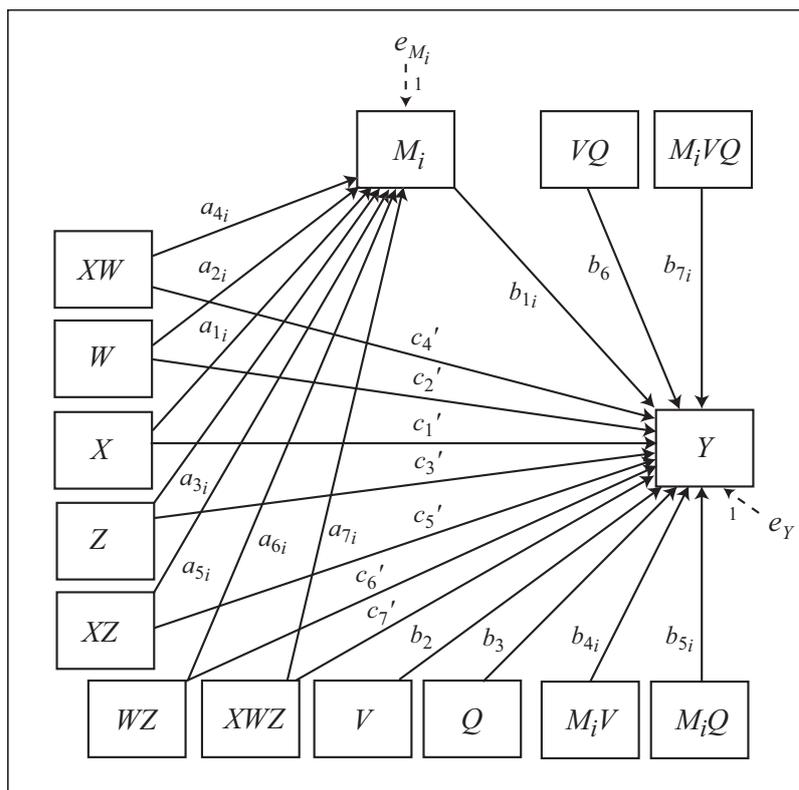
\*Model 54 allows up to 10 mediators operating in parallel

### Model 55

Conceptual Diagram



Statistical Diagram



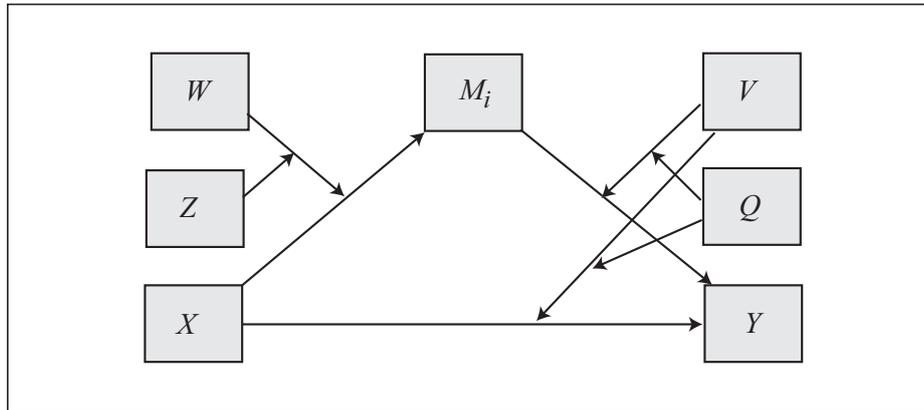
$$\text{Conditional indirect effect of } X \text{ on } Y \text{ through } M_i = (a_{1i} + a_{4i}W + a_{5i}Z + a_{7i}WZ) \cdot (b_{1i} + b_{4i}V + b_{5i}Q + b_{7i}VQ)$$

$$\text{Conditional direct effect of } X \text{ on } Y = c_1' + c_4'W + c_5'Z + c_7'WZ$$

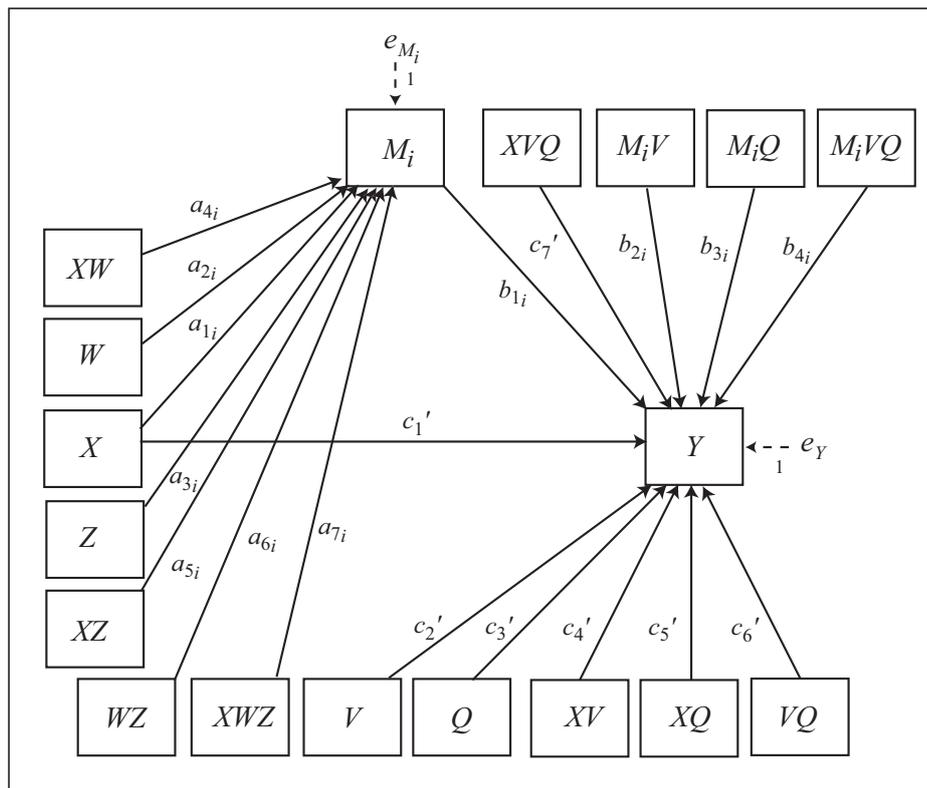
\*Model 55 allows up to 10 mediators operating in parallel

### Model 56

Conceptual Diagram



Statistical Diagram



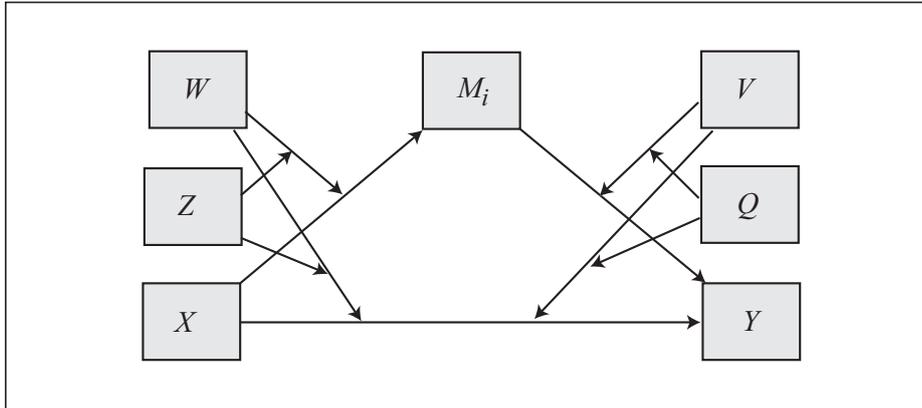
$$\text{Conditional indirect effect of } X \text{ on } Y \text{ through } M_i = (a_{1i} + a_{4i}W + a_{5i}Z + a_{7i}WZ) \cdot (b_{1i} + b_{2i}V + b_{3i}Q + b_{4i}VQ)$$

$$\text{Conditional direct effect of } X \text{ on } Y = (c_{1'} + c_{4'}V + c_{5'}Q + c_{7'}VQ)$$

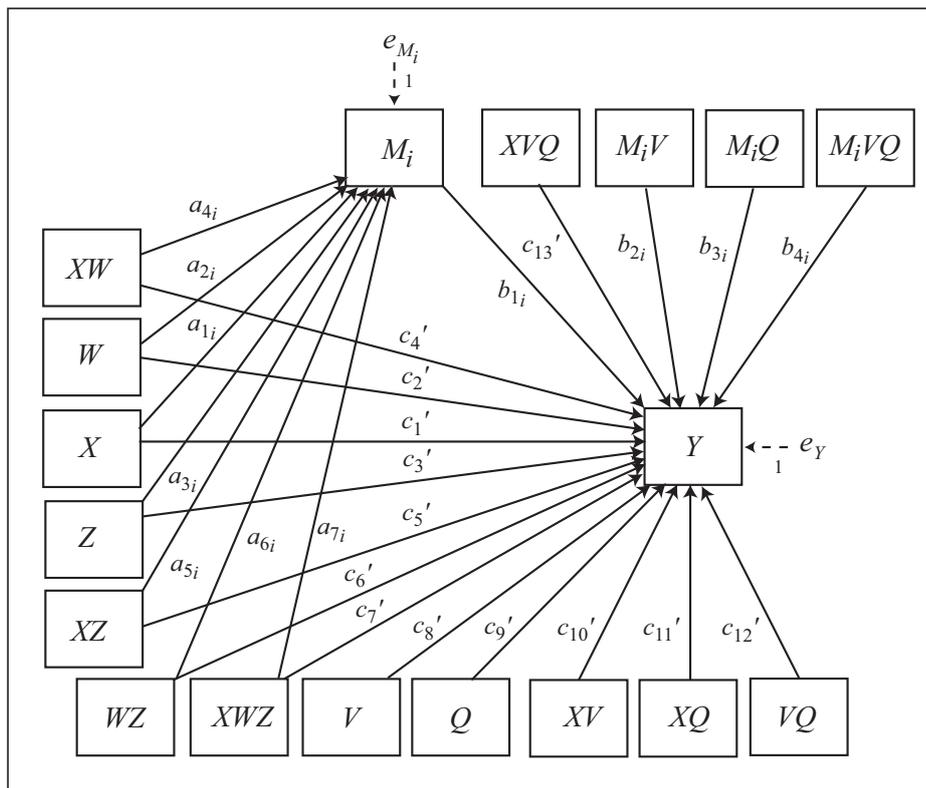
\*Model 56 allows up to 10 mediators operating in parallel

### Model 57

Conceptual Diagram



Statistical Diagram



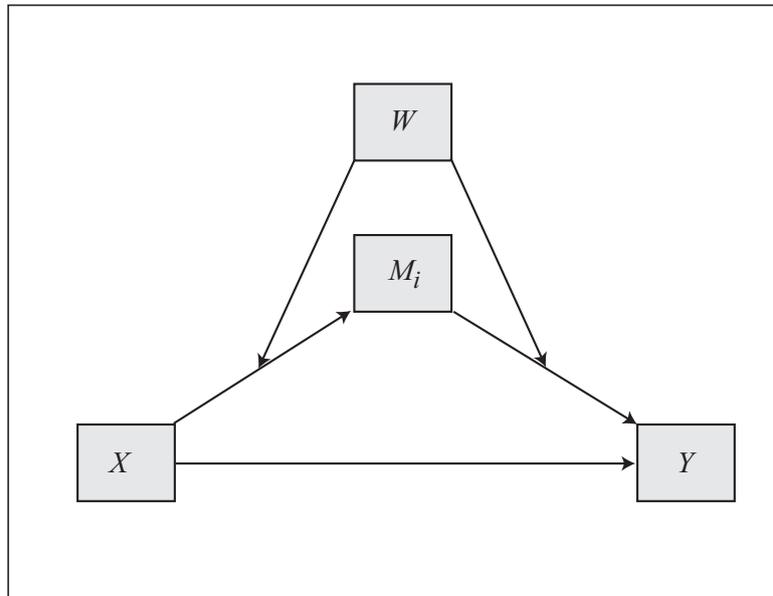
$$\text{Conditional indirect effect of } X \text{ on } Y \text{ through } M_i = (a_{1i} + a_{4i}W + a_{5i}Z + a_{7i}WZ) \cdot (b_{1i} + b_{2i}V + b_{3i}Q + b_{4i}VQ)$$

$$\text{Conditional direct effect of } X \text{ on } Y = (c_1' + c_4'W + c_5'Z + c_7'WZ + c_{10}'V + c_{11}'Q + c_{13}'VQ)$$

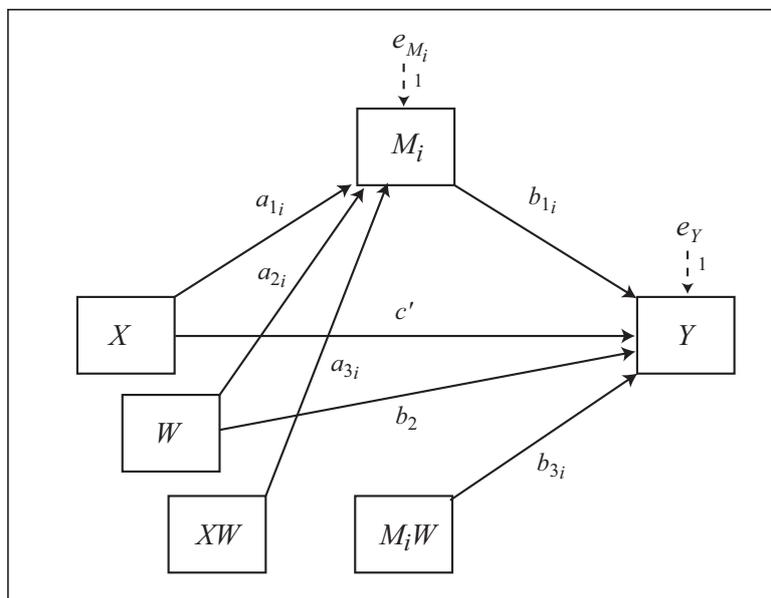
\*Model 57 allows up to 10 mediators operating in parallel

### Model 58

Conceptual Diagram



Statistical Diagram

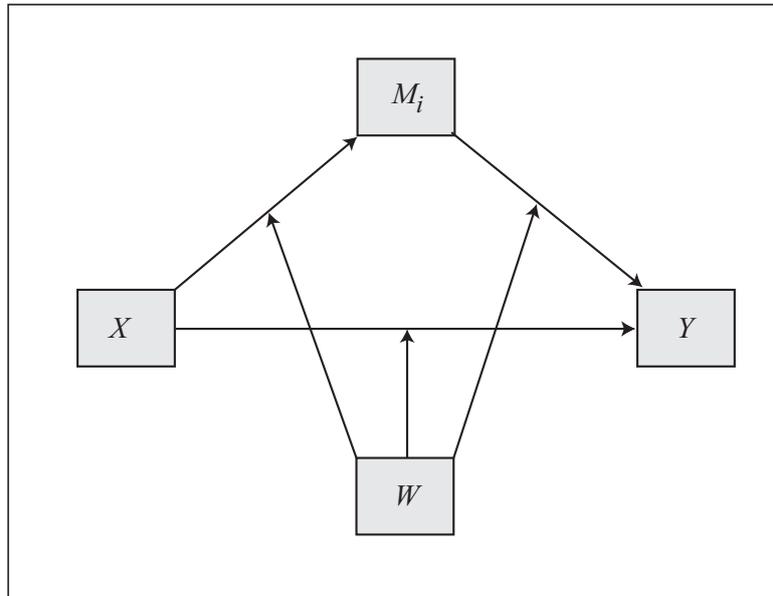


Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{3i}W)(b_{1i} + b_{3i}W)$   
 Direct effect of  $X$  on  $Y = c'$

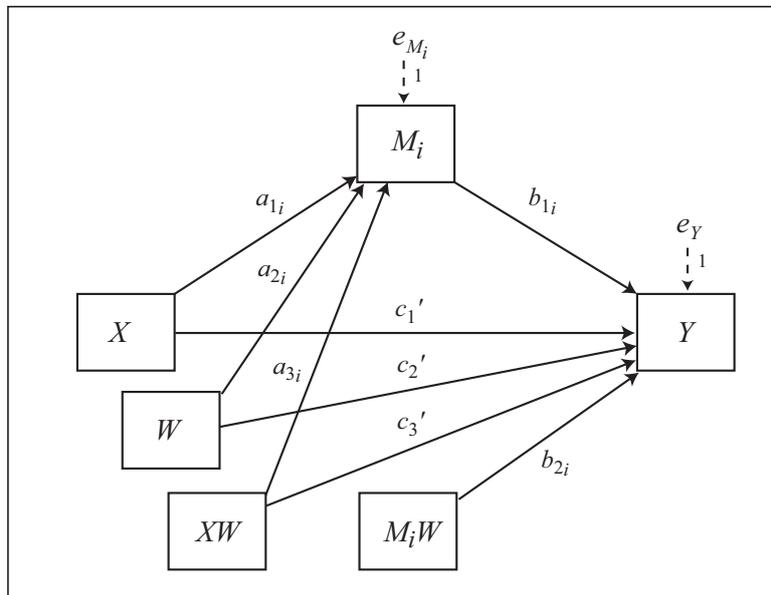
Note: Model 58 allows up to 10 mediators operating in parallel.

### Model 59

Conceptual Diagram



Statistical Diagram



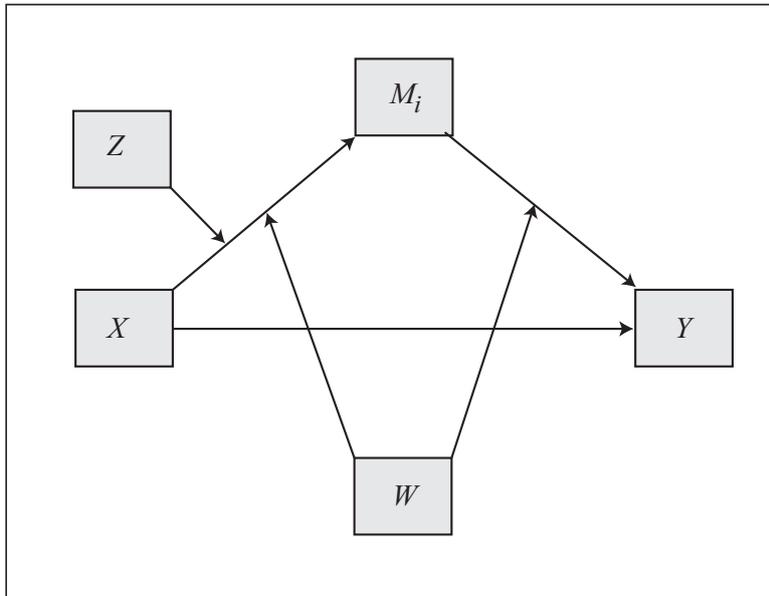
Conditional indirect effect of X on Y through  $M_i = (a_{1i} + a_{3i}W) (b_{1i} + b_{2i}W)$

Conditional direct effect of X on Y =  $c_1' + c_3'W$

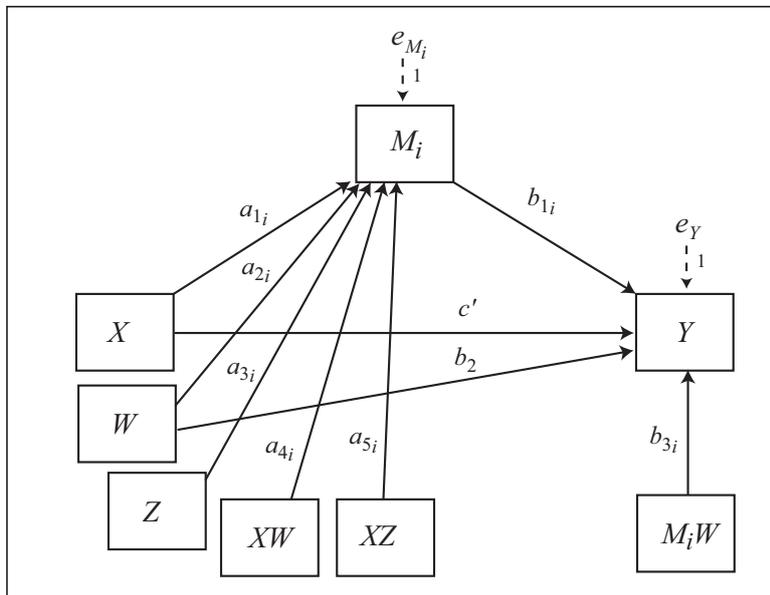
Note: Model 59 allows up to 10 mediators operating in parallel.

### Model 60

Conceptual Diagram



Statistical Diagram

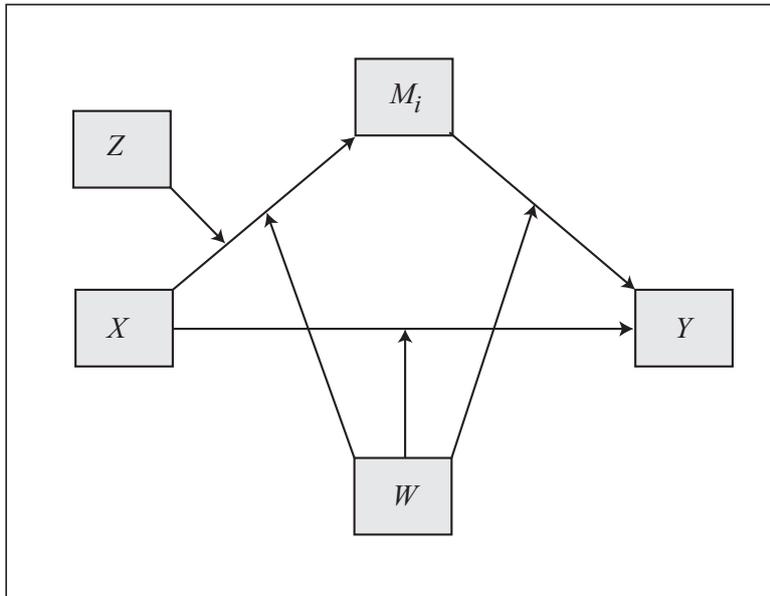


Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{4i}W + a_{5i}Z)(b_{1i} + b_{3i}W)$   
 Direct effect of  $X$  on  $Y = c'$

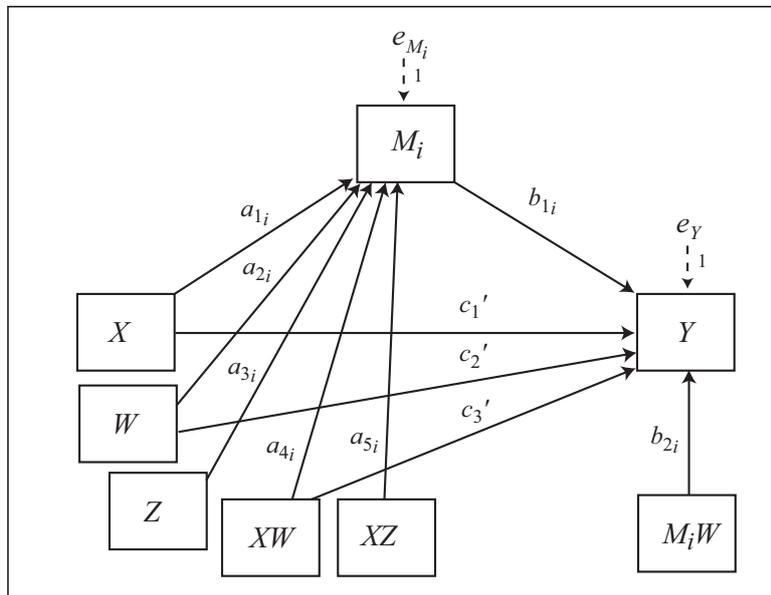
\*Model 60 allows up to 10 mediators operating in parallel

### Model 61

Conceptual Diagram



Statistical Diagram

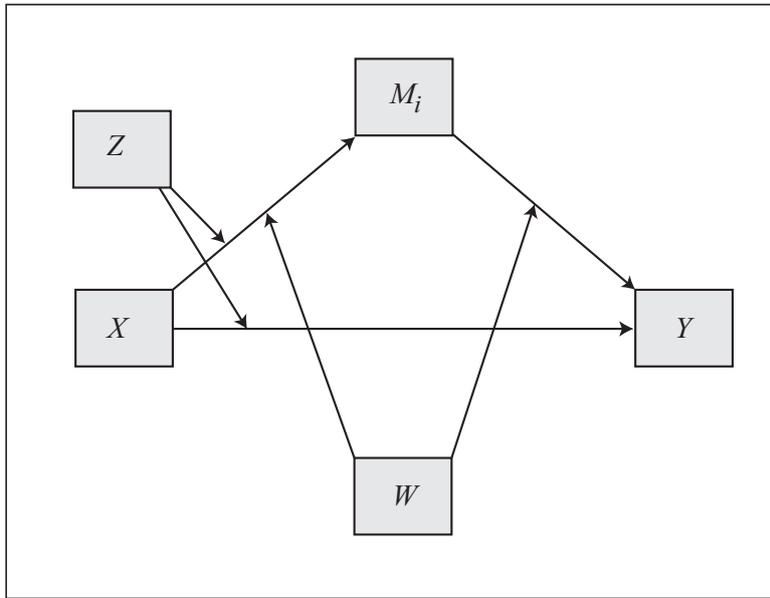


Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{4i}W + a_{5i}Z)(b_{1i} + b_{2i}W)$   
 Conditional direct effect of  $X$  on  $Y = c_1' + c_3'W$

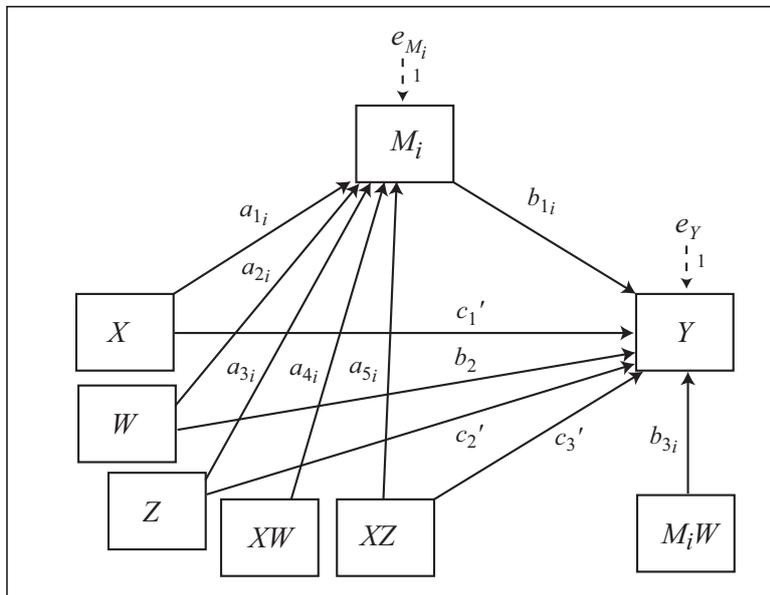
\*Model 61 allows up to 10 mediators operating in parallel

### Model 62

Conceptual Diagram



Statistical Diagram

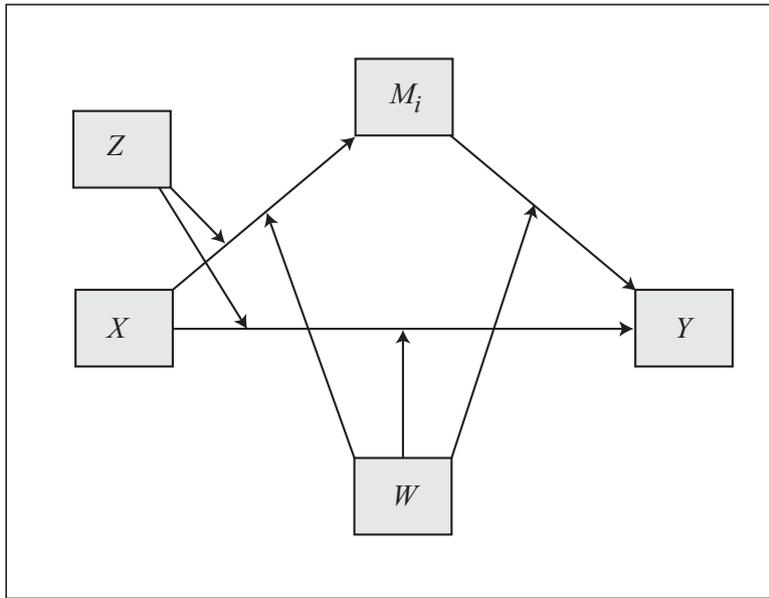


Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{4i}W + a_{5i}Z)(b_{1i} + b_{3i}W)$   
 Conditional direct effect of  $X$  on  $Y = c_1' + c_3'Z$

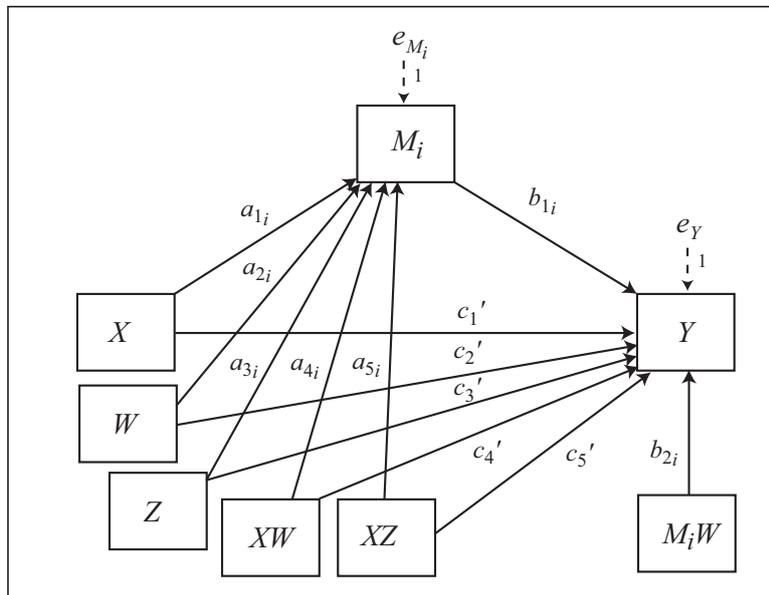
\*Model 62 allows up to 10 mediators operating in parallel

### Model 63

Conceptual Diagram



Statistical Diagram

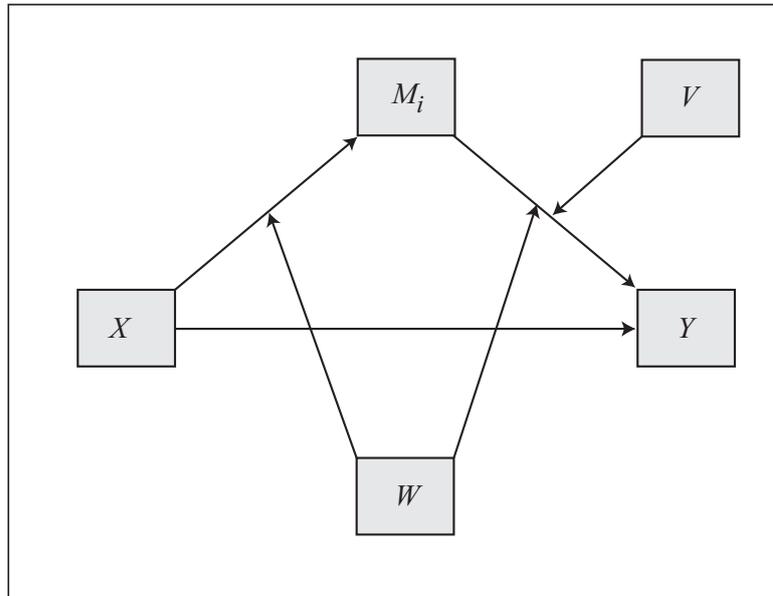


Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{4i}W + a_{5i}Z)(b_{1i} + b_{2i}W)$   
 Conditional direct effect of  $X$  on  $Y = c_1' + c_4'W + c_5'Z$

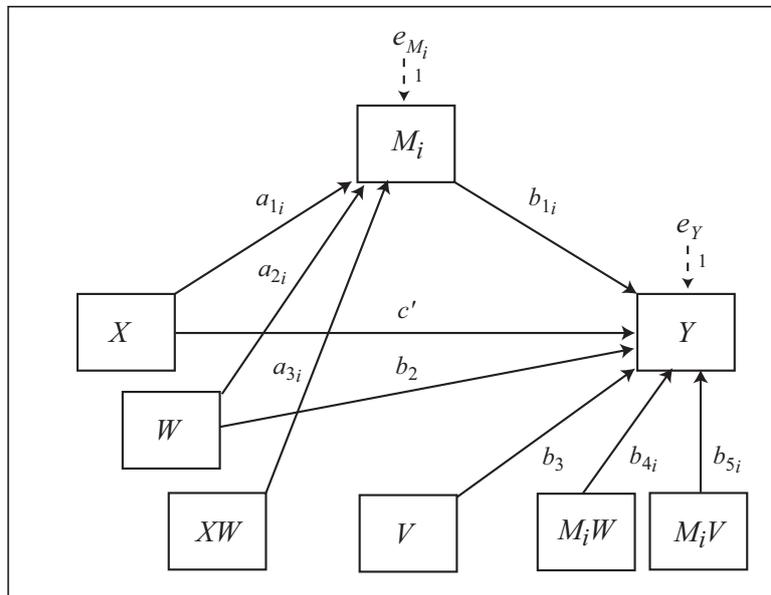
\*Model 63 allows up to 10 mediators operating in parallel

### Model 64

Conceptual Diagram



Statistical Diagram

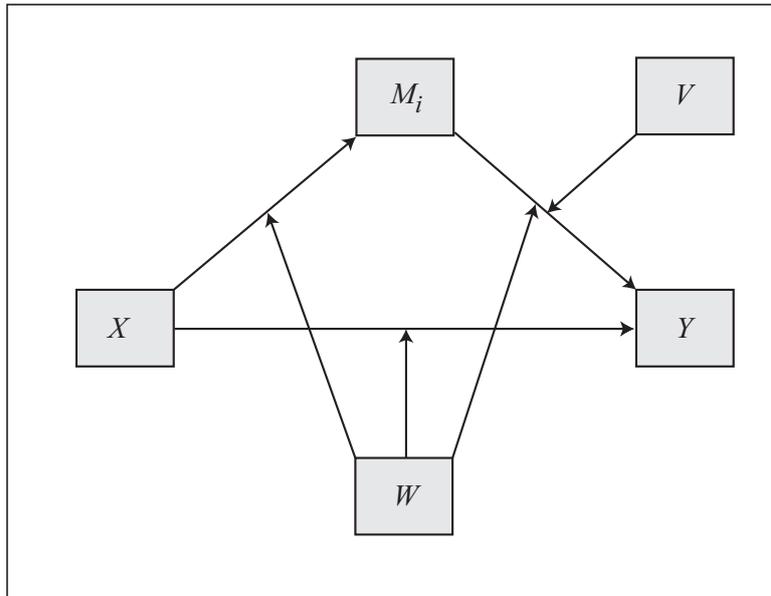


Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{3i}W)(b_{1i} + b_{4i}W + b_{5i}V)$   
 Direct effect of  $X$  on  $Y = c'$

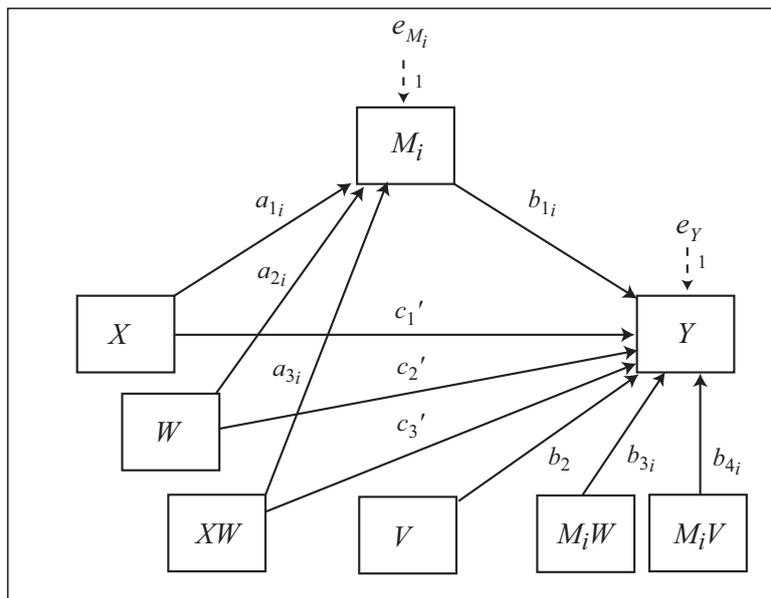
\*Model 64 allows up to 10 mediators operating in parallel

### Model 65

Conceptual Diagram



Statistical Diagram



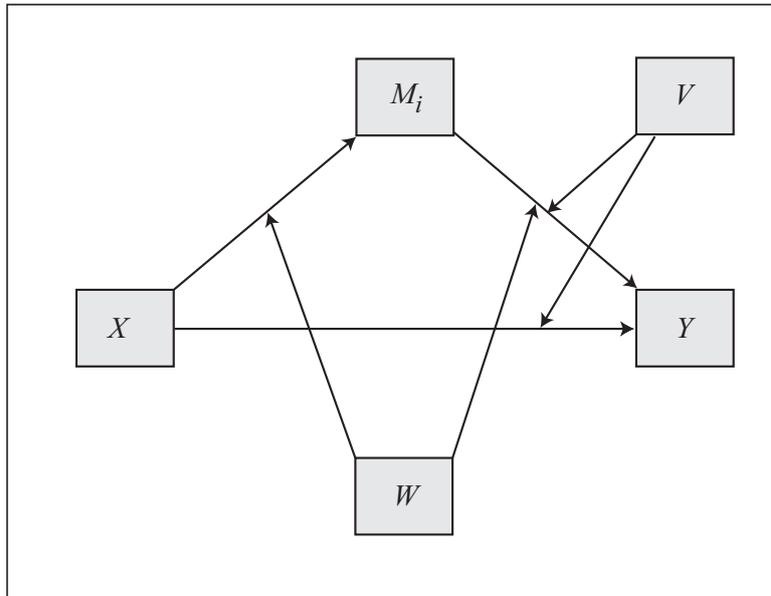
Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{3i}W) (b_{1i} + b_{3i}W + b_{4i}V)$

Conditional direct effect of  $X$  on  $Y = c_1' + c_3'W$

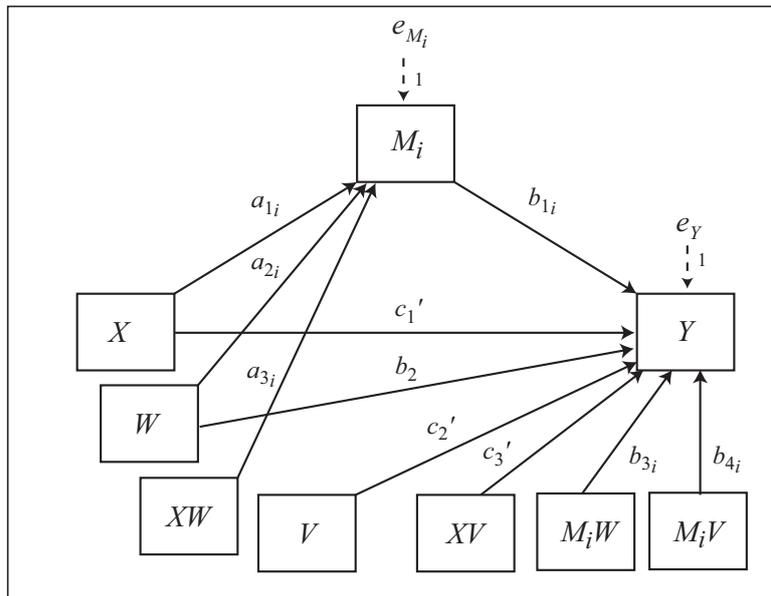
\*Model 65 allows up to 10 mediators operating in parallel

### Model 66

Conceptual Diagram



Statistical Diagram



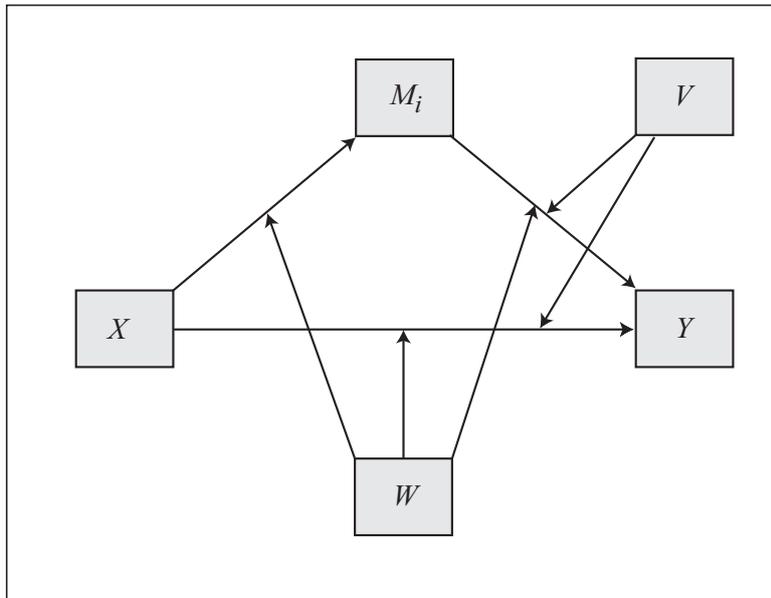
Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{3i}W)(b_{1i} + b_{3i}W + b_{4i}V)$

Conditional direct effect of  $X$  on  $Y = c_1' + c_3'V$

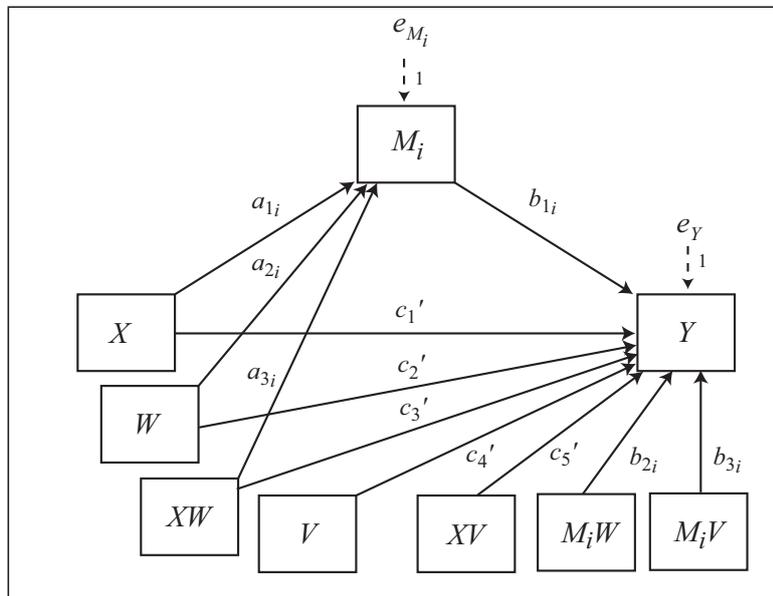
\*Model 66 allows up to 10 mediators operating in parallel

### Model 67

Conceptual Diagram



Statistical Diagram



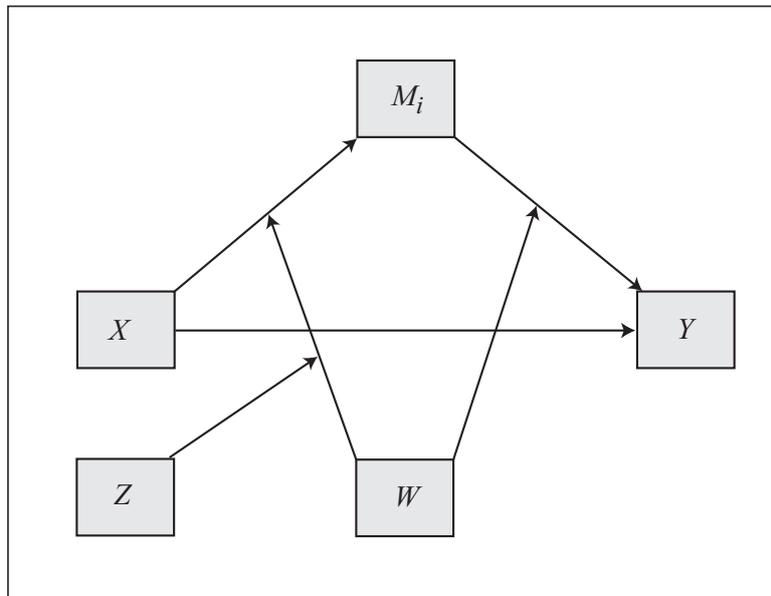
Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{3i}W)(b_{1i} + b_{2i}W + b_{3i}V)$

Conditional direct effect of  $X$  on  $Y = c_1' + c_3'W + c_5'V$

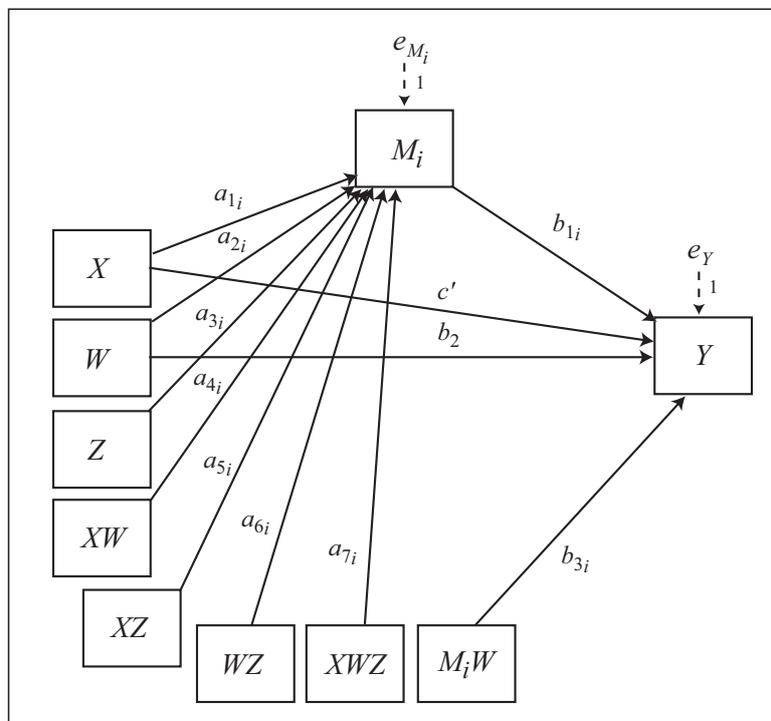
\*Model 67 allows up to 10 mediators operating in parallel

### Model 68

Conceptual Diagram



Statistical Diagram



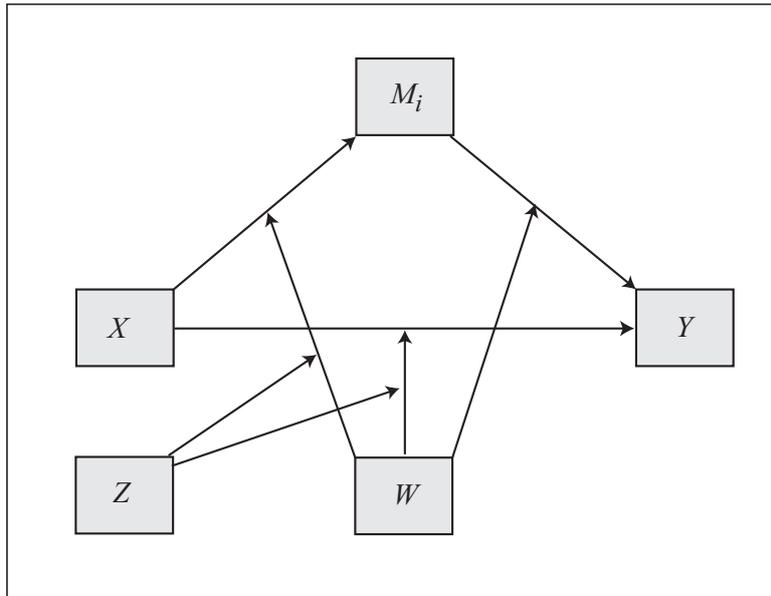
Conditional indirect effect of X on Y through  $M_i = (a_{1i} + a_{4i}W + a_{5i}Z + a_{7i}WZ)(b_{1i} + b_{3i}W)$

Direct effect of X on Y =  $c'$

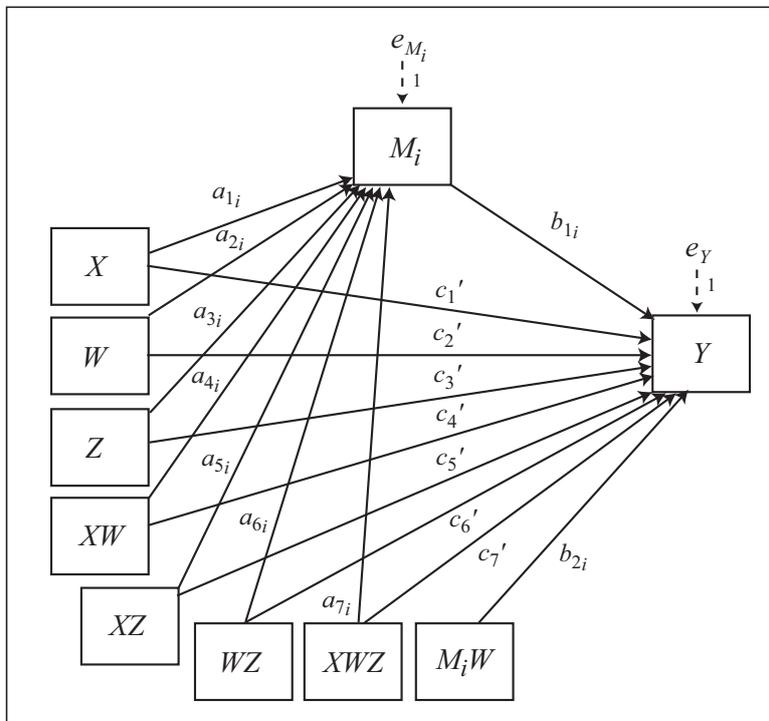
\*Model 68 allows up to 10 mediators operating in parallel

### Model 69

Conceptual Diagram



Statistical Diagram



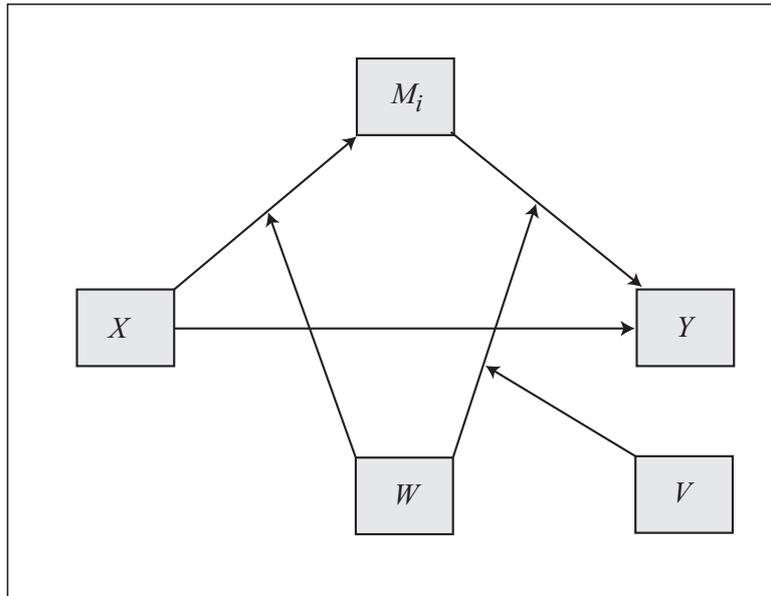
Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{4i}W + a_{5i}Z + a_{7i}WZ)(b_{1i} + b_{2i}W)$

Conditional direct effect of  $X$  on  $Y = c_1' + c_4'W + c_5'Z + c_7'WZ$

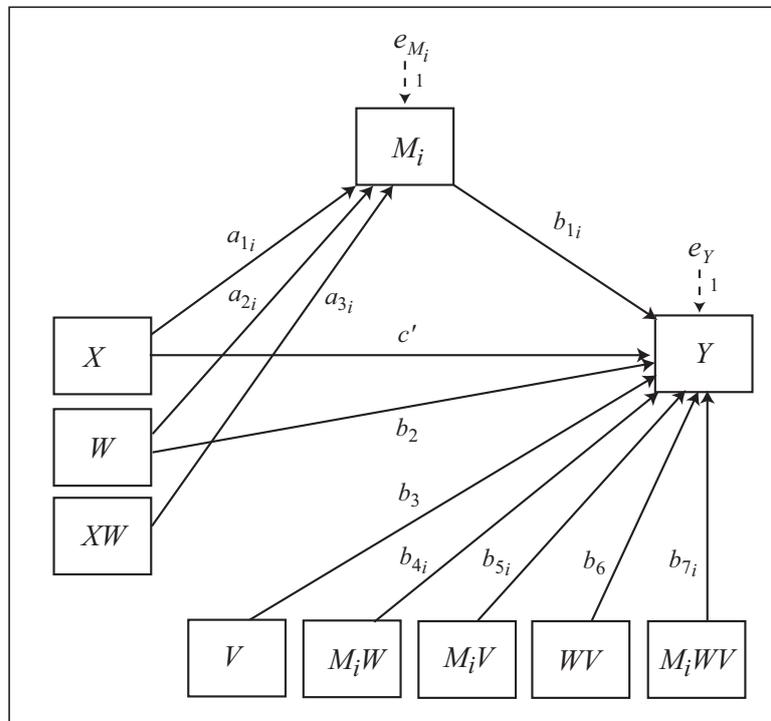
\*Model 69 allows up to 10 mediators operating in parallel

### Model 70

Conceptual Diagram



Statistical Diagram



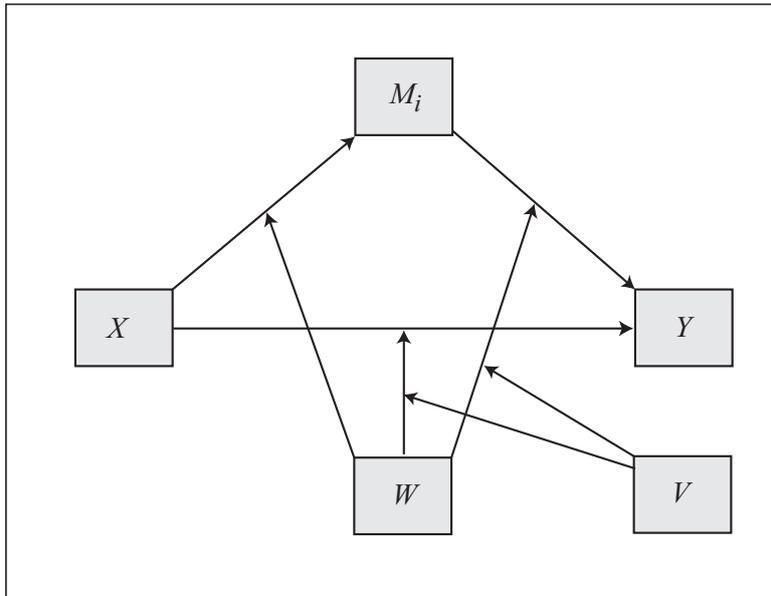
Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{3i}W)(b_{1i} + b_{4i}W + b_{5i}V + b_{7i}WV)$

Direct effect of  $X$  on  $Y = c'$

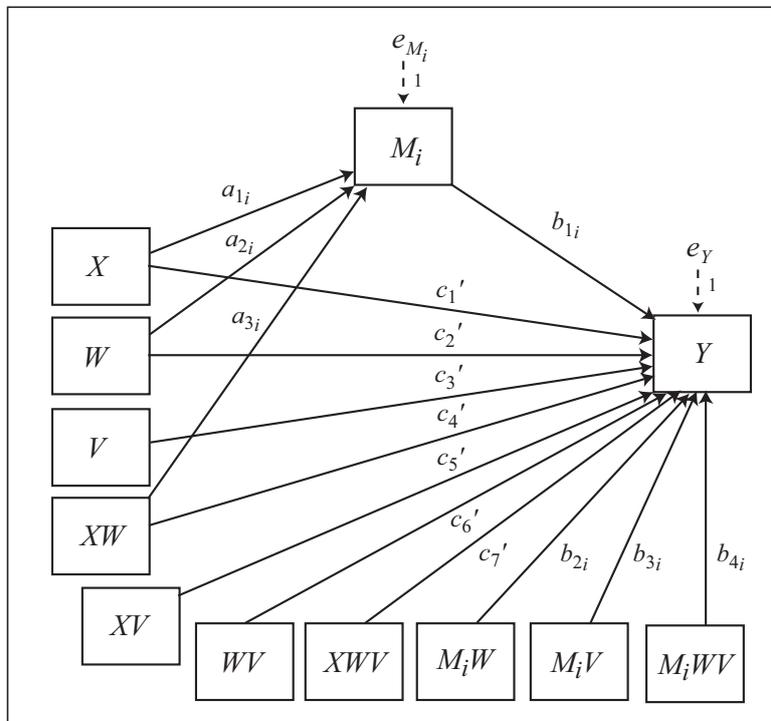
\*Model 70 allows up to 10 mediators operating in parallel

### Model 71

Conceptual Diagram



Statistical Diagram



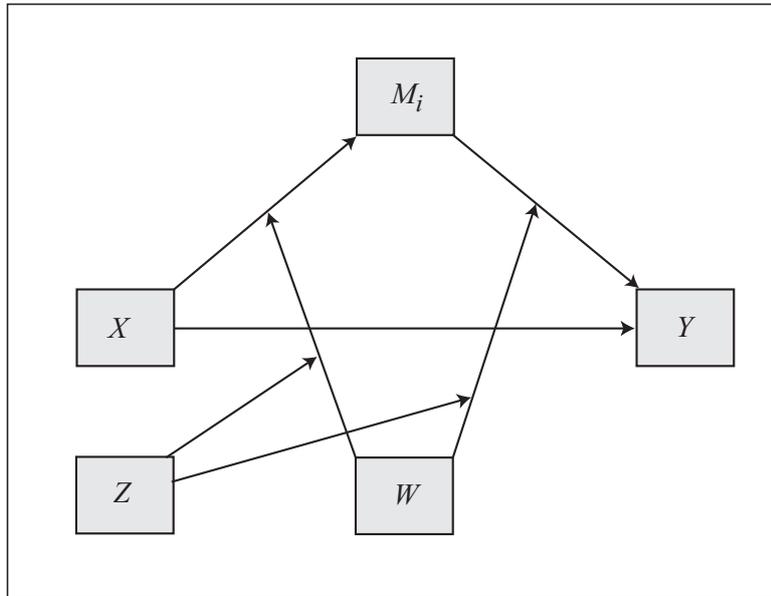
Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{3i}W)(b_{1i} + b_{2i}W + b_{3i}V + b_{4i}WV)$

Conditional direct effect of  $X$  on  $Y = c_1' + c_4'W + c_5'V + c_7'WV$

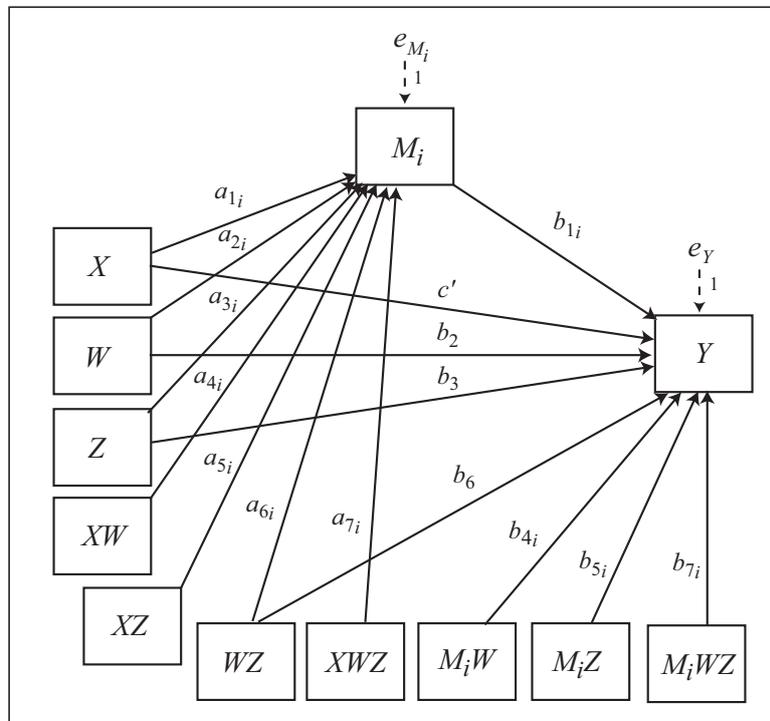
\*Model 71 allows up to 10 mediators operating in parallel

### Model 72

Conceptual Diagram



Statistical Diagram



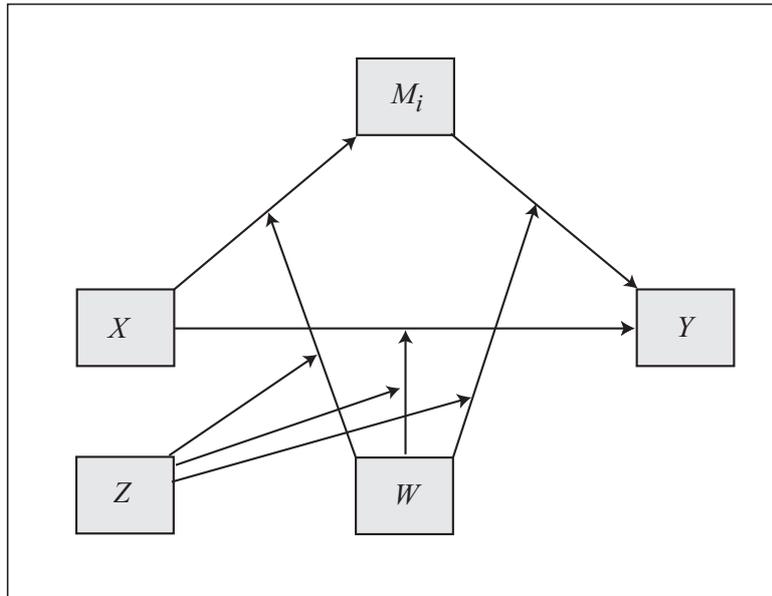
Conditional indirect effect of X on Y through  $M_i = (a_{1i} + a_{4i}W + a_{5i}Z + a_{7i}WZ) \cdot (b_{1i} + b_{4i}W + b_{5i}Z + b_{7i}WZ)$

Direct effect of X on Y =  $c'$

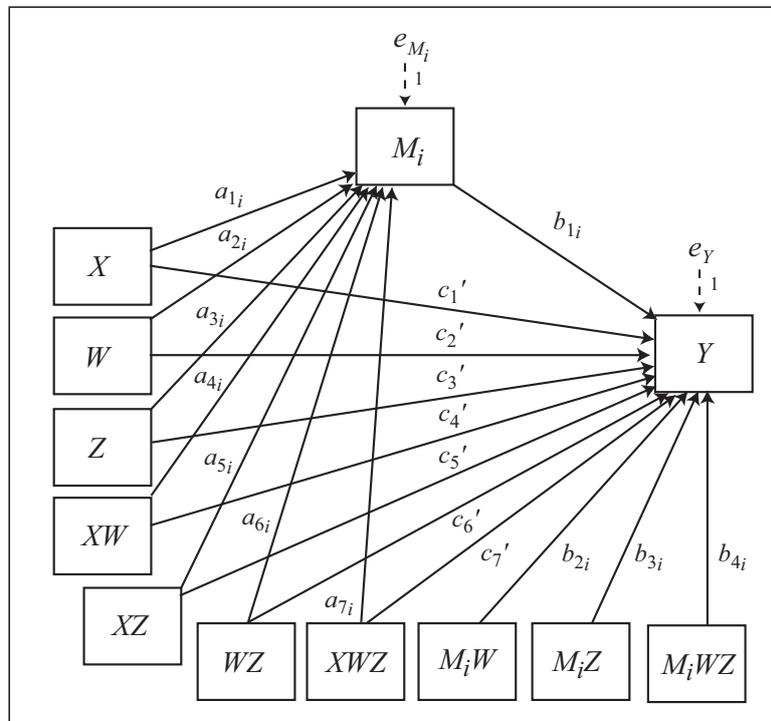
\*Model 72 allows up to 10 mediators operating in parallel

### Model 73

Conceptual Diagram



Statistical Diagram



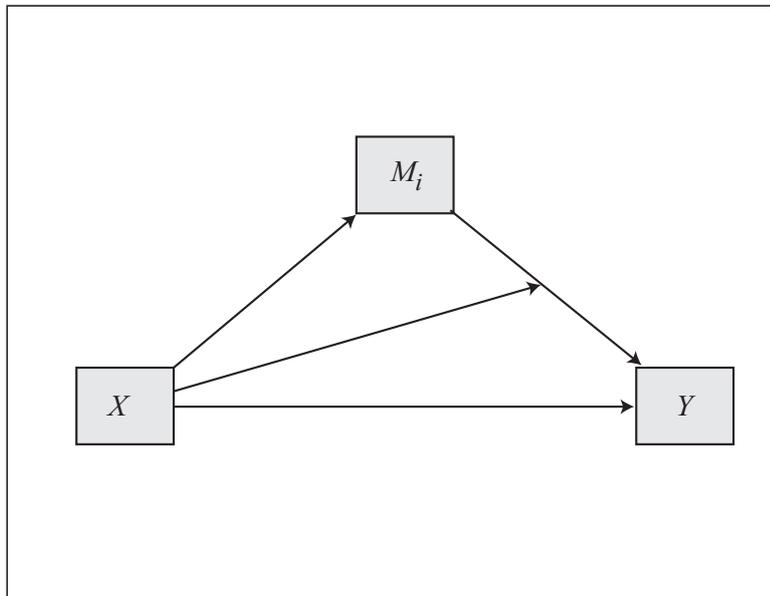
Conditional indirect effect of X on Y through  $M_i = (a_{1i} + a_{4i}W + a_{5i}Z + a_{7i}WZ) \cdot (b_{1i} + b_{2i}W + b_{3i}Z + b_{4i}WZ)$

Conditional direct effect of X on Y =  $c_1' + c_4'W + c_5'Z + c_7'WZ$

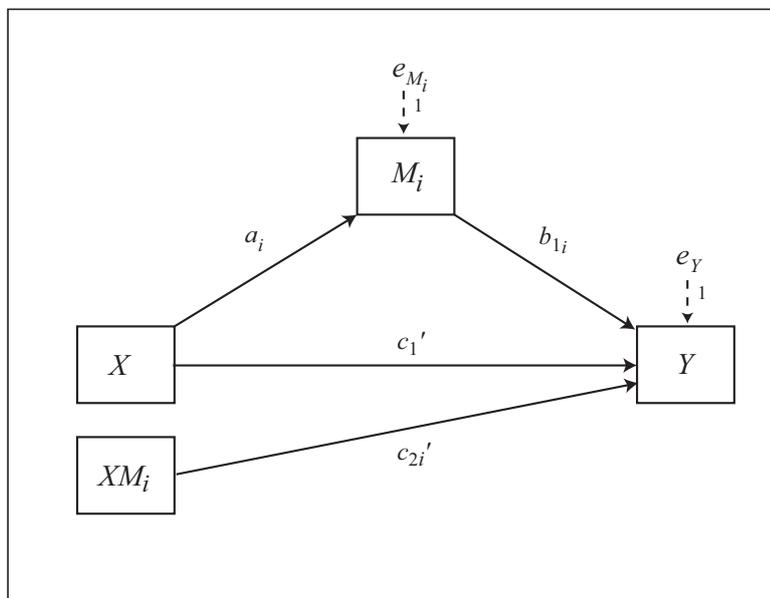
\*Model 73 allows up to 10 mediators operating in parallel

### Model 74

Conceptual Diagram



Statistical Diagram



Conditional indirect effect of X on Y through  $M_i = a_i (b_{1i} + c_{2i}'X)$

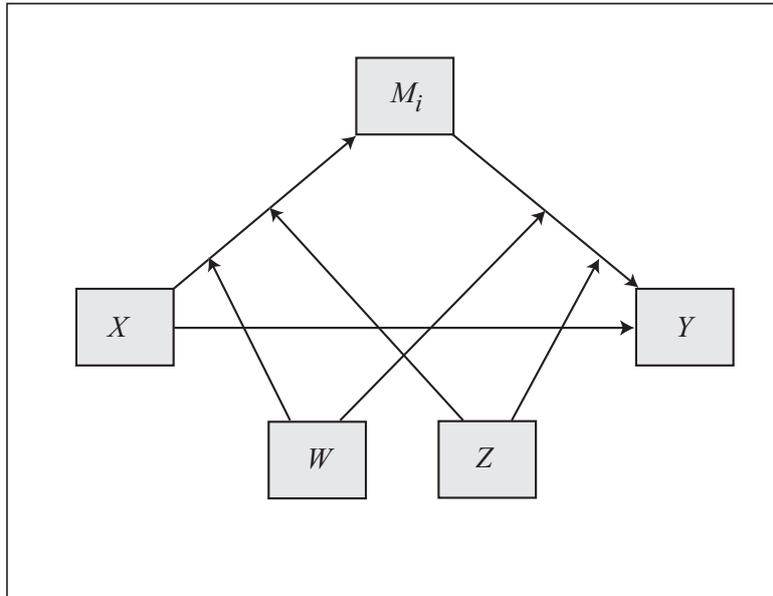
Conditional direct effect of X =  $c_1' + c_{2i}'M_i$

Note: Model 74 allows up to 10 mediators operating in parallel. PROCESS does not produce a table of conditional direct effects for model 74. With only one mediator, use model 1 to generate the conditional direct effects, specifying  $M$  as *moderator*. Effective version 2.10, when  $X$  is dichotomous, PROCESS produces only a single indirect effect of  $X$  on  $Y$  through  $M_i$  in model 74 using the formula above, setting  $X$  to its smallest value in the data.

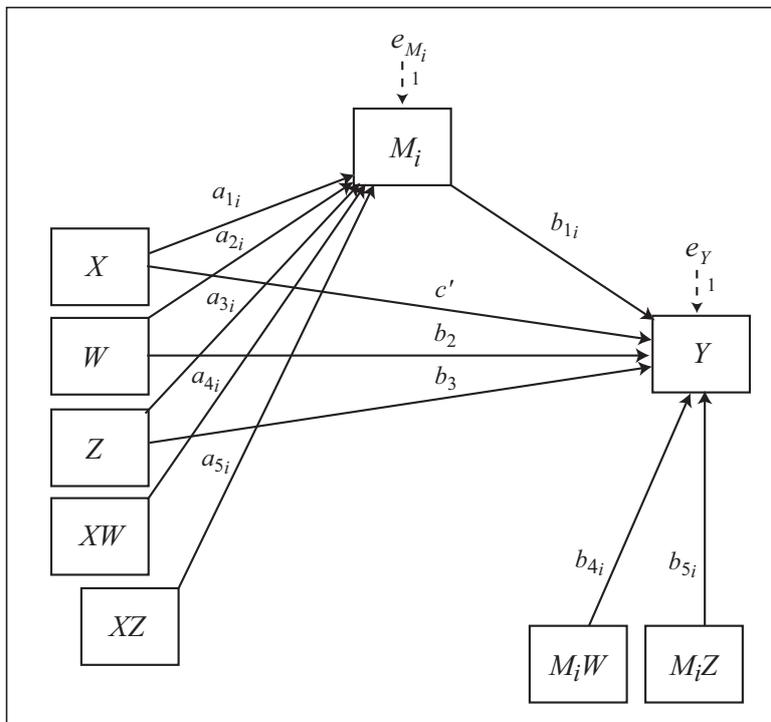
**Model 75**

(PROCESS v2.10 or later)

Conceptual Diagram



Statistical Diagram



Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{4i}W + a_{5i}Z)(b_{1i} + b_{4i}W + b_{5i}Z)$

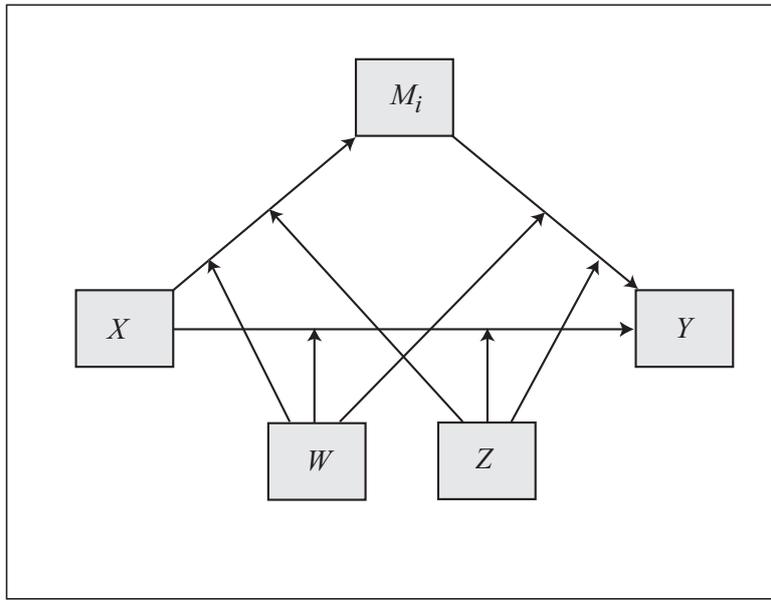
Direct effect of  $X$  on  $Y = c'$

\*Model 75 allows up to 10 mediators operating in parallel

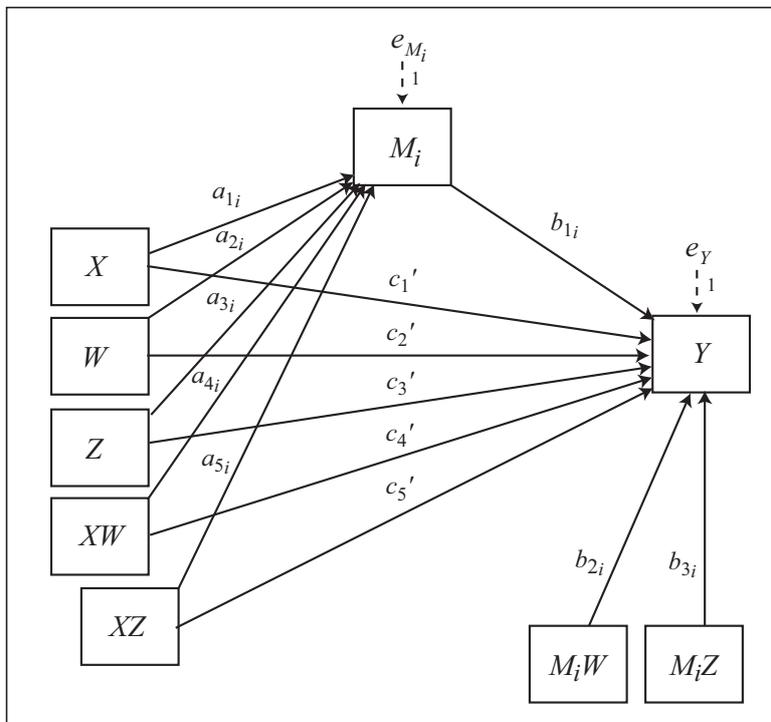
**Model 76**

(PROCESS v2.10 or later)

Conceptual Diagram



Statistical Diagram



Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{4i}W + a_{5i}Z)(b_{1i} + b_{2i}W + b_{3i}Z)$

Conditional direct effect of  $X$  on  $Y = c_1' + c_4'W + c_5'Z$

\*Model 76 allows up to 10 mediators operating in parallel