

Chiasmus Program Information
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The objective of this program is to evaluate the likelihood that chiastic structure could have appeared by chance, and is based on the article "Does Chiasmus Appear in the Book of Mormon by Chance?" by Boyd F. Edwards and W. Farrell Edwards, *BYU Studies* **43**, 103-130 (2004), <http://byustudies.byu.edu/chiasmus>. The program, which is free for noncommercial use, performs Monte Carlo calculations of L for complex chiasms, exact calculations of L for simple chiasms, and calculations of P . The program has versions for both the PC and the Macintosh.

Printing on PC: Program results may be printed by clicking on the Mark button (leftmost on the toolbar), selecting the desired text with the mouse, clicking on the Copy button (next to the Mark button), pasting the text into a word processor, and printing from that word processor.

Printing on the Macintosh: Program results may be printed by selecting the desired text with the mouse, selecting Copy from the Edit menu, pasting the text into a word processor, and printing from that word processor. The Print option in the File menu of the program may not work.

General Instructions: The following program output demonstrates how to use the program to reproduce some of the results in the article. Text that is immediately to the right of a colon is typed in by the person using the program, and must be followed by a carriage return. All other text is generated by the program. The "Chiasm:" prompt is for user reference only; the program requires at least one character to be entered in response, but otherwise ignores the characters entered. In the following, the characters entered at the Chiasm prompt correspond to the numbers of examples in the paper. When analyzing complex chiasms, it is wise to run the program for large numbers r of random rearrangements only after estimating the time required, by running the program for a relatively small number of random rearrangements, such as $r = 10000$. The value of r must be entered without commas. (That is, enter "10000", not "10,000".)

Program to calculate chiastic likelihood
This program is free for noncommercial use.
See readme file for instructions.
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```
Chiasm: 1
Number n of chiastic elements: 2
Number of appearances of each chiastic element: 2,2
Number m of nonchiastic elements: 0
This chiasm is simple. Calculate L exactly? (yes/no): y
Reordering likelihood L = .3333333333333333
Margin of error (+ or -) = .0000000000000000
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Calculate P? (yes/no): n
Perform another calculation? (yes/no): y

Chiasm: 2
Number n of chiastic elements: 7
Number of appearances of each chiastic element:
6,3,2,2,2,2,2
Number m of nonchiastic elements: 1
Number of appearances of each nonchiastic element: 2
Number r of rearrangements: 10000000
Number of duplicate levels (normally 0): 0
Calculating... Type command-. to quit.
|-----|-----|-----|-----|
xx
Reordering likelihood L = .0007834000000000
Margin of error (+ or -) = .0000088509886453
Calculate P? (yes/no): n
Perform another calculation? (yes/no): y

Chiasm: 3
Number n of chiastic elements: 5
Number of appearances of each chiastic element: 2,2,2,2,2
Number m of nonchiastic elements: 0
This chiasm is simple. Calculate L exactly? (yes/no): y
Reordering likelihood L = .0010582010582011
Margin of error (+ or -) = .0000000000000000
Calculate P? (yes/no): y
Number N of chiastic opportunities: 686
Number M of these that are chiastic: 1
Chiastic likelihood P = .5163096186372250
Margin of error (+ or -) = .0000000000000000
Perform another calculation? (yes/no): y

Chiasm: 4
Number n of chiastic elements: 9
Number of appearances of each chiastic element:
6,8,6,3,5,7,9,3,5
Number m of nonchiastic elements: 2
Number of appearances of each nonchiastic element: 2,3
Number r of rearrangements: 10000
Number of duplicate levels (normally 0): 0
Calculating... Type command-. to quit.
|-----|-----|-----|-----|
xx
Reordering likelihood L = .6586000000000000
Margin of error (+ or -) = .0081154174261094
Calculate P? (yes/no): y
Number N of chiastic opportunities: 1

Number M of these that are chiastic: 1
Chiastic likelihood P = .6586000000000000
Margin of error (+ or -) = .0081154174261094
Perform another calculation? (yes/no): y

Chiasm: 5
Number n of chiastic elements: 2
Number of appearances of each chiastic element: 2,2
Number m of nonchiastic elements: 0
This chiasm is simple. Calculate L exactly? (yes/no): y
Reordering likelihood L = .3333333333333333
Margin of error (+ or -) = .0000000000000000
Calculate P? (yes/no): y
Number N of chiastic opportunities: 3
Number M of these that are chiastic: 1
Chiastic likelihood P = .7037037037037040
Margin of error (+ or -) = .0000000000000000
Perform another calculation? (yes/no): y

Chiasm: 6
Number n of chiastic elements: 2
Number of appearances of each chiastic element: 4,2
Number m of nonchiastic elements: 0
Number r of rearrangements: 10000
Number of duplicate levels (normally 0): 1
Calculating... Type command-. to quit.
|-----|-----|-----|-----|
xx
Reordering likelihood L = .2012000000000000
Margin of error (+ or -) = .0044855322984012
Calculate P? (yes/no): n
Perform another calculation? (yes/no): y

Chiasm: 10
Number n of chiastic elements: 7
Number of appearances of each chiastic element:
2,2,2,2,2,2,2
Number m of nonchiastic elements: 0
This chiasm is simple. Calculate L exactly? (yes/no): y
Reordering likelihood L = .0000074000074000
Margin of error (+ or -) = .0000000000000000
Calculate P? (yes/no): y
Number N of chiastic opportunities: 342
Number M of these that are chiastic: 1
Chiastic likelihood P = .0025276120903325
Margin of error (+ or -) = .0000000000000000
Perform another calculation? (yes/no): y

Chiasm: 11
Number n of chiastic elements: 8
Number of appearances of each chiastic element:
2,2,2,2,2,2,2,2
Number m of nonchiastic elements: 0
This chiasm is simple. Calculate L exactly? (yes/no): y
Reordering likelihood L = .0000004933338267
Margin of error (+ or -) = .0000000000000000
Calculate P? (yes/no): y
Number N of chiastic opportunities: 359
Number M of these that are chiastic: 1
Chiastic likelihood P = .0001770912049656
Margin of error (+ or -) = .0000000000000000
Perform another calculation? (yes/no): y

Chiasm: 2,8,9,11
Number n of chiastic elements: 5
Number of appearances of each chiastic element: 2,2,2,2,2
Number m of nonchiastic elements: 0
This chiasm is simple. Calculate L exactly? (yes/no): y
Reordering likelihood L = .0010582010582011
Margin of error (+ or -) = .0000000000000000
Calculate P? (yes/no): y
Number N of chiastic opportunities: 956
Number M of these that are chiastic: 4
Chiastic likelihood P = .0196441564955649
Margin of error (+ or -) = .0000000000000000
Perform another calculation? (yes/no): n
Copy results and press return to quit.