

**The Little Logic Book**  
**Hardy, Ratzsch, Konyndyk De Young and Mellema**  
**The Calvin College Press, 2013**

*Exercises for The Little Logic Book may be downloaded by the instructor as Word documents and then modified for distribution to students; or students may be instructed to download the exercises and then told which ones to answer. This is an exercise bank; it is not assumed that students will do all the exercises for any one chapter. Comments, questions or suggestions for Chapter Five of The Little Logic Book can be sent to [logic@calvin.edu](mailto:logic@calvin.edu)*

**Exercise Bank for Chapter Five:**  
**Counterfactuals**  
**(Posted January, 2014)**

**1.0 Basic Concepts**

Define or identify the following:

- 1.1 Counterfactual conditional
- 1.2 Subjunctive conditional
- 1.3 Possible world semantics
- 1.4 Indicative conditional
- 1.5 Pragmatic ambiguity
- 1.6 Centering assumption
- 1.7 Strengthening

**2.0 Symbols**

Identify the symbol for

- 2.1 Counterfactual conditional

**3.0 Counterfactual Basics**

Indicate whether the following statements are true or false. Explain your answers.

- 3.1 All the basic deductive inferences such as MP, MT, HS, etc. are valid for counterfactual conditionals.
- 3.2 Any counterfactual with a true antecedent and a false consequent is false.
- 3.3 Any counterfactual with a true antecedent and a true consequent is true.
- 3.4 Any counterfactual with a false antecedent and a true consequent is true.
- 3.5 Any counterfactual with a false antecedent and a false consequent is false

**4.0 Counterfactuals and Possible Worlds**

- 4.1 Briefly describe Stalnaker's theory.
- 4.2 Briefly explain counterfactual negation.

4.3 Explain in terms of possible worlds why the counterfactual hypothetical syllogism is a valid argument form.

4.4 Explain in terms of possible worlds why the mixed modal hypothetical syllogism is valid.

## **5.0 Counterfactual Invalidity**

5.1 Consider this counterfactual inference:

If Hillary Clinton were to run for president, I would join the Tea Party.

Therefore, if I were not to join the Tea Party, Hillary Clinton would not run for president.

Name this inference form. Explain why this form is valid for material conditionals, but not for counterfactual conditionals.

5.2 Consider this counterfactual inference:

If automatic weapons were made legal, I would buy one tomorrow.

Therefore, if automatic weapons were made legal and no automatic weapons were for sale for the next 10 days, I would buy one tomorrow.

Name this inference form. Explain why this form is valid for material conditionals, but not for counterfactual conditionals.