Introduction to Logical Reasoning
Workshop on Statement Classification

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Part I, Problem 1 Solution

The computer scientists love logic.

Simple positive.

Part I, Problem 2 Solution

Either the journalism or the business students love logic.

**Compound disjunctive ("either . . . or . . .").
Both disjuncts are simple positive.**

The journalism students do not write boring articles.

Simple negative ("not").

If the journalism students love logic, then the business students are confused.

Compound hypothetical ("if … then …"). Both the antecedent and the consequent are simple positive.

The computer scientists do not like illogical things and the journalism students love to expose illogical thinking in governmental officials.

Compound conjunctive ("and").
The first conjunct is simple negative ("not"), while the second conjunct is simple positive.

If journalists do not understand logic, then their articles will not be enjoyable to read.

**Compound hypothetical ("if . . . then . . .").
Both the antecedent and the consequent
are simple negative ("not" is in both).**

The journalism students will confuse the business students, unless the business students are clever.

Compound disjunctive ("unless").
Both disjuncts are simple positive.

Recall that "unless" usually indicates disjunction. Also in this statement, the claim is simply that at least <u>one</u> of these is true (so it is possible that both disjuncts could be true).

Part 2, Problem 2 Solution

If both the journalism and the business students sleep through logic, then the professor will not talk quietly.

It is compound hypothetical ("if … then …").

Its antecedent is compound conjunctive ("both … and …"), where both conjuncts are simple positive.

Its consequent is simple negative ("not").

Part 2, Problem 3 Solution

If either the journalism students work for Al Jazeera or the communication students win Academy Awards, then the business students will transfer to Northwestern while the computer scientists will be jealous.

It is compound hypothetical ("if … then …").

Its antecedent is compound disjunctive ("either … or …"), where both disjuncts are simple positive.

Its consequent is compound conjunctive ("while"), where both conjuncts are simple positive. "While" indicates conjunction as it asserts something about <u>both</u> business <u>and</u> CS students.

Part 2, Problem 4 Solution

The computer scientists loving logic causes the journalists to become curious about computers.

Compound hypothetical ("causes").
Both the antecedent and the consequent
are simple positive.

Talking about "causes" does involve a hypothetical claim. In other words, <u>if</u> the CS students love logic, <u>then</u> the journalists are curious about computers.

Part 2, Problem 5 Solution

Study logic every night and you will get a good grade in the class.

Compound hypothetical ("and").
Both the antecedent and the consequent are simple positive.

Did this one fool you?

In rare cases, "and" can denote a hypothetical. Here the only way to prove this statement wrong is to make the antecedent true (by studying every night) and then showing the consequent is false (you don't get a good grade).

Next Class…

We will finally start to look at arguments by learning about the "glue" that binds statements together in an argument: inferences!