

3.2.1. Conditional Translation Problems

A. Simple Conditionals

1. If Doctor Slim runs for mayor then so will Barbie.
2. Jack will get arrested if he climbs the Cathedral of Learning.
3. Trixie's buying a hot tub only if she wins the poker tournament.
4. Provided that Letitia passes the quiz, she'll get an A in Business Logic.
5. Assuming her schedule is free, Barbie will go mountain climbing in Tibet.
6. Rex will give a quiz only if he's finished reviewing formal translation.
7. Trixie will stay in Las Vegas provided Elvis does too.
8. Only if the movie has vampires will Lucretia give it four stars.

B. Conditionals with Other Form Phrases

1. If we have bread and tuna then we can make a sandwich.
2. Augustine understands the nature of time only if he's not asked about it.
3. It's not the case that if Neko exercises then she won't win the race.
4. If it's not the case that Neko exercises, then she won't win the race.
- 5a. Kitty will win only if she has a 7 Bam – unless she draws a joker
- 5b. Unless Kitty draws a joker, she'll win only if she has a 7 Bam.

- 6a. Assuming her patent is approved, Neko will sell her new mousetrap design and make a million dollars.
- 6b. Neko will sell her new mousetrap design and make a million dollars, assuming her patent is approved.
7. Dr. Slim will turn away the client only if he either suspects police involvement or he's received a better offer.
8. Suki doesn't like missing a free meal, but she won't come out with us if Neko's coming with us.
9. If either Barbie or Letitia fail the final exam, the sorority will be put on probation and the formal dance will be cancelled.
- 10a. If Jezebel's free Jake will go to Blazing Cat; but if she isn't free he'll go to Logicpalooza.
- 10b. If Jezebel's free Jake will go to Blazing Cat; otherwise he'll go to Logicpalooza.
11. If the weather is good, Jack will surf The Mavericks; otherwise he'll go barrel hunting in Oahu.
12. Suki's ticket is valid if it has the seal of the lottery bureau; otherwise it's not.
13. Rex will stop for sushi and go to the séance if he leaves work early, and he'll go to the séance without stopping for sushi otherwise.

C. Conditionals within Conditionals: "If... then"

1. If we have bread, then if we have tuna we can make a sandwich.

(Use the same translation key as in B1. Does C1 mean the same as B1?)

- 2a. If Kitty doesn't draw a joker, then she'll win only if she has a 7 Bam.
- 2b. If Kitty doesn't draw a joker but (still) wins, then she has a 7 Bam.

3. If there's a conditional-within-a-conditional on Problem C3, then you'll get the answer right only if you've practiced translation.
4. If Lucretia can go clubbing if she bought Black Dye No. 1, then she bought Black Dye No. 1.
5. If Suki will pass Logic only if she passes the final exam, then she should study for the final exam.
6. If the police won't suspect Deacon assuming he leaves no fingerprints, then he'll be charged only if Tangelo confesses.
7. If Trixie marries Elvis, then he'll stay in Las Vegas provided he gets a casino job.
8. If Letitia passed the course provided that she passed the final, then she didn't pass the course only if she didn't pass the final.

D. More Conditionals within Conditionals

1. If we have tuna we can make a sandwich, provided we have bread.

(Use the same translation key as in C1. Does D1 translate the same as C1? Does D1 mean the same as C1?)

- 2a. The fuse will blow if Jack runs the coffee maker, assuming Neko's using the arc welder.
- 2b. If Neko's using the arc welder and Jack runs the coffee maker, the fuse will blow.
3. Provided that the fuel gauge was on empty, Rex made it home from the luau only if he stopped for gas.
4. Only if there's a complaint about noise will the sorority be put on probation, provided that Barbie and Letitia both pass Business Logic.
5. Dr. Slim will be held for questioning if he's stopped by police; otherwise he and Kitty will both go to Reno if the weather is good.

6. Assuming Neko will eat all the sushi if she can, Jack will have dinner only if we buy extra food.

7. Suki can open a new spa only if she paid her bills on time, assuming that the bank won't approve the loan if her credit score is bad.

8. Assuming hyperbolic geometry is inconsistent only if Euclidean geometry is, if Euclidean geometry is consistent then so is hyperbolic geometry.

9. If Trixie marries Elvis, then he'll stay in Vegas assuming he gets a casino job; but if she doesn't marry Elvis then it's not the case that he'll get a casino job only if he stays in Vegas.

E. Conditional Argument Patterns

- (A1) 1. We’ll have mochi **if** Suki gets an A
 2. We’ll have mochi **if** Suki doesn’t get an A

∴ We’ll have mochi

- (A2) 1. We’ll have mochi **only if** Suki gets an A
 2. We’ll have mochi **only if** Suki doesn’t get an A

∴ We **won’t** have mochi

- (B1) 1. We’ll have mochi **if** Suki gets an A
 2. We’ll have mochi **if** Suki doesn’t get an A

∴ We’ll have mochi **if** Suki **either** gets an A **or** doesn’t

- (B2) 1. We’ll have mochi **only if** Suki gets an A
 2. We’ll have mochi **only if** Suki doesn’t get an A

∴ We’ll have mochi **only if** Suki **both** gets an A **and** doesn’t

(Do these arguments seem valid? What does this show about the translation of “if” compared to the translation of “only if”?)