Philosophy 4310 — Assignment #4

This assignment is to be turned in at the beginning of class on Tuesday, April 11th.

Part I:
Take "A>C" to symbolize the subjunctive conditional "If it were the case that A, it would be the case that C". Bennett (and Stalnaker and Lewis) takes each of the inferences 1-5 below to be invalid. For each of 1-5 do three things: a) give examples sentences for A, B, and C which you think clearly make the premises and conclusion true. b) give examples sentences for A, B, and C which you think clearly make the premises true but the conclusion false. c) using w1, w2, and w3 for the names of worlds where we assume that w2 is more similar (closer) to w1 than w3 is to w1 (and assuming there are no other worlds), give a formal model where the premises are true at w1 but the conclusion is false at w1 (thus showing that the inference is invalid in Lewis's counterfactual semantics). Doing this means for each of w1, w2, w3 say whether A, B, C are true or false at that world.

1. ~A therefore A > C [paradox of material implication 1]
2. C therefore A > C [paradox of material implication 2]
   – note that if either 1 or 2 is invalid, then 'Or-to-if' is invalid
3. A > C therefore ~C > ~A [contraposition]
4. A > B, B > C therefore A > C [transitivity]
5. A > C therefore (A&B) > C [antecedent strengthening]

Part II:
Using Lewis's semantics for subjunctive conditionals, explain why each of the following inferences is valid. An explanation is an argument in English/Logic of the kind that Lewis or Bennett would give.

6. (A ∨ B) > C therefore (A > C) ∨ (B > C)
7. A > (B ∨ C), A > ~B therefore A > C
8. A > B, A > C therefore A > (B&C)
9. (A&B) > C, A > ~C therefore A > ~B
10. A > B, B > A therefore (A > C) ≡ (B > C) [the '≡' is the material biconditional]

Part III:
One key difference between Lewis's and Stalnaker's semantics is that Stalnaker assumes that there is a unique 'closest' A-world (if there is one at all). For many inferences, this does not make a difference. But it does for these two cases below. For each inference, explain whether they are valid or not on the Lewis/Stalnaker semantics and then give an argument that the inference is either *really* valid or *really* invalid (an example would probably be a good way to do this).

11. A > (B ∨ C), ~(A > B) therefore A > C
12. ∀x ~(A > Fx) therefore A > ∀x~Fx