

**Extra Credit Assignment**

In class, I noted that we often use modal vocabulary – “possible”, “necessary”, *etc.* – to express our current state of evidence or knowledge. For instance, we sometimes use

- (1) Cigarettes may cause cancer.

to express the fact that

- (2) I have some reason for thinking that cigarettes **DO** cause cancer.

Similarly, we might say

- (3) That must be the pizza delivery person knocking.

to express the fact that

- (4) I have good reason for thinking that that **IS** the pizza delivery person knocking.

I also argued that “it is contingent that  $\phi$ ” cannot be given such an epistemic reading. That is, it cannot be read as shorthand for some description of the state of our knowledge or evidence. For instance,

- (5) It is contingent that Bush won the 2000 electoral vote

is equivalent to

- (6) Bush won the 2000 electoral vote, but he might not have.

If you try to give (6) an epistemic reading, you end up with something paradoxical:

- (7) Bush won the 2000 electoral vote, but I have good reason for thinking that he did not.

So (6), and its equivalent (5) cannot be given the usual epistemic reading.

I will give anyone who succeeds at all of the following tasks a half-grade bonus on her midterm. **Give an equivalent for each of the following modal forms using only “it is contingent that”, “not”, “and”, and “or”:**

1. It is necessary that  $\phi$ ;
2. It is possible that  $\phi$ ; and
3. It is impossible that  $\phi$ .

The assignment is due in class on **Wednesday, 24 September 2008**.

Here is an example of the sort of thing I am after. You can give an equivalent for “It is necessary that  $\phi$ ” using only possibility and negation:

**(EX)** It is necessary that  $\phi$  iff it is **NOT** possible that **NOT**  $\phi$

(*i.e.*, the necessity of some claim is equivalent to the impossibility of its negation).

If you succeed, then you will have shown that, in principle, we can give an equivalent for any necessity, possibility, or impossibility claim which is not susceptible of an epistemic interpretation.