Philosophy 148 — Assignment #4

04/03/08

This assignment is due Thursday, April 17 at 3pm. If you work in a group, list your group members at the top of your submitted work.

Hempel's *Desiderata* for the Confirmation Relation

A confirmation relation is defined over ordered pairs of members of a (non-empty) Boolean algebra $\mathcal{B}$ of propositions. Consider the following seven conditions that might be met by a confirmation relation:

Equivalence Condition (EQC) If E confirms H and $H \dashv\vDash H'$, then E confirms H'.

Entailment Condition (EC) If $E \vDash H$, then E confirms H.

Special Consequence Condition (SCC) If E confirms H, and $H \vDash H'$, then E confirms H'.

Converse Consequence Condition (CCC) If E confirms H, and $H' \vDash H$, then E confirms H'.

Consistency Condition (CC) If E confirms H, and E confirms H', then H and H' are consistent.

Non-Triviality Condition 1 (NTC1) For all H, there exists an E such that E does not confirm H.

Non-Triviality Condition 2 (NTC2) There exists an H and an E such that E confirms H.

You are to answer the following four questions concerning these 7 conditions.

1. Show that if a confirmation relation satisfies EC, then it violates NTC1.
2. Show that if a confirmation relation satisfies EC, then it violates CC.
3. Show that if a confirmation relation satisfies CCC and CC, then it violates NTC2. (*Hint:* In each of (1)–(3), consider tautological or contradictory evidence, tautological or contradictory hypotheses, or both. Remember that anything entails a tautology, that anything is entailed by a contradiction, and that two propositions are consistent iff there is a possible world in which both are true.)
4. Show that (4.1) even if we restrict these conditions to *contingent* E's and H's, no confirmation relation can satisfy all 7 conditions, but (4.2) if we restrict these seven principles to *contingent* E's and H's, then 6/7 of them can be satisfied by some confirmation relation. For this, you'll need to describe a confirmation relation – defined over ordered pairs of *contingent* propositions drawn from some Boolean algebra $\mathcal{B}$ – that satisfies six out of the seven conditions.

   Hint: For (4.2), try the following definition of confirmation: E confirms H (where E and H are contingent) iff E and H are both true. This does not quite work (why?), but it comes close. How close?