Phil. 250z: Metaphysical Grounding
Feb. 13, 2013

Follow-Up Notes on Meeting 2

Several conversations with people after last week's meeting led to new counterexamples to Rosen's proposals about the principles governing grounding:

- *strong non-monotonicity*: For any facts [p] and [q] and any set of facts Γ such that [q] $\notin \Gamma$, if [p] $\leftarrow \Gamma$, then not: [p] $\leftarrow$ [q], Γ.

  Tom Donaldson's counterexample: If it is true that p and that q, then we have:

  $$[p \vee (p \,\&\, q)] \leftarrow [p]$$

  $$[p \vee (p \,\&\, q)] \leftarrow [p], [q]$$

  The first of these follows from Rosen's ($\vee$), and the second follows from (&) together with transitivity.

- ($\vee$+): If it is true that $p \vee q$, then either [$p \vee q$] $\leftarrow$ [p] or [$p \vee q$] $\leftarrow$ [q].

  Said Sallant's counterexample: If the future is (metaphysically) open, then if we let

  $<p>$ = <There will be a sea battle tomorrow>,

  the following can all be the case:

  $<p \vee \neg p>$ is true;

  $<[p \vee \neg p] \leftarrow [p]>$ is false (since $<p>$ is not true); and

  $<[p \vee \neg p] \leftarrow [\neg p]>$ is false (since $<\neg p>$ is not true).

- ($\exists$): If it is true that $\varphi(a)$, then [$(\exists x)\varphi(x)$] $\leftarrow$ [$\varphi(a)$]

  a counterexample inspired by a conversation with Sharon Berry: Suppose for reductio that ($\exists$) holds. Now let

  [p] = [Something is true].

  By ($\exists$), we have:

  [Something is true] $\leftarrow$ [$<p>$ is true].

  It is also extremely plausible to hold:

  [$<p>$ is true] $\leftarrow$ [p].

  So, by transitivity, we have:

  [p] $\leftarrow$ [p].

  But this contradicts strong irreflexivity. (Indeed, it contradicts weak irreflexivity.)