John Carroll- Three Counterexamples to the Humean Tradition

The Big Prize

Complete S1 in a non-circular way, and without a nomic sentence (186-7). Nomic sentences are causal sentences.

(S1) It is a law that all Fs are Gs if and only if…

Humean Supervenience

First stab-Naive Regularity Account

> It is a law that all Fs are Gs if and only if (i) all Fs are Gs, and (ii) the generalization that all Fs are Gs is lawlike; that is, (a) it is not necessary that all Fs are Gs, and (b) the generalization is unrestricted (it involves only non-local, empirical predicates apart from logical connectives and quantifiers.)(190)

Troubles:
-Vacuously True Generalizations (191)
    -"All unicorns weigh ninety pounds"
-Troublesome Predicates (192)
    -"All unicorns or ravens are black"
    -"All emeralds are grue"
-Puzzle (192)
    -"All gold spheres are less than ten feet in diameter"

Second Stab 1- Epistemological Approach
-Goodman and Skyrms
-Laws are the generalizations we want to hold and confirmed by induction (196)
-Problems with objectivity

Second Stab 2- Systematic Approach (Systems)
-MRL
-Laws are the generalizations that fit into the strongest, most simple system (197)
-Problems with probability

Counter-examples

1. From Tooly

-U_1-"no particles of type X are subject to fields of type Y though the generalization, L_1, that all X-particles subject to Y-fields have *spin up*." And L_2 all X-particles subject to Y-fields have *spin down* (202, 212-3).
    -First, is L_1 a law for the Humean if there are no instances? (202-3)
    -Second, if L_1 is true of U_1 and L_2 of U_2, what is the difference for the Humean between the two universes? (213-4)

2. Probability

-U_3 8/9 X-particles have spun up. (214-5)
    -Small enough number that the law could be any probability (8/9, 8/10, 9/10)
    -The law could be 9/10 in one universe and 8/10 in the other.
    -Like U1 and U2, U3 and U4 need not have nominalistic differences.
-Laws are not vacuous as they were in counterexample 1

3. Laws without Instances

-Two Universes: U_5 and U_6 (215-7)
    -At 't_0' W-particles are introduced into the universes, in U_5 they spin up, in U_6 they spin down.
    -These "spins" are laws in each Universe respectively.
    -All particles in either universe may appear and disappear in an instant.
-U_{5*} and U_{6*} are two new universes that have all the same laws as U_5 and U_6 except at time 't_0' all particles disappeared.
    -Because U_{5*} and U_{6*} are analogous with U_5 and U_6 they carry all the laws of those universes.
    -The spin laws of each exist before and after 't_0'
    -Because they exit in U_{5*} and U_{6*} after there are no particles, it is clear that they are not dependant on the particles for existence.
-These "empty" universes still exist and have different laws from one another.

Others:

-There are many empty possible worlds in which there are many different sets of laws (Newtonian to Aristotelian).
-There are non-nomical worlds
-Worlds with no laws at all

Conclusion

-All reductive accounts of laws fail
-Accepts *Irreducibility Thesis* – All reductive laws fail
-Rejects *Supervenience Thesis*- "two possible worlds which agree on *all* non-nomic facts must agree on which laws hold"