VAN INWAGEN'S ARGUMENT FOR INCOMPATIBILISM

Some definitions:

propositions: meanings of sentences; carry information

- **conjunction:** the conjunction of propositions **p** and **q** is the proposition that both **p** and **q** are true
- entailment: p entails q iff in every possible world in which p is true, q is true as well
- world state at t: a proposition about the entire universe at t that is i) exhaustive with respect to t, and ii) exclusive with respect to t
- **laws of nature:** the *true* laws governing the world (e.g., Newton's laws, if Newton had been right)

DETERMINISM (van Inwagen's definition): the conjunction of the laws of nature and the world state at any time entails the world state at any other time

Some abbreviations:

J:	someone who chose not to raise his hand at time T	P: the world-state at T
L:	the conjunction of all the laws of nature	$\mathbf{T}_0:$ a time before J's birth
NRH:	the proposition that J did not raise his hand at T	P_0 : the world-state at T_0

The argument:

- (1) If Determinism is true, then the conjunction of P_0 and L entails P
- (2) P entails NRH
- (3) If (2) is true, then if J could have raised his hand at T, J could have rendered P false
- (4) If J could have rendered P false, and if the conjunction of P_0 and L entails P, then J could have rendered the conjunction of P_0 and L false
- (5) If J could have rendered the conjunction of P_0 and L false, then J could have rendered L false
- (6) J could not have rendered L false
- (7) Therefore, If Determinism is true, J could not have raised his hand at T

Van Inwagen's principle: If S can render R false, and Q entails R, then S can render Q false.