AQUINAS'S COSMOLOGICAL ARGUMENT

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April 6, 2007

Argument

Premise 1: some things move

(∃x) M(x)

Premise 2: anything that moves does so because of something else

(∀x) (M(x) → ((∃y) (O(x,y) & P(y,x))))

Therefore, if whatever moves something itself moves, it must be moved by a third thing

(∀x) ((∀y) ((P(x,y) & M(x) & O(x,y)) → ((∃z) (P(z,x) & O(z,x) & O(z,y)))))

Therefore, if there were an infinite sequence of movers, there would be no first movers, and hence no movers at all

I → (¬(∃x) U(x) & ¬(∃y)(∃z) (P(y,z)))

Therefore, there cannot be an infinite sequence of movers

¬I

Conclusion: there is a first, unmoved mover

(∃x) U(x)

Interpretation

Domain: the universe and everything in it

Syntactic Item	***Interpretation***
I	there is an infinite sequence of movers
M(*u*)	*u* moves
U(*u*)	*u* is an unmoved mover
O(*u*,*v*)	*u* is a distinct object from *v* (i.e., *u* does not equal *v*)
P(*u*,*v*)	*u* pushes *v* (i.e., *u* is the mover of *v*)

(∀u) (U(u) → ((∃v) P(u,v) & ¬(∃w) P(w,u) & ¬M(u)))

Hidden Premise

I v (∃x) U(x)

Defining the "Unmoved Mover"

-*nothing pushes it and not moving*: U(*u*) is defined as it is above (i.e., in the strong sense of the term "unmoved mover")

-*nothing pushes it and moving*: U(*u*) defined by (∀u) (U(u) → ((∃v) P(u,v) & ¬(∃w) P(w,u) & M(u))); this is the weak sense of the term; this definition makes the conclusion contradict the second premise (i.e., line two)