

# Doubting Dr. Dino

## Kent Hovind's \$250,000 Challenge Met

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While most readers of *Skeptic* magazine are undoubtedly familiar with James Randi's \$1,000,000 *Paranormal Challenge* (<http://randi.org/research/index.html>), some may not be acquainted with Kent Hovind's \$250,000 *Offer* (<http://www.drdino.com/articles.php?spec=67&kws=250,000>) for proof of the evolutionary hypothesis. Dr. Hovind, who is known as “Dr. Dino” among his most ardent supporters, is a vociferous campaigner for Young Earth Creationism. He asserts that his \$250,000 *Offer* demonstrates that the evolutionary hypothesis is religious rather than scientific in nature.

Proponents of evolution who wish to collect Dr. Dino's \$250,000 must be prepared to prove evolution—in the broadest sense of the word—beyond any reasonable doubt. Dr. Hovind requires the proof to be empirically verifiable, and he promises to forward submissions to an impartial committee of scientists for review. Skeptics argue that Dr. Hovind defines evolution so broadly that only a second Big Bang would fully satisfy his conditions, and they suspect that his committee of scientists is comprised of Young Earth Creationists like himself.

Many claimants to the award have disqualified themselves by undertaking to prove the evolutionary hypothesis on their own terms. By contrast, I have attempted to construct a proof of the evolutionary hypothesis that *exactly* meets Dr. Hovind's conditions. I reproduce the same as succinctly as possible below.

### **Proof of Hovind's Third Hypothesis**

In his challenge guidelines, Hovind presents this problem:

*Prove beyond reasonable doubt that the process of evolution (option 3 ... under "known options") is the only possible way the observed phenomena could have come into existence.*

Hovind also provides these options as possible explanations for the Universe:

*Option 1: The Universe was created by God.*

*Option 2: The Universe always existed.*

*Option 3: The Universe came into being by itself by purely natural processes (known as evolution) so that no appeal to the supernatural is needed.*

We formalize these options by phrasing them in more rigorous terms:

*Hypothesis 1:* God is the unique necessary cause of the Universe.

*Hypothesis 2:* Nothing is the unique necessary cause of the Universe.

*Hypothesis 3:* The Universe itself is its own unique necessary cause.

We then simplify our hypotheses by expressing them symbolically:

*Hypothesis 1:*  $\sim G \Rightarrow \sim U$

*Hypothesis 2:*  $\sim \emptyset \Rightarrow \sim U$

*Hypothesis 3:*  $\sim U \Rightarrow \sim U$

Please review the Table of Definitions below for explanations of the symbols used in this proof.

### **Table of Definitions**

<b>G</b>	the set representing “God” or “purely supernatural reality”; it contains all existing sets that are neither U nor subsets of U
$\emptyset$	the set representing “nothing”; it has no existing subsets other than itself; all sets contain it as a subset
<b>U</b>	the set representing “the Universe” or “purely natural reality”; it contains all existing sets that are neither G nor subsets of G
<b>()</b>	the operators representing grouping of other symbols
<b>=</b>	the operator representing identity and called “equals”
<b>~</b>	the operator representing negation and called “not”
<b>∨</b>	the operator representing strict disjunction and called “exclusive or”

- $\Rightarrow$  the operator representing implication and called “therefore” or “if-then”
- $\subset$  the operator representing subset; it is logically equivalent to  $\Rightarrow$  insofar as all conditional propositions are directly translatable into universal categorical propositions; proper subsets are not equal to the sets that contain them; improper subsets are equal to the sets that contain them
- $\cap$  the operator representing intersection of sets; the intersection of disjointed sets is always  $\emptyset$ ; the intersection of any set and its subset is always that subset

The relationship between causation and logical implication is relatively uncomplicated; however, what we mean by “unique necessary cause” requires a brief explanation. If we say that X is the “cause” of Y ( $X \Rightarrow Y$ ), we do not mean that Y could not be apart from X. In other words, if we say that the grass is wet because it rained, we do not mean to suggest that rain is the only explanation for wet grass. X may be an *accidental* cause of Y rather than a *necessary* one.

We define a “necessary cause” of a thing to be that without which that thing is not. If X is a necessary cause of Y, then X is something without which Y is not ( $\sim X \Rightarrow \sim Y$ ). For example, photosynthesis does not occur without light, so we say that light is a necessary cause of photosynthesis. Of course, a “necessary cause” is not necessarily a “*unique* necessary cause.” Photosynthesis does not occur without light, but neither does it occur without CO<sub>2</sub>. In this sense, photosynthesis has at least two necessary causes.

We discern a unique necessary cause by disjoining all available necessary causes:  $(\sim X_1 \Rightarrow \sim Y) \vee (\sim X_2 \Rightarrow \sim Y) \vee (\sim X_3 \Rightarrow \sim Y) \dots$  *et sequens*. We then eliminate necessary causes until only the

unique necessary cause remains. Because we are seeking to identify the *unique* necessary cause of the Universe, we preclude the possibility of multiple causes *a priori*. Thus, our hypotheses are strictly disjoined:  $(\sim G \Rightarrow \sim U) \vee (\sim \emptyset \Rightarrow \sim U) \vee (\sim U \Rightarrow \sim U)$ . We now evaluate each hypothesis for logical consistency.

**First Hypothesis:**  $\sim G \Rightarrow \sim U$

(God is the unique necessary cause of the Universe.)

1.	$\sim G \Rightarrow \sim U$	Given
2.	$U \Rightarrow G$	<i>Modus Tollens</i>
3.	$U \subset G$	Definition of Subset
4.	$G \cap U = U$	Definition of Intersection
5.	$G \cap U = \emptyset$	Definition of Intersection
6.	$U = \emptyset$	Lines 4 and 5

If we begin with the assumption that God is the unique necessary cause of the Universe, we deduce by *modus tollens* that the existence of the Universe implies the existence of God. (*Modus tollens* is a well-established rule of inference that states that if  $X \Rightarrow Y$  then  $\sim Y \Rightarrow \sim X$ ; conversely, if  $\sim X \Rightarrow \sim Y$  then  $Y \Rightarrow X$ .) Equivalent set notation describes the Universe as a subset of God. Now, if the Universe is a subset of God, then the intersection of God and the Universe is the Universe itself; however, we know from the definition of intersection that the intersection of God and the Universe is exactly nothing. If we combine these propositions, we conclude that the Universe is equal to nothing, which is a contradiction. Therefore, our assumption that God is the unique necessary cause of the Universe must be *false*.

**Second Hypothesis:**  $\sim\emptyset \Rightarrow \sim U$

(Nothing is the unique necessary cause of the Universe.)

1.	$\sim\emptyset \Rightarrow \sim U$	Given
2.	$U \Rightarrow \emptyset$	<i>Modus Tollens</i>
3.	$U \subset \emptyset$	Definition of Subset
4.	only $\emptyset \subset \emptyset$	Definition of $\emptyset$
5.	$U = \emptyset$	Lines 3 and 4

Next, we begin with the assumption that nothing is the unique necessary cause of the Universe. We deduce by *modus tollens* that the existence of the Universe implies the existence of nothing. Equivalent set notation describes the Universe as a subset of nothing; however, we know from the definition of nothing that *only* nothing is a subset of nothing. If we combine *these* propositions, we conclude a second time that the Universe is equal to nothing, which *remains* a contradiction. Therefore, our assumption that nothing is the unique necessary cause of the Universe must also be *false*.

**Third Hypothesis:**  $\sim U \Rightarrow \sim U$

(The Universe itself is its own unique necessary cause.)

1.	$\sim U \Rightarrow \sim U$	Given
2.	$U \Rightarrow U$	<i>Modus Tollens</i>
3.	$U \subset U$	Definition of Subset
4.	$U = U$	Definition of Subset

Finally, we begin with the assumption that the Universe itself is its own unique necessary cause. We deduce by *modus tollens* that the existence of the Universe implies the existence of the Universe. Equivalent set notation describes the Universe as a subset of

itself. Since the Universe cannot be a proper subset of itself without contradiction, we determine that the Universe is an improper subset of itself, which means also that the Universe is equal to itself. Therefore, our assumption that the Universe itself is its own unique necessary cause is *true by definition*. Of course, we can do this in one step, but we choose to follow the same line of reasoning we use in the first two cases in order to avoid any appearance of having handled this hypothesis prejudicially.

Now, because Kent Hovind demands empirical proof, we also test our hypotheses against what we observe. We have demonstrated that our first and second hypotheses are reducible to the equation  $U = \emptyset$ , which describes a non-existing Universe. Since the existence of the Universe is self-evident, we can safely reject the first two hypotheses. Moreover, the third hypothesis is reducible to the equation  $U = U$ , which describes an *existing* Universe. This agrees with what we observe and is absolutely incontrovertible, for even if we deny the existence of the Universe, we ourselves must exist to deny it.

We conclude that the evolutionary hypothesis is the only one of our hypotheses that is both logically consistent and empirically demonstrable; and even if we initially believed it to be an improbable explanation, we have reduced both alternatives to absurdity. Q.E.D.

## **Conclusion**

I dispatched my proof to Dr. Dino shortly after committing it to paper. Many weeks later, I received a terse reply from Hovind in which he dogmatically rejected my proof. What was his justification? “The Universe is proof of a Designer—not proof that there is no Designer.” Hovind’s response suggests that he is unwilling or unable to produce legitimate objections. Nevertheless, the burden of proof now rests squarely on his shoulders.

I contend that either my proof is technically correct or Hovind’s *\$250,000 Offer* is fundamentally flawed. If my proof is correct, then Hovind is constrained by the terms of his offer to release the prize money. On the other hand, if Dr. Hovind’s *\$250,000 Offer* is flawed, then he is morally obligated to withdraw or modify it.

Because Hovind has neglected to forward my submission to the aforementioned committee of scientists for review, I appeal to the readers of *Skeptic* magazine to judge my case. Still, I am skeptical that Dr. Dino will change his mind. In fact, James Randi agrees that this would constitute indisputable evidence of the miraculous. So, in the unlikely event that Hovind *does* change his mind, I’ll be collecting Randi’s prize as well!

### **About the Author**

Adam Kisby is delightedly married and lives with his wife and four children in South Carolina. He received his undergraduate education at the University of Chicago and briefly attended Seminary before becoming dissatisfied with traditional theology. He is



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