Posted to the Gilder forum - September 28, 1999

Rand, zero, infinity and in between

Ken:

>>>Whereas, the concept of zero that refers to the absence of something would be metaphysical.

There cannot be a metaphysical zero.

Zero is a very difficult concept to grasp. The ancients, including the Romans, did not have zero. Zero was brought to our western civilization by the Arabs when they gave us their number system. The ancients and Ayn Rand start counting things with "one" and this is as should be as you cannot count zero items; at most you can say: "I don't see any." So, to them, "one" is the start of any series where you count units. When you start working with series and arrays in computer programming, you instinctively also use "one" as the starting point. Believe me, this leads to endless complications and bugs that disappear as soon as you realize that the first term of a series is "zero" and not "one." As you say, Rand refers to zero many times throughout her essay "Introduction to Objectivist Epistemology." I do not recall all the cases but as I was reading the text I became less and less satisfied with her handling of zero. Towards the end of the book, where she is answering questions (and I can't find the specific place) she says something to the effect: "Non-existence is nothing, is zero." This is a wrong use of zero. Zero can only exist as a mental construct representing the lack of units of existent things. Since you cannot count non-existents, you cannot have zero non-existents.

This argument squares well with Rand's principle of concept formation. I quote: "The basic principle of concept formation (which states that the omitted measurements must exist in some quantity, but may exist in any quantity)..." A non-existent has no measurements.

In any case, the important part of the argument I was presenting is not proper use of zero in our language. I was using it only to illustrate that, in my opinion, the Ayn Rand Institute had become a cult, that Ayn Rand's teachings are now supposed to be taken on faith. If she said it it must be right. Being an atheist, I cannot take Ayn Rand or anything else on faith alone.

>>>I'm not aware of any Web site that has Greenspan's essay on "Gold and Economic Freedom".

GOLD AND ECONOMIC FREEDOM BY ALAN GREENSPAN

Essays for Objectivism:

Essays against Objectivism:

I use Dogpile to help me find these things

http://www.dogpile.com/

Denny

PS: Ayn Rand says in her "Introduction to Objectivist Epistemology" that "infinity," taken metaphysically, is an invalid concept because the measurements omitted are all the measurements. Since then, mathematicians have identified 3 (I think) infinities of different sizes. They had to invent a new numbering system. The smallest infinity, that of points on a strait line, is called Aleph 0. The next in size is Aleph 1, the infinity of points on a surface. I don't know what Aleph 3 is. But now there is a numbering system that can count more units than can possibly exist in the Universe!

But back to my point: How many points are there in a strait line? Infinity. How many points are there on a surface? Infinity. Then how do you know that one is bigger than the other? By using the same system as the African tribesman who can only count up to three: "One, two, three, many..." You ask this tribesman who has more cows, he or his neighbor and he tells you that he has more than the neighbor. You ask him further how many cows does he have and he will answer: "Many." You ask him how many cows his neighbor has and he will again answer: "Many." So how do you know that you have more cows than your neighbor if both of you have "many?" The calculation is done by pairing off cows, one of his to one of his neighbor's. After all his neighbor's cows have been paired off he still has "many" left over so it is quite clear that you do not have to know the exact count to know who has more.

Aleph 1 is bigger than Aleph 0 because if you put a line on a surface there will be as many points on the surface underneath the line as on the line but there will also be a whole lot of other points that do not coincide with the line.

Mathematicians have now managed to measure infinities without counting, at least comparatively one to another. Is this enough to make infinity a valid metaphysical concept?