

Multivalent or Manifold Reasoning / Fuzzy Logic

Post by "Cassius" of January 13, 2022 at 8:48 AM

Elli reminded me of this article that she wrote some time ago which includes some material on what might be called multivalent or manifold reasoning. I think the basic idea is tied to Epicurus' observation that when we do not have enough evidence to conclude that only one option of several is "the single correct one," then we have to avoid arbitrarily selecting between them as if we did have enough evidence to be sure which is right.

The subject is probably deeper than it might appear and so this post is mainly a placeholder so the topic can be more easily found for future discussions.



Blog Article

<http://www.epicureanfriends.com/thread/2336-multivalent-or-manifold-reasoning-fuzzy-logic/?postID=15884#post15884>

"The Canon of Epicurus In Everyday Life"

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The purpose of this proposition is a brief introduction to the Canon of Epicurus that will help us to use it in our everyday life. There are, of course, studies on logical issues, which are very advanced and are based on studies of brain function, mathematical formulas etc. These are extremely important issues, but we, who do not study Logic in universities, should have help in our everyday life on this field.

When we were at school, we used to call as...



Elli

June 16, 2019 at 8:37 AM

Quote

Multiple causes

We said above that Epicurus ranked Canon together with Physics. He honored Democritus because he first discovered the principles of Nature, the atomic theory, namely the "elements", the atoms and the void. Let's not forget that Canon was also called "Elementary". As we know, he added the swerve. The movement of atoms in any direction, the unpredictable movement due to swerve, the striking between them, the repulsion of the striking, the creation of formations, the deconstruction of formations, if we accept that the causes are where the atoms are (this is from Metrodorus), we end up in the logic of the multiple causes and the many possible effects... and so through Physics we get to Canon. Everything is arranged "unshaken", namely that everything is arranged firmly, without being shaken, "in any way cleansed according to the phenomena", if they are explained by the manifold method, always in agreement with the events.

Canon and Fuzzy Logic

Cicero blames Epicurus because, as he writes, he abolishes the definition and says nothing about division and separation to parts. We add that Epicurus does not accept the "Excluded Middle of Law": "A is B or Non-B" (A is either bald or non-bald, male or non-male.) Nature is not bound by such laws. The structure of the logical system that accepts the Excluded Middle Law is two-dimensional, which means it requires that every aspect of existence can be divided into two lasting possibilities: true - false, it is - it is not, yes or no. But these two possibilities are not the only ones in nature (we reject the necessity in nature).

Thus, we can't characterize Epicurean way of reasoning as Two-dimensional Logic, but we can easily characterize and call it a Manifold Reasoning.

All of the above are the features of the logic system which is called Fuzzy Logic. Modern technology, artificial intelligence, nanotechnology etc. are based on this.

Canon is the forerunner of Fuzzy Logic, but almost no one says it. The Garden of Thessaloniki tries and wishes this to be known throughout Europe and around the world. It would be a great help if a scientist specializing in these issues, that is in the field of the positive sciences, would be activated in this field and help us.

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