

## Re: The Moon

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Didn't address Arrow's Paradox.

Arrow's paradox stems from the nature of transitivity – as the pointer in the previous post shows. Numbers are transitive. Human values are not. So, when we try to measure human values with numbers – something is lost. Clever people can manipulate which information is lost to determine outcomes against the will of people – even though the people who are deciding against themselves make the decisions.

This is true whether you're voting in an election, or making decisions in the closing room of your local car dealership. The decision making process is organized to give those running the show the benefit of your choices.

People intuitively feel this during elections which is why most refuse to participate.

So, my solution to Arrow's Paradox is straightforward – as are all my solutions. Basically numbers are more complicated than people generally realize. Numbers occur in different varieties. There are scalars – the numbers everyone thinks about when you talk about numbers. There are vectors – these are ordered lists of scalars. These are important in structuring information – and can be used to draw pictures for example since ordered lists of numbers can be represented by a directed line segment. The interesting thing about vectors, is that they are in certain ways non-transitive. You can reduce them to transitive values by doing things to them. Like figuring out their length or their orientation and measuring them. But vectors of themselves are non-transitive too. Then, there are tensors – ordered tables of scalars (or ordered lists of vectors.) Since Arrow's Paradox is generally introduced by examining a table of values – we should keep this idea in mind. Tensors are non-transitive too!

Now, there is a new field of study called emergent systems

<http://www.it.swin.edu.au/centres/ciamas/tiki-index.php?page=Introduction>

Might it be possible to create an emergent system involving vectors or tensors that allow for rational collective choices to be made?

I think so.

my idea is two-fold;

(1) Create personal electronic wealth symbols that are used to transact business. Individuals create their own money when they buy something and redeem their own money when someone buys something from them. This is the way nations work. Each person's spending and redeeming habits are encoded in a table, very similar to the way a credit report is used today.

(2) The electronic wealth symbols are vectors that encode a wide variety of information useful to the people who use it. Wassily Leontieff created the input-output method of econometric analysis. An economy can be represented by a table of numbers. Each table can be broken down into rows and columns. The columns represent all the needs of each consuming activity in the economy. The rows represent all the benefits of each productive activity in the economy. Individual transactions can be encoded in this way as well. In any event, the wealth symbols each person creates have a certain structure that reflects that person's values and desires.

#### SYNTHESIS

So, the electronic currency is used to transact business and encode in each transaction the reason for the transaction and the value of the transaction to both parties – recording at least as well as a written contract enforced by a court and attorneys.

The value of the currency automatically adjusts as it flows through the electronic exchanges.

The structure each person gives to their currency reflects their personal values. Collectively these structures combine to provide for the emergence of cultural and social features rationally desired by the population.

For example, if someone wanted to support cancer research with each transaction – invoking it like a tax each time their currency was used – this would reduce the value of the currency to others, but cause money to flow to cancer research. If sufficient numbers of people chose to support this activity – large quantities of money would flow. Those qualified to receive it and under what terms, could be encoded in the transaction matrix as well.

So, the issue in this new economy wouldn't be to find someone to work for to get money. People would be able to create money on demand. The issue would be to find something useful to do to allow you to redeem the money you want to spend! This at the outset is pretty

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damned impressive change of focus.

Basically, nearly all the activities we use voting and money for can be subsumed by this new system with little or no change and would finally provide humanity with a means to make rational collective choice.