Lecture by John F. Nash Jr.

Ideal Money and Asymptotically Ideal Money

The special commodity or medium that we call money has a long and interesting history. And since we are so dependent on our use of it and so much controlled and motivated by the wish to have more of it or not to lose what we have we may become irrational in thinking about it and fail to be able to reason about it like about a technology, such as radio, to be used more or less efficiently.

So I wish to present the argument that various interests and groups, notably including "Keynesian" economists, have sold to the public a "quasi-doctrine" which teaches, in effect, that "less is more" or that (in other words) "bad money is better than good money". Here we can remember the classic ancient economics saying called "Gresham's law" which was "The bad money drives out the good". The saying of Gresham's is mostly of interest here because it illustrates the "old" or "classical" concept of "bad money" and this can be contrasted with more recent attitudes which have been very much influenced by the Keynesians and by the results of their influence on government policies since the 30s.

Digression on the Philosophy of Money

It seems to be relevant to the politics of state decisions that affect the character of currency systems promoted by states that there are typical popular attitudes in relation to money. Although money itself is merely an artifact of practical usefulness in human societies and/or civilizations, there are some traditional or popular views associating money with sin or immorality or unethical or unjust behavior. And such views can have the effect that an ideal of good money does not seem such a good cause as an ideal of a good public water supply. There is also, for example, the Islamic concept which has the effect of classing as "usury" any lending of money at interest. (Here we can wonder about what sort of inflation rates might have been typical for any major varieties of money, such as Byzantine money, at the times actually contemporaneous with the Prophet Mohammed.)

In general, money has been associated in popular views with moral or ethical faults, like greed, avarice, selfishness, and lack of charity. But on the other hand, the existence of money often makes it easy to make valuable donations of philanthropic sorts and the parties receiving such contributions tend to find it most helpful when the donations are received as money!

But the New Testament story about "money changers" being driven from the Temple illustrates clearly the idea of putting the clearly mundane and possibly "unclean" utility of money at some distance from where that money would presumably continue to be received when used as a vehicle for donations.

Economics has been called "the dismal science" and it is certainly an area of studies where "the mundane" is appropriately studied.

And philosophically viewed, money exists only because humanity does not live under "Garden of Eden" conditions and there are specializations of labor functions. So we are always exchanging, mediated by money transfers, the differing fruits of our varied forms of labor.

Welfare Economics

A related topic, which we can't fully consider in a single lecture, is that of the considerations to be given by society and the national state to "social equity" and the general "economic welfare". Here the key viewpoint is methodological, as we see it. HOW should society and the state authorities seek to improve economic welfare generally and what should be done at times of abnormal economic difficulties or "depression"?

We can't go into it all, but we feel that actions which are clearly understandable as designed for the purpose of achieving a "social welfare" result are best. And in particular, programs of unemployment compensation seem to be comparatively well structured so that they can operate in proportion to the need.

Money, Utility, and Game Theory

In the sort of game theory that is studied and applied by economists the concept of "utility" is very fundamental and essential. Von Neumann and Morgenstern give a notably good and thorough treatment of utility in their book (on game theory and economic behavior). The concept of utility (mathematical) does indeed predate the book of Von Neumann and Morgenstern. And for example, as a concept, mathematical utility can be traced back to a paper published in 1886 in Pisa by G. B. Antonelli.

When one studies what are called "cooperative games", which in economic terms include mergers and acquisitions or cartel formation, it is found to be appropriate and is standard to form two basic classifications:

(1): Games with transferable utility.
(and)

(2): Games without transferable utility
(or "NTU" games).

In the world of practical realities it is money which typically causes the existence of a game of type (1) rather than of type (2); money is the "lubrication" which enables the efficient "transfer of utility". And generally if games can be transformed from type (2) to type (1) there is a gain, on average, to all the players in terms of whatever might be expected to be the outcome.

But this function of money in generally facilitating the transfer of utility would seem to be as well performed by the currency of Thailand as by that of Switzerland. Or the question can be asked "How do 'good money' and 'bad money' differ, if at all, for the valuable function

of facilitating utility transfer?". But if we consider contracts having a relatively long time axis then the difference can be seen clearly.

Consider a society where the money in use is subject to a rapid and unpredictable rate of inflation so that money worth 100 now might be worth from 50 to 10 by a year from now. Who would want to lend money for the term of a year?

In this context we can see how the "quality" of a money standard can strongly influence areas of the economy involving financing with longer-term credits.

And also, if we view money as of importance in connection with transfers of utility, we can see that money itself is a sort of "utility", using the word in another sense, comparable to supplies of water, electric energy or telecommunications. And then, if we think about it, we can consider the quality of money as comparable to the quality of some "public utility" like the supply of electric energy or of water.

"Keynesians"

The thinking of J. M. Keynes was actually multi- dimensional and consequently there are quite different varieties of persons at the present time who follow, in one way or another, some of the thinking of Keynes. And of course SOME of his thinking was scientifically accurate and thus not disputable. For example, an early book written by Keynes was the mathematical text "A Treatise on Probability".

The label "Keynesian" is convenient, but to be safe we should have a defined meaning for this as a party that can be criticized and contrasted with other parties.

So let us define "Keynesian" to be descriptive of a "school of thought" that originated at the time of the devaluations of the pound and the dollar in the early 30's of the 20th century. Then, more specifically, a "Keynesian" would favor the existence of a "manipulative" state establishment of central bank and treasury which would continuously seek to achieve "economic welfare" objectives with comparatively little regard for the long term reputation of the national currency and the associated effects of that on the reputation of financial enterprises domestic to the state.

And indeed a very famous saying of Keynes was "...in the long run we will all be dead ...".

Ideal Money as a Concept

A paper has already been published on the topic of "Ideal Money" and with that title. That paper of ours was published in the Southern Economic Journal after a lecture had been given on that topic at the meeting of the Southern Economic Association in Tampa, Florida.

So it is better now not to cover again in full the grounds of the ideas presented there and the specifics about how "ideal money" currencies could be arranged for by using linkage to an appropriate index of the prices of internationally traded commodities. (Note that gold and silver are EXAMPLES of internationally traded commodities.)

In Transition to Optimal Standards

Our view is that if it is viewed scientifically and rationally (which is psychologically difficult!) that money should have the function of a standard of measurement and thus that it should become comparable to the watt or the hour or a degree of temperature. And money, as an efficient practical means of transferring utility, naturally links directly with the game theoretic idea of "TU games" (games with transferable utility).

(Of course it is well known that in general the psychological reaction of a human of this world in relation to alternative prospects involving his or her receipt of money, this with elements of uncertainty linked with probabilities, tends to be NON-LINEAR. And this has the effect that the human individuals utility for money is typically a non-linear function, as it were, of the prospective quantities of money to be possibly received.)

It is so desirable in game theory to have transferable utility that that those using game-theoretic analyses go ahead and use the transferable utility concept although it might not be entirely fitting except for individual games of comparatively small weight played by large insurance companies.

The paper called "Ideal Money" that was recently published in the Southern Economic Journal presented a possible conventional basis for money of "ideal" type. This variety of money would be intrinsically free of "inflationary decadence" similarly to how money would be free from that on a true "gold standard", but the proposed basis for that was not the proposal of a linkage to gold.

But it seems very likely that, although that scheme for arranging for a system of money with ideal qualities would work well, that, on the other hand, it would be politically difficult to arrive at the implementation of such a system.

(One can observe, for comparison, the difficulties that are found in connection with issues of which national regions should or should not be included with the group making use of the new "euro" currency. For example, the Turks would like to become club members but the Scandinavians and the U.K. British are not convinced that they would be beneficiaries by inclusion.)

The Confessional of Targeting

It was the observation of a new "line" that has become popular with those responsible for "central banking" functions relating to national currencies that gave us the idea for the study of "asymptotically ideal" money.

The idea seems paradoxical, but by speaking of "inflation targeting" these responsible officials are effectively CONFESSING that, notwithstanding how they formerly were speaking about the difficulties and problems of their functions, that it is indeed after all possible to control inflation by controlling the supply of money (as if by limiting the amount of individual "prints" that could be made of a work of art being produced as "prints").

This popularity of the line of “inflation targeting” seems to have started in New Zealand, which is the place, among the USA, Canada, Australia, and New Zealand, which had the most depreciated dollar. And we can note also that New Zealand was hardly a place where any crisis of poverty really forced them to not maintain the value of their dollar but rather just a place where “Keynesian” thinking was probably very influential.

Our observation, based on thinking in terms of “the long term” rather than in terms of “short range expediency”, was simply that there is no ideal rate of inflation that should be selected and chosen as the target but rather that the ideal concept would necessarily be that of a zero rate for what is called inflation.

But of course, also, central monetary authorities of a state cannot actually do anything of the form that can be called “inflation targeting” without having some means for measuring inflation. How would they do this? The means for measuring inflation that they would naturally use would be a “cost of living” index relating to domestic prices within the territory of the state.

In the USA the standard domestic “cost of living” index has a long history and it actually originated back in the days when the USA was still on the “gold standard” with regard to the monetary standards being accepted then. And most states nowadays having large domestic economies also have some sort of an analogous index of prices.

Currencies in Competition

It is observable that certain types of financial enterprises, such as large internationally operating insurance companies, tend to migrate to national homes where the national currency is of at least comparatively higher quality (such as, e. g., Switzerland).

In the near future there may be a smaller number of major currencies used in the world and these may stand in competitive relations among themselves. There is now the “euro” and the old inflationary history of the Italian lira is past history now. And there COULD be introduced, for example, a similar international currency for the Islamic world or for South Asia, or for South America, or here or there.

And if “inflation targeting” were used as a “line” by the managers handling all of these various internationally prominent currencies then there would arise interesting possibilities for comparisons between these major currencies. Each of the currencies managed thusly would have its officially recognized status in terms of inflation as measured by the domestic index of costs of the state of the managers. But also, and this is what is more significant from an internationally oriented viewpoint, the various currencies would have rates of exchange so that they could be realistically compared in terms of their actual values.

And so the various currencies managed with “inflation targeting” would be comparable by users or observers who would be able to form opinions about the quality of the currencies. And what I want to suggest is that “the public” or the users, those for whom a medium of exchange functions as a basic utility, may develop opinions that are critical of currencies of

lower “value quality”. That is, the public may learn to demand better quality of that which CAN be managed to be of better quality or which can be managed to be of the lower quality observed in so many of the various national currencies in the 20th century.

So here is the possibility of “asymptotically ideal money”. Starting with the idea of value stabilization in relation to a domestic price index associated with the territory of one state, beyond that there is the natural and logical concept of internationally based value comparisons. The currencies being compared, like now the euro, the dollar, the yen, the pound, the swiss franc, the swedish kronor, etc. can be viewed with critical eyes by their users and by those who may have the option of whether or not or how to use one of them. This can lead to pressure for good quality and consequently for a lessened rate of inflationary depreciation in value.

Illustrating the principle of these optional choices, the people of Sweden recently had the opportunity of voting in a referendum on whether or not Sweden should join the eurocurrency bloc and replace the kronor by the euro and thus use the same currency as Finland. The people voted against that, for various reasons. But it cannot be irrelevant whether or not the future quality of a currency is really assured or whether instead that it depends on the shifting sands of political decisions or the possibly arbitrary actions of a bureaucracy of officials.

The voters in the U.K. are expecting to have the opportunity to vote in a referendum relating to the adoption, for the U.K., of the euro (which is already adopted in Ireland). Here they have a dramatic conflict, since the pound was the original currency of “the gold standard”, with its value pegged to gold in 1717 by Isaac Newton who was then Master of the Mint. (Of course it was not irrelevant that George II, the king then, was an early Hanoverian and also ruled territories in Germany.)

In recent years the pound has had a comparatively good rating with regard to inflation, inferior to the rating of the swiss franc but superior to most currencies of the world. So the British have the alternatives of accepting adoption of the euro when first voting, or after a delay, or never.

We can legitimately wonder how the speediness of its adoption or delays in its adoption might affect the policies operating to control the actual exchange value of the euro. The constitutional structure of the authority behind the euro is of the “paper money” character in that nothing is really guaranteed as far as the value of the euro is concerned. But this is typical of all currencies used in the world nowadays.

Of course when a currency, for a time, does have a specification of its value beyond the local fiat of administrators in its national home, like the money of Argentina had a peg to the U.S. dollar a few years ago, then international observers can wisely distrust the reliability of such a stabilization of its value. Such forms of value definition are not necessarily unsound, particularly when a small economy, like that of Panama, links its currency to that of a larger area like that of the USA. But it is obvious that this sort of thing puts a burden on the foundation of the currency that is used as a reference basis.

For example, if all sorts of non-European countries decided to define the values of their currencies as on a par with the euro, without actually joining into any system of cooperative regulations associated with that, then the effect of that would seem likely to destabilize the stability of the euro if it would otherwise be highly stable and of good value quality.

Political Evolution

There perhaps will always be "politics", like also "death and taxes". But it is sometimes remarkable how political contexts can evolve. And in relation to that I think that it is possible that "the Keynesians" are like a political faction that will become less influential as a result of political evolution. The "Keynesian" view of things did not come into existence until after the time when what we can call "Bolshevik communism" had become established in Russia. And by this label we wish to differentiate between any theoretical or ideal concept of communism and the actual form of governing regime structure that came to exercise state power in Moscow. (All over the world varieties of states make claims to have governments very properly or even ideally devoted to the interests of the citizens or nationals of those states and always an externally located critic can argue that the government is actually a sort of despotism.)

The Keynesians implicitly always have the argument that some good managers can do things of beneficial value, operating with the treasury and the central bank, and that it is not needed or appropriate for the citizenry or the "customers" of the currency supplied by the state to actually understand, while the managers are managing, what exactly they are doing and how it will affect the "pocketbook" circumstances of these customers.

I see this as analogous to how the "Bolshevik communists" were claiming to provide something much better than the "bourgeois democracy" that they could not deny existed in some other countries. But in the end the "dictatorship of the proletariat" seemed to become rather exposed as simply the dictatorship of the regime. So there may be an analogy to this as regards those called "the Keynesians" in that while they have claimed to be operating for high and noble objectives of general welfare what is clearly true is that they have made it easier for governments to "print money".

So I see the Keynesians as in a weak sense comparable to the "Bolsheviks" because of the support of both parties for a certain "lack of transparency" relating to the functions of government as seen by the citizenry. And for both of them it can be said that they tend to think in terms of government agencies operating in a benevolent fashion that is, however, beyond the comprehension of the citizens of the state. And this parallel makes it seem not implausible that a process of political evolution might lead to the expectation on the part of citizens in the "great democracies" that they should be better situated to be able to understand whatever will be the monetary policies which, indeed, are typically of great importance to citizens who may have alternative options for where to place their "savings".

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Opening for Questions or Debate

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(The talk text, just for the “ideal money” topic, originally derives from my outline for the lectures given at various specific locations of the “European School of Economics” in Italy during October 1997. Subsequent to that time, after consulting with some of the economics faculty at Princeton, I learned of the work and publications of Friedrich von Hayek. I must say that my thinking is apparently quite parallel to his thinking in relation to money and particularly with regard to the non-typical viewpoint in relation to the functions of the authorities which in recent times have been the sources of currencies (earlier “coinage”).)

(There were some later revisions and expansions of the text on “Ideal Money” and I subsequently also spoke on this topic at Northwestern, at Yale, in Athens, Greece, at a meeting in Tampa, Florida, at Peking University in Beijing, China and at a meeting in Mumbai, India. And then my lecture at the Tampa meeting was published in the SEJ journal.)

(And the portion specifically concerned with “asymptotically ideal” currencies was added first for a talk at the University of Massachusetts at Amherst.)

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