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Multiplying Money

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Abstract

This article is not a comprehensive factual history of money as an economic instrument. It aims rather to present an essential psychological history of the power of money as a social organization or social technology. It explores the catalytic role of money in the development of society and its ever-increasing capacity for accomplishment in both economic and non-economic fields. This perspective focuses attention on the unutilized potential for harnessing the social power of money for promoting full employment, global development and human welfare. The title 'multiplying money' is intended to convey the idea that this untapped potential is exponential in nature. In order to recognize it, some fundamental misconceptions about the nature of money, how it is created and on what it is based need to be examined. This is the second article in a series.

1. Too Much or Too Little

The idea of multiplying money sounds almost sacrilegious. It evokes responses similar to what one might expect if an English clergyman were to preach the virtues of polygamy or an Indian demographer were to urge people to bear more children or an international economist were to propose that gambling and speculation be promoted as a major growth sector. Today the world is glutted with money. Witness the $4.6 trillion circling the globe daily in search of higher speculative returns or the $225 trillion in global financial assets, up from a mere $12 trillion in 1980.[1] Yet, far from having too much, the world has far too little money, too little at least that is being used for its intended purpose to promote human welfare. But the merest hint about creating more money raises shouts of alarm, suspicions of conspiracy and a rush of investors to safe havens such as gold, land and other 'real' forms of wealth.

It is not surprising that the rich and famous protest against efforts to multiple money, for they presently enjoy a near monopoly in this domain and any extension of that privilege risks depriving them of the major source of social power and prestige that distinguishes them from everyone else. Imagine a conclave of dukes and earls advocating the multiplication of titled families or an assembly of physicians advocating that the number of licensed doctors in USA be tripled to bring down the costs of medical care. But ironically, it is not just the wealthy alone who resist the multiplication of money. Almost everyone else regards it with equal suspicion as an assault on common sense or sacred values. 'Beware of inflation! Remember Weimar Germany!' proclaims the man in the street born 30 years after the event, as if he has been studying monetary theory all his life. ‘Gold is the only real wealth’ cries his wife as she clings to her gold wedding ring. ‘It’s another Wall Street conspiracy to exploit depositors and raise taxes,’ insists another.

Scratch the surface and most people will tell you that a tight leash on money is a real virtue, a sign of stability and security, something you can rely on precisely because it resists change, a reassurance that greed, folly and imagination are not running away from us. This thinking is consistent with the original mindset with which the science of economy was founded at a time when wealth was confined to 10,000 families in England, the middle class was miniscule, and the vast majority scratched out a subsistence existence. Economics was founded as the science of scarcity. Although we now live in a world with the capacity to produce all types of goods and services in sufficient quantity to meet the needs of every human being, the mentality of scarcity still overshadows our thinking on the subject of both money and economy and stands as a brick wall between the human race and abundant prosperity.

The fact remains that there is not too much money in the world, but too little. At least that is what the American colonists concluded three centuries ago. Money was a revolutionary invention and a source of revolutions as well. One of the little known causes of the American Revolution was the lack of money. The Revolution was fought for the cause of freedom and one of the most prominent kinds of freedom the colonists sought was freedom to create money. England insisted that only British sterling be used as a medium of exchange in its colonies, but the colonies could not generate sufficient sterling from their one-sided trade with England, so they resorted to using Spanish dollars to supplement sterling. When this practice was banned by London, they resorted to furs, tobacco leaves, and even wampum beads as a supplementary medium of exchange. In desperation, the Massachusetts Bay Colony in 1690 became the first of the American colonies and one of the first governments in modern times to print their own paper currency notes denominated in pounds, shillings and pence. The practice was soon followed by all the other colonies. The British Parliament eventually outlawed the practice as both illegal and immoral in a series of acts, the last and most drastic completely banning the use of legal tender paper in 1764. War ensued as the result of a perpetual shortage of money to transact trade.[2]

Today a similar revolution is brewing in the streets of Athens, Cyprus, Egypt, Madrid, Rome and Lisbon, and among rising numbers of unemployed youth in towns and villages throughout the world. The cause célèbre is the first major crisis affecting the world’s most important experiment to move beyond national currencies towards a truly global system – the Euro. The source of the problem is not any inherent deficiency in the concept of a regional currency, but in the inadequate development of European institutions of governance to support its successful application. Having relinquished their right to create money at the national level, member states of the Eurozone have encountered the very same problem that plagued the American colonies before independence – an incapacity to generate all the money that is necessary to support full utilization of their economic potential to meet the needs of their people. These nations possess the essential ingredients to continue their remarkable rise from the ashes of WWII to become the most prosperous region in the world. What they now lack is the necessary catalyst – money. What is true of some nations of the Eurozone today is true of the world as a whole.

"The more we use money, the more it multiplies and the greater the power it acquires for accomplishment in society."

Economist Paul Krugman has been making a similar argument with regard to the US economy for years, citing zero interest rates and low inflation as clear symptoms that something is amiss. Randall Wray, a major proponent of Modern Monetary Theory (MMT), has provided a sound framework to explain why there is ample scope and justification for creating sufficient money to achieve full employment.[3] Although it directly challenges proponents of balanced budgets and tight monetary policy, MMT is gaining significant attention and support. In a web presentation to the World Academy's Global Employment Challenge as well as in books and numerous articles, Wray explained why sovereign nations with full control over their own currencies can and should create sufficient money to ensure their economies function at full employment. But let us reserve the theory for a subsequent article and start by examining the facts.

2. The Great Catalyst

Money is a catalyst for economic activity, in the same way words are a catalyst for communication. Without language, interaction, cooperation and relationship between people would be reduced to physical gestures and signs at particular points in space and time. The gathering and transmission of information, organization and transfer of knowledge, dissemination of technologies, codification of laws, formalization of governance, diffusion of cultures, formulation of philosophies and recording of religious experiences and inspiration would be impossible without symbolic language. In the absence of the power of ideas made possible by language, these remarkable human capacities would be literally 'unthinkable'.

Catalysts are a mysterious phenomenon. They facilitate and accelerate transactions without being altered in the process. A catalyst enables chemicals to interact with one another to produce entirely new substances, leaving the catalyst just as it was before. Without them, many reactions occur very slowly or not at all. It seems almost inconceivable that a thing so potent could remain unchanged and undiminished by the function it serves. Indeed, *when it comes to social catalysts such as language and money, each usage adds incrementally to its power and effectiveness. The more we use a language, the more it grows in subtlety and sophistication. The more we use money, the more it multiplies and the greater the power it acquires for accomplishment in society.*

Money plays a catalytic role in society, facilitating exchange, promoting enterprise, stimulating production, spurring innovation and invention. Before money, most of humanity lived at or below subsistence levels producing only enough to meet the immediate requirements of their families for self-sufficiency and for local barter exchange. *Money and trade changed all that. They provided an incentive for each person to produce the maximum of which they were capable,* so that it could be converted into money and used to obtain a wide range of other goods, services and intangible social benefits produced by others. Thus, Adam Smith termed money as 'the great wheel of circulation, the great instrument of commerce'.[4]

3. Untapped Global Potential

Any economy needs sufficient liquid money to facilitate full utilization of its productive capacities. A casual examination of the facts makes it abundantly clear that the world economy is far from operating at full production. According to official statistics, about 200 million people are unable to find opportunities for gainful employment. Nearly 75 million of them are below the age of 25 with dismal prospects for the future.[5] The actual figures are much higher. Many people are forced to settle for work that utilizes only a small fraction of their productive capacities. While underemployment is difficult to measure accurately, the magnitude of the problem is clearly reflected by the fact that only 40% of the global workforce is employed full time.[6] When underemployment is taken into account, it is reasonable to assume that more than one-third of the world's human capital remains unutilized.

What is true of people is equally true of other productive resources. Society is an organization of human beings with the capacity to utilize knowledge, skills, technology, human and other resources to meet a wide range of human needs for production, exchange and consumption; peace, security and governance; transport and communication; health and education; scientific pursuits, artistic creativity, entertainment and recreation. Today global society has immense resources – a rapidly expanding body of scientific knowledge and technological capabilities, educational and training institutions; an ever-expanding network for communication and transportation connecting individuals, organizations and communities around the world; an enormous base of manufacturing facilities functioning far below capacity; and so much more. None of these productive resources are being fully utilized for human welfare.

Even our environmental problems are directly linked to a shortage of money. The world already possesses the technological capacity to effectively address climate change, water shortages and other ecological challenges. Massive investments in solar and other forms of renewable energy could soon make reliance on fossil fuels obsolete, if only we had the capacity to mobilize sufficient money needed for that investment. Actually those financial resources already exist but are being utilized to aggravate ecological problems rather than resolve them. A new IMF report estimates that global energy subsidies amount to a staggering $1.9 trillion worldwide – the equivalent of 2.5% of global GDP, or 8% of total government revenues. Moreover a considerable portion of these subsidies goes to the top income group.[7]

Global society is operating at far below the level required to fully meet human needs. Unprecedented prosperity co-exists side by side with three billion people still mired in persistent poverty – a number equivalent to the entire world population in 1950. The gap between needs and performance has always existed. But the difference is that the world now possesses the capacity to meet all those needs. Poverty was once an accepted, unchanging reality of life to which people resigned. Today that is no longer the case. The Human Aspiration is awake, expectations of a better life have percolated to all parts of the world and all levels of society. People are no longer either resigned or patient. Even in the poorest democratic societies, they want and urgently demand more. The signs of brewing revolution are reflected in the rising levels of discontent and unrest among unemployed youth and low income voters, among the rural landless and the urban poor, among the educated unemployed and the unskilled.

> *"Like a chemical catalyst stored in a separate beaker standing next to the reactants it is intended to catalyze, a vast portion of money today is being stored separately in financial markets insulated from the real economy."*

The catalytic role of money in mobilizing social resources to tap unutilized potential was dramatically illustrated in the town of Woergl, Austria, during the 1930s. At the height of the Great Depression, the economy of Woergl was at a standstill, public spending was drastically cut, and unemployment reached 25%. The mayor of Woergl devised an ingenious plan to revive the local economy. He deposited the entire town's money in the local bank and used that deposit as the basis for creating local labor certificates, which he utilized to finance public works. The certificates quickly gained public acceptance because they could be utilized as legal tender to pay local taxes. Many important public works projects were undertaken using the certificates to pay local workers. The workers in turn presented the certificates to retailers in exchange for essential goods, and the stores used them to purchase materials from local wholesalers and manufacturers, who used them for further exchange as well as to pay local taxes. A one percent negative interest rate on the certificates ensured that people spent them quickly rather than saving them, leading to a very rapid turnover of funds, which further multiplied their catalytic economic impact. Very soon, the town economy was booming and reached full employment. Woergl's success continued until the Central Bank of Austria decided that its sole authority to issue money had been compromised and declared the experiment unlawful. In a short time, unemployment in Woergl rose back to previous levels.

Today's global economy is flush with money, but too little of it is being utilized for the intended purpose as a catalyst for the real economy. Like a chemical catalyst stored in a separate beaker standing next to the reactants it is intended to catalyze, a vast portion of money today is being stored separately in financial markets insulated from the real economy, seeking to multiply itself through speculative investment rather than by catalyzing real economic activity and employment generation. The barriers between the real economy and financial markets are porous, their interactions myriad and complex, so it is always possible to dispute this view by pointing to the positive role of financial markets in pooling capital for productive private investments, managing risks, extending credit and financing public goods. But the membrane separating the two grows ever thicker and less porous, their estrangement ever greater and closer to irreconcilable divorce.

The world already possesses the capacity to generate all the financial resources it needs to fully meet human needs. The problem is that we do not know it or rather we do not know how to design our social systems to effectively utilize it. The prevailing view of money is so completely obscured by myth, superstition and intellectual confusion that untangling the web leads only to further confusion, debate and controversy between established dogmas and conventional wisdom. The solution lies in dispensing with dogma. The key lies in finding the answers to the following questions: What is money? How is it created? On what is it based?

4. Caveat

A caveat is necessary before we can attempt to answer these questions. Money is one of the most sophisticated and powerful of all human inventions. It takes many forms, it evolves continuously over time, and it interacts in increasingly complex ways with virtually every other aspect of human social existence. The theories formulated to describe and explain it, the systems used to administer and control it, and the multiplicity of its forms and actions appear bewildering in their complexity; so much so that most people, including most economists, have decided that understanding money must be left to monetary specialists, much as we leave speculations and research on the Higgs boson to theoretical physicists. This perception is a major source of our difficulty in managing money effectively. For regardless of how money is defined in economic textbooks, it is not merely or even primarily an economic instrument. Money is a social invention, a psychological symbol, rather than a material thing. It is a human social system based on social rules and human choice, not an inanimate, lifeless mechanism. Its one and sole legitimate purpose is to promote the welfare of human beings. The moment we lose sight of these facts and begin to regard money as some mysterious abstract entity to be worshipped or feared, we lose the power to comprehend and control it. We lose our freedom as creative human beings and become subordinate or enslaved to the instrument we have created.

There is an additional complication in striving to understand money. Money and those who possess it have always been targets of envy, jealousy, suspicion, hostility and persecution. This is especially true in periods of financial turmoil, such as the present day. In the wake of the subprime mortgage crises, the ensuing global financial crisis and the persistent economic downturn, the deficiencies, inequities and abuses of money and financial systems have been so highly publicized and well-documented that public discourse is most often characterized by scathing criticism, vilification or outright condemnation. Bankers, Wall Street traders, government officials, corporate executives and wealthy investors have become the scapegoats for all that is inadequate, unfair, inequitable and corrupt about the national and global economic system. This makes it extremely difficult to engage in an objective, impartial examination of money and its role in society.

Every social institution can be used both positively or negatively, for good or for bad. The language we use to communicate and forge rich human relations can also be used to disguise, deceive, slander and condemn, to hatch conspiracies and undertake crimes. The governments we found to secure our freedom can also be used to oppress and deprive us of that very freedom. The global Internet which has empowered individual human beings as never before can also be used to promote scams, viruses, crime and terrorism.

So too, money is a neutral instrument which can be used to create unprecedented freedom of choice, prosperity, welfare and well-being for all human beings or it can be misused to serve other less noble, less equitable and desirable purposes. We do not condemn and reject the institution of language because it is also used by criminals and terrorists. We do not reject the principles of democracy because it so imperfectly embodies in practice the ideals on which it is founded. We do not shut down the internet because it is used for anti-social purposes. Instead, we strive to develop ways to extend its positive applications and minimize or eliminate its negative expressions as far as possible.

> *"Money, like democracy, is a work in progress – imperfect in its structure, often misdirected and misapplied in the exercise of its power – but nevertheless a remarkable invention that has resulted in unprecedented wealth generation and welfare."*

Thus, in examining the origins and evolution of money as a social institution, we need to recall that money, like democracy, is a work in progress – imperfect in its structure, often misdirected and misapplied in the exercise of its power – but nevertheless a remarkable invention that has resulted in unprecedented wealth generation and welfare. It is necessary that we keep in mind the remarkable contribution money has made to human development, the power it has placed at the disposal of human beings, and the vast untapped potential for extending and multiplying that power until its benefits fully reach all humanity. Then we will be in a position to impartially identify and correct the many blatant deficiencies and gross inequities that have been generated by the partial and biased misapplication of a power that is rightly intended to promote the equitable development of all.

5. Origin and First Principles of Money

Let us approach the issue of money from first principles, starting with a few basic premises. First, society is an organization of human beings which possesses power to utilize knowledge, skills, technology, human and other resources to promote the survival, security, growth and development of its members. Among these powers is society's ever-growing capacity for production, exchange and consumption. The development of a society is a function of the degree to which it has acquired the capacity to harness this social power to evolve beyond a subsistence level existence in Nature. The greater its capacity to raise the productivity of resources – land, human labor, mechanical energy and natural resources – the more economically advanced the society becomes. The discovery of fire, creation of languages, invention of the wheel, development of agriculture, establishment of markets and trade routes for exchange of goods, founding of towns and cities are some of the significant early steps in the evolution of social power. During the past two centuries global society has harnessed this power to dramatically raise the living standards of a rapidly expanding human population, generating an eight-fold multiplication in real global per capita income.

Money is one of the primary instruments responsible for this remarkable achievement. The invention of money has played a central part in the general evolution of social organization and social power. Money is a social organization relating people, institutions, communities and activities together in a seamless web. Money is not merely an economic tool or institution. It is integrated with virtually every field of social activity – law and politics, education and research, entertainment and recreation, religion and spirituality. Money is a social technology that facilitates, expedites and improves the efficiency of all types of social transactions, the way language facilitates oral and written communications and the Internet facilitates global communications and digital transactions.

Money is a social symbol. It is social in the sense that it has no value to a single person living alone on a deserted island. It is a symbol in the sense that it is not merely an object like a stone or a gem. Money may or may not be represented by objects with intrinsic value, but it always represents something beyond the material form it takes. Money is a symbol for value and its power derives solely from the fact that people recognize and accept that symbolic value, the way we accept the symbolic value of the word 'love' or 'truth'. The value of money depends entirely on human perceptions, i.e. on the fact that it is trusted and accepted by other people. Real currency notes believed to be counterfeit are essentially worthless as a medium of exchange, just as counterfeit notes believed to be real are indistinguishable in their utility from government issued currency notes.

The symbolic nature of money is obscured by its origin as a physical commodity. Although early money often took the form of something with intrinsic value – a cow, a bag of grain, a gold nugget – its utility as money did not depend on that. Indeed, the archeological evidence of clay tablets indicates that the earliest forms of money may have simply been records of credits and debits, which were in use long before the first appearance of minted metal coins around 600 BC.[8] Whatever its origin, money gradually evolved to acquire new forms which were more subtle, less material. The grain receipt was an early form of money issued in exchange for the deposit of grain in government and private warehouses in ancient Egypt. These receipts were accepted, circulated and widely employed as a medium of exchange and store of value. Public confidence in the issuer of the receipts made it possible for warehouses to also issue receipts that were not backed by grain as loans to borrowers. Thus, the first fiat money was born in the distant past.

From the 15th Century onwards, London goldsmiths applied the same principle when they issued gold receipts in the form of interest bearing loans, often far in excess of the actual quantity of gold left with them on deposit. Because they were known to be wealthy merchants with huge stocks of gold, the public trusted their receipts without verifying whether each one was backed by real gold. As long as that trust was maintained, their receipts were widely accepted as money and infrequently redeemed for the underlying commodity. Note the subtle shift from trust in the gold to trust in the institutions that stored the gold and were reputed for their sound management and integrity. The goldsmith bankers of London reached the zenith of their influence during the mid-17th century.[9]

The notion that money is or should be based entirely on a physical commodity is a misconception that persisted well into the 20th century and still returns periodically. Some monetary historians argue that precious metal was added to early coins primarily to make coins more difficult and expensive to counterfeit, rather than due to the belief that precious metal was necessary to give money value. Even at the height of the Gold Standard when the British pound sterling was regarded as the strongest, most stable currency in the world, the Bank of England possessed sufficient gold to redeem only about 5% of the notes in circulation. After being compelled to abandon the gold standard during the First World War, in 1925, Churchill pushed through legislation to restore it against the advice of Keynes, who called it an 'imbecile' bill. The ensuing economic contraction compelled the UK to abandon the gold standard once again in 1931.

"Human relations are the real basis for wealth creation."

6. Evolution from Field to Marketplace

The primary role of money is as a catalyst for relationships between people. Human relations are the real basis for wealth creation. The physical labor of the hunter, herdsman and farmer was indeed the original source of wealth and welfare in humanity's early ascent from the animal kingdom. At that time wealth was commonly measured in terms of heads of livestock or acres of arable land. But long ago they ceased to be the principal source of wealth creation. Various agricultural revolutions throughout history have enhanced the capacity of farmers to produce more than they needed for personal consumption. As soon as they developed the capacity to generate surpluses, they sought ways to exchange their surplus for other things they needed to enhance their security, productive capacity, comfort and enjoyment.[10] Trade was born.

Adam Smith depicts the life of feudal barons in Europe during the centuries before development of roads, market towns, foreign trade and a money economy provided an outlet for their surplus produce. It was not uncommon for a lord to support a thousand or more families of mostly idle retainers on the produce of serf labor, simply because he could find no better way to utilize the surplus. When trade opportunities opened up, many of these barons reduced their retinues from hundreds or thousands to a few dozen servants, so they could trade the surplus for manufactured and luxury goods.

Trade shifted the center of wealth creation from the field to the marketplace, where the value of produce depended solely on its exchange value to other people, not on the cost of producing it, and on the ability of prospective buyers to offer something of comparable value in exchange. The wider the market, the greater the likelihood that buyers and sellers would find a match. The more distant the market, the greater the likelihood that what was produced locally would be considered scarce and desirable. The development of ever growing networks of markets spurred a succession of commercial revolutions, such as the great Bourgeois Revolution wrought by Arab merchants travelling the caravan and sea routes from Mesopotamia to Egypt and across the over half the Mediterranean to Spain from the 8th to 12th centuries, while Europe still remained a feudal agrarian society.[11, 12]

7. The Rise of Trust

Land and sea trade routes combined with standardized coinage were the principal catalysts for the growth of markets. Without some form of money, exchange depended on the double coincidence of barter trade – finding buyers and sellers who both offered something the other was willing to buy in exchange. With the introduction of money, the probability of concluding a transaction rose exponentially, since it was sufficient that the buyer wanted what the seller had to offer and possessed money to be given in exchange. Money worked exactly like a chemical catalyst, moving from buyer to seller until the seller found something to purchase with it, moving on from one transaction to another unchanged by the process. The value of the money to the seller arose solely from the fact that it could later be redeemed for other desirable goods and services. The money itself was only a mechanism for recording the transfer of purchasing power, a symbol for the goods sold by the seller which empowered him to acquire other goods later on in exchange. The real value of that money was only as great as the availability of goods for which it could be redeemed. In other words, *the value of money was always founded on the productive capacity of the underlying economy, never on its own intrinsic value*. This remains true to the present day. That is why countries devastated by social unrest, political instability or civil war often find the value of their currency dramatically reduced.

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Commercial revolution eventually spread from the Levant to Southern Europe during the 13th century, where it took root in Italy and along the Adriatic, then gradually spread across Western Europe, laying the economic foundations for the Italian Renaissance and the mercantile empires of Venice and Dubrovnik, forerunners of the great colonial empires of the following centuries. The rigidity of a coin-based money supply was one of the major constraints to medieval business, which was overcome by a variety of creative innovations. While the Greco-Roman economy had been driven by minted coins, unstinting credit became the great lubricant of commerce in Italy.[13] The rise of Italian merchant bankers marked a significant new phase in the evolution of money from coinage to bills of exchange and other forms of money based on credit and trust. Italian merchants exporting goods by sea to distant markets in Western Europe introduced bills of exchange as a form of promissory note in which the buyer agreed to pay for the goods at some future point in time. Often these notes were backed by the guarantee of another person or local institution of notable wealth in the buyer's country. Although the guarantor usually did not participate in the transaction, he was able to leverage his reputation as a catalyst to facilitate trade. Eventually, the use of bills of exchange spread throughout Europe.

This practice marked a transition from commodity money based on the value of the metal of which it was composed to credit money based on trust between individuals and institutions. Each time a transaction was successfully carried out between a buyer and seller, the trust between them increased and their willingness to transact business grew. Successful transactions progressively shifted the basis of trust from the underlying commodity or the transaction to the buyers and sellers engaged in those transactions. With increasing frequency, buyers and sellers extended credit to one another to increase the volume of their trade. Reputable traders and trading houses found that they could carry out transactions based on the confidence and trust which other buyers and sellers placed in them. This gave rise to the emergence of the original merchant-bankers, which facilitated trade by transferring charges and credits in the accounts of their clients. The annual cycle of Champagne Fairs of France during the 12th and 13th centuries relied almost exclusively on credit instruments known as fair letters. These fairs became the financial clearinghouses for long-distance trade between north and south.[14, 15] No longer was the creation of money dependent on an underlying commodity. Credit money could be created in the marketplace based on trust in those involved in trade, that is, in their capacity to complete transactions.

We still tend to think of economics solely or primarily as a matter of production. Production in the absence of markets may have use value, but it has no economic value. Market is a creative social institution which is creative of money. Market is a social organization designed to promote mutually beneficial relationships between people. *The growth of wealth is a measure of humanity's capacity to integrate myriad points of production and consumption within an ever widening, increasingly interconnected and complex network of trust.* Each step in expansion of the network, multiplication of its interlinkages and increase in the trust underlying the relationships is directly productive of greater wealth and greater social power.

The growth of credit money has passed through many stages since then. Today credit money generated by banks to commercial and individual customers and by companies to their corporate and individual customers represents one of the major sources of money. Keynes considered money on account, money that comes into existence along with debt contracts for deferred payment, as the primary form of money.[16] Indeed some monetary scholars argue that all money, even commodity based money, is based on the creation of credits and debts, which constitute the two sides of every credit transaction.[17]

In earlier centuries, only a relatively few individuals, mostly from the aristocratic class, had access to what we now refer to as consumer credit. Since then the power of money creation has moved from banks, merchants, governments and a few wealthy individuals to the common man. Today the power of money creation is once again getting personal, but this time on a global scale. Consumer credit now represents a major source of money creation. In the USA alone it represents upwards of $2.7 trillion.[18] This is roughly equivalent to the total value of US currency notes in circulation.

The rapid expansion of the global credit card industry represents an unprecedented stage in which the power of creating credit money has shifted to individual consumers in the form of outstanding charges on their credit cards. Banks set credit limits, but it is the individual who decides how much to use, when to use it and when to pay it back. In most cases, the underlying asset securing this money is simply trust in the credit-worthiness of the borrower based on past credit history. Visa, the world's largest retail electronic payments system, links nearly 15,000 retail banks in more than 200 countries around the world with millions of merchants and about two billion card holders in a seamlessly integrated system involving 80 billion transactions valued at more than $6 trillion annually.[*] The development of a

* See http://corporate.visa.com/_media/visa-corporate-overview.pdf

highly sophisticated global system for distributing the power of money creation to millions of individuals marks a new stage in the evolution of money. Individual trust has been institutionalized as a social system.

8. Money as Social Power

Monetarists regard money as a measurable quantity of financial instruments – currency notes, deposits, debt obligations, etc. – that can be tabulated by various measures of the total money supply, M0, M1, M2, etc. In contrast, this article focuses on money as a force that accomplishes work in society. That force is best measured by the results it generates, not merely by the quantity in circulation in various forms.

"The power of money is too great and important to be left to technical specialists, any more than we would leave the choice of our marriage partners to geneticists breeding for certain desirable traits."

The value of a chemical catalyst cannot be adequately measured by its physical weight. Its value derives from its power to drive chemical reactions. Given the right temperature and pressure, a catalyst makes possible reactions that might otherwise take years to occur or never occur at all. The power of the catalyst is inseparable from the context in which it functions.

The same applies to the physics of money. The primary aim of money is wealth creation. The power of money to create or multiply wealth depends on many factors. Most notable is the speed or velocity with which it is utilized, the number of transactions it catalyzes during a period of time. The higher the velocity with which transactions are completed, the higher the productivity and effective power of money. Therefore, examining various measurements of the money supply is insufficient to comprehend the extent to which the power of money has multiplied in recent centuries.

Another important determinate is the purpose for which money is applied. Money invested in production of beneficial goods and services possesses power to promote human welfare. Money applied for speculation in commodities, land, and financial instruments may multiply rapidly, but serve no useful social purpose. On the contrary, it may, as recently demonstrated, undermine the normal functioning of the real economy. In recent years, major corporations on every continent have been flush with funds. Often that money is being redirected for speculative purposes, even in countries where there is a serious shortage of capital for infrastructure development or other productive investments. The same applies to the utilization of money on activities that destroy or deplete the environment or threaten the security of other people by war or terrorism. A mere quantitative increase in the volume of money in circulation tells us very little about its overall contribution to human welfare or its untapped potential for catalyzing social development. Managing a society by the numbers is nothing less than speculation. *The power of money is too great and important to be left to technical specialists, any more than we would leave the choice of our marriage partners to geneticists breeding for certain desirable traits.*

Before the advent of the Industrial Revolution more than 50% of economically productive activity in the Western world was self-production for self-consumption or barter, i.e. it did not involve monetary exchange. Since 1800 monetarization has spread rapidly to encompass a much larger portion of the world economy. From then to now, total world GDP has increased about 100 fold in real terms. During the same period, real income has grown about 15 fold in per capita terms, in spite of a seven fold increase in world population.[19] Scholars most commonly attribute this incredible achievement to the development and application of technology since the dawn of the Industrial Revolution. But this is an oversimplification. The development of new industrial technologies was accompanied by a corresponding and equally radical development of new social technologies, including new types of markets, new types of institutions and new ways to create money. It was also a period in which human rights and democratic freedoms have been widely distributed and education has spread rapidly. Without these corresponding changes in social organization, the results of technological innovation would have been far lesser. Indeed, the first rudimentary steam engine can be traced back to the 1st century AD Alexandria, some 1600 years before James Watts' invention in 1775. So it is evident that technology alone does not generate development. The extended use of money as a social organization played an important part in the democratization of political, economic and social rights.

9. The Psychological Evolution of Money

We have so far traced the psychological evolution of money from commodities to transactions to the people and firms undertaking those transactions and eventually to banking institutions specialized in the financing of trade, public expenditure, war and other activities. Psychologically this marked a movement from informal types of money or credit employed locally to impersonal, institutionalized forms of money operating over an extended geographical area. The physical chronology of different forms of money differs widely from place to place, but the progressive evolution from informal to institutional money is universally valid.

Until the 20th century, the most common form of paper currency used in Europe was the 'banknote', a promissory note issued by a state or commercial bank. The first European bank notes were introduced in Sweden during the 17th century. In England, the trust once placed in the goldsmith bankers of London who held gold bullion on deposit was gradually extended to a wider range of banking institutions holding public deposits of precious metals and other assets as backing for the notes they issued. The demand for more and cheaper money culminated in establishment of the Bank of England in 1694 and the Bank of Scotland the following year, which began issuing banknotes backed by their governments, which soon replaced the goldsmiths' receipts as the principal paper in circulation. By the time Adam Smith published his famous book *The Wealth of Nations* in 1776, bank money exceeded metallic money, a milestone in world monetary history.[20]

For much of the 19th century, banknotes were the principal source of currency circulated in the USA. In 1789 the US Congress chartered the First Bank of the United States to issue banknotes. After the bank closed in 1811, the Second Bank of the United States was chartered until 1836. After the Civil War, national banknotes issued by federally chartered commercial banks and backed by deposits in the US Treasury came into vogue. At one time nearly 10,000 different kinds of banknotes in addition to more than 5000 counterfeit varieties were in circulation in the US, some accepted only locally and others over a much wider area depending on the reputation and perceived trustworthiness of each institution.[21] Privately issued banknotes remained in circulation until 1936, when they were replaced by Federal Reserve Bank Notes, which in turn were later replaced by Federal Reserve Notes backed by the assets of the Federal Reserve Banks.

10. The Supremacy of the State

The generation of money as a medium of exchange in trade is only one origin of money. By a parallel route money also has been created by government fiat as a means to pay for services rendered to maintain the security and welfare of the state. Adam Smith explained the rationale for this form of money creation, "A prince, who should enact that a certain proportion of his taxes should be paid in a paper money of a certain kind, might thereby give a certain value to this paper money; even though the term of its final discharge and redemption should depend altogether on the will of the prince."[22]

The theory of Chartalism holds that tax debt has always been the principal basis for the creation of money, even in ancient times. Even when coins were the dominant form of money in ancient Greece, power of coinage was rigorously controlled by the state. According to Keynes, the issuance of fiat money in the form of government-issued tokens such as engraved clay tablets, copper or carved wooden sticks, is at least four thousand years old.[23] The state used these tokens to pay for goods and services and accepted them as legal tender for the payment of taxes.

Today we tend to look with suspicion at the idea that governments can create fiat money out of thin air without the backing of gold or silver, simply by declaring money as a legal tender for payment of taxes. The very idea that government can print money at will often evokes horrific visions of profligacy and impending financial crisis. The current Euro crisis is cited as evidence that the capacity of governments to spend must be strictly curtailed. The truth is quite different. One of the main reasons for the Euro-crisis is that the countries of the Eurozone have renounced their right to print money at the national level without creating an all-European institution with the power to take over the responsibility for ensuring the availability of sufficient money for a full employment economy.

Viewed historically, public debt is a remarkable evolutionary innovation. When the Roman Empire went bankrupt it did so without owing money to anyone, because the very concept of public debt had not yet been conceived. Given the vast resources of the Empire, the precipitous plunge into the Dark Ages may have been prevented, had it known what we know today. The invention of public debt was to play a central role in the development of the nation-state.

China introduced the first paper currency during the 10th century. Its value was linked to the value of precious metals but was not convertible. The English monarchy introduced a unique form of money in the 12th century known as the tally stick, which was akin to a wooden bill of exchange. Tallies were notched sticks representing specific amounts of taxes payable to the King. The monarchy issued tallies to pay for its expenditures in advance of tax receipts and then accepted them back as payment of taxes in lieu of gold. For 700 years tallies were employed as a convenient method of payment by merchants for private transactions, thus becoming an earlier form of government-issued money. As the value of tallies grew to exceed the amount of taxes due to the throne during the present year, they came to constitute a form of public debt advanced by the people to the government to be repaid from future tax revenues. Over time the value of tallies in circulation continued to grow based on public confidence in the strength of the monarchy and the prosperity of the country. Thus, money was created based on trust in the government and the economy over which it presided.[24, 25]

The psychological history of money reveals the evolution of a remarkable social invention. What began as a proxy representing things of material utility for human survival gradually evolved into a symbol representing trust in the ability and integrity of a person or organization to complete commercial transactions. From there the symbol generalized itself to reflect the trustworthiness and reliability of the institution issuing the money, be it a company, commodity exchange, merchant banker, commercial bank, central bank or government. The capacity of the state to create money required for governance, defense and public welfare is one of the essential conditions for the emergence of modern nation states.

At each stage of its development, the foundations of money became less material and dependent on specific persons, things or events, more subtle and dependent on the capacity of an institution or an economic system to fulfill an ever-widening array of human wants. As is always the case, the more subtle the forms it developed, the more powerful money has become.

The psychological basis of money was dramatically illustrated during the US banking panic of 1932. Banking panics had been a periodic occurrence throughout American history, with major occurrences in 1818, 1837, 1857, 1873, 1893, 1907, 1930, and 1931. When rumors spread that a bank was about to fail, depositors rushed to the bank to withdraw their deposits. Not even the financially soundest bank could withstand a panic, since most of its assets were lent to borrowers and could not suddenly be withdrawn to pay depositors.

The greatest panic of them all occurred in successive waves from 1930 to March 1933, resulting in the failure of 2444 commercial banks, compared with just 73 during the previous panic of 1907.[26] On assuming office as President that month, Franklin Roosevelt went on the radio to deliver the first of what would become known as his fireside chats. FDR appealed to the American people to halt the panic by reminding them that America still possessed the rich natural resources, industrious people and huge industrial capacity that had generated so much prosperity. He promised to immediately introduce legislation to guarantee the security of bank deposits and regulate the banking industry. When the banks reopened the following week, long lines of people formed to redeposit their hard earned money and the panic ended.

What began as a loss of faith in individual institutions of the financial system was reversed by a restoration of trust generated by faith in the national government, which represented the wealth, people and productive capacities of the nation as a whole. Faith in America became the foundation for the American monetary and financial system. Since 1957 every US currency note proclaims that faith by the motto "In God We Trust".

11. The Ultimate Search Engine

Originally valued for the things that could be obtained with it, money has gradually come to be valued as a thing in itself, valuable not only because of what it can buy, but also because the mere possession of it signifies an accumulation of social power and capacity that can be applied for both economic and non-economic purposes.

For the individual who acquired or possessed it, money became a means to obtain political patronage, social influence, military power, religious indulgences, recreation and entertainment, and virtually every other form of social benefit. It became a measure of a person's marriageability and romantic desirability. Those who obtained it in large quantity came to be regarded as superior in intelligence, ability, and courage. They were accorded respect and deferential treatment, itself a form of power that opened up opportunities unavailable to the rest of humanity. Money became a symbol embodying all that human beings value and aspire for on earth and in society.

For the society that evolved the appropriate organization to generate and utilize it, money became a catalyst for awakening people's aspirations for the finer things of life, for releasing their energy and initiative for risky enterprise and ceaseless labor, for raising production and productivity to ever higher levels, for spurring continuous innovation and new invention. Once that energy was released, money also became the organizational means for channeling that energy effectively for productive purposes.

The remarkable role of money as a networking instrument to match needs and capacities has not been adequately recognized. Without the advent of accurate indexed search engines such as Google run by complex algorithms, trying to find information among more than 14 billion pages of the World Wide Web today would be quite like searching for a needle among millions of proverbial haystacks. Money plays a comparable role in matching buyers and sellers in the world of commerce as well as matching economic with non-economic needs and capacities in global society. Money is the ultimate search engine. For while Google is still confined largely to searching the cyberspace of virtual information and transactions, money extends its domain of power to all planes of human existence – material, social, mental, psychological and even spiritual. Money not only facilitates the free exchange of economic goods and services. It plays a similar role in the interconversion of all varieties of socially desirable 'goods', such as education, health care, culture, popularity, social status and political power. Rightly applied, money has the power to promote peace and security, save lives, educate youth, improve health, and foster understanding and the development of culture.

Money is not only a powerful catalyst. It is also a great transformer. Like the secret formula for converting lead into gold sought after by the alchemists, money facilitates the conversion of any type and form of social power into any other type – conversion of scientific knowledge into power for greater production, conversion of political power into health and education.

Money is a great transformer. Like a dam across a raging river, it helps channel and direct the raw energy and productive potential of society so that it can be harnessed for useful work. Like the turbines of a hydroelectric project that transform the kinetic energy of the river into power that can be distributed to power a city, money transforms every variety of power for application in all fields of social activity.

"The psychological evolution of money is moving from things, institutions and governments to its ultimate source – the individual human being."

12. Money as Human Capital

Money has evolved from a material thing to a symbol that represents material things, a symbol representing trust in commercial transactions and in the people and institutions that participate in them. From there it has evolved further to represent trust in the national government that issues currency and regulates the economy, which is founded on trust and confidence in the nation itself. There is no reason to conclude that the process will stop at this point. Given the inherent instability and inequality resulting from the current dollar-dominated global system, it seems inevitable that further efforts will be made to expand the concept of monetary union geographically from national governments and nation states to regional groupings, and ultimately beyond. A global currency was advocated by Keynes and the British government as an alternative to the Bretton Woods system in 1944. FDR directed his secretary of the treasury, Henry Morgenthau Jr., to also develop plans for a world currency, though the US subsequently withdrew support for domestic political reasons.[27]

In another direction, the psychological evolution of money is moving from things, institutions and governments to its ultimate source – the individual human being. The human being is the source of all resources. For all things become a resource only when they are recognized as such by the human mind. Converting sand into bricks, glass or silicon chips or decayed organic matter into fuel, synthetic fabrics and pharmaceuticals are strictly human activities. In that sense Human Capital has always been and will always be the real source of wealth creation, human welfare and well-being.

The power of any society to create money ultimately resides in the psychological values and capacities of its people. The willingness of individuals to honor obligations and commitments is the basis for the creation of credit money. The willingness of society to extend and disseminate the power of money to all citizens is the true basis of democratic economy. This trend is illustrated by the unprecedented extension of consumer credit to cover the vast majority of people in USA. About three quarters of Americas now have access to credit card money, including about 45% of low income families.[28, 29] This has been made possible not only by the development of a very sophisticated credit delivery and monitoring system, but also by the willingness of individuals to accept, utilize and repay the credit. Banks may allocate the right to create credit card money, but it is only the individual card holder who can decide to exercise that right and actually create it.

The individual becomes the ultimate issuer of money based on the trust society places in him, which is founded on his own trustworthiness and trust in himself. In spite of four years of economic slowdown, in 2011-12, only 2-4% of US credit card holders were more than 60 days late in making payments. This reflects the psychological capacity of the people to create money and the willingness of the society to extend it to all who exhibit that capacity. Extending that capacity further to reach the entire American population and eventually to all humanity is a line of evolution that will mark a fuller recognition of the value of the individual human being and the essential role of the individual in the development of global society.

We conclude, as we began, with the observation that the world already possesses the capacity to promote the welfare of all human beings. To do so will require many changes in law, public policy and institutional functioning. It will also require a fundamental reconsideration of the nature and role of money in human development and a willingness to reorient values, attitudes and policies to unleash the full potential of this remarkable human invention for the welfare and well-being of all.

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