

Primitive and Modern Economics: Derivatives, Liquidity, Value, Panic and Crises, A Uniformitarian View

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Abstract This paper investigates aspects of economics in the context of complex society and the nature of investment devices in cross-cultural comparison, placing special attention on the new global issues of money, hedge fund contracts, derivatives and other risk-spreading concepts and practices. The function of these are compared to the behavior of the inventors and practitioners in other cultures. Similarities are noted with religious formulators and the process of conversion and the operation of the market and credit paralleled with the concept of Mana. This work provides a context for understanding contemporary human economic behavior. Novel structures of symbolic worth are associated with individual presentation and performance. Clearly concepts of value and credit have been changing in modern financial culture. Indeed, they have been expressing forms that have traditionally been associated with primitive economics. An understanding of the current financial and social losses resulting from the subprime collapse is presented along with a means to counter it.

Keywords Caching · Money · Credit · Hedge funds · CDOs · The market · Mana · Derivatives

Introduction

Beginning in the summer of 2007 a freeze of sorts struck the world of finance affecting the behavior of the market and the condition of liquidity and credit. While the initial cause was placed on an implosion in the subprime banking industry, the central feature of this freeze manifested itself over the next 15 months in banks either not lending to each other, lending for shorter periods along with rising “fails” in Fed convertibles, as Paul Davies and Michael Mackenzie demonstrate (FT 10/15/08).

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Increasingly this freeze spread to a greater collapse of lending extending to corporations, businesses and public sector projects of municipalities and other public agencies. The central problem has not been the behavior of consumers, though we have seen a drop in retail sales reported in fall 2008, rather it is with the financial sector.

No matter how much credit the Fed has extended, the individual banking and finance institutions know how bad their own balance sheets are, how they have bundled off and hidden losses and bad loans and so they simply expect all the other banks have done the same. The situation is much like several of the forms of game theory. Paul G. Mahoney and Chris Sanchirico (2003) described the idea in “third party enforcement problem” where social norms, not legal rules, influence outcomes. In this situation community retaliation is illusory where there is a free rider element. Here we see the parallel with bankers. The present situation, however, would undermine their conclusions. They can profit from the injection of capital from the governmental agencies, but are under no enforceable obligation to lend. This is the central problem with the current crisis in liquidity. The Fed and the Treasury cannot force banks to lend, to each other or to the corporations and small businesses that need credit to keep the economy running. Jeremy Siegel, in his recent article in the FT comes to a similar conclusion and suggests that the Fed should use provisions to lend directly to private entities by backing up commercial paper. However, this may not reach sufficient industries and business of small sizes, or widely distributed to help turn the tide. The British plan has the power to force banks to act. Gordon Brown has required banks sell the government regular shares carrying voting rights along with preference share, which do not. The US plan only allows for the purchase of preference shares. He has also required the banks to give the government representation on the bank’s boards of directors; the US plan does not have this provision. The British government will earn 12% in a dividend equivalent, while the US taxpayers will earn only 5% for the first 5 years and 9% thereafter. For the plan to work as a stimulus to recreate trust in investors it must demonstrate that the credit is in the hands of individuals who are immune from the contamination that created the crisis. In the US the very people who were involved in the origins of the debacle, former and current employees of Goldman Sachs and other financial institutions are running the bail out. Does this matter, can their involvement inspire confidence or destroy it no matter how much money is involved? One can ask why this occurred, why trust in the market appears and disappears and what role transparency in business and banking play in the maintenance of credit and liquidity. Some economists, like Keynes believed that governments could provide the necessary stimulus and foundation in cases of economic crises. This paper presents an anthropological explanation of this relation.

Currently, investors, auditors and accountants are having a great deal of difficulty assessing the value of assets and the underlying veracity of financial statements. It stands at the center of the storm threatening the financial system of world Capitalism at present. Since the scandals of Worldcom and Enron this problem has exploded as many accountancy firms have been caught up in a considerable degree of culpability in hiding or distorting asset value and profitability. This is only part of a wider debate in economics, one which was reflected in William H. Beaver’s calling efforts to increase information on the net worth of companies in the 1970s and 1980s, a “revolution” (Beaver 1989). It also impinges on a much wider discussion of value and credit in theories concerning the evolution of human economic behavior.

The invention and acting out of various behavioral strategies by financial professionals can produce significant rewards or deficits for themselves and individuals who follow these strategies. A number of innovations have recently been made to hedging devices known from the nineteenth century like options and futures, puts, etc. and given new roles, often they are classed as derivatives as they are forms of bets or insurance-like contracts derived from real assets. The use of these strategies and the models behind them has drastically changed financial markets today. Billions in profits have been produced by their use, while some of these innovators failed to produce positive returns for themselves, like Robert Merton in the Long Term Capital Management firm collapse (Lowenstein 2000). A central question has arisen as to whether they introduce new stresses in the economy or reduce its volatility and make it more stable. In the context of products, however, and how selling advice to clients and molding their financial behavior, brings up questions as to whether the selling of such instruments functions is like religious proselytizing (Caldararo 2004) where the production of converts changes the system, as is demonstrated in the acceptance of new financial devices in the market.

The desire of investors to know the values of financial devices and assets increases in times of cyclical markets, and yet there are cyclical aspects to environmental conditions affecting the survival of most life on the planet (Wilson 1975). We see animal behavior in many species structured around saving food for the future (caching), as humans have done in the past, and people do today mainly in forms of wealth (savings, retirement, pensions, etc.) in modern human societies. Yet this behavior of projecting present wealth into future action is often defined as a specifically human, and essentially modern aspect, certainly where interest and transfers of wealth between individuals is concerned. However, we find many parallels with modern financial behavior in traditional societies, as Lorraine Baric has noted regarding the indigenous economy of Rossel Island (1964). She states, "...the island was covered with a network of debtor and creditor relationships of great complexity, in which loans were manipulated so as to provide the greatest advantage that was possible under the circumstances. In the course of this,... a great deal of calculation, discounting and careful allocation of resources was exercised."

Fixation on buying and selling to the detriment of the individual or kin group is seen by some societies as a disease, like that of pathological gambling, while mass responses to economic news can become as stereotyped as herding behavior in other vertebrates and has been defined as a pathological mass psychogenic event. While in some traditional societies these "panics" occur regularly and have the effect of wealth transfer devices.

Economic systems are guided by central core values in most societies, while being explained within the general cosmological outlook of the culture. In 1940 Melville Herskovits', *The Economic Life of Primitive Peoples*, initiated a debate between economists and anthropologists on the nature of economic behavior in modern societies. Due to the cosmology of the time, Herskovits suffered severe criticism over his uniformitarian view that all human societies practiced similar forms of economic behavior. The cosmology of the twentieth century, or at least its dominant paradigm, held that there was a vector or direction in time in which events could be placed, a view that was a product of the two major economic and political

systems in contention at the time. Both Communism and Capitalism were based on ideologies that firmly conceived that society of the twentieth century was characterized by elements that differentiated it from all other social contexts in the past. They called this “modernity.” Recently a book by Goody (2004) criticized this view, arguing that modernity was a worldview of hegemony created in each period of political and economic dominance. As such, modern man could be compared in terms of economic behavior with earlier periods. While he recognized that technology had changed, the basic foundations of human behavior remained the same, thus while no economic system in the past was exactly like that which exists today, comparisons were valid. Further, while some economists and social scientists had argued that modern man was guided by rational thought while primitive society was a context in which man’s behavior was embedded in irrational beliefs that permeated economic behavior, this contrast was not supported the all the evidence. I have described this argument in more detail in a recent book (Caldararo 2004). Another approach, led by Michel Callon (1998), follows a line of questioning by Alfred Marshall in 1920 that economic theory became reduced to a study of market prices and not the marketplace itself. Callon’s theory, the “performativity of economics,” focuses on the creativity that brings an economy into being, and notes the specific roles of actors in the process. Critics of this approach, for example, MacKenzie and Millo (2003) instead give more emphasis on the underlying “embedding” of values in which commercial exchanges are seen as cultures and moral communities. In MacKenzie and Millo’s view the Chicago exchanges (CBOE and CBT) memberships came to be passed from father to son, a characteristic of a kin-based society at first glance. Likewise, violations of procedures (“out trades”) are dealt with by social informalities like shunning, typical of traditional societies. Also like traditional societies, MacKenzie and Millo (2003) found that reciprocity is practiced in the exchanges intergenerationally, “...not just in the hope of personal reward.” In the creation of the CBOE, members participated in an ethos of group recognition and personal investment beyond the financial where, “This (contributions) was part of the concept that was inculcated into all of us: ‘You owe it to your community.’”(MacKenzie and Milo 2003).

Other lines of inquiry originated in the study of social networks and the social identities of the agents within them, as described in the work of Granovetter (1985). Most of this type of work, like an earlier study by Granovetter (1973) focuses on the degree of personalization of credit and the size and density of social networks, showing that these rely on an emphasis of action and relationships, not belief systems.

Economists like Knight (1941) and social historians like Polanyi (1957) attacked Hershkovits on this point, arguing that non-Western societies’ economies were not constructed on rational determinations of value. They attempted to support this assertion by examples that contrasted the translation of value from objects (food, housing, manufactured items) to abstract carriers of value (stock, letters of credit, checks, “money”). Their essential point centered on the belief that such abstract carriers could always be translated into objects by different actors in Western societies, but that such abstract carriers did not exist in non-Western societies. Exchange in such societies was established by haggling or mediated by custom. The economy was seen as “embedded” by culture in each actor limiting the choice and

goals available (Cohen 1967). But modern mass media certainly limits choices by conditioning the responses of economic actors to perhaps an even greater degree (Packard 1957; Henry 1963; Wagner 1975). This attitude is to be expected as the market is central to the exchange system of our society, but to make it an essential focus of modernity may be ethnocentric. Lorraine Baric (1964) demonstrates that on Rossel Island goods and services are exchanged not primarily via markets but by adjudication and the resolution of claims. This rigid distinction was partially breached, for example, in critiques of rational actors in market economies, by the rise of a number of schools of behavioral economics (e.g., Becker 1975) in the 1960s to the 1990s, but none took a uniformitarian position as did Herskovits.

Money and Value, Primitive and Modern

An article in the *Financial Times* (27 October 2005) by Stella Fearnley and Shyam Sunder is most interesting in light of the history of economic theory. In their article, Fearnley and Sunder (2005) state that the main problem accountants have with the drive for accounting standards is that it is difficult for accountants to produce equal determinations of value when one steps outside the simple audit of cash accounts. This was made clear in reference to insurance accounting in an interview with Sir David Clementi in the *Financial Times* (Felsted and Jopson 2006). When value is to be assigned to assets of different classes, then accountants have no reliable yardsticks to arrive at uniform translations into money. The same difficulty has beset the back offices of hedge funds over the value of CDOs and hedges of risk, e.g., over bonds and settlement of contracts. This dilemma of the auditors certainly justifies Herskovits (1940) and shows that the convertibility of units of value in non-Western societies, like the wheels of Yap are a universal in human society. I made this comparison in a comment in the *Financial Times* (Caldararo 2005). In fact, the wheels are much more like Western money than any of these devices (Einzig 1966), contradicting modern economists, such as Greenspan's assertion about primitive money and credit systems (1967), since the stone wheels of Yap, as money, could readily be translated into products or services.

Many credit devices traditionally used in non-Western 'primitive societies' are very much like the paper promises and wagers of CDOs (Firth and Yamey 1964). Baker (1984) found that consideration of a financial asset as being close to money in industrial society, depended on the social position of the holders. The "piles of paper," and the vast interpretations of lawyers discussed by Robert Bruce (2004) in his description of the clearing of obligations contained in derivative contracts reflect kindly on the "haggling" in traditional societies so depreciated by Knight (1941) and Dalton (1969). Since Bruce's article the situation has only gotten worse where now in the midst of the liquidity crisis begun by the Subprime loan collapse many derivatives cannot be assigned value (Hughes and Tett 2008). Resolution of the derivative contracts originated or related to the Lehman Bros. accounts have been reported as settled, but many are being challenged in the courts. This parallels Baric's (1964) conclusions on Rossel Island. The creation of credit devices, such as derivatives, depreciate other forms of money in one sense, but only reshuffle control over wealth, as in many former primitive economies as Raymond Firth described

(Firth 1964). This process is being demonstrated today with the several trillion dollars in bonds and contracts based on the collapsed Subprime loan markets being assumed by taxpayer supported entities (especially America's Federal Home Loan Banking System, Fannie Mae and Freddie Mac) in both the USA and Europe governed by the Federal Reserve Bank and Europe's central banks (Guha and Scholtes 2008).

Magical Economic Thought in the Twentieth Century

We assume the impact of individual egos must have had a long history in human affairs and played a significant role in the development of our institutions. The ability to convince and persuade is a powerful skill. But in the context of modernity one would expect illusion and the power of personality to be less forceful than in the past. Unfortunately, people seem to be as much under the influence of egos and passion as in the past if not more. Certainly the careers of individuals like Hitler and Stalin would support this idea. This concept was described in detail by Canetti (1960), and is now studied under the topic of human psychogenic disease. For a review, see Caldararo 2004. Charismatic movements—both religious, as Billy Graham, or secular ones such as Werner Erhard's EST or Scientology, also are significant. Comprehensive studies of human mass action were the subject of a number of psychologists and sociologists in the late nineteenth and twentieth centuries (e.g., Canetti 1960). Many focused on the nature of the crowd, its makeup in sex, age, socio-economic and cultural background, etc. Other studies analyzed the psychology of the motivator (in religion, what Paul Radin (1937) called the "religious formulator"). On a more general level, however, innovators (whether in technology or business or politics, etc.), like celebrities, motivate people through the pathos of their lives, but usually as models for life.

In the realm of finance we find the same factor of the impact of individual egos, not only in the "get rich quick" "seminars" led by celebrities like Donald Trump, but also in the case of Fischer Black whose mathematics describing the nature of derivatives and risk did not reflect reality very well when he first proposed them (see Mehrling 2005), derived partly, as it was, on his idea of monetary policy which differed from Keynesians (who recognized the instability of the market with booms and busts) and Monetarists like Milton Friedman (who saw central bank interference in the money supply as the problem). Black supported a capital pricing model from which the risk of market variations could be avoided. Despite the divergence of his projections and the market, he and a number of other economists continued to proselytize, to promote their relevance by the distribution of printed explanations (called "theoretical option values"), and, like magic charms, the behavior of traders and bankers began to change, resulting in a shift in the market until there was a correspondence of theory and market movement. This is like the action of preachers described by Adam Smith which is discussed elsewhere (Caldararo 2004) in regards to the compatibility of capitalism and Christianity. But the correspondence of Black's method and the market has degraded significantly today and endangers the stability of the financial basis of our system (Mackenzie 2005; Larson 2006). Black's formulae and the math behind them do not provide a scientific

description of reality but simply verify the existence of human belief. Another example would be Fibonacci sequences which have been found to be useful in studying patterns in biology. They have long been used in a number of theoretical applications to market trends, but Batchelor and Ramyar (2006) have shown that they have nothing to do with predicting market movements. The use of these numbers is based on belief, like magic charms, providing users with a degree of confidence. Stock options and futures were part of nineteenth century exchanges and gained considerable condemnation as a business practice after the Depression, the speculation in derivatives "...looked like wagers on price movements (MacKenzie and Millo 2003)" into the 1960s. What changed this climate was the election of Richard Nixon and the appointment of tax lawyer William Casey to the SEC. The Chicago Board of Trade, which was the vehicle for this change, was not a hierarchical organization, but more horizontal in structure, electing its officials. The behavior of some members was that of the proselytizing activist, to the extent that some lent newcomers the money to join (initially \$10,000), similar to "fronting" a stake in a poker game.

This structure could be interpreted differently, however. The idea of "fronting" individuals money, and the kin-based nature of many of the relationships, has many aspects of generalized reciprocity found in many primitive (Traditional) economic systems (Cohen 1967). Of course, biological kinship does not make up the basis for social membership or exchange in all human societies, as we see in cognatic societies (Stone 2006) and another good example is the Huli of New Guinea, where membership is in flux and by free association (Glasse 1965, 1968). When one takes into consideration the nature of the clearing-house for settlement of stock and bond transactions, we find more support for this idea of a similarity with forms of traditional societies. Efforts to establish a central and uniform international clearing house for derivative transactions have gained momentum through 2008 but thus far failed. The Depository Trust and Clearing Corporation, as one such organization, is a monopoly, but it is also owned by its industry customers, a collective of sorts. Thus, at the top of our modern economic system, where new financial devices are created and risk theoretically abated, we have one of the most primitive forms of economic structures, a modified generalized reciprocity. It would also be consonant with the idea that futures, options and derivatives, and hedging in general, distributes risk and reduces the overall danger of loss. In that sense, the theory of hedges would be parallel with primitive economics where the community is the basis of growth and renewal.

Gillian Tett (2006a) produced a brief description of the process of the construction of one portion of the hedge market by a group of young financial innovators. Keeping in mind Black's contributions and the appearance of CFDs (contracts for difference) in the 1980s (which were really more a product of a desire of some investors to escape taxes, as they could take a position on an instrument without owning it and other people, such as George Phillips (Phillips and Connolly 1992), whose writings on the evolution of Japanese warrants to derivatives in the 1980s provided some background), Tett focuses on one significant group. Derived from a number of interviews, Tett describes how a weekend of personal encounters resulted in the formation of credit derivatives. There is a considerable history of academic involvement in the theoretical foundations of these financial instruments as Arditti

(1996) relates, but Tett's interviews provide an interesting window into the culture of the financial institution side of the equation.

Anthropologists have generally focused their research on relationships in their analysis of how an economy functions. What is most interesting about the personal stories of the development of this industry is how much seems framed as advertisement and promotion. She notes that the group of about 80 J.P. Morgan bankers met at a posh holiday resort in Boca Raton about a decade ago. They were referred to as, "the Morgan mafia." From this meeting, betting on whether bonds or loans would default, became more of an organized device from the methods used by J.P. Morgan's agents in the early 1990s where Robert Reoch, a Morgan banker began developing contracts for such bets as "first to default" swaps. Buying derivatives is essentially engaging in a form of insurance, spreading risk. The main question is how effectively this risk is spread and where it has gone. Again, it seems like *Mana*.

The proliferation of these devices is amazing as Tett notes (2006b). Some new variations include LCDS (loan credit default swaps), CDS of CDOs (credit default swaps of collateralized debt obligations), CFDs (contracts for difference) and dispersion swaps. These have increased the total in the market said to be above 65,000 billion dollars in value (although the total value of derivative-like devices has risen to notional values of over \$415,000 billion by the Bank of International Settlements in its Dec. 2007 report there is no general agreement of value). While pension funds, corporations and banks are suspected to be the biggest users, tax avoidance is also a potential use (Tett 2006b). Stephen Kingsley, managing director of Bearing Point, a financial consultancy, points out that most financial products today are virtual, existing in cyberspace. They bolster banking profits but also are an example of great creativity, but also represent an increasing desire by the financial world to chance profits (gamble) and avoid risk at the same time.

Avoiding risk is not new, nor is the creation of more money or credit. On the simplest level this occurs whenever someone buys a house. Say one that is bought for \$120,000. The buyer pays 20% down and the bank finances the balance. The seller gets the value of the house—\$120,000, but the bank creates much more credit by the financing process at, say 7%. The \$100,000 is financed over 30 years, and the buyer pays the first year of \$6,967.82 in interest and \$1,015.82 in principal. By the end of the 30 years the buyer will have paid back the \$100,000 loan and an additional \$139,508.90 in interest. But the bank can sell the loan right after financing to another institution at a discount, say for 20% of the expected interest, plus principal. Thus \$139,508.90 in credit was produced out of money to be paid in the future, but it has a risk, the buyer may default, or may repay the loan early and while there may be an early repayment penalty, loss of expected income is a risk. The institution that buys the loan is accepting the risk of default but may buy a contract with another person to insure the loan, should the homeowner default on the loan. The probability of default establishes the cost of insurance. The same is true of groups of home loans that are bundled for sale, or in the sale of options to buy or sell a commodity. A futures contract is a contract to buy or sell a commodity at a certain price by a certain date. It is derived from the value of the commodity, and one makes money if the price of the contract is in the favor of the person holding the contract. If not, they lose money. As with options (which are rights but not obligations) to buy a futures contract only at a specified price limiting risk further), contracts can be sold

to individuals holding other kinds of investments, like corporate bonds, to insure the holder from loss in case of default. These contracts are called “derivative,” and are derived from the value of the bonds, based on the risk of default. These contracts may be sold, creating more credit, held as assets, by banks and pension funds, but the underlying value is the original asset (Arditti 1996). The question eventually comes to the fore as to whether the asset value will cover the cost of the risk. The idea that profits could be made from such risk betting, can be traced to Keynes (1923) who produced a theory of “normal backwardization” and predicted that the price of futures contracts would fall below the expected “spot” price of a commodity.

We do not have to refer to Sornette’s data (2003) on critical events in stock market crashes to see the problem with this flight from risk and at the same time desire for great gain. It is both probability, which Keynes (1921) cautions economists about seeing as reality, and the fact that the present level of hedging and derivative leveraging has created destabilizing conditions as with Long Term Capital Management (Lowenstein 2000), where a very small investment could influence a quite remarkable segment of the market. This has been often felt in “shorting the market” where a combination of “borrowed” stocks by hedge funds and rumor have caused substantial falls in the stock of some companies producing large profits for hedge funds. Where can we find the origin of all the liquidity that has been created by derivatives and like synthetic products? In asset inflation that essentially comes down to human faith in value, that is like a belief in Mana. The difference from what Keynes proposed in 1923 and what has become practice in current innovations, can be seen in the lack of information and its distribution among investors, as Keynes states in 1921, “The terms “certain” and “probable” describe various degrees of rational belief about a proposition which different amounts of knowledge authorize us to entertain.” Without knowledge all is luck and Mana.

The social effect of hedging behavior was reported in Traditional economies by anthropologists. Barth (1967) described how hedging—taking advantage of minor discrepancies in prices—operated in the economy of the Mountain Fur people of Darfur. The process had the effect of profits for a few speculators but also undermined the traditional economic relations associated with kinship and neighborhood obligations based on ceremonial labor exchange. Thus we can see that derivatives and hedging are not new, nor is the behavior without risk of damage to the underlying economy and social relations that sustain it.

Risk and Cycles

In an article in the *Financial Times* of July 17th 2006, Frank Partnoy and David Skeel argue that credit derivatives create a “moral hazard” in that they allow banks to shift risk, encouraging people to take on more debt because they believe they are insured. Credit derivatives leave borrowers unmonitored fueling credit expansion, as well as increasing the lack of knowledge people have about financial transactions they are involved in due to the complexity of the contracts and related agreements. Also, as Davies and Tett reported (FT 5/17/07), a new version of loan instruments was created as brokers of derivatives and hedge fund manager found they could control consumers’ need for cheap credit by demanding no risk to themselves, these

devices called “cov-lites” were being produced in the past 5 years in which most of the traditional protections lenders received are removed. These traditional covenants, even when they are retained are weakened and nearly unenforceable. The unwinding of these positions as defaults have occurred has resulted in legal challenge not only to the contract language, but remarkably, to the intent of the institutions who have been the originators (Van Duyn and Mackenzie 2008). Buying and possessing these devices conforms to a number of aspects of consumer behavior related to other purchases made today based on advertising. There is a similar aspect of the totem, belonging to a group very similar to tribal identification seen in branding efforts in commercials. There is a considerable effort that goes into the design of these financial instruments, but what is most compelling is the consumers’ contradictory desire to achieve substantial profits with no risk. This pursuit seems irrational and brings up a trend noted by Robert Shiller in his book, *Irrational Exuberance* where he notes that there has been a 60 fold rise in gambling in the USA since 1962. He suggests that this desire to engage in risky behavior has spilled over into the investment world. MacKenzie and Milo (2003) argue that the emergence of the skew in the market represents a stability due to generational experience in the 1987 crash and thus can be explained as a form of rational learning. They propose that actor networks perform to reduce tendencies that would return instability. But the facts of 1987, where they imply that 3 min separated the collapse of the economic system and survival, seem to argue otherwise. As the collapse accelerated Leo Melamed is called by Allan Greenspan to acknowledge the ability of markets to open. This history belies Greenspan’s pleas before Congress that he misjudged the risks involved in his deregulation policy. Only transfers of credit, especially by the Federal Reserve to Continental Illinois, provided the necessary liquidity. But where this “liquidity” came from is the essential question, just as in yesterday’s tremendously liquid worldwide financial system we are seeing today a shrinkage of liquidity in response to the subprime loan crisis. Are we dealing with Mana? Dark Matter? As the value of the paper contracts disappeared, like the ectoplasm of nineteenth century spiritualists, the debt was assumed by the taxpayer. “Eaten” in the sense of the old Celtic “sin-eater,” taken on by the commons.

A significant problem lies in the way these financial instruments were being rated. The rating agencies were coming under increasing pressure to provide rational explanations for differences in risk, but, as Beales et al. (2007) have shown, there was an increasing lack of confidence among regulators, analysts and investors in the present system. Lawsuits and insolvencies have followed, with the Bear Stearns collapse being the most spectacular (Brewster 2008) recently followed by Lehman Bros. Examination of rating agencies whose system of grading had been a means of relating risk to investment are now under scrutiny (Jones et al. 2008). All this relates to the pursuit of certainty and is an interesting aspect of modern culture in the contradictory nature of risk and guaranteed unusual profits. Mary Douglas (1966, 1985) addressed the issue of risk and reward in two insightful books and with Aaron Wildavsky (1982) investigated variations in application of risk assessment and perception in a variety of cultures. In *Purity and Danger* (1966) she found clear distinctions in how people in different cultures come to “...pay attention to a particular pattern of disasters, treating them as omens or punishments. On this argument there would always be a mutual adaptation of views about natural dangers

and views of how society works: rewards and punishments are stored in the environment.” This is undoubtedly how people in modern economies view the market. We are accustomed to its vagaries, economic actors therefore should not be considered irrational or pathological, their views are not privately formed. As Douglas (1985) argues, “...irrationality tends to be invoked to protect the too narrow definition of rationality.” We are again reduced to haggling in back offices.

Motivation: Need and Spirit

In primitive or traditional societies that are often juxtaposed with our modern context, motivational forces are often attributed to supernatural forces; to gods, spirits, or general essences like Mana. While the idea of Mana as an impersonal force in the world was originally derived from Codrington’s research in Melanesia (1897), it has taken on a variety of forms in the century since he wrote, especially as a foundation for a proposed earliest form of religion known as animatism. Codrington describes it as,

“It is a power or influence, not physical and in a way supernatural; but it shows itself in physical force, or in any kind of power or excellence which a man possesses. This mana is not fixed in anything, and can be conveyed in almost anything... All Melanesian religion consists, in fact, in getting this mana for one’s self, or getting it used for one’s benefit.”

Contrasting two worldviews we can see the parallels. In Mary Douglas’ description of the Lele (Douglas 1954), we find the Lele set their village in the grasslands, never far from the forest. Their staple crop was maize and they derived much economic material from the raffia palm, and additional food from groundnuts. All other good things come from the forest: water, firewood, fish, meat, salt, manioc, oil and sacred medicines. While both sexes worked in the forest, it was considered a male sphere and women were excluded from it for certain ritual periods of time. Work in the forest is cool and pleasurable, in the village hot and routine. Most importantly, the forest is the scene of the hunt. Meat is a valued food, so much so that to serve someone a vegetable meal was considered an insult.

Unlike their southern neighbors, the Lele did not breed goats or pigs. Meat from animals raised in a village revolted them. Rats, dogs, goats and pigs were referred to as unclean. Antelope and wild pig were “clean.” In their cosmology the spirits inhabited the forest and control the fertility of women and the success of men’s hunting. The spirits require all people to be at peace, and good hunting is the indication that all is well in the village. According to Douglas, “Hunting is a kind of spiritual barometer whose rise and fall is eagerly watched by in the entire village.” The distribution of the rewards of the hunt are strictly defined.

In much the same way, the stock market is watched by the entire world. It is equally capricious in determining rewards, in an unequal fashion, strictly defined by rules. While financial specialists (similar to the shaman) attempt to guide individual investors by the use of arcane and often secret methods, none are capable of consistent rewards. As in the case with the Lele, spiritual specialists may provide direction, but the response of the forest spirits was never predictable. Perhaps as Durkheim (1915) argued, religion is the reflection of human representations of

reality, based on the history of the group. Likewise, the stock market serves as a religion, reflecting a belief system no more rational than that of the Lele. Firth (1996) concluded that such paradigms are the “aroma” of human civilization, linking belief and action despite failure of the system to produce expected outcomes.

We might then speculate that variation in the stock market results from variation of human desires, ideas and fallacies (greed, etc.). As our ability to predict human choices improves through marketing studies, and to mold motivations by modeling these in advertising and education (see e.g., Moschis 1987), different advertisers like different powerful sorcerers try to capture consumer loyalties by creating ever more imaginative but irrational scenarios. We find in the new “neuroadvertising” specialty (Anderson 2003), through the youth market seems every bit as variable as the adult (Nuttall 2006). This is what we might expect given Redfield’s predictions in the relationship between technological change and culture (Redfield 1953), the one as a modifying agent for the perceptual landscapes of the other. A new school, of behavioral economics has grown up since the 1960s to try and examine trends in choice (Kahneman and Tversky 2000), but has focused little attention on cross-cultural perspectives. An approach similar to Gary Becker’s mentioned earlier was that put forward in an interesting treatment of economics in an evolutionary context by Michael Rothschild (1990), titled *Bionomics*. The approach also ignored cross-cultural information, but borrowed its title and perspective from the group of studies in biology that today is called ecology.

Evolutionary Role and Effects of The Market

How can we characterize the market then? The market responds to all the influences placed upon it, each buy or sell, each pronouncement by experts or charlatans, each new system makes it different, as it is the sum total of the desires, frustrations and hopes of all who watch it. Better than any other example, the market demonstrates man’s image of divinity, like an angry god it withholds its bounty, or gives rewards. Its actions are seldom predictable, rather they are chaotic as Mandelbrot (1997) has shown, and are, like a distant but all powerful immortal, they are mysterious and unexplainable.

One would expect that the market would function as a psychogenic device as is found in other species, defined recently as Evolutionary Swarm Design, displaying a swarm “intelligence” as Christian Jacob, of the University of Calgary, has put it (Lacombe 2006). If the market is “intelligent” in this fashion, we simply have not been able to consider all the factors that define it as such, since its effects seem quite illogical in many regards. But this depends on what we think the function of the market really entails (Somette 2003).

It is true that human institutions often have carried out functions for which they are not specifically defined. For example, in the case of Tsembaga Maring warfare and pig rearing (Rappaport 1967), or where the outcome is actually counter to that intended, as in the Montagnais-Naskapi divination regarding hunting (Moore 1957). In the former case, warfare and ritual peace explain the cycle of pig raising, which leads to over-grazing and conflict within groups, and then pig slaughter and feasting, which justifies alliances in warfare. War and ritual take place around the growth of

the pig herds, but warfare does not have a significant role in either population changes or in land available to any group for pig raising but limits overgrazing. In the latter case, among the Montagnais-Naskapi, divination is practiced using shoulder blade augury where a shoulder blade of a caribou is heated and the cracks and burn marks interpreted as a representation of the hunting territory. Hunting is then carried out where this interpretation indicates game will be rather than on where experienced hunters might find game through their knowledge of animal behavior and the seasonal resources of forage and water. The result is that there is no over-hunting and divination thus preserves scarce resources for future needs. Here the religious authority says in essence, “Your hunt will not succeed for the future good of the clan.” Since today we are divorced from the ‘eternal return,’ the cycle of renewal of the seasons, we have no one, not even Alan Greenspan, who can say to the brokers and Tett’s credit inventors, “stop the exuberance, we cannot take on more risk without danger!” Thus, we have the 1987 and 2000–2001 stock falls. In a way we have taken on the strategy of the traditional society’s idea of “limited good,” (Foster 1965) and in so doing, attempt to cushion ourselves from the inevitable fall by spreading the risk, hoping that the damage will be limited and manageable, since we are incapable of understanding ourselves and controlling it.

We do have regulation, however, but it is seen by some investors as an impediment to extracting profit by manipulating risk. Hedging, futures and options are all derived from the common human desire to provide alternative resources should central investment fail (crops, herds, etc.). Where these strategies depart is when the probability of return (gambling) is so low that losses must be transferred from the common store (note the government bailout of LTCM investors).

More striking is the conclusion reached by Harvard University’s Ricardo Hausmann and Federico Sturzenegger, a visiting Professor there concerning the US deficit (*Financial Times*, 8 December 2005). They invoke the idea of “Dark Matter” from Astrophysics to make the US deficit disappear. The existence and movement of this “Dark Matter” of value is very much like the concept of Mana. While acknowledging that there have been nearly three decades of balance of trade deficits in the US economy, they deny the existence of any imbalance of value. They cite Bureau of Economic Analysis figures finding that in 1980, with \$365 billion in foreign assets in the USA, there was a net return of 30 billion, but between 1980 and 2004 the US developed a current account deficit of \$4,500 billion. They claim that the return in 2004 on US foreign assets is still 30 billion resulting in \$4,500 billion in “free” spending. Such accounting slight of hand has been used with disastrous effects in the real estate industry by assessors, producing inflated values for housing. This pretense can only hold as long as the “investors” regard US equities as possessing these values. However, as I show in my book (Caldararo 2004), the structure of these payments over time reflects a similar trend of wealth transfer as that accorded to Italy during the period after the Second Punic War in Rome’s history and could be considered tribute (Marsh 1927). The way that the Japan “carrying trade” in Yen has worked over the past several years with estimates of several trillion dollars in loans outstanding is also a part of this process. Some might argue that the archetypal “Mrs. Watanabe” as a retail investor makes profits by this, but it is a question of “profits” vs “consumption” and goods. Japanese households pay a transaction premium to invest abroad and as long as their investment is not

recalled in Yen its value may grow but these households are not consuming goods with their investment (profits), Americans are consuming by using the credit the Japanese provide. In late 2008 as the Yen rises the carrying trade is unwinding forcing more pressure on credit and liquidity. Still there will be no substantial economic collapse so long as US military might remains functional as the only world power and as long as safety and stability remain sufficient for trade to continue as Marshall (1923) noted in his unfavorable comparison of Rome and England in his time. Bubbles are solid so long as the crowd follows the image of value, and warnings of “irrational exuberance,” cannot affect belief as long as it holds the awe of the beholder. Why the present credit system works and has not yet produced substantial inflation is due to a new kind of agency, since the old theory of money in its value determined by its quantity, no longer applies. Boulding (1966) discusses this problem in terms of the quality of money and the desire to hold cash or equivalents. Money is the “veil” of the real operations of an economy, but representations of money are products, consumer products themselves, and the desire to hold them varies by the nature of the cultural context at a particular time, like the stone wheels of Yap (Caldararo 2005). People may hoard dollar bills, gold coins, derivative contracts, etc. for reasons of prestige or other psychological compensations.

Within the USA bubbles could continue to build and collapse as we have recently seen in the market corrections of 1987 and 2000 and presently. These are essentially wealth transfers, mainly from sources like pension funds. Perhaps this is also because we have another element engaged in the desire to purchase these instruments of financial faith, what Douglas and Isherwood (1978) described as purchases which are symbolic avenues compounding and providing complexity to identity.

Often when the “fundamentals” concerning production, consumer behavior and management indicate a stock should go up, it does not, and when all data provide a picture of disaster and the stock should fall, the market surprises. All the desires of consumers, managers, investors, financial brokers and analysts combine to produce what Kroeber (1917) defined as the sum total of human thought and action, the “superorganic” (different from that first proposed by Herbert Spencer). Man has created a god, who circles the globe treating man’s billions of needs, a god not in man’s physical image, but in the visage of his primitive psychology and peculiar neural calculus formulated, as Leslie White (1947) proposed, within the experience of history of the human mind. The failures of financial analysts and economists to predict the market (Coggin 2006) and the comments of Graham Copley the HSBC global head of equity research, that analysts are “worthless” (FT 6/19/06), is no different than the failure of shaman, and priests to intercede with a deity to produce the desires of their worshipers (Eliade 1964). This includes the exposes of insider trading and conflicts of interest that analysts were involved in, since shaman often were acting in their self-interest as well, and brokers need to buy and sell for clients to make a living.

There is always present in the ideology of a religion an explanation for failure, e.g., a more powerful shaman is at work against the wishes of the client, or evil spirits or devils frustrate the priest’s efforts, or the client does not pray enough or believe enough. As with the stockbroker or analyst, so with the shaman, one “needs to be in it for the long haul,” which is similar to, “one needs to believe, no matter what the outcome,” as Jung (1954) points out with regard to Job’s predicament, “...it

is the behavior of an unconscious being, who cannot be judged morally. Yahweh is a phenomenon and, as Job says, ‘not a man.’”

During the late nineteenth and early twentieth centuries there was considerable debate over the difference in mentality and thought between modern and primitive human (those living in pre-modern societies) (Evans-Pritchard 1965). Examples of the illogic of modern and premodern thought patterns as described by Pareto (1917–1919), Radin (1937) and Malinowski (1916), vs the dichotomy of modern vs primitive and as described by theorists like Freud (1928) and Levi-Bruhl (1923) developed considerable complexity on the subject. Wagner (1975) argued that modern advertising was producing a magical way of thinking in modern humans. In general, we look at population, consumption and energy in very similar ways to the concept of Mana. These are diffuse elements to existence in most discussions in the public media where they appear to be uncontrollable. It seems clear, therefore, that modern and premodern ways of thinking and acting in an economic sense do not differ substantially, but involve the availability of different kinds of information.

We should examine specific elements of our current financial paradigm in the same way we analyze those of non-Western, non-industrial societies. But modern financial theory is based on mathematics. The essential nature of this theory holds that mathematics (and the models it produces) reflects objective reality. Anthropologist Leslie White demonstrated how mathematics is shaped by culture and its interpretation and results are viewed in the context of cultural institutions, as in Euclidian geometry, Ptolemaic astronomy, Newtonian physics and Einstein’s relativity. Each interpretation of nature was based on cultural assumptions and institutional needs. While mathematics is a part of culture, it is the human mind that it reflects in White’s cross-cultural and historical view (White 1947; Ascher 1991). Today, most economic theory and policy is based on modeling, the models are based on mathematics and serve the needs of our economic institutions. The fact that we are dumbfounded by the unpredictable nature of the market, especially the formation and duration of “bubbles,” only reflects the patterns of our culture.

This conception might be viewed from a different perspective, that of a change in paradigm. For example, Baric (1964), using Armstrong’s (1928) original data from Rossel Island, argues that, “...despite great activity in the economic sphere, aggregate capital is largely maintained at the same level although individuals may become wealthy.” Here is reflected the idea described by George Foster (1965) in, “Peasant society and the image of limited good.” But in the present usage, one might say, in terms of mentality as described by Levy-Bruhl (1923), a primitive or traditional conception, somewhat akin in physics to the idea of the conservation of matter, it cannot be created anew or destroyed in the balance of the universe, only transformed back and forth into energy. In the new view of Western modernity (in physics and finance), one might say that from Dark Matter we get both the mysterious creation of multiple worlds and universes as well as new wealth.

Productivity and A Standard of Living

In Gillian Tett’s interview with Robert Merton (in the Financial Times, May 21st 2007), we find some insights to the problem of performance in the market. In a very similar

exposition of Nassim Nicholas Taleb's life since the publication of his book, *The Black Swan* we are subject to some surprising comments. Just as Taleb's performance as a hedge fund manager has been spotty at best, Prof Merton made the claim, following the LTCM collapse, that derivatives protect us from crashes, a claim which seems remarkable. It would be like Lord Treasurer Robert Hartley, the inventor of the South Seas Bubble in 1711, asserting that his scheme had protected England from economic panics in 1720. Or John Law, who produced the great French economic bubble and collapse in 1719–1720 by securitizing French debt in a startlingly similar pattern to that of the current Subprime American debacle (Macdonald 2008), arguing the same.

Prof. Merton's view of a world of controllable risk by mathematics in the face of his admission that in the case of LTCM people did not behave in ways predicted by his model, based on his model's assumptions, that is, that people act rationally, is unconvincing. Instead of acting as the model predicted, people behaved, first as a group under conversion, and then as a herd in panic. Canetti described such patterns in 1962 and a number of scholars from Kronratieff and Schumpeter to Stomette have attempted to develop an understanding of such panics and their role in economics. On the other hand we might expect that, as James R. Beniger (1986) argued over the "crisis of control" of production and labor in the 1870s and 1880s in the wake of the Industrial Revolution, we will find increasing pressure to control the production of credit. Just as the panic of 1878 was a product of this lack of control, and was a special concern of Schumpeter (1939), so our current crisis with liquidity will also result in innovations of control.

Recent actions of the Fed and EU central banks buying or accepting distressed debt as collateral from banks without producing the stigma for specific institutions of applying for support, parallels traditional societies' means of maintaining authority in times of stress. Usually in traditional society, the cause of failure is usually expressed in terms of supernatural intervention, and the parallels with forms of magic and sorcery are obvious. Credit was created that has turned "bad," though the people responsible for this "bad" credit are not punished, official institutions will act to "purify" such credit and make it "good." The essential element here is to produce sufficient signs of authority and consensus and demonstrate it through ritual to enforce and entice the general public to accept the terms and consequences of these acts. The slow and partial release of the subprime "infection" has so far contained panic within the financial community, whether it spreads from there will be determined by the recognition of the public of the symbols utilized to communicate the correction, and their perception that they are not being victimized in the process.

I think that Mary Douglas (1966, 1985), in her works on risk in various cultures, has shown how risk functions varies in different cultures at different times. For Prof. Merton (Tett 2007) to say derivatives are like anti-lock brakes and if people drive faster because they have them we should do not blame the brakes, is preposterous, because is that not the problem? If you reduce the probability of adverse events in people's minds, will they not engage in more risky behavior? Many products exist which allow people to feel better and ignore the consequences of their behavior temporarily, like heroin, but we do realize that eventually reality does intercede. It is an apt choice of words to refer to Prof. Merton's enthusiasm for his idea as "evangelical zeal," since we should recall John Maynard Keynes' (1921) caution that we should not mistake what is probable for either knowledge or reality.

As in 1929, a slow collapse of financial institutions and products is taking place in the context of an economy that is seemingly functioning with solid fundamentals. Of course we wish to know what must be done and at present we find that the central banks, both in Europe in the USA, are providing easy credit to try to ease the illiquidity which is seen as the major problem. However, while establishing the image of stability, essentially the atmosphere that no long recession or depression is at hand, the heads of these institutions are incapable of dealing with the underlying problem that is driving the present spread of uncertainty throughout the economic system. Here we see the advance of the destruction of faith in relationships, at its core is the idea that things have gotten out of hand, but what is worse is the erosion of social credit (foundation of belief in common action, demonstrated in trust and support for social institutions, cooperation, etc.) that has been undermined and is what supports the system in bad times. The agent of this process is moral hazard, the actions of some have produced an environment where the populace of consumers and investors feel taken advantage of and in this milieu we cannot expect social credit to sustain the financial system. A creeping decay has set in, the evaporation of *Mana* is afoot and only efforts to restore confidence in fairness can reduce its loss. After Enron this was accomplished by the investigations and arrests of “those responsible.” But today there is no target for such expression and as a result the unfolding process is taking hold. This is especially true as a general feeling of distrust is apparent expressed by the public in the current Presidential campaign. It is difficult, however, for it to be focused as some of the central investment bankers from Goldman Sachs are leading the Federal government’s actions and reports from the lawsuits over both Bear Stearns and Lehman Brothers contain charges of unfair actions by these individuals.

Actions by the American Federal Reserve to save banks and financial institutions that have brought about the current credit crisis are aimed at achieving stability to grant everyone some degree of financial security. However, past actions as in the Fed bailout of the Franklin National Bank in 1974, the Continental Illinois National Bank and Trust Company of Chicago 1984 and the Savings and Loan Failures that followed have all tended to create an environment of irresponsibility. As John Authers describes in his 22 March 2008 FT article, the final removal of all restraints on banking, investment and insurance protections ended with the destruction of the Depression Era Glass-Steagall laws in 1998. As noted above, the Nixon Administration paved the way with actions directed to the SEC that overturned rules (instituted after the Depression) that made trading futures and similar financial actions illegal. Authers associates the elimination of Glass-Steagall with the creation of huge financial institutions of the Citibank type. One might argue that these globalized megacorporations did not make the financial world safer from risk, but instead insured that crises would be global (the “too big to fail” argument). I discuss the question of size and stability of institutions and organizations in another publication (Caldararo 2004). Authers does not fit the American situation into the global financial economy. The crisis is shared by world markets due in part to the investments derived from the Japanese carrying trade and use of other currencies in investments in Eastern Europe and elsewhere. The present action by the Fed has resulted in a “tax” on American consumers by the volatility of the dollar and gas and by heaping up the subprime debt and other new instruments, that are of no market

value, onto the taxpayer. What is needed is an internationalization of this debt. The idea that America can solve this problem alone or without substantial international support is naive. Data on mortgages and foreclosures indicate that many people are already stretched beyond their ability to pay. Many have loans with interest-only payments with huge additional debts in credit cards and car loans. To think that those who have purchased these loans will absorb losses is unrealistic, as many of the entities involved are pension funds that have invested to cover existing and coming liabilities. Again, if they did take these losses then it would amount to a wealth transfer. However, international cooperation in regulation is necessary to prevent future events. It is unlikely these would be successful any longer than those produced in the Great Depression were as they attempt to limit a mechanism for wealth transfer that seems well established in the cultural core in many human societies. For the present, the illiquid instruments that cannot be marked to market and non-performing loans world wide should be taken over by the IMF and the servicing debt paid for by a tax on international financial transactions that should also pay to support investigation and prosecution of those who have profited from this crisis and to create an international Interpol like the SEC to deal with international cross-border financial fraud. The behavior of the banks after given protection and credit by the Fed (and the EU authorities) has been to profit from it, propose to pay it out to shareholders or to buy other banks rather than to lend to revive the economy. This can only further undermine conditions.

The uniformitarian perspective outlined here for economics should be seen in the context of other discussions, like Toynbee's on modernity and that recently produced by Maier (2008) in assessing the nature of empire and American political and social behavior, both domestic and international. The essential question now is, if banks will not lend and the government cannot make them lend will the global economy settle into depression because it rejects the prospect of governmental agencies originating loans? If all the banking players feel the contamination of each other can governmental replacement of private lending (uncontaminated Mana?) break the paranoia of private finance? It seems unlikely that a permanent solution could be arrived at even with ritual constraints as I have described in traditional societies. It is possible that these crises are ritual components of modern society as organized around the market mechanism and its traditions. They may be channeled or restrained but a transformation may be necessary and possible as Mead (1964) describes for the Manus and their customary economic mania.

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