

## **Human freedom and finance. A critical picture of the economy of gambling.**

I would like to formulate a concept of money and *debt* which is consistent with the assumption according to which our ethical duty is to maximize the satisfaction of the greatest number of people. To this end, I outline the intersubjective dynamics in which we need to apply such a rule and I do that using Hegel's explanation of how a subject finds her self-realization.

According to Hegel, two self-consciousnesses – or, in our case, two economic agents – can achieve their highest self-realization only by reciprocal recognition. That is to say, by understanding that they need to recognize and maximize the other's satisfaction in order to maximize their own bargaining power and ask something in exchange. Hegel's dialectics ends up coinciding with the existential conditions of market.

Starting from such a basic structure the concept of money arises. Money cannot be simply defined as a symbolic commodity which takes the place of another one as a reserve of value when barter is unfeasible. It has to be defined as a manifestation of bargaining power which a community grants to an individual to recognize its obligation of an act of reciprocity to her. Such a simple definition bears essential implications about the legitimate utilization of money, given the end of general well-being maximization.

The structure outlined, founded on reciprocal reactions and bargaining power, in fact, implies two other crucial features:

1 – The first one reminds us to what Keynes exposes as a philosopher of knowledge: the fallacy of composition. The quality of a football team, for instance, cannot be deducted from a sum of the quality of each single player. It can only be deducted from a prediction and estimate of the probable interactions among the players. Also, in absence of a preceding agreement among all the players, each single player cannot predict the outcome of any maneuver based only on the others' single features. She needs to know the exact configuration of interactions. Within an economic system, this gives rise to danger of complete uncertainty and impossibility of any risk assessment by the single agent, unless this agent has a conventional judgment to rely upon. Sometimes such a convention is arbitrarily based on past perceptions and the awareness of a pragmatically suitable conventional judgment has to be created by mean of a public coordination of reciprocal actions.

2 – The second one, as a direct implication of Hegel's dialectics, recalls the fact that if reciprocal bargaining power is at the basis of market, therefore each reduction of the incentives to improve or maintain a certain level of bargaining power brings to a reduction of reciprocal utility. To have too much power in comparison with the other, or to have low expectation about our economic neighbor's power to offer something in exchange is a disincentive to improve one's social utility. Hegel makes an interesting allegory of this in his "lord and bondsman" passages. Hence the necessity to assess the sustainability of monopolies, oligopolies, cartels, inequality, asymmetric information, demand reduction. According to the fallacy of composition, then, nothing can ensure that a lowering of reciprocal utility in a certain node of the social web does not bring about a total crisis of mutual trust, if the order and the composition of the interactions are in a specific way. All this is connected to the studies of authors like Stiglitz and Greenwald, Kalecki, Minsky and the post-Keynesians. But we need to frame their empirical or particular insights into a general existential dynamics if we want a universal and cogent norm of action.

Given these two features inherent to the interactions among bargaining powers, the fallacy of composition and the dysfunctional character of power inequality, a necessity arises. The allocation of money, as manifestation of bargaining power which a community grants to an individual, needs to be directed and disciplined by an agent which owns the following features:

- 1) Ability to use instruments such as a consistent set of public decrees, norms and enforcements in order to distribute an amount of power in a certain configuration so that it creates among the single agents a new “conventional judgment”. This is the case of, for instance, wealth redistribution or public investment in order to create aggregate demand and good collective expectations. I call this ability “collective coordination” and it clearly cannot be obtained by a simple sum of isolated agents wills.
- 2) Time and resources to perform the assessment of how to distribute and to enforce the norms. This cannot be undertaken by an economic agent which does not have such a task as its unique duty.
- 3) Tendency to be impartial, since the task of calculating a suitable organic allocation of bargaining power may involve decisions which look undesirable to some agents, in the short run or in the long run.

The assumed ethical end of everybody’s well-being maximization and the existential structure of an exchange economy command, in other words, a public authority actively attempting to optimize reciprocal expectations and bargaining power. The Austro-Hungarian economic historian Karl Polanyi conceived such an authority not as a being detached from the single agents but as a form of decision-making which involves full democratic participation and transparency. Consistently with the presence of fallacy of composition and the unsuitable character of power inequality, Polanyi intended even the idea of “human freedom” as coincident with taking responsibility of a cooperative decision. A decision which take into account the necessity of organically assessing and coordinate the consequences of a distribution of bargaining power. From this point of view, an institution which approaches the three features illustrated above – enforcement power, resources to freely work and impartiality - appears to be a democratic elected parliament functioning with the highest representativeness and the highest degree of collaboration and interaction with citizen – through periodical evaluations, assemblies, referendum.

We have come to the conclusion that in order to fix the excesses of power inequality and to create a sound conventional judgment in the economic agent to defuse the danger of uncertainty we cannot simply rely on the isolated decision of a single agent. Because of the single agent legitimate ignorance of the effects of the fallacy of composition and because of its possible legitimate disinterest in the problem of inequality, a pure single decision may rely on wrong conventional judgments, it assumes the form of a bet, of a wager which can legitimately focus only on its own advantage. We are going to see how the structure of today’s financial institutions can be described as a wager-machine which leaves no room for “human freedom” as intended by Karl Polanyi, that is to say as the capacity to take awareness and responsibility for the organic consequences of our actions.

Let’s introduce the concept of *debt* in view of what we have concluded so far. If money has to be read as a manifestation of bargaining power which a community grants to an individual to recognize its obligation of an act of reciprocity, debt can be defined as an *anticipation* of this manifestation of power granted by society. An anticipation which reveals itself as necessary, given

the physiological discrepancies in time of production and capacity development present among individual producer. But if we have asserted that bargaining power distribution has to be coordinated in an organic way in order to maximize reciprocal power and expectations, also debt and credit should not assume the nature of a simple commodity to be traded according to what we have called an individual bet deliberated according to a private assessment of uncertainty, risk and benefits. To make a trivial example, an individual lender who assesses her personal risk can be indifferent about the possible technical and occupational advance which an investment on a start-up may bring to the entire society and very concerned about a possible personal loss of, say, sixty thousand euros. A publicly run institution can instead decide that a possible 'waste' of that sum – whose risk is spread on millions of taxpayers or defused by using newly created 'fiat money' - is indifferent or negligible in comparison with the possible advantage of a successful investment. The single investor would calculate her bet according to uncertainty, the "collective" one may be aware of its setting up a decree which will create the aggregate demand likely to support such an investment – it would be aware of its creating a new "conventional expectation" among economic agents. Also, a private investor may require high interest rate because of her level of liquidity preference or because the forces of supply and demand of credit-commodity are in her favor. This in fact directs a high amount of money toward agents who are usually already powerful enough, which would be arbitrary in comparison with the rule of equalizing reciprocal bargaining power. A collective granting of not commodified credit would leave to the quoted democratic decision the discretion about how to safeguard or reward the savings of who would act as an investor in debt.

But let's see how the *entire* set of financial instruments in fact corresponds to a system of betting tools where money and credit are individually traded.

To begin with the 'bottom', we have big and small savers and investors. They represent workers and entrepreneurs. The legitimate interest of these agents is to increase individual income within a frame where not necessarily there is cooperation among them. Thus, they try to influence the others' desires and expectations of the surrounding subject while knowing that these latter are doing the same thing with them. They cannot know the others' reaction in advance and they cannot know what the others think their own reaction will be, therefore any investment of money or time has a certain degree of bet. Such a condition can be compared to what is studied in the *game theory*, using some of the most famous examples as analogies of the financial logical structures.

The game called "stag hunt", for instance, describes two men in a hunt who can choose to try to catch a stag or a hare. Their decision will take place without knowing the other's decision and it has to take into account that to catch the stag it is necessary that both of them collaborate to pursue it as objective, while one man is sufficient to reach the hare. The hare, though, is a less satisfying prize in comparison with the stag, which is a much better meal even if divided between two cooperating hunters. The case in which they find themselves cooperating to hunt the stag coincides with the case in which a series of entrepreneurs takes the hazard of producing a product which will be profitable only if another series of entrepreneurs and consumers makes complementary decisions. For example, an entrepreneur who decides to invest in the production of new generation fuselages bets of the increase of demand of tools by air companies and travellers. There would be a reciprocal gain, but it would be undermined in the case that air companies decide not to invest in innovation, keeping a low profile. The possible gain in fact turns into a contagious corporate crisis if the fuselages producers attempt the hazard to follow the "stag", while it turns into the maintenance of the status quo if all actors involved decide to keep the production steady, following the "hare". In

the first level of the financial system, therefore, investors allocate capital according to the logic of individual bet which not necessarily maximize everybody's profit.

But where will we find anything different? In the middle step of the pyramid of financial system we find the private banking system, the stock exchange and all private institutions part of what we call "shadow banking system". By means of these institutions all financial instruments work in order to allocate new credit and the capital coming from the underlying savers.

I would like to allegorically synthesize the procedural structure of these instruments, abstracting from some technical and institutional reasons why they work in this way – for instance, I will not recall capital requirements or the fact that any fund or institution needs Central Bank liquidity to settle any transaction to other commercial partners. I will list three sets of financial instruments and I will compare the logic used by the agents involved to three games studied in the game theory.

The bargaining power which is money and credit is objectified and traded as commodities according to the following logics, which alter the criteria of their distribution in comparison with the organic end we have recalled.

In the first set we have the game of the stag hunt again. Within this set we can insert all investments decisions which presuppose a bet about how much other economic agents invest in complementary projects or instruments. Projects or instruments which corresponds to consumption and investment decisions by different social groups which help a purchased title to bring profit by cash flow. Here we find investments in shares and other risk capital, in bonds and loan of other kinds – by the side of both who issues them and who purchases them. Here we also find speculative borrowers in a Minsky sense, that is to say agents who are capable of making interest payments but do not have sufficient cash flows to make principal payment. So when their debt is due, they will have to refinance the loan or will have to raise capital by some other means. But in this latter behavior we also find another game overlapped, the so called centipede game.

This is our second set: in the centipede game we have two or more players who alternate themselves in choosing whether to take a certain sum of money – and to conclude the game in this way – or to pass the choice to the next player. At each passage, though, the sum increases and the strategy maximizing the prize is to predict when the next player choose to stop the game, and to anticipate her. Disengaging the logic of this game from its empirical details, we can put within this set all the situations in which a subject bets on her profiting over a certain asset whose value for her will only depend on how the other players will estimate the value of the same asset in the future. These players, obviously, are influence by the first player and by their expectations about the others' actions. Here we find all investments in shares and bonds and other assets aimed at realizing capital gains – that is to say the profit which results from a sale of a these assets where the sale price exceeds the purchase price. We also find all purchases aimed at following Ponzi schemes, the purchase of an asset in the hope that it appreciates in value sufficiently to make both interest and principal payments as well as profit. This is the obvious case of real estate bubble but also, in a reverse sense, of short selling.

In the third set we find the game of simple bilateral wager, which allocate a certain amount of economic profit to one of the two players in the case that something happens or not. Here we find all the typologies of derivatives, on debt as well as on other assets, which are agreements on fixed

reciprocal flow of money which favor one player or the other according of the prices or interest rates change.

It is worth noticing three important things:

- 1) In all these games – and in all games in general – Nash equilibrium (that is the outcome of a game where no player has an incentive to deviate from his chosen strategy after considering an opponent's choice) is not necessarily Pareto optimal. In other words, even after discovering the other agents' choice, there is no necessary mechanism which would make all of them converge upon a welfare maximizing configuration. In the game of stag hunt, for instance, if everybody starts pursuing the hare it is likely that everybody keeps doing that.
- 2) In finance, we have that not only within each game individuals make betting decisions which may rely on wrong conventional judgments and which can legitimately focus only on their own advantage. We also have that individuals can choose *what* game to play and on which conditions, and they still may make betting decisions which rely on wrong conventional judgments or which only take care of their interest *perchè giochi sono valutati isolatamente tra loro*. For instance, capital flights from real economy toward financial circuits can correspond to the fact that the centipede and the stag hunt game offer more attractive or immediate prizes in those environments. Or also, the polarization of investment toward few big companies may indicate that the game of the stag hunt is considered more reliable or attractive in certain nodes of the economic web (an emblematic case here is financial leverage).
- 3) The effects of the failure of isolated strategies in maximizing collective or also individual payoff can occur within a singular game but also as a result of the overlapping of different games and interactions with preceding reciprocal bargaining power. The paradox of thrift, which states that an increase in autonomous saving leads to a decrease in aggregate demand and thus a decrease in gross output which will in turn lower total saving, is a failure typical of a stag hunt game. So it is a depression caused by an excess of what Keynes calls liquidity preference, the tendency to ask high premium for risky investments. But, on the other hand, the game of housing bubble – which, in analogy with the centipede game, is based on profiting over a certain asset whose value will depend only on how the other players will estimate the value of the same asset in the future – can be brought to an end because houses prices suddenly drops, and this may happen because new aspiring purchasers of houses have to deal with the rise of interest rates, caused by savers and investors finding many more profitable “stag hunt” games for the very reason that there are some winners of the “centipede game” offering those. This is the description of Minsky's cycle of boom and bust in speculative borrowing, which take the economy to a new recession once households trying to buy a house and investors losing in the housing bubble game find themselves blocked by debt and provoke an unpredictable fall in general demand and expectations.

The effects of the games are therefore overlapped and very complex, intertwined with preceding arbitrary asymmetries in bargaining power and also subject to exogenous arbitrary inputs. But the important point here is to remark that these games and therefore their interactions, because of their very nature, need to function by a logic of individual gamble which is an out-and-out oblivion of the fallacy of composition and of the problem of power asymmetries.

This is not at all mitigated by the highest step of the financial system. Today's Central Banks, in fact, in absence of a role in respect to lending decision of underlying credit institutions, limit themselves to determine quantity and cost of money-commodity. They only determine, in other words, some exogenous ingredients of the individual strategies performed below.

We can now conclude with an appeal. We have outlined a concept of money and debt consistent with the existential goal of market: as a manifestation or anticipation of bargaining power which a community grants to an individual to recognize its obligation to her. We have expressed the necessity that such a bargaining power should be allocated or at least coordinated by an authority which thanks to government power and transparent democracy attempts to approach the goal of impartially calculating the organic consequences of interactions. Money and debt, in other words, should stop being simple commodities. Debt, in particular, should stop being a tradable commodity at all, since it is crucial to harmonize everybody's potentialities. Money and debt should be considered only as instruments of social coordination. We have said that the creation of such a social coordination would achieve a real economic freedom because it would coincide with an awareness of the fallacy of composition and with the taking of responsibility for its overcoming. It would appease our dependence on uncertainty and on individual gamble, it would let us leave behind the very logical structure of game theory.

There are many ways in which a public financial system dependent on democratic consensus can be built today with the new technological and cultural tools we have. I think, for instance, of an improvement of distributed consensus typical of crypto-currencies. I think of an application of the Swiss system of direct democracy which they use to set up taxation and to discuss in assemblies about how to use it. Many systems of public finance have worked in the past, for instance in Italy. The point is that a public democratic coordination is always imperfect but it can always be perfectible. When we study game theory, instead, we know that it will always present the same set of logics and nothing can structurally change this.