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WORLD OF BUSINESS SEMINAR

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FOR A RELATIVIST ECONOMICS

by

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A Report by Michel Berry

A brief overview of the session

Economics was founded in reference to production and exchange of essentials. Jean-Marc Oury suggests a theory centered on the development of relations between agents, through which they build their own identity by means of material or immaterial, and merchant or non-merchant exchange. In reference to Defoe's Robinson Crusoe, the economists asserted that trade generated efficiency; in Jean-Marc Oury's opinion, the most significant point is the conditions that lead Crusoe and Friday to cooperate in spite of all the things that drive them apart, and not only what they build together.

The Amis de l'École de Paris du management Association organizes debates and publishes their reviews ;

the ideas remain under the sole responsability of the authors. The School can also publish whatever comment those documents may arouse.

INTRODUCTION by Michel BERRY

An uncommon approach to Economics and Physics

One should first emphasize the works of Jean-Marc Oury who has always followed such uncommon paths: apart from his absorbing business activities, he has, for the last fifteen years, carried out ambitious reflection in Economics and, more recently, even in Physics.

When a student at the École Normale Supérieure, he was fascinated by the lectures of mathematical econonomics given, at that time, by Jean-Claude Milleron. His entry at the Corps des Mines made him discover the world of business and this gave him a shock: what he was experiencing did not correspond to the model of economy that had fascinated him. This shock and his meeting Claude Riveline, a Professor at the École des Mines de Paris, were at the origin of his reflection aiming at bringing Economics closer to the world of Business.

In his book, *Political Economy of Vigilance* (Calmann Lévy), published in 1983, Jean-Marc Oury points out that the patterns of Classic as well as Marxist economics strive to demonstrate the existence of equilibria, although the business world is based on the exploitation of disequilibria; the origins of value are thus not only labour and trade, but also vigilance, which is a factor discarded by classical theories.

He then goes deeper into the question of economic agents and publishes an article: *Towards a New Economics of the Enterprise*¹.

His reflection is developped in the context of the "World of Business" seminars, created in 1989. Taking up some of the ideas of Claude Riveline², he brings up the question of what is "soft" and what is "hard" within the field of economy. The Factory Model, which is the basis of classic theories, considers that Matter conveys certainty and Man conveys doubt. However, machines often break down and one should expect delivery times or bugdets seldom to be kept. If they are, it can only be achieved because of the extreme determination of the agents. The source of this determination is the eargerness showed by the agents to preserve their identity, an identity which is moulded by the vision others cast, as well as by the instruments this vision is filtered through³.

Next, Jean-Marc Oury considers a new economic theory which would abandon the idea that agents trade commodities which have an objective value⁴. Financial products neither have the objectivity nor the stability of the objects described in classical theories: for an agent, the value of a share depends of his own conception of the future monetary income it represents. This conception is relative (it differs from an agent to another) and unstable. When an agent trades a financial product against cash, he can verify if he was right in his representation; he is then subjected to a principle of reality. Thus, the agents live in a universe of representations which are periodically, but only periodically, sanctioned by facts. It is no longer necessary to postulate the existence of a universe of commodities: everyone has his own vision of an economic universe according to his identity and his means of interaction, but the shapes of

¹ June 1988 in *To manage and conceiv*, (in collaboration with Claire Hocquard).

² Claude Riveline, An Essay on the Hard and the Soft, The Yellow and the Red, July 1985.

³ Session N° 2 *Vigilance and identity* (C. Hocquard and J.- M. Oury). See also *The Model of the Building Site*. C. Hocquard, *To manage and conceive* n° 17 December 1989.

World of Business Seminar, session N° 14 Economy without Commodities (J.-M. Oury).

this universe, considered from the point of view of each individual, do not tie up.

He then surprisingly extended this theory to physics with the following idea: can we rightfully postulate that particles and forces exist as such in the Universe? Man has always been an anthropomorphist: before Copernicus, the Earth was supposed to be the center of the Universe; before Einstein, the Universe had only three dimensions... Jean-Marc Oury points out that, still nowadays, the place we give to objects, in the nomenclature of forces and particles, is independent from the observer's point of view. On the contrary, he suggests to consider that this classification merely reflects the different shapes that space-time can take according to each individual.

The results he obtains seem amazing. Not only well known laws of physics are found as geometrical necessities, but the contradiction between quantic mechanics and general relativity meets a solution. Although this work is still under the process of scientific validation, the originality of this approach already aroused the interest of renown mathematicians and physicists. It was accepted that Classic Economics was ratified by Classic Physics, since both strove to establish the domination of the objects. Jean-Marc Oury's new economics leaves objects aside, so does his physics.

A few months ago, I asked Jean-Marc Oury to come back to economics and to deliver a lecture on a topic which title I suggested to be "For a New Relativist Economics". The time has come...

LECTURE by Jean-Marc OURY

The turning point of Economics

During the golden years of the post-war period, it was believed that, thanks to Economics, we would benefit of tools allowing reason to master business. Then, after the deception due to the series of crisis during the seventies, the economists began to focus on what was really happening within the entreprise: such were the founding works of Simon, of Liebenstein on the *X- efficiency*, the reflection of March on the limits of the functions of preferences, Coase's and Williamson's works on the origins of the efficiency of the firm etc...

However, following the example of the naturalists of the XVII and XIII century, the economists accumulate observations but do not link them to a new paradigm. In fact, these observations are considered as discrepancies in the traditional paradigm: in the *X-efficiency*, it is said that, when confronted to the difficulty to define functions of production, one must introduce an additional variable: effort; the studies on *satisfacing* rely on the idea that agents, because of lack of time and limited cognitive capacities, cling to the first choices that satisfy them, and are thus prevented to reach optimal decisions (the notion of optimum is referred to, while contested at the same time).

I will now discard the idea of a discrepancy in a theoretical situation, and propose a new paradigm based on the notion of relation which opens the way to a relativist economics.

Of Efficiency

Everyone knows the famous reference to Defoe's Robinson Crusoe used by the economists: once on his island Crusoe meets Friday and, between the two of them, efficiency arouses through trade. The disadvantage of this presentation is that it does not take into account

Crusoe's efforts to look for other human beings on his island, nor what both men must do to establish an exchange once they have met. In the economy I propose, the important factors are the efforts of men to establish the relations they develop: they must overcome the impediments that hinder trade, namely space, time, hazards and the difference of their identities. I thus propose to consider as essential in Crusoe and Friday's attitude, not their collaboration once it has been established, but their striving efforts to meet, communicate and work on a common project.

According to Pareto, a situation is inefficient when there is a better situation for the whole of the agents, but this means that the functions of preferences can be defined a priori. I would say that a situation is inefficient, if the relations that can exist between men are not established. This is a local definition according to which, considering everything at the same level, if supplementary relations can be established, we can trust the agents to gain the best from it.

The hustle and bustle of commodities

Throughout history, economists strove to accumulate observations and to draw a chart of the economy, just as Michel Foucault points it out in *Words and Objects*: it is the Universe outlined by the Classics once they had understood that richness was not gold, contrary to what the Spanish may have thought at the time of the conquistadores. By doing so, and although they did not intend to, the economists began to draw a universe of commodities.

During the XIX century, the notion of time was introduced into economics, as well as in many other sciences. The economists tried to find what was the driving force of the evolution of these charts of objects, and thus the concept of labour value was introduced. It makes us think of Smith and Ricardo. More recently, with the use of marginalist theories, an attempt was made to outline the shapes of evolution: as it was clear that the study of the evolution of the global chart caused problems, it was thought that shapes could be outlined locally. However, the economic revolution of the seventies and eighties showed that even these local shapes could not be drawn with enough accuracy.

Economics was thus built as if the economic universe was the Tower of Babel, where men worked at the same time and in the same place to achieve a one and only task of accumulation. I suggest a radically different conception: the commodities of the tower of Babel are nothing but myths; their universe is nothing but a hustle and bustle and only relations between men define the connections between objects, and this is true for production and consommation as well as for trade.

First of all, there is no such thing as a function of production. Most of the objects we use are made of assembled elements and production often means negociation: one must learn to subcontract, buy parts, contract with external research units etc... Conversely, companies which only deal in sales know they have to produce sales: when salesmen are sent on the field, there is no other means of evaluation than counting the contacts they made during the day, the rates of transformation into firm orders, the rates of cancellation of orders etc... A salesman works with the sales "object", just like a foreman works with his production "object". Thus, nothing in production is "hard".

The worst is still to come. Nowadays, financial transactions represent at least a hundred times more, in volume, than commercial transactions. However, these can not be interpreted in terms of agents' utilities or preferences: there is no preference, a priori, for a share in a stock company, an option on the Deutsch Mark or a three year interest rate. The main part of real transactions is out of the reach of traditional theories. This concurs with the comments J. March made nearly fifteen years ago: it is impossible to rely on a prior existence of relations

of preferences because agents keep building their preferences and have them evolve; they play with them and even have strategies for them; economics will not overcome its own difficulties until it will be fully understood how functions of preference are handled.

Here is an image to summarize this critic. Let us suppose that, during the sixties, a Martian had landed on earth and had proposed to men today's technologies at today's prices. According to the traditional theory, he would have brought happiness to all, since he would have supplied more commodities of better quality. This, however, would have destroyed all the production links of car factories, computer factories etc... and would have caused social chaos as a result of the desorganization of relations within society. In fact, this is more or less what happened when Third World countries were provided with more sophisticated products and cheaper food: material fortune brought in relativist misfortune, for it destroyed traditional relations.

Tools for a relativist approach

All this led me to seek new concepts to build an approach that would place the relations between agents at the core of the economy. For that purpose, I first would like to give a few definitions:

- I will call *Economic relation*, a relation which can lead to an observable decision; the field of the economic thus belongs to the observable.
- I will call *Economic identity* of an individual the representation he builds of his economic relations with others.

Let us precise how this identity is built. We all have habits: we buy the newspaper in the morning, we determine a budget for food and for vacation. In brief, far from constantly optimizing our behaviour, we live among sedentarities. In the business world as well, management has to cope with more sedentary- type constraints than optimizing attitudes: if a workshop was striving to constantly increase its production day after day, it would create such variations in production that they would prevent a rational organization upstream as well as downstream. In order to regulate production from beginning to end, the level of production of the workshop must be more or less the same every day or every month, depending on the production cycle. The management of a network of salesmen also demands to introduce sedentarities, that is, to impose non optimizing constraints on observable relations (a minimum number of daily appointments, the number of orders per month etc...). This determines the *sedentary components of the identity*.

I will now propose to assert that an agent goes through a *local identity crisis* when one of his sedentary components fails. The production of the workshop is not what was expected, a salesman cannot manage to sell the amount required and his job is at stake. This analysis can also be applied to financial mechanisms: a company which cannot face its financial commitments will go bankrupt even if it shows profits in its books and if its prospect seems brilliant. A financial commitment is a sedentary component, and a company unable to cope with it is in trouble. This does not refer to any pre-existing element in the preferences of the agents: I have no idea what your tastes are, but I know there is a financial commitment which you must face because it is part of the sedentary components of your identity. Many other arguments can be built from this.

I introduced the word *representation* in my definition because, in reality, one agent can never be sure of what the sedentary constraints of the others can be. An individual has to adapt his own behaviour according to the representations he builds of the identities of others.

This sedentary dimension of the identity is not sufficient to describe the behaviors of economic agents, for instance, the behavior of a financier who invests on the stock market.

Another concept is needed in relation to what I will call the nomadic components of the identity. I will call a decision looped on a nomadic component of the identity a decision in which this component is represented as reverting to its initial value, and *local increase in* value all the variations of the other components at the moment they loop. Let us consider the case of a decision to invest. If the loop parameter I choose is availability, the moment the investment it is out of use will be the loop time, the local increase of value will be the net actual value: I calculate how much money is left when the investment is out of use and refer this amount to today's value. If the loop parameter I choose is cash flow, the loop time will then be the moment when I recoup the amount of the investment, and the local increase in value will be the availability of the investment after this period of time. The internal rate of return on investment will be the rate of return required for both loop times to match. This formulation allows to understand what is irreductible in different criteria: since the actual net value and the return time both correspond to different loops for a same decision, there is no reason why those two criteria should lead to the same choice. This is a phenomenon well known to professionals but which economic calculation does not give a full account of.

This definition allows to take the opposite view of the underlying idea to the notion of preference: when one refers to preference, one postulates that, among a choice of commodities, an agent knows, a priori, the one he prefers. On the contrary, we consider that the agent can use reasoning to build up his own decision, therefore to build, a posteriori, his own preferences. We are then in the direct line of what J. March wanted, nearly twenty years ago.

Exchange revisited

Let us now imagine a very simple type of economy in which two agents exchange two commodities and let us suppose that the first agent is sedentary for one commodity and nomadic for the other one, and the opposite situation for the second agent. The optimum is reached when each possesses the exact quantity of commodities required for the sedentary component of his identity. Close to this particular point, nearly any rate of exchange can be accepted by both, as long as it contributes to satisfy each of the agent's sedentary component. In other words, there is no possible theory of value when the agents do not have the same attitude towards commodities. There are, in fact, only two main possible theories of value:

- one, in which all the agents are nomadic for all the elements of their identity: this is Pareto's theory;
- the other, in which all the agents are sedentary for all the components of their identity : this is Marx's theory of labour value; one can then understand Marx's difficulties to deal with technical progress in combining it with "extra-increase of value" linked to innovation. There is thus an almost perfect opposition between those two theories of value⁵.

Let us now examine the way several agents interact. If we consider two agents A and B, there are four possible configurations:

- they can provoke a mutual crisis;
- A can put B in a situation of crisis, but B cannot; (blackmail situation)
- B can put A in a situation of crisis, but A cannot; (blackmail situation)
- they cannot provoke a mutual crisis but only gain local increase of value from one another.

Traditional theory deals only with the last case, and, for this reason, considers as normal the

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⁵ To be entirely rigourous, I must say that a theory of value would exist if all the agents were nomadic on a set of commodities and sedentary on another, but the two theories of value would not tie up.

existence of a system of prices. However, as soon as a sedentary component is introduced, the possibility of an equilibrium on a system of prices vanishes. Let us take, for example, the case of non differentiated markets: huge intermediaries in chemicals, petrol, raw material etc... Prices are not stable at all, but, on the contrary, follow a rule of fluctuation, which is logical considering the configurations described above. Everyone knows it is possible, at any time, to start a price or market conflict. A conflict will take place when one of the competitors thinks he has a definite advantage (blackmail situation), or when he has to sell a production capacity (because of his own errors, he absolutely must produce). The normal situation is thus price instability. This situation worsens if others thinks they are in a better situation than him: each one has only access to representations of the identity of others. Relativist approach shows why, as soon as sedentarities exist, market fluctuation becomes the rule and the exception is stability.

Just to mention other examples of analysis, it can be pointed out that trade unions, in their dealings with enterprises, are in a crisis - crisis type relation: employees can put their company in a situation of crisis when they strike, but, at the same time, the loss of salary also puts them in a situation of crisis. A big company often is in a blackmail situation vis a vis subcontractors. Our approach allows to describe many phenomena well known in the world of business.

The construction of identities

Let us now examine how agents build up their identities. When an individual decides to invest, to contract a loan, to choose the capicity of a machine, he creates sedentary components to his own future identity. I propose we call *strategic* all the decisions that have an influence on a future identity. Decisions can then be analysed on two levels: the impact on the actual identity and the impact on the future identity. *Strategy* is thus, for the individual or the enterprise, the construction of his future identity.

As soon as individuals are defined in reference to their relations with one another, and not to their situation vis a vis commodities anymore, the efficiency criterion mentioned above, takes its full meaning: from the moment the economic identity of an individual is based on his economic relations with others, the introduction of new economic relations can create more efficient situations.

Relative currencies

Since we do not know anymore what commodities are, all that can be referred to with precision are the common components of the identity of a certain number of agents. I suggest we call *relative currency* such common component. Tradition in economics is to start with the idea that each agent has his own relation to commodities and that relations between agents are built through the exchange of commodities. On the contrary, I take as a basis the idea that exchange is a consequence of the identity of agents, i. e. the relations which unite them, and that, if there is an exchange abetween them, it is because they find common points to their identities. I speak of *relative currencies* to avoid the word *commodities*.

The most simple case is money in economy. However, it is traditionnally referred to as if it existed only one type, although, in reality, different types of currency are used: in finances, for example, there can be bonds, shares etc...

When a company is quoted on the first market, the number of people who are interested in its shares is more important than if it was quoted on the second market or not quoted at all. This comment introduces a notion of *liquidity*: a currency is all the more liquid when the number

of agents, that react to it, is important. This is linked to the efforts the agents must make to find other agents who react to the same parameters. It is rather easy to exchange shares of a company quoted on the stock market and, on the contrary, very difficult when the company is not quoted. In classic theory, a painting by Picasso is of little use to its owner if he keeps it in a safe. From my point of view, this painting becomes relative currency of high value as a vector of exchange with other connoisseurs.

Each relative currency is a vector of more or less important efforts in order to find other agents liable to have this particular component as part of their identity, which introduces a notion of scale between the relative currencies. In particular, if a relative currency is less liquid than another and less profitable in time, it will not find buyers. These are laws well known of professionnals but which are almost totally discarded in traditional theory: the more liquid a currency is, the more its own growth becomes the the bottom of the profitability of other relative currencies. This is one of the macro-economic bases to the impact of interest rates: a raise on short term interest rates mechanically drains out the flow of the buyers of all the other relative currencies. This is exacty what happened during the recent crisis on art and real estate markets.

A clue to Maurice Allais' enigma

This approach allows to explain Maurice Allais' strange enigma. In his publications, when he was awarded the Nobel Prize, Maurice Allais mentioned that not enough attention had been payed to his recent works linking global demand to the speed of currency circulation. He had postulated in his works that the time that had to be taken into account in macro-economic models, what a relative time during which the rate of interest remains constant; which is in fact pure convention. He had introduced a second notion, the oversight coefficient, by formulating the hypothesis that people forget at the same speed as the rate of interest. The introduction of this coefficient leads to extraordinary correlations which are, according to Maurice Allais "the most beautiful in the History of economic theories".

However, this is rather hard to follow: what is this oversight coefficient and why should it be equal to the rate of interest? On the other hand, if commodities are taken as relative currencies, and if we consider that the prime element is exchange, the fact that currency progresses at the speed of short term rate of interest, implies that the others progress all the less: this effect is comparable to a platform "backing up" when a train is moving forward. All Maurice Allais correlations can then be completely reinterpreted by clarifying the subjacent law of his models: the speed of circulation of currency is an affine function of demand relativized by short term interest rate, and not a function of demand as it is often said.

Shared confidence

The fact that identities are expressed through relative currencies gives weight to everything that goes through currency, since it can be exchanged against all relative currencies. Currency is then a preferential means to allow men to overcome the diversity of their identities. However, one can wonder if the fact that we live in a market economy where currency plays a preferential part, does not contribute to limit the efforts of public and private authorities, as well as of the economists, to explore the other means that men could have to carry out exchange. I would like to illustrate this in examining the theory of the firm.

The efficiency of the firm is usually ascribed to its capacity to economize on transaction costs, as it was suggested by Coase and Williamson. This has always puzzled me, because, in large companies, one of the most efficient ways of management is to create internal profit centers, which therefore multiplies transaction costs. I suggest another approach.

Fernand Braudel showed that capitalism was born on the market place. Local markets and fairs were mainly proximity institutions which allowed the peasants to overcome the problems of space and time. Then, the first large companies were born of the big maritime commerce, when goods were shipped far away, and a long time elapsed between the day the merchandise was sent and the day something came back in return. Cities, and even families, were at the origin of these developments, because one had to be sure that the merchandise that was sent far away was in safe hands, and these particular types of organisation allowed to manage confidence.

What is confidence? It is the known identity: I will trust someone when I have a representation of his identity which I consider trustworthy, therefore a representation of the economic relation I have with that person. I suggest to replace transaction cost saving, by the introduction of relations of confidence.

Today, the firm is a privileged place for economic relations between individuals, not through the intermediary of currencies anymore, but through shared confidence. Of course there is, within a firm, a latent conflict between the producer, the salesman and the financier due to contradictory objectives and economic identities. However, if they all belong to the same entreprise, the producer will not spend time wondering if the salesman will sell his products nor if the financier will provide him with the necessary funds: he has confidence in the relations linked with them within the entreprise, and he can then dedicate the whole of his energy to the organisation of the production.

Let us come back to Adam Smith's famous example of the needle factory. We learnt, in the École de Paris, that he never had visited a factory but he had read the Encyclopédie⁶. The Encyclopédie exposes at great length how to produce and Smith deducted from it that division of labour is the root of productivity. However, this is not true if one considers the consequences of technical progress: in Adam Smith's factory there were ten employees, this number was probably reduced to five at the beginning of the XIX century, and today one employee handles a machine which produces infinitely more needles. Where did division of labour go? In order to be efficient, the factory has to know how many needles will be sold and what sort of needles must be produced. This can only be done within the firm, where privileged relations take place, on a non purely monetary basis, between salesmen, financiers and producers. In my opinion, shared confidence is the root of efficiency.

This type of reasoning can be extended out of the context of the firm. I would take as an example, a case studied in l'École de Paris: the networks of reciprocal exchange of knowledge⁷. It is clear that, if I want to be in a position to exchange a course on economics against a course on welding, and if this exchange is done by means of a non merchant process, there has to be a system of shared confidence which allows this exchange to take place.

As a conclusion, I think that, in the same manner the XVIII century gave birth to a reflection on the efficiency of the firm, there is today a huge task to be undertaken by the economists, and not anymore only by managers, such as one can meet at the École de Paris: to examine what can allow the development of these non merchant identity type relations at a moment when we are passing from a merchant society to a post-merchant society.

⁶ J - L Peaucelle, Statute of example in Management Teaching - the Journal of l'École de Paris n° 7, December 1997.

⁷ C. Heber -Suffrin, J. - J. Piard, Exchanging Economics courses against Welding courses, the success of reciprocal exchange of knowledge networks, - the Journal of l'École de Paris n°7, December 1997.

DEBATE

Of relativity

Thierry Weil: This lecture tackles three rather different notions: relation, that refers to a traditional approach of economics; relativity according to Einstein, where observations made in different systems of reference are linked by a mathematical relation; relativism, opposed to the latter, where observers placed in different situations have irreductible visions one from another. To me, these shifts seem to lead to unprecise reasoning.

Moreover, economics have dealt with sedentarities. It is the case with Schelling who gave the example of truck drivers going in the opposite direction on a narrow road, one creating sedentarity for the other by throwing his driving wheel out of the window to force him out ofway.

Jean-Marc Oury: I never pretended to give an exhaustic review of litterature in such a brief lecture, and my intention is not to say that no pertinent tool can be found in contemporary works on economics. I only put forward that economics multiplied interesting observations but kept on linking them to Pareto's model through the intermediary of relations of preferences which are, by definition, non sedentary. I propose a new framework.

Relativity, in its original form, states that it is impossible to consider the speed of an object independently of the referent in which the object is observed. Relation and relativity are thus linked. The basic idea of restricted relativity is that one cannot anylonger consider the position of an object in relation to a historical referent. Thus, for Einstein, the closeness of these two terms was valid. The theory of physics on which I am working is based on interactions, and so, on relations. I approach economics in the same perspective.

Should economics be challenged?

Jean-Claude Milleron: This is all very appealling, but J.-M. Oury is trying to lead us too far. Firstly, Arrow and Debreu's theory do not determine a one-price system, but in some cases a multiplicity and even an infinite number of prices. Also, instability of prices is not exceptional in their model: there are configurations in which the equilibria can be unstable. Many studies have been carried out since. I think, for example, of a paper by Malinvaud and Younes delivered in the seventies at the René Roy seminar (CNRS: French national center of scientific research), in which the authors link a set of feasible transactions tied to each economic agent. You are more ambitious but you should have placed your study in relation to these works.

I also would like to make three comments of a conceptual nature:

- Cannot sedentarity result from a repeated optimizing behavior?
- The word anticipation has never been used, although it has become a major notion in economics studies for the past thirty years;
- Your opposition between Pareto and Marx does not appear relevant to me: Gérard Maarek and others showed that the theory of labour value is a trivial particular case of the case when only one rare ressource exists: labour.

J.-M. O.: I will take into account the works you suggested.

I know Debreu only demonstrates one local unicity of prices of equilibrium and that there can be many, but my comment was different: I suggest that, as soon as sedentary constraints are to be found, no natural price system can exist, and that trying to rely on a preexisting set of preferences, proves to be non operational. Going back to Plato's myth of the cavern, instead of seeing what is happening in the cavern and being convinced that it is only the reflection of preferences, one takes as prime data the relations within the cavern, and is submitted to the overriding rule of observation. One does not postulate that the facts which are observed are the reflection of some pre - existing permanence.

Can sedentarity be the result of a repeated optimizing behavior? Even if this were true for a given agent, the economist does not have to take it into account: he must rely on what is available to observation. If, every morning, I buy doughnuts at the baker's down the street rather than at the baker's up the street because it is better for my legs, this decision will remain forever my very own and an economist makes a mistake if he tries to scrutinize my conscience. To assert that agents adopt such and such behavior because they have anticipated such and such event comes under the same process. Many elements of business life can be described just by sticking to what can be observed.

- **J.-C. M.:** In your definition of identity, the agent visualizes his relation with others. Isn't it anticipation?
- **J.-M. O.:** Agents anticipate, I agree; I even said that they take decisions to build their future identity. I would even go further: for relative currencies, the same way as for currency or the stock exchange, there could be different indices (the Picasso painting index for example); a thorough study and publication of these indices would improve the anticipation of agents. However, this refers to the common meaning of the word anticipation and not to its sense in economic theories.

Lastly, if I caricaturized Pareto and only talked about Marx's agent at the beginning of the Capital, it was to show that a purely nomadic or sedentary agent does not exist.

What are the limits of economy?

Pierre-Noël Giraud : As an economist, although not a conventional one, I will play be the devil's advocate.

The importance of financial transactions is perfectly explained by the contemporary financial theory, which is based on classic micro - economy. It explains the growth of financial transactions, speculation and the rationality of the agents in these exchanges. Why isn't this theory sufficient enough?

The distinction nomadic / sedentary must be relativized : at a very short term, aren't all the components of the identity sedentary whereas, in a 10 year's time, don't most of them become nomadic?

How can we distinguish what does or does not come under economic theory? If, in order to take a decision, an agent must seek advice from a sorcerer, take into account the reaction of his family, these are observable relations; are they economic relations? To make war or love leads to tangible results: is this economy? What is economy in the identity of an individual? Our subconscious plays a part in our identity, but, for the economist, it is no more observable than the functions of preference.

In order to study Economics, it has to be specified what is in its field and what is not. This is why we need to turn to functions of production, preferences and optimization; it is a way to isolate certain behaviors described as economic ones.

J.-M. O.: A whole series of tools are used in finances: actuarial calculus, risk analysis and so on. Those tools, however, are not really based on the micro - economic theory according to which there would be relations of preference and functions of production: since one cannot know, a priori, one's preferences between a Saint Gobain share or an IBM share, one builds one's own preferences through local added-value type reasoning with tools used in finances which do not proceed from micro-economics.

With my definition, of course, identity is dependent on time. Thus, to take a decision one needs to refer to a notion of time.

I cannot trace, a priori, the boundaries of economy, but this is not important because, the efficiency criteria I use in my approach are local. When I say that a situation is inefficient, I do not need to say I know the identity of all the agents involved: I only need to say I can set up a new relation; if this relation is observable, I will consider it as economic.

Your objection is based in reference to the aim of traditional economics but I have a more modest purpose: to give instruments which allow to improve a certain number of local situations with local criteria.

- **P.-N. G.:** There still remains a paradox. You say that efficiency grows when an economic relation is introduced, but you showed that a relation can put an actor into a situation of crisis.
- **J.-M. O.**: The role of the economist is to do his best so that relations can take place and to suggest how to overcome the impediments due to the difference of identity, time and space. However, the economist cannot say what is Good or Evil: this concerns ethics.

Labour, employment, situation

Claude Riveline: The State in never referred to in your theory, although it could bring important advantages. I will illustrate this with the help of studies carried out at the École de Paris.

In the networks of reciprocal exchange of knowledge⁸, teaching is exchanged, which has a positive effect on the identity of actors. However, this is not an economic situation in the classic meaning of the word, and this puts Authorities in an embarrassing position. Mrs Heber-Suffrin explained that Authorities refused to consider as fees the knowledge brought by its members to a non profit making association. the Authorities pointed out that fees had to be paid in cash and suggested that she should envisage a symbolic one Franc fee system, to which Mrs Heber-Suffrin replied that she would take care of the symbolic aspect of the problem but what she needed was money. Recently, a service barter Association (SEL) was sentenced because its activity could be considered as unfair competition, tax evasion and moonlighting. Nevertheless, the sentence was reduced to a small suspended fine. The judges obviously shared Jean-Marc Oury's preoccupation.

I propose to separate three notions that are often confused: labour, employment and situation:

- Labour is an exchange of energy against money: the State is very present in this exchange: taxes on salaries, regulations etc...
- Employment refers to a role in the economic sphere; until recently, the State was not really involved is this notion which was unknown to traditional economics;

⁸ Echanging Economics courses against Welding courses, op. cit.

- Situation refers to social life in its relational dimension: the reciprocal exchange of knowledge networks cannot be analysed in terms of labour nor in terms of employment, but the networks build situations; however, this type of activity embarrasses the Sate. In the debate Poor French, Rich France⁹, Arnaud Grevoz and Martin Coustenoble show that the correlation between increase of gross internal product and reduction of poverty was getting smaller and could even be null. Paul Champsaur, general manager of INSEE (French national institute of statistics) admitted the Authorities were unable to handle poverty because they did not know how to measure it nor how to fight it. Mrs De Gaulle showed that poverty does not only have a material dimension but also refers to a problem of dignity, therefore, to a relational dimension.

Now, your approach comes straight into the field of economics according to Mrs Heber-Suffrin's point of view and poverty according to Mrs De Gaulle's point of view.

J.-M. O.: I agree, but let me qualify this. In France, we tend to think that it is the State's role to deal with poverty. However, if the fight against poverty and isolation aims at establishing new echanges, possibly non monetary ones, other actors than the State can play a part. Sports is, for example, an important means to establish new relations. For this, equipments are needed: work's councils and local communities play an important role in this matter.

If the attention of micro-economists could focus on other instruments than monetary means to create exchange, they would discover prolific ways to fight poverty. More generally speaking, they could at last play the important part it was thought they could be entrusted with at the beginning of the seventies, and I am sure they would gain customers who would no longer be only the State or State banks, but all the actors of economic and social life.

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 $^{^9}$ P. Champsaur, G. de Gaulle Anthonioz, A. Grevoz, M. Vancostenoble, *Poorer French in Richer France* - The Journal de l'École de Paris, $N^{\circ}9$, February - March.