MICRO-MACRO DICOTOMY IS NOT RELEVANT

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The distinction between micro and macro is recent; becomes relevant in the 70s. The evolution of the curricula of the Faculty of Economics of the National University (Rivera, 2002a) reflects how this distinction has been introduced. The modifications of the pendum follow closely the trends of the United States and Europe. In the 70s in Colombia, the distinction between micro and macro was not made (Rivera, 2002b, 63). And in the area of economic theory was taught introduction to economics, economic theory i and ii, monetary theory and banking systems, introduction to national income, theory of public administration and theory of development. This approach to the theory had a claim to integrity that has been lost over time. And in this process of segmentation the distinction between the micro and the macro has had much to do. At the beginning of his Microfoundations, Weintraub (1979, vii) recalls that the relationship between micro and macro theories has been "stormy". The issue, he says, has been

"Ignored", "discovered", "emphasized" and "again ignored". During the 80s and 90s there was a double dynamic. For

On the other hand, the distinction between the micro and the macro 1 was consolidated, and on the other, the relevance of the microfoundation of the macro was emphasized.

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1 The training of economists is very similar. This conclusion is reached by Hansen (1991, 1062) after comparing 91 economic programs in the United States. The contents of the micro and macro courses are very similar. And for Hansen, this is a reflection of the "substantial [...] agreement that exists between

economists about what the economy is or, at least, about what constitutes its core". In Colombia, the programs are also very homogeneous, especially in the basic courses (González, 1999).

The nature of both problems is not the same. It is one thing to affirm the autonomous status of micro and macro, and another to recognize the relevance of microfoundation.

After thirty years it is well worth evaluating the convenience of maintaining the distinction between micro and macro, and the legitimacy of microfoundation. The difference between micro and macro has been harmful for the teaching of the economy, because it does not allow the student to understand the nature of the problem and transmits the false idea that both subsystems are closed2.

I start the reflection with the following premise: the differentiation between micro and macro is not relevant. And if it is valid, the pretense of microflowing the macro remains without a floor. From here immediate implications for the education of the economy derive. It makes no sense to continue dividing the courses between micro and macro. The teaching should revolve around large themes, in order to avoid the complexity inherent in the problem being lost in such arbitrary distinctions as the micro and macro.

I will examine four points: 1) the false micro and macro dichotomy,

2) the internal fissures of the partial and the general, 3) the lack of continuity of the microfoundation, and 4) towards an overcoming of the micro and macro separation.

THE FALSE MICRO AND MACRO DICOTOMY

The micro and macro dichotomy has not been a useful methodological support for the consolidation of the theoretical corpus of economic discipline. The important theoretical reflections have not revolved around this differentiation. On the contrary, in the relevant discussions the micro and macro dichotomy has been avoided. I mention some examples:

When Walras (1926, 153 ff.) Asks about the transition from partial equilibrium to general equilibrium, he does not reason in terms of micro or macro, but rather focuses on the compatibility between the

2 Knoedler and Underwood (2003, 699) consider that one of the causes of the decrease in the number of students of economics in the universities of the United States is the "boring" way of teaching the micro and macro. In his opinion, students would be more enthusiastic if the door were opened to the history of economic thought and the analysis of cases. It is necessary for students to have a "richer understanding of the real economy" (p.714). For Krugman (1993, 26) the objective of teaching is to give the student instruments that allow him to "respond intelligently to current discussions on economic issues". The environment is more closed in the United States than in Europe. The North American academic market, which is broader and more competitive, encourages excessive specialization (Frey and Eichenberger, 1992).

partial equilibrium and general equilibrium. Walras talks about the generalization of the equations of supply and demand. Therefore, the problem does not consist in the passage from the micro to the macro, but in the congruence between the partial equilibria and the general equilibrium. The partial equilibrium is the equilibrium in the market of a good. The general equilibrium covers all goods.

Walras begins by analyzing the conditions that make possible the existence of each partial equilibrium. Then he asks about the interaction between partial equilibria and finally examines the compatibility of partial equilibrium and general equilibrium. The Walrasian method does not suppose a staggering of the micro to the macro. The analytical effort is different. The transition from partial equilibrium to general equilibrium has many difficulties. Balance in a market may not exist, and if it exists it may not be durable. If there is any permanence, nothing guarantees simultaneous equilibrium in several markets. And much less, in all markets. Walras (1926, 153) seeks to "generalize our formulas in an appropriate manner" (emphasis mine). In his search for the constituent elements of pure economics, he strives to construct a general theory. He is always aware that the success of this task depends on the possibility of generalizing the results, and this would be feasible only if at some point of time all the partial equilibria were presented simultaneously. The general equilibrium does not exist in reality, and is only conceivable in the hypothetical conditions of the laboratory. The condition ceteris paribus helps to see the reality in conditions analogous to those of the laboratory.

For Walras, mathematics and geometry are the right instruments to develop the scientific method "par excellence". Without the numeraire, the step from partial equilibrium to general equilibrium is halfway. I do not deepen in his reflection; for now I only care to show that their concern for the transition from the partial to the general has little to do with the way in which the relationship between micro and macro is conceived today. For Walras, the partial is not equivalent to the micro, nor the general to the macro. Both dimensions constitute a single world, in which the general is not understood without the particular. The Neowalrasians have done a double exercise that is not faithful to the spirit of Walras. On the one hand, they have closed the system and, on the other, they have tried to hide the weaknesses that Walras himself recognizes3.

3 Clower and Howitt (1995, 30) criticize the distortions of the Neowalrasians, who have introduced categories, such as that of the auctioneer, which are not constitutive of Walras' original thinking. Harrod (1956, 312) explains some

If for Harrod (1956, 307) Walras is the economist of the economists, it is worth making a weighted reading of his work4.

Hicks also helps to illustrate the lack of relevance of the distinction of micro and macro in the development of economic thought. In Value and Capital, Hicks (1939) uses the simple exchange and multiple exchange categories, and the corresponding analyzes are carried out in a dynamic context in which the notion of temporal equilibrium plays a central role.

The reflection on simple and multiple exchanges expresses a similar preoccupation to the one that inspires Walras's analysis of the passage from partial equilibrium to general equilibrium. For Walras, the study of partial equilibrium is not enough; therefore, he tries to determine the conditions of possibility of general equilibrium. Hicks is not content with the analysis of simple exchange and thinks that theory should also account for multiple exchange. The problem is that when the number of transactions increases the balance becomes more fragile. The more complex the process to reach equilibrium, the less stable the result. Dynamics is a central piece of Hicks's analysis, it focuses it from a very different angle to that of Samuelson (1947) 5. It rejects the idea of the stationary state because it ends up being a way of ignoring the dynamics6.

of the difficulties Walras encountered in the process of thinking about general equilibrium. Walras was always aware of the restrictions. It is strange, Harrod concludes, that his apologists do not want to recognize the limits of his analytical exercise. Hicks (1989, 8) does not consider it appropriate to think of the Walrasian market as an auction, although he recognizes that articulation is possible because there is a kind of "market organizer".

4 Harrod (1956) shows that in economics it is not always easy to determine the contribution of each new author. In other disciplines it may be easier. In physics, for example, the contribution of each of the great thinkers is usually classified with relative precision.

5 Samuelson (1947) formulates the principle of correspondence, which has a very remarkable influence "[...] even in the simplest theories of the business cycle there is no symmetry in the equilibrium conditions, so it is not possible to reduce the theory to a problem of maximums or minimums. To overcome this difficulty, the dynamic properties of the system are specified and the hypothesis that the system is in "stable" equilibrium or that its movement is "stable" is formulated. Thanks to what I have called the correspondence principle between comparative and dynamic statics, it is possible to define operationally significant theorems that can be derived from such a simple hypothesis. Of course, the empirical validity and usefulness of these theorems can not surpass that of the original hypothesis "(Samuelson, 1947, 5). In a previous article, Samuelson (1937) had already shown how the calculation of variations can be applied to economic analysis. Current growth models, such as Sala-i-Martin (1994), follow the format proposed by Samuelson.

6 "The steady state has positively impeded the development of the theory of interest, by not taking into account a large number of its aspects

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In his study of the currency, Hicks (1935) part of the Keynesian difference between voluntary and involuntary demand for money (Ke-ynes, 1930). The monetary theory makes sense because there is a voluntary demand for money. Hicks proposes to extend the theory of marginal utility to the currency. The voluntary demand for money shows that the currency, by itself, provides utility. This is the first step of the "marginalist revolution" initiated by him. It is about applying the principles of marginal utility not only to assets, but also to money. The subjective perception of the utility of money affects the way of organizing the financial system. Hicks distinguishes between sensitive and insensitive people. The former permanently modify the composition of their portfolio, depending on the vagaries of interest rates. The insensitive people, who are the majority, are not moving money from one site to another because the amount of their resources is very small and the transaction costs are relatively high. Modernization and the technification of the financial system reduce the costs of each operation, creating incentives for insensitive people to stop being. And if the number of sensitive individuals increases, the financial system becomes more fragile. The conflict has no way out since the technification, which in some way is inevitable, encourages speculation.

Without going into the details of Hicks' analysis, it is enough to make it clear that he does not intend to organize his reflection around the distinction between micro and macroeconomics. Simply, these categories are not relevant.

For Keynes (1936) the monetary theory of production is the expression of the conjunction of time and currency. This is the axis of the analysis. And the monetary theory of production has to do with the individual company and with the set of companies. It contrasts the general and special categories. The classical theory is reprehensible because it is hardly valid for "a special case". I transcribe the first chapter of the General Theory:

vital. Moreover, although it is always recognized that the real state of any economy is never in fact stationary, however, the theorists who rely on the steady state naturally considered that reality "tended" toward that state, even if very doubtful that such a tendency exists. Of course, the stationary theory itself gives no indication that reality actually tends to move in that direction. It tells us that if we reach a steady state, then (in equal conditions) we will remain in it; but it does not give us any element to affirm that, in fact, we tend to reach such a position; for he can not tell us anything at all about something real "(Hicks, 1939, 135). In Gonzalez and Pecha (1995) we discussed the meaning of the dynamics in Hicks and Samuelson.

I have called this book The General Theory of Occupation, Interest and Money, emphasizing the general suffix, so that the title serves to contrast my arguments and conclusions with those of the classical theory, in which I was educated and which dominates the economic thought, both practical and theoretical, of the academics and rulers of this generation as it has dominated over the last hundred years. I will argue that the postulates of the classical theory are only applicable to a special case, and not in general, because the conditions involved are an extreme case of all possible positions of equilibrium. Moreover, the characteristics of the special case assumed by the classical theory are not those of the economic society in which we live today, which is why its teachings deceive and are disastrous if we try to apply them to real events (Keynes, 1936, 15).

It is curious that despite the clarity of Keynes, it continues to insist that the General Theory is the work "macro" par excellence. I do not think I misinterpret Keynes if I say that the special case could be of a micro or macro nature. And proof of this is that his comments from the second chapter to the employment theory are a constitutive part of what we know today as micro. Keynes criticizes the classical approach to the labor market because it is partial, not because it is micro. Remember that for the classics "the salary is equal to the marginal product of labor". It does not refute this concept because it is "micro", but because it has no general validity. And the general should be preferred to the special because it can account for the real facts. The partial analysis of classical literature leads to the erroneous identification of all forms of unemployment with frictional unemployment. Keynes insists that the trend towards structural unemployment can not be countered even when all prices (including wages) are flexible. Reject Pigou's argument. The substantive discussion has to do with the self-correcting capacity of the markets. For Pigou there are automatic adjustment mechanisms. In his opinion, the lower prices that accompany deflation are reflected in a greater purchasing capacity of the salary and in increases in demand. Keynes does not share Pigou's optimism. It shows that deflation triggers vicious uncontrollable circles: consumers do not respond to falling prices and deflation becomes more acute.

From this quick mention to Walras, Hicks and Keynes, it is possible to argue that contemporary economic thought has not been built on the micro and macro dichotomy. And although it sounds paradoxical, the eagerness that some schools have shown (like the new classical macroeconomics and, especially, the theory of real cycles) of microflowing the macro leads, in fact, to a negation of the micro / macro dichotomy. If the macro is microfunded, there would be no dichotomy but a single great comprehensive theory. So the micro / macro dichotomy would have no meaning from the perspective of Keynes, nor from the perspective of the new macroeconomics.

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The terms partial and general, as Walras does, have nothing to do with micro and macro notions. There is more partial, simple and special closeness than between any of the three and micro. Equally, it makes more sense to associate the general with the multiple, than to identify any of these two categories with the macro.

THE INTERNAL Fissures of the Partial and the General

The micro and macro dichotomy is often accompanied by the false belief that the micro is autonomous and compact. It is stated that the micro-foundation of the macro makes sense because the micro is solid. Since the macro is considered to be weaker, its micro-foundation would consolidate the hard core and strengthen macro thinking. Without any convincing demonstration, it continues affirming that the micro is robust while the macro is fragile. I will not talk directly with this perception. I will simply show that two authors who are often considered the founders of the contemporary micro, Walras and Edgeworth, are well aware of the intrinsic limitations of their respective methods. Both recognize the multiple fissures of the partial and the general. I start with some of the fissures that are evident in the thought of Walras (1926).

Fissures in WALRAS THOUGHT

Fissure 1: the overlap between pure economy, art and institutions

Art is transformation, industry, and institutions relationships between people. Pure economics has to do with science. It seeks to specify the laws that regulate economic behavior in conditions analogous to those of the physicist's laboratory. Through the scientific exercise we aspire to isolate all the elements that generate impurity. The ideal of pure economics would be to build a theoretical apparatus in which art and institutions would not introduce any noise.

A world like this would correspond to the vacuum bell of the physicist.

On the way, Walras encounters numerous trips. Despite his enormous efforts to specify the elements of pure economy, page after page he runs into the spaces corresponding to art and institutions. And finally he can not avoid gray areas and impurities. In the simplest model of supply and demand, the question of justice, the distribution of property and happiness is inevitable. The offer (O) is a function of prices (p), O = O (p),

the demand (D) is a function of the prices, D = D (p), and in equilibrium the supply is equal to the demand, O = D. The equations of supply and demand could be considered pure economy. The operation of the model is relatively simple in the short term, and when it is assumed that the variations in the quantities hardly represent changes in the available stock of goods. In such circumstances, if the price rises, the supply increases (∂O / ∂p> 0) and the demand decreases (∂D / ∂p <0). Despite the simplicity of the model and scientific forcefulness, in the purity of the argument, Walras notes with concern that there may be shortages7 because someone monopolizes the good. In such circumstances, the question of justice is inevitable, 8 and in trying to define it (as impartiality, as treatment among equals, etc.) the analysis loses purity. Walras is perfectly aware of this. And when reflecting on the meaning of prices, he brings up Mill's questions (1848) about utility, pla-cer and happiness9. Walras contrasts the subjective theory of the value

of utilitarianism with the objective one of Smith, Ricardo and Marx, and with his based on scarcity. The study of the meaning of prices is framed in a context in which questions about the good life are inevitable.

Fissure 2: ignorance of the direction of supply and demand curves

Although the supply curve tends to be positive and the negative demand curve, the direction of both curves may be different. Long and short term supply curves are very different. In the short term, supply is reduced to the problem of stock management, while in the long term it is mediated by the decision of the producer. It is not the same to manage the wheat stocks (short term), than to take the decision to plant more wheat. The second option incorporates the expectations of future prices and the risks inherent in any option that is taken with a medium and long-term perspective10.

7 Walras defines shortage, rareté, as the intensity of the last need satisfied by a consumed quantity of merchandise.

8 The problem of property is analyzed in detail by Walras (1936a and 1936b). He is in favor of the state property of the land because it seems that it is the only way to achieve competition among equals. He declares himself a socialist for "scientific reasons" and a liberal for "political reasons." Peer competition, which is the basic condition of market operation, is possible only if the land, which is the main factor of production, is in the hands of the State.

9 Pérez's text (2003) highlights the main lines of Mill's liberal thinking.

10 Harrod (1956) and Hicks (1934, 340) highlight the problems

Walras shows that the supply curve has qualitatively different characteristics from those of the demand curve. The functions have very different characteristics and this creates problems to define the balance, which he identifies with the equality of areas.

Figure 1

Amount Amount

Price

In the figure on the left side, klm is the supply curve. In the figure on the right side npq is the supply curve. The demand curves are Ad-Ap and Bd-Bp, respectively.

Source: Walras (1926, 103)

Figure 1 shows the Walrasian supply and demand curves. The graph was copied directly from the Walras text. It is not necessary to go into the details of the argument or specify the meaning of each symbol. I simply want to show that the supply curve changes its slope, first it is positive and then it is negative. Walras ends up not knowing if, definitely, the supply curve has a positive or negative slope. This systematic doubt of the author contrasts with the security shown in textbooks when they assume that the supply curve has a positive slope. Walras recognizes, with all tranquility, that it is impossible to know if at any given moment the supply curve is rising or falling. If the slope of the curve can not be determined, much less is it possible to know its elasticity.

presented to Walras with supply curves (short and long term) and demand.

Cleft 3: the disparity between the time "t" of the demand function and the time "t" of the supply function

The periods of supply and demand do not coincide. And this divergence would occur even if it is considered that for the purposes of the analysis both curves are only relevant in the short term. If prices change, the demand may react immediately, while the offer may require more time to respond. The duration of the short term is not the same when viewed from the supply side or from the demand perspective.

Although Walras does not assume the doubts about the period as systematically as Hicks (1939) and Samuelson (1947), his concern about the lack of synchronicity between the moments of supply and demand is clear. In reality, the problem is insoluble. And it is naive to pretend that it can be solved with mathematical procedures11. When Walras turns to mathematical generalization he knows that the real world's difficulties are not solved by mathematics, and therefore he would never dare to use his model to solve real conflicts. The model is just indicative.

In social sciences the special conditions, the ceteris paribus, typical of the physicist's laboratory, do not solve the problems that by their nature can not be solved. The difficulties inherent in collective choice, expressed in the impossibility theorems of Arrow (1951), are not solved by any mathematical model. Mathematical devices do not solve the real problem. They simply express hypothetical conditions under which there would be some kind of solution. The problems continue because the assumptions required by the solution are not feasible.

From the point of view of physics and mathematics it is possible to formulate the hypothetical conditions under which people could fly by their own means. If the model is well posed, the specialists could accept that it is serious, consistent and technically impeccable. And without doubt, it serves certain purposes, such as pedagogical. But despite its virtues, the model does not solve the real problem: people who want to fly can not do it.

11 For Debreu (1991) mathematics enters strongly into the economy in the mid-40s of the twentieth century. Since then, most economists who have received awards belong to the Econometric Society and have a mathematical inclination. Between 1969 and 1990 the Nobel Academy awarded 30 prizes and 25 of the laureates belonged to the Econometric Society.

Walras was never so naive to think that the lack of synchronicity between supply and demand curves could be achieved through a mathematical identity. He imagined what pure economics would be like if disturbing phenomena could be isolated. Unlike physics, the social sciences can not ignore impurities. With imagination and mathematical logic, economics tries to compensate for the absence of a laboratory12. But the identity of the moments of supply and demand does not exist in reality and also in the laboratory. It's just a logical chicanery.

Fissure 4: the step from partial equilibrium to general equilibrium

Walras ends up assuming a kind of partial balances chained, without himself being satisfied with this solution. Balance in the market has to do with the nature of the good. The coordination between partial equilibria is very different when goods are perishable, such as fish, or when they can be stored, such as wheat13. The heterogeneous nature of goods hinders the transition from partial equilibrium to general equilibrium. This road is tortuous. The first difficulty has to do with the conditions of possibility of equilibrium in the market of each of the goods. There are markets that achieve a very rapid equilibrium, such as that of potatoes in a stock exchange, or that of shares traded on the stock market. But others take years. The convergence towards the equilibrium price of an old building can be very slow. If the college of Oxford is put up for sale, says Keynes, it may be several years before a buyer emerges. For the sake of argument let us suppose that all partial equilibria are possible. The second difficulty is related to stability of equilibrium. Some markets are more

12 In social sciences the relevant variables can not be isolated and this makes control, repetition and predictivity difficult. The social researcher does not control the characteristics of the "experiment". The economist resembles the historian: classifies and orders information once it has occurred. His approach to reality is ex post. And in the best of cases, the "control" is reduced to selecting and abstracting the variables that it considers relevant. The lack of control results in an impossibility to repeat the experiment and this goes against the predictivity.

13 Hicks (1989, 10) recalls that in the 1920s, in Cambridge, Marshall's disciples did not know whether the analyzes of the goods market should be carried out with wheat or fish. They were aware that the implications derived from one or the other option are very different. The fish forces to close the market at the end of each day. There are no stocks and the balance is timeless. Wheat leaves the market open. At the end of the day there may be no equilibrium, and the intertemporal dimension appears explicitly.

erratic than others. In order for there to be general equilibrium, each partial equilibrium must be maintained, at least, until all partial equilibria have been reached14.

In real life, general equilibrium is never achieved. The mathematical projection of Walras (1926) and the more complete formulation of Arrow and Debreu (1954) do not solve the problem that arises in the real world. The conditions of existence, uniqueness and stability of equilibrium are not possible in any real scenario. Again, the force of the argument is purely logical. Samuelson (1947) explicitly recognizes that the significant theorems in economics are solid insofar as they are consistent from the logical point of view. It does not matter if they are true or false15. Walras would like to go further. It is not enough for pure economy to be internally consistent. It is also required that pure theorems, formulated in conditions close to those of the laboratory, be an adequate instrument to explain reality. Walras thinks that general equilibrium is a mathematical exercise that offers appropriate tools to think about real-world problems.

Fissure 5: the arbitrariness of the numerary

For Hicks (1934, 343), Walras' equations are not a complete solution to the problem of exchange. The numerary that guarantees the equilibrium fulfills the functions of the currency in a very im-perfect way. And according to Patinkin (1956), Walras' work proposes an accounting equation, without a theoretical structure to support it. In addition, the introduction of the currency in the utility function is problematic because Walras does not adequately analyze the demand for currency for precautionary reasons16.

14 Bronfman, McCabe, Porter, Rassenti and Smith (1996) show the frailty of Walrasian equilibrium in real financial markets. In the ordinary world, very demanding conditions are needed for Walrasian convergence.

For me a significant theorem is, simply, a hypothesis about empirical data that could be refuted only under ideal conditions. A significant theorem can be false. It may be valid but of trivial importance. Its validity can be indeterminate and practically difficult or impossible to determine. Thus, with the existing data, it may be impossible to verify the hypothesis that the demand for salt has an elasticity of -

1. And, nevertheless, this hypothesis is significant, since under ideal circumstances an experiment could be designed to refute it "(Samuelson, 1947, 4).

16 According to Hall (1983), these two conclusions are not relevant because Walras' theory is ambiguous and does not allow conclusions to be drawn.

These fissures that, I insist, Walras recognizes, make us think more about a strainer than a compact theory. And a large part of the inconsistencies arise because, despite all their efforts, the author can not leave out the dimensions of art and institutions. The consistency of what is now called micro is apparent and has been possible because it ignores, without any blush, the discussions proposed by Walras himself.

The micro theory of textbooks usually presents Edgeworth's thought as if it were solid as a stone. In the so-called boxes of Edgeworth it would seem that there was no room for any kind of slit. From the article The Hedonical Calculus (Edgeworth, 1879) I will highlight several cracks in Edgewor-Thian thought. And as in the case of Walras, the fissures and limitations are recognized by the author.

Fissures in the Thought of EDGEWORTH

Fissure 1: we are not pure egoists

The problem of the hedonic calculation - says Edgeworth (1879, 394) - is "to find: 1) the distribution of means and 2) of work, 3) the quality and 4) the number of inhabitants, in such a way that the greatest possible happiness ". This approach, very marked by Mill's thinking, includes dimensions that are hidden in the supposed equilibria of the conventional micro when developing Edgeworth boxes.

First, the essential point of the hedonic calculation problem is the distribution and not the contract. The initial allocation of resources is not given. The decision, of an ethical and normative nature, on the most adequate distribution of resources, is a precondition of Edgeworthian analysis. It is surprising that the contemporary versions of the Edgeworth boxes do not even mention the distributive issue, and if they do sometimes, they raise it as an issue that is resolved ex post, once the equilibrium states have been reached. It is argued that the choice between Pareto's different optima, which forces us to take a stand against alternative income distributions, is carried out once the market equilibria have been achieved. The problem of the hedonic calculation, as formulated by Edgeworth, gives

sharp as those of Patinkin. For Jaffé (1935, 191), the Walrasian numeraire is closely linked to the value standard, and the function of the currency as a means of payment goes to the background.

priority to the second welfare theorem17. And against the spirit that animates The Hedonical Calculus, in the conventional micro the first theorem occupies the privileged place. Edgeworth begins by asking the fundamental question about the distribution of initial resources. This approach is radically different from that of the micro. And if the ethical reflection precedes the analysis of equilibrium, the fissures are evident. The system is not compact. In addition to the distribution of media, Edgeworth also invokes, as a founding postulate, the distribution of work.

Second, along with the number of people it is essential to take into account the quality of life. Education, notes Edgeworth, is an inherent condition of a good life because people learn the art of happiness. Take the discussion of Mill and Bentham. The ideal of society is not to generalize the pleasure of pigs. People must be educated so that enjoyment goes beyond food and drink, so education is crucial. And in this area, says Ed-geworth, we are outside prices and the market.

Third, if the purpose is to seek the greatest possible happiness, we can not be pure egoists18. The utility of the individual can not be understood outside of that of others.

Fissure 2: time is a constituent element of the micro

Faced with aggregation by Benthamian sum, Edgeworth proposes its fundamental axiom. It's about maximizing,

dp dt dn

dp represents the variations of pleasure, dt changes in the duration of pleasure and dn the evolution of the population. The function is maximized if the pleasure increases, if it lasts longer and if it covers a greater number of people. Edgeworth is aware that the instruments available to us in economics are very limited to understand these relationships, and therefore do not intend to build a finished system and

17 The second welfare theorem, or the "inverse" theorem, can be seen as the "revolutionary manual". "If we want to use the competitive market equilibrium to achieve any social optimum, we have to have the correct initial distribution of resources and, depending on how equitable our objectives are, such a thing could require a total reallocation of the ownership relationships of any system of relationships that we have inherited historically. The 'inverse theorem', then, belongs to a 'revolutionary manual' "(Sen, 1993, 127).

18 Sen (1977, 317) highlights the significance of "impure selfishness" in Edgeworth's thinking.

compact. Accept fissures. Recognize, for example, that the duration of pleasure has to do with intensity, and that both relationships interact in a very complex way.

Fissure 3: the utility function may have a negative slope

The utility function that is used in traditional microeconomic theory assumes that there is no sociability; thus the individual can indefinitely increase the consumption of the good without experiencing disutility. The first derivative is always positive. Edgeworth's approach is very different. It admits that from a certain level of consumption it is possible that utility decreases, accepts satiability, and recognizes that the first derivative may be less than zero19.

Figure 2

Edgeworth's utility function

The vertical axis represents the utility (U). The horizontal axis corresponds to the quantity of good x. Ux is the first derivative of U with respect to x. The utility increases until the individual consumes an amount of the good equivalent to x *. If consumption increases beyond x *, the person begins to lose utility.

19 "The rate of increase in pleasure decreases when the means increase. This postulate is equivalent to saying that the second derivative of pleasure with respect to the media is continually negative. This assessment does not mean that the first derivative is continually positive. It can be supposed (though not likely) that means that increase beyond a certain point only increase pain "(Edgeworth, 1879, 397, emphasis mine). The phrase "although it is not probable", which is in the parenthesis, suggests that under normal conditions the individual, on his own initiative, does not increase the consumption of a good that begins to cause him discomfort. However, there are situations in which the individual prefers to continue consuming the good, even though the utility decreases

The utility function would have the form of an inverted U. As shown in Figure 2, the utility decreases if the quantity consumed is greater than x *. The person can be fatigued with the consumption of the good. The reading proposed by Edgeworth disputes, substantively, with the focus of the textbook. The utility function would be without floor and, in addition, the conventional properties of the demand function.

Fissure 4: the Malthusian trap breaks if the number of people does not increase, and the fundamental axiom is fulfilled if the quality of each generation is higher, so that society advances in the scale of apprehension of happiness

The generations do not behave in the same way, as contemporary models of growth with an infinite horizon assume20. Faced with the complexity of these problems, it is not understood why the micro simply identifies the relationship between marginal profits and the price relationship, and the balance between the consumer and the producer. In the simplification of the textbook the fundamental axiom of Edgeworth is castrated. It is not clear, then, where the supposed strength of the micro is born, if Edgeworth himself is full of doubts. And, in addition, in the formulation of the problem of the hedonic calculation, Edgeworth shows that the central issue is not of a micro-contractual nature, but of distribution. So their underlying concern is the same as that of classical economics.

Keynes (1936) also recognizes fissures. Only with the intention of illustrating, I mention three:

Fissures in KEYNES THOUGHT

Fissure 1: the absence of the subject notwithstanding the affirmation of the relevance of animal spirits

The time of the subjects is subsumed in the time of the coin. In Keynes there are no individuals, but aggregates. And although he recognizes the relevance of "animal spirits" in the decision to invest, he does not study the relationships between people.

20 For example, Barro (1974), Barro and Sala-i-Martin (1992) and Sala-i-Martin (1994).

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Cleft 2: the limitations of the conventions to compensate for the uncertainty

In chapter 12 of the General Theory, Keynes (1936) proposes conventions as the institutional order that allows to counteract uncertainty. It barely hints at the big lines, without specifying the exact meaning of the convention.

Cleft 3: the ambiguities inherent in the salary anchor

Keynes chooses not to systematically analyze the function of the currency as a measure of value. Anchor the variables in the non-minal wage accepting, in advance, that this anchor is weak.

In the last twenty years, the new classical macroeconomics carries with it the inherent difficulties of the micro which it claims to be: 1) The homogeneity of the subject. The theory aims to focus on individual decision, but ignores the subject. It is not consistent with methodological individualism. 2) The multiplicity of Pareto optima. 3) The inability to do an intertemporal microfoundation. 4) Ignorance of the organization. 5) The affirmation of certainty.

THE LACK OF PERTINENCE OF THE MICROFUNDAMENTATION

Microfoammentation can be questioned from two perspectives. The first was pointed out by Solow (1989, 32). For him, it is more relevant to macro-fund the micro than to micro-fund the macro. Micro decisions are not understood outside of the macro context. The effort of an entrepreneur to improve the production conditions of your company can be broken down overnight, simply with a revaluation of the exchange rate. In a situation like this one fully understands the meaning of the macro-foundation of the micro.

The second criticism arises from the recognition of the intrinsic dryness of the micro. Instead of insisting on the microfoundation of the macro, we should recognize the abundance of fissures, in order to enrich the analysis from large themes.

It is useless to try to close the fissures with the market. It is fundamental to take up the proposal of Williamson (1993, 103; 1994) and Vernon Smith (1974): economics has to be thought of as an institution "liberated from the nucleus" 21. It is clear that economic reflection

21 For Vernon Smith (1974) the need to think economics from the outside

outside the nucleus it does not allow microfoundation, but it opens a rich range of analysis. Microfoundation does not favor the integral comprehension of the central problems. The study of economics should confront the student, formally and systematically, the fissures detected by Walras, Edgeworth, Keynes, Arrow, etc., who thought of the economy as an institution "liberated from the core" 22. And together with these "conventional" authors, space should be given to a systematic analysis of the problems posed by the institutionalists (old and new), and by the Austrian school. The student can develop creativity if the teaching exceeds the limited horizon of the textbook. In Human Action de Mi-ses (1949) there is no micro, no macro, no partial, no general, there are human beings interacting in complex contexts. In his words, "human action" and "cooperation" must be the objects of study of economic science. For Hayek, time is consubstantial with the productive process23.

TOWARDS AN OVERCOMING MICRO AND MACRO DISTINCTION

The text of Cuevas (2001) moves in the right direction: it presents the foundations of market theory without resorting to the micro and macro dichotomy.

I mention three topics that help to understand how relevant economic problems could be treated, without falling into the micro-macro distinction. The first is the zero-degree homogeneity of the demand function and the neutrality of money. The second has to do with

of the nucleus does not invalidate the attempts made to consolidate a theory that within the nucleus is free of values. This exercise is convenient because it helps to explain the interests that underlie the different analyzes. The scientific ideal in economics continues to be to examine the contracting conditions within the nucleus, leaving out all institutional-evaluative criteria. But, Smith concludes, despite all efforts, the value dimension ends up permeating the core. "The new microtheory will deal with, and should do, the aspects related to the economic foundations of organizations and institutions ..." (Smith, 1974, 321). By following this path it is impossible to set aside values.

22 Debreu (1991, 3) thinks that a "unified grand theory" remains outside the reach of economists. In any case, says Debreu (1991, 4), the mathematical system of economic theory is not strong. There is disproportion between assumptions and conclusions. From weak principles, solid and generalizable conclusions are derived.

23 The Austrians are characterized because they consider that the nature of production is a process in time. Hayek (1934) proposes an investment function in which time is a factor of production. While the Austrian approach makes explicit time, the conventional perspective ignores it. On the rupture that the Austrian economy does, see González (2003).

the rationality of individual and collective elections. And the third corresponds to the theory of the firm and its financing.

The zero degree homogeneity of the demand function is a neuralgic assumption of conventional economic theory. Zero degree homogeneity invokes a very simple principle: if prices increase in a proportion, and if income grows in the same proportion, demand does not change. If zero-degree homogeneity is met, the relative price system remains stable. This condition is very demanding. It implies that at all times all prices change in the same proportion and in the same sense. In reality it is impossible to be fulfilled. The macro equivalent of zero degree homogeneity would be the neutrality of money, the classical dichotomy and the Friedmanian stability of the demand function (Friedman, 1959a and 1959b). These monetary problems can only be dealt with adequately when the approach is global and comprehensive. But the micro / macro dichotomic reading proposed by textbooks does not facilitate the understanding of the monetary phenomenon. Quite the opposite. It obscures it. The student ends up involved in the mathematical formulation of zero degree homogeneity, forgetting all the global requirements necessary for such a principle to be fulfilled.

Individual and collective rationality is another area that is best understood with a comprehensive approach. The narrow perception of the micro does not capture the complexity inherent in collective decision. The individual subject modifies his preferences when he perceives society from the angle of his preferences, more or less selfish. The trans-sitivity of individual choice encounters obstacles in the field of collective choice. And it is not simply the logical difficulties of a mathematical property. The lack of consistency reflects a complex epistemological and ethical problem.

The vision of society is different when the subject thinks of a social world that is already given to him, that when he thinks of alternative feasible ordinances, depending on the personal well-being that would be derived from each one of them. The micro formulates the problems of collective choice as a purely logical issue. When the macro textbooks analyze the tension between the governments, which for political reasons take advantage of the monetary illusion and resort to the emission, and the technicians, who seek to prevent the irresponsible handling of the issue, they no longer mention the theorems of impossibility of Arrow (1951), as if the issue was just a logical problem of micro consistency. Actually, the im-possibility of Arrow is a way of expressing the inherent question of any form of government based on the majority decision rule. And in this political game, the government uses the broadcast.

And in the theory of the signature the student should be shown that there are radically different conceptions. One approach is the Ricardian production function. There the signature is a black box, closed and compact. Coase (1937) proposes a different path. Within the firm, relationships are hierarchical and the price system does not operate. The salary is not the marginal productivity of labor, but the result of agreements between unequal people. The employer orders and imposes conditions and the worker accepts them in exchange for a salary. Coase's view of salary is very similar to that of Simon (1945). And in this way

we arrive at the hypothesis of Williamson (1993 and 1994): Alternative forms of financing of companies do not respond to technically neutral decisions, but to different governance structures.

Unfortunately for the academy and for the good training of Colombian economists, we will only eliminate the distinction between macro and micro in the pendulum when it is eliminated in Chicago, Harvard, Stanford, Mit, Princeton and Yale24. This inability to act is one of the tragic consequences of our dependence.

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