

## From Say's law to Keynes, from Keynes to Walras' law: some ironies in the history of economic thought

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Produce, supply, sell, buy: the inflection of a few verbs is sufficient to express the essential phenomena of a mercantile economy. This simplicity is, however, illusory. Even though these actions are carried out self-confidently by individuals, the conjugation of the verbs, in the discourse of economists, is far from being a trivial task. Impasses and controversies surround issues which can only be deemed basic.

There is, for instance, an insuperable disagreement regarding the definition of the essential properties of a mercantile economy. Mercantile, and therefore monetary, according to Marxists, Institutionalists, and Post-Keynesians (monetary and therefore non-ergodic, the latter would add; see Davidson, 1982). Nevertheless, the hegemonic tradition intrepidly proceeds, clinging to the conception of the mercantile economy as being essentially an economy of direct exchanges (see, for instance, the assessment by Hahn, 1982).

The law of markets is one of the recurrent themes in economic debate. Over the last decades, a large number of interpreters have sought to establish the 'final truth' regarding it. The debate carried out by the mainstream proceeded, essentially, to rehabilitate the law, exempting it from the criticism of Keynes. In Schumpeter (1954), it becomes a precursor of Keynesian Macroeconomics. In Becker and Baumol (1960) it coincides with the notion, essential to the neoclassical synthesis, of the existence of a price level compatible with general equilibrium. It is '*the beginning of sound thinking in macroeconomics*', for Blaug (1962:149) and, in the opinion of Clower and Leijonhufvud (1973), it is an essential proposition for the elaboration of any economic theory. In its more recent transmutation, it is seen as a predecessor to the New Keynesian theories on economic fluctuations or as a full-fledged classical theory of recession and involuntary unemployment, perversely disfigured by Keynes' interpretation (see Jonsson, 1997, and Kates, 1997, 1998).

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The aim of this paper is to carry out a criticism of this criticism, from a Keynesian point of view. The interest of the theme greatly exceeds that of mere exegesis. After all, the debate surrounding the law and its interpretation by Keynes has never lost sight of its possible implications for theory. Criticism of Keynes as an interpreter is, in most cases, inseparable from criticism of Keynes as a theorist.

The main proposition presented in this paper is that Keynes' thesis that Say's law is equivalent to the identity between aggregate supply and demand seems consistent with a careful reading of Say, James Mill and Ricardo (which does not imply that it is the only sustainable interpretation of the law, or that it encompasses all the propositions in some way related to it). It is suggested, however, that it is doubtful that the dichotomy between the law and the principle of effective demand was in fact able, in Keynes' time (and even more so today) to draw the line between 'orthodox' and 'heterodox' economists. Maybe the law of markets should be seen merely as a particular example (and of the less brilliant kind) of 'equilibrism' (to borrow the term from Hicks, 1975)<sup>2</sup>.

The interpretation of the law by the mainstream is the object of the first two sections<sup>3</sup>. The third and fourth items resort to the classical texts in order to found the interpretation of the law as an identity between aggregate supply and demand. The fifth item formulates some hypotheses that may help to explain the profusion of propositions related to the law, a fact that has contributed to the persistence and the confusion in the debate surrounding the law. This is followed by a brief conclusion, containing some considerations on the opposition between Say's law and the principle of effective demand.

### **1. Say as a precursor of Keynes**

In 1954, in the *History of Economic Analysis*, Schumpeter (1954: 617) wrote that 'Say's law is obviously true. Nevertheless, it is neither trivial nor unimportant'.

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<sup>2</sup> Equilibristic, in my point of view, are all the economic theories based on the hypothesis that markets are always in equilibrium or tending towards it. The equilibristic procedure – common to several economic schools – consists of eliminating the dynamics (adopting only statics or comparative statics) or in carrying out dynamics of a teleological nature, in which the changes admitted are those strictly necessary to the attainment of a pre-defined result (the final state of equilibrium). Criticism of equilibrism does not imply rejection of the possibility of (or the interest in) specifying states of equilibrium (for a contribution to the development of non-equilibristic macroeconomics, see Macedo e Silva, 2000).

From the point of view of studies in the history of economic thought, this was an important turning point. Paradoxically, in Schumpeter's interpretation, Say becomes a precursor of Keynes and of macroeconomic analysis.

According to Schumpeter (1954: 617) the law is the direct result of the interrelations between the producers who act in an economy distinguished by the vertical division of labour. The perception that production determines the generation of income flows would have permitted a triumph of logic against the simplistic and irrational underconsumption thesis diffuse among non-economists. Schumpeter's argument was subsequently taken up by Blaug (1962: 149):

Production increases not only the supply of goods, but, by virtue of the requisite cost payments to the factors of production, also creates the demand to purchase these goods (...) The demand for the output of any one industry must increase in real terms when the supplies of all industries increase, since these are precisely what generates demand for that industry's products. Say's law, therefore, warns us not to apply to macroeconomic variables propositions derived from microeconomic analysis.

There could be no greater irony than the transformation of Say into the pioneer of criticism of the fallacies of composition (Schumpeter, 1954: 623-624). The privileged object of Keynesian demonology is converted into the patron saint of macroeconomic theory!

Baumol's article of 1977 is one of the perpetrators of the imbroglia initiated by Schumpeter. Baumol identifies (at least, he writes) eight Say's laws. According to the first, 'a community's purchasing power is limited by and is equal to its output, because production provides the means by which outputs can be purchased' (Baumol, 1977: 147). Baumol adds that this proposition just 'tells us, as Keynes did, that output is the source of effective demand – that output is purchasing power. But it does not say that all of that purchasing power will always be used to buy goods'<sup>4</sup>.

The hypothesis that Say's aims were so modest is simply astonishing. The concepts of the increase of wealth through the flow of production (and not through the accumulation of the stock of precious

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<sup>3</sup> More exhaustive renditions of the literature can be found, of course, in Sowell (1972) and Kates (1998).

metals) and of the identity between production and income precede Say and Ricardo, and even Smith. It is hard to understand how the law of markets, in this minimalist form, could have deserved the enthusiastic allusion by Ricardo in the preface of the *Principles*, and have aroused such a polemic.

Leaving exegesis aside, this interpretation is also debatable from a strictly theoretical point of view. The positions of Baumol, Becker and Blaug are evidence that, even today, the meaning of the accounting identity between production and income can give rise to great confusion, when propositions of theoretical nature are introduced in a somewhat unthinking and tacit manner.

Such is the case of the propositions according to which purchasing power is limited by income and additional production instantaneously generates the exact purchasing power with which it can be purchased. Besides being unnecessary for the solution of the underconsumptionist challenge, they may be inconsistent with a Keynesian view of capitalism as a monetary economy.

The concept of income must be understood as the monetary flow derived by an agent as a result of his participation in the production of wealth. Considering the Keynesian period of production as a unit of time, we find that some of the flows of income generated by the decision of production are generated *ex ante*, such as wages and payments to the producers of inputs. On the other hand, part of the capitalists' profit is necessarily of an *ex post* nature, for it cannot be calculated before the proceeds from the sales are known. Therefore, the mere act of production never generates by itself an amount of income equivalent to the total proceeds expected by the capitalist. For the same reasons, it cannot be affirmed that production generates purchasing power equal to its expected value (at least, not immediate purchasing power; see Possas, 1987)<sup>5</sup>.

To avoid the conclusions above, we would have to redefine the concept of income, in order to incorporate the concept of expected profit, calculated according to the present value attributed by the capitalist to his stocks of goods, both finished and undergoing processing. (In this case, however, we would

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<sup>4</sup> Further ahead (p.154), Baumol refers to the 'Keynesian point that effective demand is a rising function of real output, and that money merely facilitates the working of that relationship'. See also Becker and Baumol (1960: 764) and Blaug (1962: 156).

also have to ascribe to an unemployed worker an income equivalent to the value he attributes to his labor.) In the same line, we would have to affirm that a good is purchasing power owing to its potential of conversion into money. However, these solutions seek to bypass what is essential to mercantile production: the fact that only the sale can confirm whether – and in what measure – the production ‘contains’ new wealth (and, therefore, income); the fact that only money is immediate purchasing power. In this sense they are equivalent to the concept of the capitalist economy essentially as a barter economy with low transaction costs.

Clearly, the proposition that the increase in production does not, by itself, generate the income necessary to buy it does not bring us back to the universe of underconsumptionism – to the concept that the reproduction of the capitalist system faces, at each step, the ‘problem of realization’. On the one hand, because the income effectively generated by the expenditure – for instance, the expenditure created by the decision of production – is gained in the form of money that can return to circulation (generating more income) an indefinite number of times. On the other, for the simple reason that purchasing power is a stock (augmentable through credit creation and capital gains) and therefore does not necessarily derive from current income. There is no realisation problem intrinsic to capitalism. There always exists enough purchasing power to buy production, however large it may be (which does not imply that production will effectively be bought). But the fact that productive activity triggers off flows of income is only responsible for part of the explanation <sup>6</sup>. Production is only one of the sources of effective demand <sup>7</sup>.

In any case, neither Say nor the other defenders of the law contented themselves with the affirmation that, after all, capitalism is not impossible. The preoccupation in describing the nature of possible unbalances between supply and demand and in establishing the adjustment mechanisms between them pervades the polemic around the ‘general glut’. However, before discussing this point, we will see

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<sup>5</sup> These propositions are related to what Carvalho (1992: 46) calls the ‘temporality principle’.

<sup>6</sup> Therefore, the ‘profound observation (...) that demand is constituted by supply’ (Kates, 1998: 2) is in fact a simplistic proposition, obviously unsuitable for the analysis of capitalist economies. It is preferable to say, with Keynes, that ‘expenditure creates its own income, i.e. an income just sufficient to meet the expenditure’ (XXIX: 81), and that ‘spending is constrained only by liquidity and/or timidity considerations’ (Davidson, 1984: 566-7).

how another interpretative line evolved, preoccupied with the relation between the law of markets and Walras' law.

## 2. Say's law and Walras' law

In 1944, an article by Lange defined the terms of the modern debate. He employed a small apparatus of general equilibrium in order to compare what he called Walras' law to his interpretation of Say's law, and to explore the implications of the latter.

Walras' law affirms that the aggregate demand for all goods (including the one used as money) is identical to aggregate supply. Lange observes that 'Walras' law does not require that the demand and supply of each commodity, or any of them, be in equilibrium' (Lange, 1944: 150). That is, Walras' law is defined as an *ex ante* identity between aggregate supply and demand.

In turn, Say's law is taken as a (stronger) proposition in which the aggregate demand for all the  $n-1$  goods (goods and services, excluding money) is identical to the aggregate supply of these goods. This implies that the supply and demand for  $n^{\text{th}}$  good – 'money' – are identical.

In my opinion, the proposition according to which the sum of the excesses of demand in the different markets of goods and services is necessarily equal to zero only transposes into modern language the proposition frequently and forcefully stated by Say, Ricardo and others, according to which there is no general glut. In the article, Lange is not preoccupied with the possible dynamic implications resulting from the existence of excess demand different from zero in one or more markets, except in the terms in which these implications are treated by the classical supporters of the law of markets.<sup>8</sup>

Lange's interpretation, developed by Patinkin, was rejected by Becker and Baumol (1952/1960). With this article, Becker and Baumol founded a new line of interpretation of Say's law that would be continued in works such as those of Clower (1963/65), Baumol (1977), and Clower and Leijonhufvud

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<sup>7</sup> It should be clear that 'effective demand' here means actual expenditure, and thus has to do with the *ex post*, 'expenditure version' of the principle of effective demand (see Amadeo, 1989).

<sup>8</sup> And, for this reason, I think that the sarcasm with which Clower and Leijonhufvud (1973) and Jonsson (1997) refer to him is quite unfair.

(1973). Common to all these authors is the greater or lesser assimilation of the law of markets to Walras' law, with the latter understood in similar terms to those used by Lange.

According to Becker and Baumol, the interpretation of the law of markets as an identity ('Say's identity') does not find support in the classical texts. 'Say's Equality' – that is, the law itself, correctly interpreted – would be limited to establishing that

“supply will create its own demand” not despite the behavior of the price level but because of it (...) The Cambridge equation implies that for every relative price structure there exists a unique absolute price level at which the money market will be in equilibrium (Say's equality). This is equivalent to stating that for every set of relative prices there exists a price level which brings about over-all equilibrium in the commodity markets, i.e., the total quantity of money offered for commodities is equal to the total value of commodities supplied (Becker & Baumol, 1960: 758).

The law (or equality) of Say, in this interpretation, corresponds to a particular case of Walras' law, that in which in the goods markets, taken as a whole, the excess demand is equal to zero (as in the money market). It is a particular case because Walras' law does not exclude the possibility of disequilibrium in two, several, or even in all markets. It does not exclude, in particular, the possibility of general overproduction, understood as a situation in which the excess supply of goods corresponds to an excess demand for money. In a situation such as this one, the fall of the prices of goods would generate a wealth-effect (Becker and Baumol, 1960: 758), re-establishing the general equilibrium (and, therefore, Say's equality).

This reasoning leads to a conclusion that, although not explicit, is obvious: Say's law, already in the XIX century, established the theoretical defeat (and *avant la lettre!*) of Keynes by the Neoclassical Synthesis (see Blaug, 1962: 157). The contribution of the *General Theory* would have consisted of arousing a debate through which, endowed with the instruments created by Keynes himself, the 'classical' economists (in the Keynesian sense) affirm the continuity of their tradition regarding the essential points of the doctrine<sup>9</sup>.

In the works of Clower and Leijonhufvud, the relation between Say's law and Walras' law is even stronger. They formulate 'Say's principle', based on which they intend to 'resolve all issues of substance associated with earlier discussions of Say's Law (p.146). The principle establishes that 'the net value of an

individual's planned trades is identically zero' (Clower and Leijonhufvud, 1973: 146). This means simply that the agent intends to realize transactions compatible with his budget restriction – he does not steal, donate money or err in his budget calculations.

The aggregate version of the principle is, according to the authors, formally equal to Walras' law: 'the money value of the sum of all aggregate EDs [excess demand] is identically equal to zero' (Clower and Leijonhufvud, 1973: 152). Because it is omissive regarding the issues of the existence (of a price vector compatible with general equilibrium) and stability (Clower and Leijonhufvud, 1973: 158), the principle is 'consistent with indefinite persistence of unemployment on a large scale, for it involves no assumptions and yields no implications about the dynamic adjustment behavior of the economic system' (Clower and Leijonhufvud, 1973: 156). One of the few implications of the principle would be the impossibility of general overproduction, if this is defined as an excess supply of all goods and assets, including money (Clower and Leijonhufvud, 1973: 153)

To sum up, this brief history of the metamorphoses of the law of markets shows us how it was successively interpreted as an identity consistent with a non-monetary interpretation of a mercantile economy (Lange), as a specific case of Walras' law in which there is equilibrium in both goods and money markets (Becker and Baumol) and as a purely logical statement, necessary to the construction of any economic theory and independent of the formulation of any equilibrium condition (Clower and Leijonhufvud)

It is time to let the classical economists take the stand.

### **3. The law of markets and the reproduction of the system**

For authors such as Say and James Mill, the law of markets is much more than an affirmation that there is always sufficient purchasing power to buy production (so that there would be no obstacles to the long-run growth of the economy). Their concern undoubtedly encompasses the problem of the

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<sup>9</sup> This conclusion seems to reverberate in Samuelson (1963), when he suggests that the *General Theory* provides the instruments which would have made it possible for Say, Mill and Ricardo to understand and defend their own opinions.

reproducibility of the capitalist economy, but it goes well beyond this<sup>10</sup>; for them, this reproducibility is founded in a non-monetary theory of production (which, in turn, has as one of its possible implications the theory of the impossibility of a general glut, a point to be dealt with in the next item).

It is interesting to observe how Say, in one of his letters to Malthus, presents his law of markets:

All those who, since Adam Smith, have turned their attention to Political Economy, agree that in reality we do not buy articles of consumption with money, the circulating medium with which we pay for them. We must in the first instance have bought this money itself by the sale of our produce (...) From these premises I have drawn a conclusion (...) the consequences of which appear to have alarmed you. I had said: As no one can purchase the produce of another except with his own produce; as the amount for which we can buy is equal to that which we can produce, the more we produce the more we will purchase. From whence proceeds this other conclusion, which you refuse to admit, that if certain commodities do not sell, it is because others are not produced, and that it is the raising produce alone which opens a market for the sale of produce (Say, 1820: 440-441; revised translation, based on Say, 1821).

Say is evidently referring to a mercantile economy, characterized by private production and by the social division of labor. In this economy, goods are produced for sale; the goods produced privately must be exchanged for money. Given this starting point, there are many possible questions. To one of them Say replies in a very particular way and, thus establishes the law of markets: what explains the decisions to produce?

The first step consists of emphasizing his affiliation to the Smithian theory of money. Wealth is not treasure, rather production that is continually renewed. Money is merely ‘the agent of the transfer of values’, performing ‘but a momentary function’ (1819: 56-57). The monetary veil merely disguises what is in essence a barter economy<sup>11</sup>. The relevant – real – process is that by which each producer aggregates new wealth to the social product, giving himself credentials to obtain from others those goods he wants to make use of.

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<sup>10</sup> Besides, according to Sowell (1974: 41), ‘the general glut economists were as zealous in refuting these popular notions’ – that ‘some absolute limit to economic growth had been reached’ – ‘as were the supporters of Say’s law’.

<sup>11</sup> The same holds for James Mill (1808:82).

‘From these premises’, he extracts two assertions that, in my view, define the law and are aptly synthesized by the formula ‘supply creates its own demand’. The first of them – ‘the more we can produce the more we can purchase’ – posits that the producer’s purchasing power comes solely from the sale of the production (thus, it is equivalent to his income flow). The second one – ‘the more we produce the more we will purchase’ – refers to the aim of the producer in a mercantile economy<sup>12</sup>. Production is not geared to selling (so as to obtain money<sup>13</sup>), but to buying.

In various passages, James Mill does indeed seem to cut out the selling stage, identifying production and purchasing power:

We have already seen, that every man, who produces, has a wish for other commodities, than those which he has produced, to the extent of all that he brings to market (...) His will, therefore, to purchase, and his means of purchasing, in other words, his demand, is exactly equal to the amount of what he has produced and does not mean to consume (Mill, 1844: 231)<sup>14</sup>.

Leaving Mill’s imprecision aside<sup>15</sup>, the value each producer hopes to obtain with the commodities he produces corresponds to a given basket of commodities that he desires. The definition of this basket precedes and determines the decision to produce. The acquisitive desire of the collectivity determines the total volume of production, in any given period. Now, if for each producer the expected value of his

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<sup>12</sup> There is a clear *non sequitur* here – the rejection of mercantilism does not imply any specific declaration with regard to the motivation of the producers and the role of money. This was clearly noticed by Malthus (1827: 60n): ‘It is quite astonishing that political economists of reputation should be inclined to resort to any kind of illustration (...) rather than refer to money. I suppose they are afraid of the imputation of thinking that wealth consists in money. But though it is certainly true that wealth does not consist in money, it is equally true that money is a most powerful agent in the distribution of wealth; and those who, in a country where all exchanges are practically effected by money, continue the attempt to explain the principles of demand and supply, and the variations of wages and profits, by referring chiefly to hats, shoes, corn, suits of clothing, &c., must of necessity fail’.

<sup>13</sup> As Keynes (CW XXIX: 81) would state, based on Marx.

<sup>14</sup> Becker and Baumol (1960) state that it is not possible to discard the possibility that Mill considered money as one of the goods coveted by the producer in exchange for his surplus production. This proposition seems unwarranted to me. According to Mill ‘It makes no difference to say, that perhaps he [‘every man’] only wanted money; for money is itself goods; and, besides, no man wants money but in order to lay it out, either in articles of productive, or articles of unproductive consumption’ (Mill, 1844: 233-244). Money is introduced only to be immediately discarded.

<sup>15</sup> In macroeconomic terms, the proposition amounts to saying that the ‘power of purchasing’ of the nation ‘is always equivalent to its power of producing, or at least to its actual produce; and that as it never can be greater, so it never can be less’ (Mill, 1808: 86).

production is equivalent to the value of the demand for other goods that he hopes to effectuate, on aggregate, each increase in supply will inevitably be a sign of an increase in demand of equal value<sup>16</sup>.

Say's law thus establishes an *ex ante* identity between the expected values of aggregate supply and demand<sup>17</sup>. To achieve this, it seems to dispense with any temporal clause: the identity between supply and demand is created with the decisions to produce, necessarily and instantaneously (see Mill, 1844: 237). However, up to this point the law constitutes only an aprioristic and non-verifiable declaration as to the producers' motivation, consistent with any empirical result. Today's production represents a demand – whose temporality is not specified – for other goods. It does not matter that one or many sell and do not buy; they will buy 'tomorrow' or bequeath the money to their heirs for them to do so.

In fact, the law of markets calls for a more ample scope. For this reason, it must inevitably make a pronouncement on the question of time and offer a proposition, *ex post* in character, on the nature of the adjustment between supply and demand. It is only possible to do it by means of a more precise specification of the role of money and of the temporality of the demand for goods that is made explicit by the very decision to produce.

As will be seen below, the law of markets is saved from innocuousness by the inclusion of a temporal clause that is equivalent to restricting money to its function as a means of circulation. This amounts to positing that the general glut is a logical impossibility. Additional conjectures, of an equilibristic nature, imply an in-built mechanism to prevent partial gluts from becoming generalized. The last sentence in Say's quotation – 'if certain commodities do not sell...' – announces the theme.

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<sup>16</sup> For Say, here lies the proof of the ultimate harmony between men and nations (see Say, 1828: 213-215, 360, and 1841: 51).

<sup>17</sup> 'Although the equality of supply and demand was sometimes expressed as an ex post identity of purchases and sales, it was essentially a behavioral theory of an ex ante equality of supply and demand (Sowell, 1974: 36; see also Sowell, 1987: 250). It should be stressed that this interpretation of Say's Law as an *ex ante* identity is quite consistent with its presentation in chapter 3 of the *General Theory*.

#### 4. The law of markets, money and partial disequilibrium

It is worthwhile noting that in Smith there is some ambiguity in the recognition of the liquidity premium of money<sup>18</sup>. In Say, the conceptual knot is unceremoniously undone:

It is worth while to remark, that a product is no sooner created, than it, from that instant, affords a market for other products to the full extent of its own value. When the producer has put the finishing hand to his product, he is most anxious to sell it immediately, lest its value should diminish in his hands. Nor is he less anxious to dispose of the money he may get for it; for the value of money is also perishable<sup>19</sup>. But the only way of getting rid of money is in the purchase of some product or other. Thus, the mere circumstance of the creation of one product immediately opens a vent for other products (Say, 1819: 57).

The issue of the convenience of carrying money disappears. The period of retention of money in its active function of means of circulation seems to tend to zero<sup>20</sup>. If every supplier of goods intends to immediately convert 'the money he may get for' his product into another product, the general glut is really inconceivable. Once again, it is worth resorting to James Mill. Supply must convert itself into demand within the 'annual' cycle of production and consumption<sup>21</sup>:

In speaking here of demand and supply, it is evident that we speak of aggregates. When we say of any particular nation, at any particular time, that its supply is equal to its demand (...) [w]e mean, that the amount of its demand, in all commodities taken together, is equal to the amount of its supply in all commodities taken together (Mill, 1844: 230).

What is it that we mean, when we say the demand of a nation, speaking of the aggregate, and including a definite circle of production and consumption, such as that of a year? Do we, or can we, mean any thing but its power of purchasing? And what is its power of purchasing? Of course, the goods which come to market. What, on the other hand, is it we mean, when, speaking in like manner aggregately, and including the same circle, we say the supply of the nation? Do we, or can we mean any thing, but the goods which come to market? (Mill, 1844: 238)<sup>22</sup>.

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<sup>18</sup> 'And though goods do not always draw money so readily as money draw goods, in the long-run they draw it more necessarily than even it draws them' (Smith, 1776, IV, 1: 439)

<sup>19</sup> The second edition is even clearer with respect to the 'perishability' of money (Say, 1814, *apud* Baumol, 1977: 158).

<sup>20</sup> 'The money that individuals receive for what they sell, is immediately laid out by themselves, or by those to whom they lend it, on purchases' (McCulloch, 1864: 157).

<sup>21</sup> The use of the metaphor of the annual cycle of production and consumption embeds the equilibrium hypothesis in the theory of income determination, forging a link between them that not even Keynes dared to question. In this respect, see Macedo e Silva (2002).

<sup>22</sup> A careful reading of the item from which the two quotations were taken shows clearly that Mill is interested in the consequences of his behavioral theory of producers on the economy as a whole, and not in the development of the macroeconomic accounting identities.

In these extracts, as in many others, the understanding of the law of markets as an *ex ante* identity between the supply and demand of goods is clearly evident <sup>23</sup> (and one begins to discern the existence of important *ex post* implications). There is little need to highlight the similarity with the interpretations of Keynes and Lange. Strangely enough, the interpreters discussed in Item 2 of this text flatly refuse to admit the plausibility of this interpretation (not even included by Baumol as one of his many Say's laws). Nevertheless, the central argument employed by Say, James Mill and Ricardo in the polemic of the general glut – certainly one of the most important economic controversy of the XIX century – is precisely that of the identity between supply and demand!

According to Say and James Mill, production is geared towards sale <sup>24</sup>. A sale should be followed almost immediately by a purchase. What happens, then, when the sale does not take place? For the law to be 'effective' – in the sense of allowing inference with regard to *ex post* variables – it is necessary to show the existence and efficiency of some kind of adjustment mechanism.

Undoubtedly, the law does not intend to determine the results of each producer's decision to produce, or of whole segments of the economy, taken individually. There is no mechanism that guarantees, *ex ante*, the consistence between the composition of supply and the composition of aggregate demand. Sectoral disequilibria between supply and demand – partial glut – are perfectly admissible <sup>25</sup>. In fact, the law is intended to dispute the possibility of general overproduction: 'Inability to sell, therefore, arises not from overabundance but from misallocation of the factors of production' (Say, 1803, apud Baumol, 1977: 156)

<sup>26</sup>.

The affirmation is presented as a corollary of the basic hypothesis of production geared towards buying. If the purchasing power that the producers expect to be contained in the produced goods is equal

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<sup>23</sup> It is worthwhile emphasizing that the proposition is stronger than the simple idea that 'anything that is sold must also be bought, and nothing can be bought without proper means to purchase it' (Jonsson, 1997: 205).

<sup>24</sup> This hypothesis implies – I repeat – what I have been calling the *ex ante* identity of supply and demand. See, to this respect, Mill (1808: 84-85; 1844: 234-235) and McCulloch (1864: 145).

<sup>25</sup> By the way, Kates' affirmation that, in the Keynesian interpretation of the law, 'everything produced would be bought' and 'unsold goods and services are a theoretical impossibility' (Kates, 1999: 222; see also p. 169), seems to be completely groundless.

<sup>26</sup> This reasoning is repeated by Ricardo in many extracts (see, for instance, Ricardo, II: 305-306).

to the demand they intend to effectuate, if the set of decisions of production is related to a certain composition of demand, disequilibria between supply and demand imply an excess of some products and scarcity of others: ‘It is observable (...) that precisely at the same time that one commodity makes a loss, another commodity is making excessive profit’ (Say, 1819: 57).

James Mill, far from criticizing Say, was happy to paraphrase his reasoning<sup>27</sup>. In the case of a partial glut, caused by the increase in the production of some goods,

[t]hese goods would fall in exchangeable value as compared with others, others would rise in exchangeable value as compared with them. But there is a new demand created; for the owner of the new produce, as he has come into the market to sell goods of some kinds, so he has come to buy goods of some other kinds. As the supply, which he brought, of certain kinds of goods tended to reduce their value, so the demand, which he brings, for other kinds tends to increase their value. The result is, that now there are certain kinds of goods, which it is less profitable than usual to produce; others, which it is more profitable than usual to produce: and this is an inequality, which tends immediately to correct itself (Mill, 1844: 241).<sup>28</sup>

Should this reasoning make sense, overproduction (always partial in the start of the process) might never become generalized, because, with each disequilibrium, the price system would produce an instantaneous signal: prices would fall where there is excess and would increase where there is scarcity. I would like to call attention to the fact that here the reasoning does not refer to a hypothetical ‘long run’ situation; it tries to show how the system reacts in the concrete situations in which the disequilibria occur.

It is not by chance that Malthus’ definition of general overproduction is in direct opposition to this conception of compensatory disequilibrium. He considers general overproduction to be ‘a fall [in the prices] in a great mass of commodities below the costs of production, not counterbalanced by a

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<sup>27</sup> This weakens Kates’ depiction of Say’s approach (‘clearly wrong’, he writes) as idiosyncratic and his opinion that ‘the more logical approach adopted by James Mill (...) ultimately came to dominate’ (1998: 31).

<sup>28</sup> ‘It is, therefore, impossible, that there should ever be in any country a commodity or commodities in quantity greater than the demand, without there being, to an equal amount, some other commodity or commodities in quantity less than the demand (...)The commodity, which happens to be in superabundance, declines in price; the commodity, which is defective in quantity, rises’ (Mill, 1844: 235).

proportionate rise of some other equally large mass of commodities above the costs of production’ (Malthus, 1827: 66-67, my emphasis)<sup>29</sup>.

One may wonder whether what makes this definition unacceptable to Say is precisely the absence of the adjustment mechanism he postulates. The guarantee that overproduction is temporary – therefore not affecting the reproducibility of the system – would be precisely the fact of its being partial<sup>30</sup>.

Say does not demonstrate that the price system behaves in the way described (neither does James Mill). The acceptance of the initial conjecture that production is geared towards buying is insufficient. The definition of the level and composition of supply and demand is simultaneous; in (expected) value, supply and demand are identical, even though their compositions may differ. However, while the composition of supply is a ‘real’ phenomenon derived from the decisions of production, the initial composition of demand is purely virtual and *ex ante*<sup>31</sup> – resulting from a sum of the acquisitive desires of all the agents. With disparities between the compositions of supply and demand, there would certainly be opposite variations in prices provided that, in the real world of the markets, it were possible to confront that same virtual demand with supply; in the attempt to purchase the desired goods – in function of which the decisions to produce were taken – the producers would make the prices increase in some markets and fall in others.

However, it so happens that the initial hypotheses of the law are hardly compatible with the initial magnitude and composition of demand. If the objective of production is purchase, the actual income will be spent in buying the desired products, provided that the purchase is carried out in the terms foreseen by the producer. If, however, the producer’s expectations are frustrated, the effectuation of his *ex ante* demand for goods could be partially or totally impossible – since, we are told, in order to buy, it is necessary to have sold first. The frustration of the expectations of the producers, when the expected income differs from the effective one, must alter unpredictably the individual decisions of expenditure and, as a consequence, the

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<sup>29</sup> Ricardo warns Trower not to commit ‘the great and fundamental error of Mr. Malthus, who contends that there may be at one and the same time a glut of all commodities, and that it may arise from a want of demand for all – he indeed argues that this is the specific evil under which we are at present suffering’ (Ricardo, VIII: 256-257; see also McCulloch, 1864: 156).

<sup>30</sup> This may have been the most important reason why partisans of Say’s law have mistakenly and systematically attributed to their opponents the thesis that the glut could be general and permanent (see Sowell, 1972).

composition of aggregate demand in an unpredictable manner. The price system – flexible by hypothesis – will doubtlessly react to this state. However, this may not necessarily be in a ‘virtuous’ way, giving the different capitals a clear indication of the path to be taken. A cumulative process of fall in income and demand can make a fall in prices or in the profit rate become more or less generalized. In other words, there could be a general overproduction (see Possas, 1987:60)<sup>32</sup>, which would seriously disturb the regulating function of the price system.

The exclusion of the possibility of general overproduction presupposes the existence of a sufficiently efficient adjustment mechanism. Apparently, the search for such a mechanism in Say is a futile enterprise. Even more than in Ricardo, the adjustment is little more than an equilibristic conjecture<sup>33</sup>. In some passages, Say appeals to the reasoning of the entrepreneur (see Tapinos, 1972: xxx) – a truism also employed by Ricardo – while, in others, he just restricts himself to making an inventory of factors, of natural and political nature, which can delay the process<sup>34</sup>.

Curiously enough, in the most recent anti-Keynesian revision of the debate on the law of markets, Jonsson (1997) and Kates (1997, 1998) attribute to Say the pioneering role in the formulation of a Clowerian theory of recession. Yet another paradox and another supposed irony of history: the supporters of the law of markets could be the true creators of the New Keynesian theory of recession as a cumulative result of errors in the decision to produce, i.e., of coordination failure<sup>35</sup>.

<sup>31</sup> At least, partially. Obviously, there is a quantity of intermediary goods (and services) whose purchase was determined by the decision to produce.

<sup>32</sup> The same can happen to an economy based on barter. I agree with Hahn (1977: 38), for whom ‘the idea that there would be no unemployment in a barter economy is grotesque’ (as is grotesque the idea of a mercantile economy without money; cf. Possas, 1987: 62-64).

<sup>33</sup> Ratified by Mises (1950: 316) many years later, and without qualification: ‘To the overproduction of shoes corresponds an underproduction of shirts. Consequently the result can not be a general depression of all branches of business. The outcome is a change in the exchange ration between shoes and shirts (...) What the seller wants ultimately to receive in exchange for the commodities sold is other commodities. Every commodity produced is therefore a price, as it were, for other commodities produced’.

<sup>34</sup> According to Say (1819: 57), ‘there must needs [sic] be some violent means, or some extraordinary cause, a political or natural convulsion, or the avarice or ignorance of authority, to perpetuate this scarcity on the one hand, and consequent glut on the other. No sooner is the cause of this political disease removed, than the means of production feel a natural impulse towards the vacant channels, the replenishment of which restores activity to all the others. One kind of production would seldom outstrip every other, and its products be disproportionately cheapened, were production left entirely free’ [my emphasis].

<sup>35</sup> ‘But once errors were made in the production process (...) then some goods, in what was referred to as a “partial glut”, would remain unsold. Incomes would then fall bellow expectations, employment numbers would be reduced and the

It is certainly true that Say's law can be made consistent with the occurrence of recessions and unemployment. However, as far as Say and James Mill are concerned, the evidence of a theory of recessions based on the generalization of partial gluts is rather weak (see Baumol, 1997). Jonsson and Kates stresses some passages in which Say (1819: 59 and 137) and James Mill (1808: 87-88) in fact deal with stagnation, impoverishment and unemployment. This proves that they did not deny the possibility of such phenomena, but not that they believed in the predominance of definite economic causes (see Béraud, 1992: 488) and, specifically, in the generalization of the partial glut as a primary explanation for recessions. In my opinion, the absence of macro-economic treatment of the adjustment mechanisms sparked off by a situation of frustration of short-term expectations is precisely what makes the laws of markets, at least as presented by Say and James Mill, one of the meanest equilibristic theories in the history of economic thought <sup>36</sup>.

Kates does make the point that the connection between Say's law and a cumulative theory of recessions was accomplished by Torrens and developed by other classical and neoclassical economists <sup>37</sup>. But there is a great deal of arbitrariness in the contention that this would be the 'true meaning' of Say's Law. Moreover, such a cumulative theory can also be found... in Malthus <sup>38</sup>. This should not seem

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demand for other products would decrease. The consequences of partial glut in some parts of the economy could thus reverberate through the economy as a whole and would often end in recession. Recessions were thus conceived as structural' (Kates, 1997: 197).

<sup>36</sup> The evidence is more favorable in the case of Ricardo, who tried to cope with the problem of economic distress in the oft-quoted chapter XIX of the *Principles*. Significantly, while Ricardo (I: 263) mentions the effects of changes in 'the tastes and caprice of the purchasers', the emphasis is placed on factors such as the 'commencement of war after a long peace, or of peace after a long war' (*ibid*: 265). There is no clear description of a cumulative process. In a letter to Malthus, Ricardo (VIII: 278) writes that he 'cannot conceive it possible, without the grossest miscalculation, that there should be a redundancy of capital, and of labour, at the same time'. Is it really reasonable to consider 'grossest miscalculations' as a basis for a 'structural' (in Kates' words) theory of recessions?

<sup>37</sup> Sowell (1972: 129-131) had already suggested that Torrens was the first to conceive the possibility of generalization of a partial glut. Nevertheless, he (as Béraud, 1992: 478) placed Torrens in the side of the critics of Say's law. According to Sowell (1972: 176), similar reasoning would be employed later by John Stuart Mill and Marx.

<sup>38</sup> See Malthus, 1820: 438, and 317-8. According to Béraud (1992: 483), the idea of a cumulative process of crisis, present in Sismondi, was 'frequently evoked the classics, by Malthus, by Torrens and by Say as well'.

surprising: there seems to be no theoretical incompatibility between such a theory and Malthus' approach, and, for that matter, with Keynes' principle of effective demand <sup>39</sup>.

## 5. An attempt at synthesis

The evolution of economic science has continually frustrated all the (millennialist) expectations that have been betting on the advent of an era without controversies. Even exegetic debates, like this one, instigated around a limited *corpus* of texts, find it difficult to reach a resting place. This need not be seen as frustrating, for as modern historians well know, we must accept with resignation and humility the fact that the interpretation of the past is inevitably re-written from the viewpoint of present experience.

Therefore, the orthodox debate on the law of markets is punctuated over time by the state of the art in macroeconomic theory. The motives and the degree to which economists more closely linked to the mainstream appropriate, at a given moment, aspects of Keynesian thought – or simply reject it – are revealed with each reinterpretation of the law of markets.

On the other hand, it must be recognized that the persistence of the theme on the agenda of the historians of economic thought is equally due to certain peculiarities of the law of markets. As Baumol points out, it is useless to seek a clear and precise definition among those responsible for the formulation and divulgation of the law of markets. They never intended doing that.

The implications of the fact that we are dealing with a science which was still developing should never be underestimated. As Sowell (1972) pointed out, the debate on the general glut was greatly clouded by methodological, terminological and conceptual differences, some of which were only clarified after many years of discussion. Neither can we exclude the possibility that important authors have been inconsistent, or have simply changed their opinion over time.

Among the peculiarities of the classical debate is the illuminist conception of scientific knowledge. Natural law, in the classical economists, is not an evident empirical truth. In many cases, it is up to the

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<sup>39</sup> It is convenient to add that Keynes' theory is not based on the assumption that a contraction of aggregate demand is the only conceivable cause of unemployment, and that it does not require the occurrence of any type of glut (partial or general)

scholar to deduce it, to make explicit the conditions under which it becomes valid and show why it is advantageous to institute such conditions (Ingrao & Israel, 1990: 43). Until the enlightened principles are established, arbitrariness flourishes and the natural laws do not fully conduct the business of men.

Thus it is not surprising to find, in the classical authors, a great number of passages in which the author identifies and discusses a phenomenon that, to judge from the reading of other extracts, should simply not exist. There is a difference between the theoretical discourse, when it presupposes a society under the auspices of natural laws, and the allusions to circumstances in which the institutional conditions present a very different character.

An obvious example is the Smithian treatment of hoarding. Yes, ‘a man must be perfectly crazy who (...) does not employ all the stock which he commands’ in ‘procuring either present enjoyment or future profit’. However, this is only valid ‘where there is tolerable security’. To admit that hoarding is a rational attitude in ‘unfortunate countries (...) where men are continually afraid of the violence of their superiors’ (Smith, II, 1: 285) is neither proof of inconsistency nor a demonstration of the ‘wealth’ of the author’s theoretical conception, for if there are no institutions compatible with the natural laws, everything is permitted. The theory of capitalism in suitable institutional conditions continues to lack a more encompassing conception of the role of money<sup>40</sup>.

In the texts defending the law of markets, the denial of the possibility of general glut co-exists with frequent mentions of phenomena whose compatibility with the law is problematic, to say the least. In chapter XIX of the *Principles*, Ricardo eloquently describes causes and effects of ‘sudden changes in the channels of trade’. The adjustment process can be long and costly and there will be idle capital and labor in a proportion directly related to the agents’ incapacity to become aware of the situation and adapt to it (giving new uses to their productive resources) and to the impediments imposed by the authority. According to Sowell (1972: 32), Ricardo was aware that ‘a sharp contraction of money and credit’ would have ‘“the most disastrous consequences to the trade and commerce of the country”, causing “much ruin

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to deflagrate a recession process.

and distress” in the economy’. Ricardo’s final recognition of the possibility of persistent unemployment as a result of the advent of machinery is well known. Say (1819: 60), in turn, describes the impact of a strong contraction in circulation, in function of the expectations which lead the owners of goods and money to individually retain a substantial amount of their assets. To sum up, we have here Ricardo and Say talking of recessions, of ‘goods’ whose supply does not generate demand (labor) and of alterations in the velocity of money.

At no time in the *General Theory* does Keynes dare to delve into this embarrassment of propositions. Indeed, he opts for too partial a rendition of Say’s Law (although it preserves one of its constitutive elements, the identity of aggregate supply and demand). If taken too literally, Keynes’s interpretation would imply that references to the above-mentioned phenomena should be outrightly discarded as inconsistencies committed by the authors.

The mainstream economists offer interpretations that, in my view, are similar to the Keynesian one in the way they abstract certain ‘uncomfortable’ elements from the classical texts. Except that here, the abstracted elements are precisely those stressed by Keynes. Curiously enough, the main argument against the general glut, as well as some possible short term implications of the law (clearly explained by Say and James Mill), are omitted.

A less partial and less preconceived interpretation should be simultaneously capable of recognizing, among the central propositions of the law, the identity between aggregate supply and demand and of classifying in different categories the ‘deviant’ phenomena identified by the authors. There are those consistent with the law, inasmuch as they are derived from institutional contexts quite distinct from the natural order. There are others, derived from semantic problems, as the difference (correctly stressed by Kates) between general glut and distress or stagnation. There are possible inconsistencies, maybe such as those that Ricardo criticizes in Say (see Kates, 1998: 31), or the former’s admission of technological

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<sup>40</sup> Similar arguments to these can be found in other classical economists, such as Say (1819: 59).

unemployment (on both of these, see Baumol, 1997). And there is the evolution of the authors' thought, an example of which are Say's last manifestations<sup>41</sup> on the law<sup>42</sup>.

## 6. Conclusion: a brief note on the opposition between Say's law and the principle of effective demand

According to Keynes, the opposition between Say's law and the principle of effective demand marks a basic dichotomy, from which the orthodox vein and the Babel of heterodoxies differentiated themselves (Keynes, 1933: 97). As I hope to have shown, Keynes' interpretation of the meaning of the law as an identity between aggregate supply and demand is basically correct<sup>43</sup>. The thesis that there is an opposition between the law and the principle is fairly arguable too. According to the principle of effective demand, as formulated by Keynes (1936), supply does not create its own demand, and although variations in supply determine variations in demand, the balance between the two is fundamentally determined by decisions to invest that are independent of the level of production.

It is more complicated to accept the thesis that this opposition adequately describes the watershed between orthodoxy and heterodoxy, between the specific theory of the allocation of given resources and the 'general' theory. This thesis, of indisputable rhetorical efficiency in the years that followed the publication of *The General Theory*, incurs the very dangerous error of underestimating the opponent. This is because the law of markets, despite its being conducive (when properly connected to other equilibristic propositions) to most of the propositions commonly defended by the mainstream – such as the ideas of

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<sup>41</sup> In several of his last texts (see Sowell, 1972: 121 and 139-141), Say explicitly reconciles himself with Malthus and Sismondi, finally accepting the existence of restrictions on the demand side (see 1841: 146-147, a 1827 letter to Malthus *in* 1848: 513 and 1828: 345-347). These excerpts include what Baumol (1977: 159) called a 'rather curious tautological version of Say's Law'. See Béraud (1992: 488) and Kates (1998) for a different interpretation.

<sup>42</sup> A careful interpretation should also deal specifically with John Stuart Mill's intervention, which was both late and peculiar. As Sowell (1972) shows, on the one hand Stuart Mill transforms the propositions of the critics of the law of markets into a crude caricature, in which it is possible that the relative prices all fall at the same time and the general glut becomes a permanent state (Stuart Mill, 1844: 74). On the other hand, Mill himself (1844: 70-71) admits the fact that the monetary revenue derived from sale cannot generate an immediate purchase, which gives rise to a fairly clear formulation of what will later be called Walras' law (Sowell, 1971 emphasizes the similarity with the argumentation employed by Marx).

<sup>43</sup> On the same theme - that of the lack of substance of the Keynesian interpretation (and/or of criticism) of Say's law - a greater number of variations than those described here were developed. According to Ackley (1961), there was never a Jean-Baptiste Say – at least, nobody with this name played a minimally significant role. The law attributed to this 'mythical scholar' should be seen as a modern creation, a 'straw man' sewn by Keynes (Ackley, 1961: 109; see Miglioli, 1981: chapters 1 and 2).

the neutrality of money and of the tendency to full-employment equilibrium in the long run – is not in any way a necessary condition. The law of markets was just a minor (and quickly outdated) example of equilibrium, founded on hypotheses which are too restrictive and whose compatibility with evidently important phenomena is problematic.

The identity between aggregate supply and demand, albeit correctly related by Keynes to Say and Ricardo, is not necessary to obtain any of the fundamental theses defended by the modern mainstream, from the neoclassical synthesis to the New Classical authors, passing through monetarism.

So it is that, after the controversy of the general glut, the law of markets, as formulated by James Mill and Say, only reappears sporadically in the economic debate. As Keynes (1936: 18-20) pointed out, the virtual disappearance of references to Say's law after John Stuart Mill is not in itself definitive evidence that the law had become irrelevant<sup>44</sup>. For him, the absence of the law in the orthodox argumentation signaled the fact that it had become such an obvious postulate as to no longer warrant naming<sup>45</sup>. However, there is another hypothesis, which I consider more plausible, and it is that equilibrium, after the contribution of John Stuart Mill, opts for less vulnerable paths, even before leaning clearly towards the Walrasian conception.

So it is that, from the '40s onwards, orthodoxy elegantly and painlessly recovers from the Keynesian attack, by means of an operation that is completely independent of the recourse to the law of markets. The strength of the argument lies precisely in its simplicity (seductive and, in my view, deceptive). Walras' law is at the base of everything (see, for instance, Modigliani, 1944). The irony of history – here, indeed, the expression seems pertinent – consisted in performing the transition from the original truism to the thesis of convergence towards general equilibrium by using Keynesian instruments, as formalized by Hicks in 1937 (but also suggested in chapter 18 of *The General Theory*). Supply does not in fact create its

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<sup>44</sup> Klein (1966) emphasizes the importance of Fred M. Taylor's textbook. Taylor (1913: 148) presents an interpretation of the law of markets that in my view is faithful to the originals (and totally compatible with Keynes' interpretation). Similarly, Mises (1950: 319), based on what we saw above to be less of an interpretation than a paraphrase of Say and Ricardo, fiercely defends the validity of the law: 'Keynes did not refute Say's law. He rejected it emotionally, but he did not advance a single

own demand; it is recognized that demand can establish limits on production below the level of full employment... for a given absolute level of prices. If, with unemployment, wages and unemployment fall, aggregate demand will tend to expand, due to the so-called Keynes and/or Pigou wealth effects.

This result – as with the long-run neutrality of money, reaffirmed emphatically by the monetarists – does not depend on the heroic hypothesis that the agents supply goods with a view to purchasing goods <sup>46</sup>. Nevertheless, it depends, inasmuch as its credibility as a foundation of economic theory and policy is concerned, on the presumption that it is reasonable to assume as a hypothesis the predominance of the endogenous tendencies of the markets towards a state of equilibrium; in other words, it depends on an equilibristic avowal of faith.

In *The General Theory*, the criticism of the equilibrium of Say's law and fertile examples of what could be a dynamic non-equilibrist analysis (as in Chapter 19) can be found. There is not, nevertheless, a general methodological criticism of equilibrium. The result of this, as I suggest in another text (Macedo e Silva, 1995), has been of simultaneously facilitating the acceptance of Keynesian policies and the maintenance of the hegemony of neoclassical thought.

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tenable argument to invalidate its rationale’. For Mises (1950: 317), ‘the acknowledgement of the truth contained in Say's Law’ became in the XIX century (and presumably also in the XX century) ‘the distinctive mark of an economist’.

<sup>45</sup> This, by the way, is the opinion of Kates (1998).

<sup>46</sup> This point was clearly perceived by Patinkin, according to whom, by acknowledging the Pigou effect, the ‘classical’ conception of a ‘consistent’ economy does not need Say's law. Thus, the Keynesian attack should be concentrated not on the law, but on the ‘dynamic instability of our economic system – on its inability to restore full employment within a reasonable time after being subjected to a shock of one type of another’ (Patinkin, 1949: 378).

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