

commerce, and unproductive consumers, but whether they suffice remains indeterminable. Malthus spells out quite clearly the idea here that the profit motive itself poses the main problem for the closure of circuits in capitalism and points to “unproductive consumers” as *ultima ratio*. Malthus, like Sismondi and others before him, looks towards prosthetics to close the gap.

## Section 6. What Say said and Ricardo’s Law of Say

Malthus was a close personal friend of Ricardo. For the sake of faster progress in economic theory, it might have been better if the two had become enemies and Malthus would then have been less moderate and polite in his criticism of Ricardo.

### Ricardo and Say

The years following the Napoleonic Wars had disproven Smith’s earlier optimism (from fifty years previously) concerning a lasting sufficient demand being available, which would buy the capitalist firms’ output. David Ricardo (1772 – 1823) was fully aware of the problem and was in constant discussions with his friend Malthus and others that occasionally included Sismondi, about the reasons why sales markets rejected the absorption of the produce,<sup>106</sup> which undermined confidence that future production would be sellable, and led to the underemployment of equipment and workers. The problem that Quesnay had axiomatically solved, and which Smith had ignored, Ricardo, though, felt could be explained with special and transitory circumstances. Capitalism, he felt, had no general problem. When he needed a formula to express his view, he began to generously refer to a formula of a European disciple of his, *Jean-Baptiste Say* (1776 – 1832). Say, according to Ricardo, was “not only the first, or amongst the first, of continental writers who justly appreciated and applied the principles of Smith...” (meaning the teaching of Ricardo himself) and did “more than all other continental writers together, to recommend the principles... to the nations of Europe”, but, Ricardo went on, even “succeeded in placing the science in a more logical, and more instructive order and enriched it by several discussions, original, accurate, and profound.”<sup>107</sup> One of these “enrichments” were a few sentences that Ricardo himself elevated to the “Law of Say” or “Say’s Law”. It provided a new, more

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106 One year before Ricardo’s death, in 1822, he visited Sismondi in Geneva. Sismondi reports that the two began their two or three meetings by agreeing that “all sorts of industry, agriculture and manufacture, complain, one alike the other, in all European countries of a congestion of the markets and the impossibility to sell or to only sell at a loss”. (*Sismondi* (1827) page 411, translation by author).

107 Preface page 6. Ricardo leaves not doubt who is the master and who the disciple.

general, more abstract and, as it appeared, eternal reason for the automatic closure of capitalist circuits; this could replace the specific numeric argument found in Quesnay's tableau.

## What Say said

Ricardo's Law of Say is most commonly stated as "*supply creates its own demand*",<sup>108</sup> but it is difficult to find a quote in Say's own words that corresponds to the statement. In disputes, it is common to refer to quotations from either Ricardo or John Stuart Mill<sup>109</sup> instead (not to be confused with James Mill, a direct Ricardian) or even to modern statements, e.g., by B.M. Anderson.<sup>110</sup> When searching for the origins of the "Law of Say" in Say's writing, we found the following reasoning in chapter XV of Say's *Traité de l'économie politique* (first ed. 1803). Here, Say actually deals with "débauchés."<sup>111</sup> He tells us that from entrepreneurs' views the problem is not producing, but selling; "money is rare" is their complaint. Say undertakes the task of clarifying the issue as follows: "L'homme dont l'industrie s'applique à donner de la valeur aux choses en leur créant un usage quelconque, ne peut espérer que cette valeur sera appréciée et payée, que là ou d'autres hommes auront les moyens d'en faire l'acquisition. Ces moyens, en quoi consistent-ils? En d'autres valeurs, d'autres produits, fruits de leur industrie, de leurs capitaux, de leurs terres: d'où il résulte, quoiqu'au premier aperçu cela semble un paradoxe, que c'est la production qui ouvre des débouchés aux produits. Que si un marchand d'étoffes s'avisait de dire: ce ne sont pas d'autres produits que je demande en échange des miens, c'est de l'argent, on lui prouverait aisément que son acheteur n'est mis en état de le payer en argent que par des marchandises qu'il vend de son côté. 'Tel fermier', peut-on lui répondre, achètera vos étoffes si ses récoltes sont bonnes; il achètera d'autant plus qu'il aura produit davantage. Il ne pourra rien acheter, s'il ne produit rien."<sup>112</sup> "L'argent n'est que la voiture de la valeur des produits".<sup>113</sup> Money fulfils only an "office passager".<sup>114</sup> "C'est donc avec la valeur de vos produits, transformée momentanément en une somme d'argent, que vous achetez, que tout le monde achète les choses dont chacun à besoin".<sup>115</sup> "Lors donc qu'on dit: la vente ne va pas, parce que l'argent est

108 E.g., for an Austrian adherent of Ricardo's Law of Say see *Hazlitt* (1959) page 35.

109 *Mill* (1848) Book III, Chap. xiv. Sect. 2.

110 *Hazlitt* (1959) page 33, gives a statement of almost a full page with arguments and examples

111 *Say* (1803). In the preface of the *Principles* Ricardo refers to this chapter as follows: "Chapter xv part I, 'Ses Débauchés', contains, in particular, some very important principles, which, I believe, were first explained by this very distinguished writer" (*Ricardo* (1961) page 7).

112 *Say* (1803) chap. XV 3<sup>rd</sup> and 4<sup>th</sup> para.

113 *Say* (1803) chap. XV 5<sup>th</sup> para.

114 *Say* (1803) chap. XV 11<sup>th</sup> para.

115 *Say* (1803) chap. XV 6<sup>th</sup> para.

rare, on prend le moyen pour la cause... On ne devrait pas dire: la vente ne va pas, parce que l'argent est rare, mais parce que les autres produits le sont."<sup>116</sup> Say goes on to explain that this also applies to classes that do not materially reproduce themselves, such as clergymen, lawyers, or state functionaries: "C'est pour cela qu'une bonne récolte n'est pas seulement favorable aux cultivateurs, et qu'elle l'est en même temps aux marchands de tous les autres produits. On achète davantage toutes les fois qu'on recueille davantage. Une mauvaise récolte, au contraire, nuit à toutes les ventes."<sup>117</sup> "Un homme à talent, que vous voyez tristement végéter dans un pays qui décline, trouverait mille emplois de ses facultés dans un pays productif, où l'on pourrait employer et payer sa capacité."<sup>118</sup> "Une ville entourée de riches campagnes, y trouve de nombreux et riches acheteurs, et dans le voisinage d'une ville opulente, les produits de la campagne ont bien plus de valeur."<sup>119</sup>

Now, these quotes are impeccable and correct, by and large,<sup>120</sup> but what is normally called "the Law of Say" is not found therein. Commodities always and only exchange either directly against other commodities, including labor, or against money, which has been exchanged against such commodities previously (that is certainly true – against what else might commodities be exchanged?). The more commodities have been produced, the more exchanges can take place (true again), given that they are possible ammunition of exchange partners. Still, though, there is no statement about what Ricardo presents as the "Law of Say". Yes, Say states that supply creates demand, but nowhere does he state that "supply creates *its* own demand", certainly not in the sense that there will *always* be *sufficient* demand to buy the entire produce supplied at a price that allows for a reasonable profit. Nowhere (not in these aforementioned quotations and nowhere else to our knowledge) does he claim that a preordained quantitative match to this effect actually exists. On the contrary, Say explicitly casts this into doubt by making the following points:

"Cela étant ainsi, d'où vient, demandera-t-on, cette quantité de marchandises qui, à certaines époques, encombrant la circulation, sans pouvoir trouver d'acheteurs ? Pourquoi ces marchandises ne s'achètent-elles pas les unes les autres ?

Je répondrai que des marchandises qui ne se vendent pas, ou qui se vendent à perte, excèdent la somme des besoins qu'on a de ces marchandises, soit parce qu'on en a produit des quantités trop considérables, **soit plutôt parce que d'autres productions ont souffert. Certains produits surabondent, parce que**

116 Say (1803) chap. XV 7<sup>th</sup> para.

117 Say (1803) chap. XV 13<sup>th</sup> para.

118 Say (1803) chap. XV 18<sup>th</sup> para.

119 Say (1803) chap. XV 19<sup>th</sup> para.

120 The only objection, which could be raised: Say does not seem to be aware of the paradox mentioned by Malthus that easily accessible markets with many firms are sometimes favorable and sometimes unfavorable for other firms, see on page 56 et seq.

**d'autres sont venus à manquer. En termes plus vulgaires, beaucoup de gens ont moins acheté, parce qu'ils ont moins gagné; et ils ont moins gagné, parce qu'ils ont trouvé des difficultés dans l'emploi de leurs moyens de production, ou bien parce que ces moyens leur ont manqué.**<sup>121</sup>

Only the beginning (before the first “soit parce que...”) considers insufficient esoteric demand for specific values-in-use as the cause for deficient demand. Yet, Say clearly provides a second cause, which is not founded in firms’ misreading of the needs and tastes of their customers. Accordingly, it cannot be removed by producing other, more desired values-in-use. This second explanation is that the value-in-exchange-generation, through other productions, has suffered and the “counter-supply” of values-in-exchange, needed to pay for desired produce, is not sufficiently present. Say “vulgarizes” this, as he says, to make it utterly clear: Potential demanders have earned too little, as they had difficulties in either employing their means of production or because they did not have means of production or because they did not have salary incomes at all. In other words, the lack of esoteric demand and because prospective demanders lack means of payment (or ways to procure them) will shrink exchanges and, thereby, reduce future exchanges and future income opportunities. When examined properly, all of this is very close to the works of both Sismondi and Malthus. While Say’s first reason for deficient demand (no “esoteric” demand, Say says no “physical demand”) can be easily remedied<sup>122</sup> by shifting production,<sup>123</sup> the second (esoteric demanders cannot procure money) is much more difficult or even impossible to remedy. In other words, Say, the alleged inventor of “Say’s Law”, does,

121 Say (1803) chap. XV 14–16<sup>th</sup> para (bold print added).

122 It is actually not so easy to adjust output even to “physical demand”. Why, if the needs of the public have been missed out on in the first place, should the second attempt be reliably so much better? It was a strong argument against central planning economies that they would not be able to successfully adjust production to existing needs – why should private firms be so much better? Furthermore, will not every true discovery of specific consumer needs or desires unleash a stampede of entrepreneurs all running into the same direction and will they, thus, not almost by necessity mutually frustrate their efforts, at least after some time? It is true that economic liberty and markets punish missing the consumer needs (hard), but they also excite far too many firms to run after the the same opportunity.

123 Say goes on to discuss this in the next 17th para. Ricardo and Hazlitt put great emphasis on this point. Ricardo writes: “It is not to be supposed that he should, for any length of time, be ill-informed of the commodities which he can most advantageously produce, to attain the object which he has in view, namely, the possession of other goods; and, therefore, it is not probable that he will continually produce a commodity for which there is no demand.” (Ricardo (1961) chap. XXI, early, page 290). Ricardo also wrote: “Mistakes may be made, and commodities not suited to the demand may be produced—of these there may be a glut; they may not sell at their usual price; but then this is owing to the mistake, and not to the want of demand for productions.” (Ricardo (1991) page 305).

indeed, not proclaim that supply *always* find its *full* demand. Products buy products *if* there happens to be desires for just the right special values-in-use and, in addition, *if* one has enough money. “Say’s Law” is, thus, based on a misinterpretation by Ricardo and we must acquit Say of being the inventor of what is conventionally called the “Law of Say”.

## Ricardo’s Law of Say

Hence, Ricardo overinterpreted and changed what Say actually said. “M. Say has”, Ricardo writes, “... most satisfactorily shewn<sup>124</sup>, that there is no amount of capital which may not be employed in a country, because demand is only limited by production...There cannot, then, be accumulated in a country any amount of capital which cannot be employed productively, until wages rise so high in consequence of the rise of necessaries, and so little consequently remains for the profits of stocks, that the motive for accumulation ceases,<sup>125</sup> but Say, as we have seen, did not say this. We do not know how Ricardo came to “enhance” Say’s work. Was he conscientious of the fact that he was reading something alien into him or not? If he was, why would he hope that his disciple would accept the fatherhood of a bastard baby? In fact, Say neither rejected Ricardo’s interpretation, nor rephrased and repeated it in a way so as to better correspond to Ricardo’s reading. It appears that *nobody* wanted to be too closely associated with Ricardo’s Law of Say<sup>126</sup> and that everybody wanted to keep all of his options nevertheless.

## Ricardo’s Law of Say in ideological battles

When Smith wrote in 1776, he was authentically optimistic about there being sufficient demand for Albion’s produce. When Say, Ricardo and Sismondi, and Malthus wrote, at the end of the first quarter of the 19th century, that was history and the “encombrement général de tous les marchés de l’univers, où l’on porte incessamment des marchandises que ne se vendent à perte<sup>127</sup>” was reality. Ricardo’s Law of Say was, thus, irreconcilable with reality from the very day of its invention. The Communist Manifesto was published 25 years after Ricardo’s death, and trade unions and socialist, social democratic or communist parties and philanthropes complained about

124 Ricardo does not provide a quotation in which Say is supposed to have made the statement, which Ricardo in an adjacent footnote calls “M. Say’s principle”.

125 *Ricardo* (1961) chap. XXI, early, page 290. Emphasis added. The condition “until ...” also already points beyond Ricardo’s Law of Say.

126 *Keen* (2011) page 205, states that “‘Walras Law’ is simply Say’s Law in a more formal guise...”.

127 *Jean Baptiste Say, Lettres à M. Malthus, Lettre première*, in: *Jean Baptiste Say, Cours d’économie politique*, Paris 1996, page 224.

“poverty amidst of plenty” all throughout the 19th and the first part of the 20th centuries; Manchester capitalism, unemployment after the Great Depression and what was then called the “Third World” were all ongoing disproof of Ricardo’s Law of Say.

The years between 1848 and 1989 centered around battles between socialist or communist ideologies on the one and liberal or “laissez faire”<sup>128</sup> ideologies on the other side. Imperial world powers partly subscribed to either the one or the other side. This lifted “Ricardo’s Law of Say” to a mass-ideological relevance, which Ricardo himself had probably not foreseen. The “law,” which Say never stated, “supply creates its own demand”, became as important for political hegemony as doctrines of Catholicism and Protestantism had been in the religious civil wars of the 16th and 17th centuries; believers in economic liberty defended it as fervently as Catholics had defended the virginity of mother Mary. It is the destiny of economic theory, alike religious credence, if it becomes relevant in a mass ideological debate to be fully subdued to battle logic. It does no longer matter what the opponent truly states or means any more. Rather both sides portray their opponents’ doctrines as overshooting what they really meant and, accordingly, both sides can justly claim that their positions are misrepresented by the other side.<sup>129</sup> As Ricardo’s Law of Say had neither a clear father nor a clear content, and still tried to assert control over a basic macroeconomic question, no wonder it became a particularly fuzzy plaything.

## Macro transmissions in the interpretations of Ricardo’s Law of Say

This, Ricardo’s Law of Say’s sad destiny, does not relieve us from thinking hard about whether it may still have a sensible meaning. Three interpretations are possible and each are examined one by one.

### First interpretation of Ricardo’s Law of Say

The “Law of Say” could, first, wish to abbreviate what Say really stated and what we have quoted extensively: As produce exchanges against other produce, there will be more opportunities for exchange with those who have more of the other produce.

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128 The author is not aware of the origins of the French expression “laissez faire”. Given the adoration China enjoyed in the “siècle des lumières”, Lao Tse’s “Wu wei”, might well be looming in the background.

129 E.g. Hazlitt, in its defense against Keynes, restricts the meaning of “Say’s Law”. The “doctrine that supply creates its own demand, in other words, is based on the assumption that a proper equilibrium exists among the different kinds of production, and among prices of different products and services. And it of course assumes proper relationships between prices and costs, between prices and wage-rates. It assumes the existence of competition and free and fluid markets by which these proportions, price relations, and other equilibria will be brought about.” A lot of preconditions he presupposes! (*Hazlitt* (1959) page 36, 35).

Yet, as stated previously, this interpretation by no means implies that there will always be sufficient demand for all produce. This first interpretation would demote Ricardo's Law of Say to a true, albeit trite macroeconomic insight.

## Second interpretation of Ricardo's Law of Say

The second interpretation stipulates – as a self-evident truth – that all produce can indeed be securely sold in full – without giving specific verifiable or falsifiable reasons for it. In other words, everybody remains free to figure out their own explanatory mechanism. This may be a notional identity or equality between flows (such as  $I = S$ ?), a mechanical transmission belt, like a law of gravity, a magic or mystical relationship, some math, or whatever. Why not quantum entanglement? It also could be a Platonic idea (*ante res* or *in rebus*)... – we are not told.<sup>130</sup>

If stubborn unbelievers continue to ask how the “law” can possibly function, they will soon have to understand that Ricardo's Law of Say cannot conclusively be thought of as relating to only two groups, those who want to sell and those who are expected to buy. Instead, the latter group of expected purchasers can only buy because they were or are already successful sellers. Hence, Ricardo's Law of Say must be anticipating the result of a circular process, a *regressio ad infinitum*, with everyone and with all involved. The following can also be stated: Not only must a first firm find customers who attribute some esoteric value-in-use to its commodities – which is obvious, without value-in-use-attribution they would not attribute any value-in-exchange –, but there is a quantitative issue, too. The esoteric value-in-use-attributers must attribute *more* value-in-exchange to the commodities than the firm has spent as costs on the production of the to-be-purchased product and they must be willing and able to make the sacrifice in this full amount. They will, however, only be capable of doing the latter if Ricardo's Law of Say is simultaneously also working in their favor (or has done so before) and if it equips them/has equipped them with the needed money. This condition, now, is exactly what Ricardo's Law of Say teaches us will always be fulfilled: Do not worry, it seems to state, everybody can sell because everybody can and has succeeded or will succeed when they do the same thing. Ricardo's Law of Say has the structure of, first, acknowledging a mutual dependency and of, second, foretelling that this mutual dependency will always resolve itself, without neither explaining why, nor dealing with quantities.

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130 Sismondi writes: “C'est avec regret que nous voyons l'économie politique adopter en Angleterre un langage chaque jour plus sentencieux, s'envelopper dans des calculs plus difficiles à suivre, se perdre dans des abstractions, et devenir, en quelque sorte, une science occulte.” (Sismondi (1827) page 373, 374). As chief of this “école nouvelle”, which has “un esprit de secte”, Sismondi names “Mr. Ricardo” (page 374).

### Third interpretation of Ricardo's "Law of Say"

The third possible interpretation of the "Law of Say" intricates the "law" in a world of causality in which rational argument can now, indeed, take place. It begins with the idea that those involved in producing a product *acquire income* for their involvement, as outlays from a firm, and that they should be able to (re)purchase their product with it. Is this the case though? If we use Marx's splitting-up of  $M$  into  $c$  and  $v$  and his splitting-up of  $M'$  into  $c$ ,  $v$ , and  $s$  in order to consider this question, the answer is rather simple: Yes, if the producing firms were to sell their produce at  $M$ , then their suppliers, supplier firms alike workers, could (re)purchase the produce with the money they got from the producing firm. However, it was certainly not the producing firm's idea to produce things to only recover the costs; they want a profit because that is what capitalism is about. Hence, the capitalist profit principle stands in the way of Ricardo's Law of Say working by the suppliers of the production inputs (re)buying the produce at  $M$  or for  $c$  plus  $v$ . What if the firms were to sell at  $M'$ , hence at the profit  $s$ ? Now, the aggregate of  $c$ -outlays and  $v$ -pay-outs can never suffice to buy  $M'$  (as  $M' > M$  or as  $c + v + s > c + v$ ); we saw this already in Proudhon ("costs cannot buy value"), Sismondi, and Malthus.<sup>131</sup> Only  $M'$  could obviously buy  $M'$ . Only if all of a firm's suppliers and all of its employees use the outlays that they received for their contribution to the production, *and* if the firms themselves were also to use the profits from their produce for this purpose, then the whole produce should be sellable for  $M'$  i.e., even with the profit  $M'-M$  or  $s$ .<sup>132</sup>

In this reasoning, though, we assume that firms can use the profits they *intend* to realize to pay their own profits or to pay other firms  $M'-M$  crosswise. In the latter case, then, the precondition for all capitalists getting their intended  $M'$  would be that they *all* spend their entire profits (their  $M'-M$ ) to mutually purchase each-others' products. This paradox has several sides.

Let us, first, do away with an innocent, benign side. The involved liquidity issue will willingly resolve itself in several ways. Assistance already comes from  $M-C-M'$  itself. We have seen that  $M$  represents not only pay-outs actually made by a firm but also includes future pay-outs the firm will have to make for the respective circuit,

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131 Assume an entrepreneur has, all in all, invested 7 money units in equipment and inventories and 8 money units in salaries (no rent, no interest) and intends to sell the produce at 20 money units. He can obviously not buy "back" his own produce for the created value-in-exchange of 20 money units. Out of the production he has the produce, but no money at all. He cannot even have his suppliers and workers buy the produce; they received only 7 and 8 money units, 15 in total, which would not suffice to buy the produce at 20. At best the entrepreneur's suppliers and workers could buy a part of the produce for 15, but that would not satisfy the entrepreneur; if they (very unlikely) would at all do that, the entrepreneur would certainly not initiate a second circuit.

132 In this sense also *Foley* (1986) page 150 et seq.

e.g., what accounting would call depreciation or provisions. Accordingly, rather than a firm will initially not pay out the full amount of  $M$  but only a lower amount and accordingly it will retain the excess of  $M$  over the amount actually paid and can use it to pay for other firms' profit. A second means would be to take out loans, to buy the produce at the other firms  $M'$  and repay the loan from later incoming sales prices, their own  $M'$  (if at a loss of interest and bank fees). Firms could also, third, mutually grant credit to each other and repay them out of received purchase prices or setting them off against counterclaims for purchase prices, e.g., in some kind of clearing house.<sup>133</sup> As a fourth means, if worse comes to worst, they might even barter their produce amongst themselves. Hence, we see that it will be easy for all capitalists somehow buy each-others produce. Liquidity is not in the way of all produce being able to sell.

But here is the malign side of the paradox: Capitalists will only go out and organize the liquidity needed to buy their colleagues' produce if they have good uses for the offered values-in-use and if they have the needed money and are ready to sacrifice it. The utility of values-in-use for firms is not consumption but to use them in profitable investments; they will, thus, only ascribe value-in-use and value-in-exchange to other firms' produce, if they expect to be able to use it for their own profits. And the investment, for which other firms' output can be used, must beat other investments. If liquidity is normally not, the limitation of firms' capital and the need to maintain and to increase it is a serious factor. Accordingly. Each firm, which considers to close other firms' circuits by buying their produce, must be able to expect other firms to act alike and to dispatch the yet expected  $M'-M$  to it.

If we, accordingly, begin with assuming that supplier firms and workers "repurchase" their produce, to exceed  $M$  and to get to  $M'$ , we need to bring in the producing firms as crosswise buyers of their produce. There is a necessity of a circularity, which can, ultimately, only deliver the result stated by the alleged law. This third interpretation of Ricardo's Law of Say has still significant worth for the progress of economic thinking. Unfortunately, though, as the proposition in which it evolves is *conditional* – all produce of all firms can be purchased at a profit, *if* all firms use their expected profits to purchase all of other firms produce. This is not a final answer but poses the question of macroeconomics only in a new form: Can capitalism maintain something like a permanent moderate bubble?

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133 There are many historic examples of such practices. E.g., as *Sismondi* (1827) chap. VII, page 74 et seq. reports, the merchants of Lyon settled payments amongst them only four times a year.

Already in Malthus, we met the situation that an amount of demand was needed, beyond costs, which corresponded to the to-be-generated profit; otherwise, the circuit could not close. Accordingly, Malthus looked out for a union of production and distribution supported by division of landed property, commerce and at prosthetics (unproductive consumers coming from anywhere) as solution. The third interpretation of Ricardo's Law of Say (which is the only relevant) goes back and re-considers whether there is truly insufficient demand. It ends up by intricating the reader to think about, whether those who caused the problem – firms, by posing the profit condition – could not also deliver the crucial<sup>134</sup> blow to solve it. This is an important proposition to think about. Unfortunately, it does not take the reader to enlightenment but only gets him into a difficult bewitched circular territory, through which, ever since, writers of all camps, including Marx, Keynes, Kalecki and Minsky, would have to battle their way. The third interpretation of Ricardo's Law of Say, insofar, remains in the background of their attempts and of our attempt.

## Section 7. Marx's insufficient theory on insufficient employment-generating spending

### Karl Marx

Marx saw Newtonian mechanics govern astronomy and Hegelian dialectics – after being turned upside down by Marx himself – govern history. Marx's goal, like Ricardo's, was to discover laws, which explain the motions of the capitalist economy in a similar way. He started up with classical social philosophy, e.g., of Hobbes, Montesquieu and, again, Hegel, added what he liked in existing economic theory and tried to move further towards an integrated social, political, economic and historical theory. His approach conceived the economy as an interdependent sub system, which evolved over the time axis (within modes of production and beyond modes of production), the evolution being driven by a dialectic of the economic system itself (an endogenous dynamic) and dialectical mutual influences between the economic system and its non-economic (exogenous) environment, such as science, technology, ideology, society, politics, culture, religion etc. Insofar, Marx anticipated systems theory, yet, unlike most systems theory, Marx, the materialist, assumed a dominance of the economy as of one particular social sub-system. He famously expressed this asymmetry in his base-superstructure-metaphor. An ideological, legal, cultural etc. “superstructure”, he said, “raised” or “elevated itself” (“erhebt sich”) over the economic “structure” (or base, “Basis”). Truly, a “metaphor”

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134 Supplier firms that delivered equipment and inventories and workers who gave labor inputs are assumed to comply anyhow.