

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”

---

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

that was. Marx and Engels never worked out what the metaphor meant more specifically. It could entail simple mechanistic bottom-up causation, pattern reflection, e.g., of the “commodity form” into law or art, or a conspiracy-like purposeful instrumentalism or other transmission forms.<sup>135</sup> As, in a world of dialectic, it was remarkable that there was to be asymmetry and dominance in favor of the economy, Marx at least quickly admitted feedback and a “relative independence” of the superstructure. That was no concession *contre cœur*: Marx, in fact, needed the “relative independence of the superstructure” anyhow to explain – in a non-mechanical – way how politics, a “superstructure-inhabitant,” could turn against the “base” – in the future proletarian revolution. Probably, systems theory was not far enough for more progress at the time. How this may have been, ultimately the limits of the base-superstructure-metaphor did not damage Marx’s social theory. To the contrary It opened the way to seeing social systems influencing each other, a path which coalesced with ideology critiques of Freud or Nietzsche, and which is further pursued by modern sociology. Marx also used Hegelian dialectic to describe social and historical dynamics, which allowed to conceptualize social systems as moving through time, hence, evolution and history. After having stripped off eschatology, philosophy of history and the idea of an avantgarde party, this part of Marxism too, “historical materialism”, has in the meantime become a widely accepted moment of modern social sciences.<sup>136</sup>

Marx’s approach to economics is also rich in two other regards: First, he saw grandiosity in capitalism; he found it great *and* ugly, enormously productive *and* destructive, a god *and* a devil. Second, his approach was close to Quesnay systems view without falling victim to Quesnay’s pre-ordained axiomatic harmony. Third, via his social theory and historical materialism he projected the idea of a contradictory system evolving over time.<sup>137</sup> Fourth, as already expressed, a first crucial step of Marx analysis of capitalism, his “general formula of capital”  $M-C-M'$ , and his concept of a “twofold free laborer” remain valuable economic observations. But, nevertheless, we cannot but remember Marx’s theory of labor value and exploitation, a center piece in his *opus magnum*, but as a huge and crucial mistake. We shall treat this flaw of the theoretical giant rather mercifully. He largely took over the labor theory of value as

---

135 On the different applications of the Marxian structure-superstructure-metaphor to the theory of criminal law, see *Wächter* (1983) page 161 et seq.; *Wächter* (1987) page 8–31.

136 *Furth* (2008) page 324.

137 In this regard there are some parallels with *Irvin Fisher* and *Knut Wicksell*. In a combination between contradictions and evolution, there are also visible methodological parallels with *Schumpeter* and even with the former US-security-adviser *W. W. Rostow*, who wrote a worthwhile economics book in 1960 (*Rostow* (1990)).

ready-made from Ricardo and attached the exploitation theory thereto.<sup>138</sup> As his understanding of surplus, profit and profit rate, including his theory of the tendential fall of the profit rate, were derived from them, their fallacy infected the heart-piece of economic Marxism and collapsed as a whole. There were reasons for Marx to end up in this mess: On the one side, he seriously pursued the honorable goal of an ambitious theory design between Newton and Hegel and to detect contradictions at the deepest possible level, yet on the other side, he also pursued revolution and needed a theory with moral and political appeal to workers and other progressive circles. But both goals conflicted, and in Marx, in the end, the politician won over the economist or the necessities or the political battle crippled his theoretical search for truth.

It is terribly difficult to analyze and explain something, e.g., of human physiology or of a combustion engine, if you invent an *additional mechanism, which is just not there*. The fictitious thing, which you want people to acknowledge and use in their thinking, will unavoidably shift itself between the elements, whose functioning might otherwise be easily explained, and thereby render sound explanations impossible. Wherever it finds a little space, the made-up implant will creep in, cancerously take root and mercilessly defend its footholds against more enlightened (and simpler) analysis. It is this *add-on of a non-existing fictive mechanism*, and the quasi-religious character of it, which gave Marxist labor-value-driven economics its distinctly sad character. Once committed to it, Marxists had to be permanently on the watch that nothing was stated about capitalism without using it as an explanans; anything else would mean surrender. This made Marxism cumbersome, awkward, unintuitive, clumsy, petty and doctrinal (in the negative sense of the word) – and, by the same time, moralizing and always on the jump from a scientific debate into a political attack of the opponent. The self-infliction of this millstone also condemned Marxist economists to devote an enormous part of their time to the frustrating high energy task to invent and defend explanations, which would allow undeniable facts to co-exist with the labor value and exploitation credo; as much as two third of their energy may have gone into this.<sup>139</sup>

---

138 Marx, as Schumpeter says, did much to keep Ricardian thought alive (*Schumpeter* (1954) page 478). Thereby, Marx kept Malthus down. Marx decision for Ricardo and against Malthus may have been the most consequential decision in the history of economic thinking.

139 E.g. the theory of labor and of exploitation implies that capitalists, before anything, need to increase the *mass of labor* employed to obtain the maximum of surplus labor, surplus value and profit. They, thus, ought to hate increases of the “constant” component of capital (“constant” as it generates no surplus value) and of the so-called “technical” and “organic composition of capital”, which bereave them of the miraculous exclusively value-generating power of living labor. Accordingly, to keep up or even increase the exploitation rate  $s/v$  and the profit rate  $s/c+v$ , the main thrive of capitalist businesses should have been to *fight* and *retard machinery*. But that is not what happened; rather capitalism always pushed for an explosive increase of machinery. The core-element of Marxism, at least at the most abstract and basis

It is yet telling that Marx himself, in his later writing, which he did not publish himself but became the third volume of *Capital* through Engels' hands, mostly no longer bothered to maintain the awkward exploitation-loaded notations "variable capital"  $v$ , "constant capital"  $c$ , and surplus value  $s$  in central places, but substituted them with "exploitation-neutral" notations. "The formula  $C = c + v + s$ ", he wrote "turns into the formula  $C = k + s$ , that is, the commodity-value = cost-price + surplus-value"<sup>140</sup>; later "... the formula  $C = c + v + s = k + s$  turns into the formula  $C = k + p$ , or the value of a commodity = cost-price + profit."<sup>141</sup> He, thus, came dangerously close to treating profit as no more than an add-on or margin on costs, which he elsewhere did not tire to condemn as utmost vulgarism. He wrote: "Hence, if a commodity is sold at its value, a profit is realised which is equal to the excess of its value over its cost-price, and therefore equal to the entire surplus-value incorporated in the value of the commodity. But the capitalist may sell a commodity at a profit even when he sells it below its value. So long as its selling price is higher than its cost-price, though it may be lower than its value, a portion of the surplus-value incorporated in it is always realised, thus always yielding a profit."<sup>142</sup>

The 175 years of economic history, which passed by since the *Communist manifesto* of 1848, were merciless with the labor theory of value. The period offered an abundance of fascinating developments and crises for Marxist economics to explain: There was imperialism, two world wars, the end of colonialism, fascism, the rise and fall of soviet socialism, a Keynesian period of capitalism, a neoliberal ecstasy

---

level of Marxian analysis, being in a full-fledged contradiction to the most visible and undisputed trend of capitalism since the 18<sup>th</sup> century necessitated later Marxists to invent all sorts of artificial constructions to reconcile the facts with the theory of labor value. This problem in Marxist economic theory also affects its only semi-clear long-term theorem on capitalist evolution, the so-called law of the "tendential fall of the profit rate" (Capital volume III chap. XXVIII). This law says in principle: If the so-called technical and organic composition of capital increases with the growing use of machinery,  $c$  will grow relative to  $v$ , whatever  $s/v$  does, the rate of surplus value  $s/c+v$  will tendentially go down ( $\uparrow c/v \downarrow s/(c+v)$ ). That "law", taken seriously, would have meant that the heydays of capitalism were in the decades of primitive manufacture capitalism, and that capitalism was already set to dry out for the lack of sufficient profit when Marx wrote *Capital*. This was so visibly nonsense that Marx himself undertook to tame his "law" through the invention of not less than six "counter-tendencies". Yet, here he stumbled from one problem into the next one. If the world can only be explained by a bundle of "tendencies" and "counter-tendencies", dialectical materialism with "historic laws" etc. capitulates to eclectic theories.

140 Marx, Capital volume III chap. I.

141 Marx, Capital volume III chap. I.

142 Marx, Capital volume III chap. I. Much ado about nothing! This apparent change, of course, to save "labor value" and "exploitation"- theory, occupied many Marxians over more than a century with "proving" that Marx's change was no change. The different terminology only resulted from a higher level of analysis, they said.

with a “great moderation”, a “subprime-crisis” and a “Eurozone crisis” and a war in Ukraine. China, the most important country of the history before the industrial revolution, and still the most populous country, is propelling itself back to the top of the world; other large countries, such as India, are progressing quickly. And capitalism has proven capable, in many countries, of delivering dwelling, food and many thrills, such as cars, electrical household equipment, mobile phones, computers and the internet, even partially in Sub-Sahara Africa, to the working classes, even often to unemployed, at affordable prices. Social security had been improved in most countries, while inequality is, nevertheless, rising. A lot to analyze for critical economics committed to the position of the laboring classes! But Marxist economics, because it raised high the banner of its labor value and exploitation approach, proved utterly useless at the whole front, with regard to each and every period. If at all orthodox Marxist, Maoist or Trotskyist economists, or leftists in general, came close to making a constructive theoretical contribution, they silently skipped labor value or only paid lip service to it. It was neither a constituent factor in Hilferding’s or Lenin’s theory of imperialism or in Rosa Luxemburg’s contribution, nor even in the orthodox theory of “state-monopolistic capitalism.”<sup>143</sup>

The theory of labor value and exploitation had another telling impact on the history of economic thought. Because it was mystical itself, it helped to hide the mystical moments in mainstreams economic theory (e.g., of Ricardo’s Law of Say) and made the latter appear much smarter than it really was. Marx offered a weak spot to

---

143 The damage, the theory of labor value does, can also be seen at the Anti-Stalinist end of the spectrum. The work of the Belgian Trotskyist economist *Ernest Mandel* (1923–1995) combines sovereign command of Marx and the Marxian tradition with significant knowledge of non-Marxian economists. He undertook a study of the relationship between the “general laws of motion of capital” and “the history of the capitalist mode of production” from the 19<sup>th</sup> century to the 1960ties (*Mandel* (1972) page 11). He asked: “Wie kann die wirkliche Geschichte der kapitalistischen Produktionsweise der letzten hundert Jahre als die Geschichte der Entfaltung der inneren Widersprüche dieser Produktionsweise, d.h. als letztes Endes durch ihre “abstrakten Bewegungsgesetze” bestimmt, dargelegt werden? Welche “Mittelglieder” sind dabei operativ, um die Einheit des Abstrakten und Konkreten in der Analyse zu verwirklichen?” (page 20). He then used non-Marxian content, like *Leontief’s* “long waves” and demand issues, for his journey, but nothing or little came out of the labor value and exploitation theory, in which he believed, for his project. While *Hegel* could explain the world history and history of philosophy rather well by means of his dialectics, Mandel could not explain the history of capitalism using labor value, exploitation and profit rate dialectics, not even with the help of non-Marxian add-ons. In this context, Mandel noteworthy refutes attempts to explain periods of capitalist development and of their problems, including by *Rosa Luxemburg*, with Marx’ reproduction schemes page 22–40, page 27. He prefers to use limitations of consumption as a “Mittelglied” (pages 64, 257, 395, 508 et seq.) but achieves close to nothing in the end.

his opponents and, in a way, helped to turn the ideological battle between pro-capitalist and anti-capitalist economics into a battle between *two* dumb things. Marx was too smart not to somehow becoming aware of being captured in his own labor-value-credo during his lifetime. Like a lion behind bars, he continued to move around the same spots – from the “Grundrisse” or “Rohentwurf” (1857–1858), “Kritik der politischen Ökonomie” (1859), “Theorien über den Mehrwert” (1861–1863), *Capital* volume I (1867) to the writings that Engels would later condense into volumes II and III of *Capital*. That contradiction between Marx’s honest aspiration to analyze capitalism at the deepest possible level and being fettered by his value and exploitation theory may explain why, in full 16 years, he could live after *Capital* volume I was published in 1867, until 1883, he did *not* himself publish any further volume of *Capital* or anything on the subjects, which he had planned or announced before. And it may explain why he did not longer use his exploitation-oriented notation from the first volume of *Capital* in his later writing (to become the third volume of *Capital* by Engels). Marxists often say that Marx only “laid foundations”, but could not himself work out his theory. But wait! If he worked out his theory of exploitation already in the *Communist Manifesto* of 1848 (35 years before his death), deepened and extended his understanding on the theory of value in the “*Theorien über den Mehrwert*” between 1861 to 1863 and presented *Capital* volume I in 1867, why should he not have *somehow* made theoretical use of the centerpiece of his theory – labor value and exploitation –, in the many remaining years? Marx’s unfortunate recurring periods of illness may also be no satisfactory explanation. Perhaps, Marx illnesses did not keep him from further working out his theory, but he became ill because he sensed that he was on the wrong track in an essential point.

Little can be said as an excuse for the labor theory of value and the attached exploitation theory. If the labor theory of value still became a major signature-element of orthodox revolutionary socialism and communism, then, as stated, because it was a great propaganda-tool. It distinguished orthodox communists from other leftists and stated, in most simple terms, why capitalism was bad. The labor value and exploitation theory offered something, whose essentials everybody could understand and it became a belief functionally comparable to the Catholics’ credence in the virginity of mother Marry or the resurrection of Jesus Christ. Marx would likely not have become the greatest hero of the proletariat and revolutionaries around the world (and one of the most famous persons to have lived on earth) without it. He may have a smile for that from Highgate Cemetery in London.

\*\*\*

Marx’s economics offers three main points of departure, which Marx *could* have used for a theory of employment-generating spending in capitalism,  $M-C-M'$ , the reproduction schemes and, again, his theory of labor value and exploitation. Marx made

no use of either of them to describe the behavior of capitalism over time. He gave us no worked-out theory of crises (no short or medium-term theory of capitalism) and no worked-out theory of the grand trends of capitalism, e.g., concerning decay or breakdown (no long-term theory of capitalism). In fact, he gave us nothing, which was nearly worked out. He also made not much of a use of his theory of tendential fall of the profit rate (which is almost a mathematical corollary of the labor theory of value). His most often quoted statement on crises “Der letzte Grund aller wirklichen Krisen bleibt immer die Armut und Konsumbeschränkung der Massen gegenüber dem Trieb der kapitalistischen Produktion, die Produktivkräfte so zu entwickeln, als ob nur die absolute Konsumtionsbeschränkung der Gesellschaft ihre Grenze bilde”<sup>144</sup> is almost an admittance of that. The un-Marxian vague terms of “poverty” and “restrictions on consumptions” of the masses and considering even these terms only as being the “final” reason for crises admits that Marx has nothing to say about the *intermediate* steps. But in causation, even dialectical, intermediation is what matters. We shall, thus, without permission of the inventor or even against his verdict, check the potential of the three mentioned theorems for a possibly theory of employment-generating spending.

## M-C-M' and employment-generating spending

### M-C-M' as theory of wealth accumulation and segregation

We have left no doubt that M-C-M' is an insightful description of the main economic processes in profit economies and capitalism; this notwithstanding its simplicity, its proximity to what merchants know intuitively or expressly and what religious men, philosophers, social movements and state leaders had attacked as deformations of the proper way to produce and distribute goods. M-C-M' is also in line with Sismondi and Malthus<sup>145</sup> and even Keynes is much closer to M-C-M' than he admitted in the *General Theory*.<sup>146</sup>

Some, the M-C-M'-players, exchange with a profit, their complementary counterparties, C-M-C'-players, don't. One side is after profits (and they normally realize them), the other side is after value-in-use-consumption (and they normally also achieve their goal): that is the gist of M-C-M'. M-C-M', as we saw, has a segregating effect. It generates and accumulates wealth on one side and leaves the other side, after it has enjoyed the pleasures of values-in-use-consumption, dry and empty. Units predominantly playing C-M-C' (entering transactions with the goal to consume) transfer wealth to units predominantly playing M-C-M' (entering transactions with the goal to make a financial gain). As there is always unequal wealth distribution, to

144 Marx, *Das Kapital*, MEW volume 25, page 501.

145 His costs would be M, his value M'.

146 See below on page 290 et seq.

begin with, the wealth transfer will typically be upwards to the already richer, who are further enriched by the poorer, who, after having consumed, will stay as poor as before or worse. One side to  $M-C-M'$  collects and accumulates additional value-in-exchange, while others don't; the other side dispatches value-in-exchange to the first – with a doubly segregating effect.  $M-C-M'$  was introduced to express the essence of the operation of profit economies or capitalism and in many regards succeeds in doing so. Will it also work as a tool for the analysis of socially available employment-generating spending?

### **$M-C-M'$ and a theory of employment-generating spending**

Can the circular movement  $M-C-M'$  can be financed out of itself? An entrepreneur starts with a stock of money, either as he owns wealth himself or as he borrowed it from a wealth owner (in a Schumpeterian sense). He pays the money  $M$  out to the factors of production (other firms and laborer-consumers) who may pass it on amongst themselves; from there it may return to the firm who made the initial outlays. One thing is already clear here:  $M$  remains  $M$ , and it can never suffice to pay  $M'$  ( $M'$  being higher than  $M$  by the amount of the entrepreneur's profits). This was already captured in Proudhon's "the workers cannot buy their produce"<sup>147</sup> or in our review of Malthus ("cost cannot buy value"). The idea could even be further reduced to the yet simpler agrarian image "seed cannot pay harvest" (at least under normal circumstances). Hence, we must say that the incomes of the factors of production resulting from their contribution to the production will never suffice to buy the produce at a profit from the capitalist. This is an important insight, which we already owe to Sismondi and Malthus and which is the moment of truth in the 3rd interpretation of Ricardo's Law of Say.<sup>148</sup>

The entrepreneur, yet, does not want to only get  $M$  back for  $M$ . He plans to receive  $M'$ . He wants to close the circuit with  $M'$ , with *more* than he gave to his suppliers. But before he can get  $M'-M$  on top, somebody must have had it (to give it to him). But initially this  $M'-M$  is not here. If we stubbornly and mechanically only think of the already existing, it accordingly can't work. But production creates something new. If we take into consideration not only newly created value-in-use, but the fact that new value-in-exchange may also be attached to the new values-in-use – if we view production as source of value-in-exchange – there is hope. But step by step: The factors of production receive their  $M$  early in the process. Assume they use their  $M$  to buy the  $M/M'$ -part of the produce.<sup>149</sup> The workers buy the  $v/M'$ - part of their produce,

147 Proudhon's statement ignores other suppliers, who receive  $c$ ,  $M = c + v$ .

148 See on page 240 et seq

149 Note this possibility is independent of the pricing by firms. Those who received  $M$  can always buy the produce for an amount of  $M$ . If the prices are very high, they can only buy a small part of the produce.

which is sold for the wages  $v$  (in other words, “labor costs can buy the labor costs-part of the produce”). Also, suppliers-firms can buy the  $c/M'$ -part of the produce. All in all, seed can buy the same volume of harvest.... So far, we found an explanation, why entrepreneurs can make “break even”. Yet, they still sit on produce representing the money amount of  $M'-M$  or on the  $M'-M/M'$  part of their produce (or its  $s/M'$ -part) and they must also sell that to realize their planned profit, the purpose of their whole operation.<sup>150</sup> Assume first, the entrepreneur would be happy to keep the  $M'-M$ -part of the produce in kind, e.g., for him, his family and his servants, slaves or helots to consume it; in this case he does not need to turn the surplus into money via an exchange. Assume second, the entrepreneur's business is mining gold or silver. Again, he does not need to exchange his produce into money, as gold or silver are – essentially – money already and can spare a final  $C'-M'$ -leg. There is, third, the already mentioned, old-fashioned possibility for entrepreneurs (after having sold the  $c/M'$ -part to supplying firms and the  $v/M'$ -part to their workers) to barter their left-over  $M'-M$ -parts or the surplus-parts of their produce in kind amongst themselves. Whether this works, depends on whether all capitalists mutually attribute value to their respective produce. If so, after some “tâtonnement” and with a little luck, they may all march home happily. If all entrepreneurs only attribute enough value-in-use and value-in-exchange to the produce of their fellow-entrepreneurs, newly produced commodities will clear the market of newly produced commodities.

A fourth, also already mentioned, possibility, would be for all entrepreneurs to take out loans from banks, buy the produce they wish to buy, and, if they have later been able to sell their own produce, e.g., by virtue of the same mechanism, repay the loans. The prerequisite for this is again that the buying colleagues mutually attribute value to their products and that banks have money and do loan out money.<sup>151</sup> With allowing banks to provide liquidity, we have opened the door to using money coming from outside the circuits. Of course, they could also come, fifth, from reserve-stocks of money of entrepreneurs themselves. (Actually, if only one or a few entrepreneurs have such reserve stocks and start spending them, this may suffice to set into motion a wave of payments wandering through the whole group and eventually enabling

---

150 Marx puts this that the capitalist “durch seine Ware dem Markt mehr Wert wieder entzieht, als er ursprünglich hineinwarf ..., weil er größern Warenwert hineinwirft, als er ursprünglich entzog. Er warf den Wert  $G$  hinein und entzog den Gleichwert  $W$ ; er wirft  $W + w$  hinein und entzieht den Gleichwert  $G + g$ .” (Marx, *Das Kapital*, vol. II., MEW 24, page 47).

151 The banks, in order to hand out loans, will be mostly interested in the general creditworthiness of the capitalists, but may still like to ask for the existing surplus produce and future claims for purchase prices as collateral. Capitalists would have to give away a share of their  $M'-M$  as interest and bank fees (as they would have incurred bartering costs if they had opted for the bartering solution). Alternatively the capitalists could use drafts on each other or set up a clearing house.

everybody to sell his surplus produce – as the money can do its job several times one after another).

As a summary, it is generally possible to mobilize the finance and liquidity needed to complete the circuits of a capitalists through selling the surplus part of their produce (representing  $M'-M$ ) to each other, assuming value is attributed to the produce, or to achieve the same by bartering. Already Marx said, if the value is there, the money is not the problem.<sup>152</sup> When Marx wrote, banks' credit money creation or states' fiat money creation was much scarcer than today; in our world of permanent private and state money creation and banking, it has become far less likely that circuits should not be able to close, if the value is there, for the lack of money to pay with. Hence, we have the noteworthy (surprising?) result that following the path of Marx's  $M-C-M'$ -analysis, in general, nothing stands in the way a closure of  $M-C-M'$ -circuits. Rather, to the opposite: After entrepreneurs have sold the  $M/M'$  part of their produce to their factors of production, they should be able to sell (distribute, "absetzen") the remaining  $M'-M/M'$  or surplus part amongst themselves.

This must, however, also be stated in the opposite way to stress the possible immanent barrier (which will rise to a fully-fledged antinomy): *Only* if all capitalists barter against each other or buy from each other their respective  $M'-M/M'$ -part of the produce, which is left over after the purchasing power distributed in the circuit has been recovered,<sup>153</sup> will they generate the necessary additional employment-generating spending to close all their circuits (the expectation of which induced them to initiate the circuits). Closing this reasoning, we note that much of it, now coming out of  $M-C-M'$ , was already recognizable in our attempt to make sense of Ricardo's Law of Say in its third interpretation.<sup>154</sup>

### A dialectical feast with $M-C-M'$ and employment-generating spending in the "Grundrisse"

We have so far looked at the problems of circuit closure in a rather traditional lim- itational, rationalist and mechanical style of thinking. In the *Grundrisse*, Marx approached the same issue like a dialectical feast, if not like a spiritual orgy. He uses notions from his theory of capital, which reflect *supra-personal subjects* and observes how they move through  $M-C...C'-M'$ -transformations (it makes sense to use the extended version here, with  $C...C'$  representing production).

152 See Marx, *Das Kapital*, vol. II., MEW 24, page 331–334, and 346 et seq. Foley (1986) page 87 et seq., page 151 discusses gold production and loans as means to fund the purchasing power required by extended reproduction.

153 Of course, one capitalist can also sell to a factor of production of another capitalist if there is a settling "repurchase" somewhere else.

154 See page 240 et seq.

We already know the names of these notable and special spiritual characters, which transcend the phases of the “valorization process”. The first one is “constant capital” or  $c$ , the second is “variable capital” or  $v$ . They not only move but proliferate and give birth to a new third character, already in the intermediate production phase  $C...C'$ ; the result is the “surplus”  $s$ , which we also already know. A part of  $M$ , the money which the capitalist will use for the purchase of equipment and inventories, not only already knows its future, bears a stamp coming from its future use, but Marx also allows it to already transubstantiate: This part of the money  $M$ , the constant capital  $c$ , is already *its future* – in the form of *equipment and inventories*, then in *commodity-form* and at the end in *money-form* again. It is money as well as non-money as well as later money again. This subject  $c$  remains the same and only changes its form in its journey through  $M-C-M'$ . In the second stage, after the money bought equipment and inventories as input-commodities, it appears as machinery, oil, energy and chickens;  $c$  is then no longer a part of the money  $M$  but a part of  $C$  as equipment and inventories.<sup>155</sup> Follows production, and the constant part-subject of  $C$  now transforms into a part of the output, which is still physical produce in kind, a part of  $C'$  in commodity-form.  $C'$  is, on the one side, physically different from  $C$  as value-in-use. We may have less chickens and less oil for heating and salt and pepper in storing facilities but chicken sausage instead. There will also be wear and tear. After the production we shall have less functioning equipment; parts of the machines are broken or torn down. But luckily, these parts have transubstantiated into more chicken sausage. Furthermore, the part of  $M$ , which was “variable capital”, the money, which was meant go into salary payments, and did go into salaries, was eaten up by workers, but it also, as sweating human labor physically produced new tangible or intangible values-in-use. Capitalists, of course, were only induced to enter into these complexities by the hope that third parties would later attribute value-in-use and value-in-exchange to the result  $C'$ , which is higher than the total costs of their  $c$ -inputs and  $v$ -inputs. This is, at least, the way non-believers in the labor value theory could describe it.<sup>156</sup>

---

155 Remember the capital letter  $C$  stands for commodities in  $M-C-M'$  and is not to be confused with  $c$  for constant capital.

156 Marx and other believers in the labor value theory will describe the gain of value-in-exchange over the initially purchased equipment and inventories as accruing to the produce not via *value-attribution by prospective customers*, but as result from the *specific capacity of labor to create value-in-exchange*. That is the crucial difference. Marx also stresses that already  $C'$  – not only  $M'$  after a sale – represents a higher value-in-exchange than  $C$  and reminds us that  $C'$  and  $C$  are also not only representing values-in-use but also values-in-exchange. We could, hence, instead of the customary expression  $M'-M = s$  also write  $C'-C = s$ . Non-believers in the labor-value-theory may even agree with the observation that value-in-exchange *may* already be present in the produce before it is sold (if it can be sold later), rather than only in the sales proceeds. But they cannot agree how this gain of value-in-exchange originated in

In Marx, in the aggregate, our supra-individual subject  $c$ , the used-up energy, the used-up oil, the chickens and the used-up part of machinery (or wear and tear, depreciation<sup>157</sup>), have wandered into the chicken sausage at exactly the same value-in-exchange. After all chicken sausages have hopefully been sold, the capitalist sits on the money  $M'$ , collected sales proceeds or revenues on his bank account or in his cashier. Our  $c$  has changed its form once more and resurrected in money-form, again without a change in quantity, for every future use.<sup>158</sup> The same is true for the “variable capital”  $v$ . The salaries paid became sweating human labor, then this labor incarnated in the switch from chickens to chicken sausage, and then they were recovered in their full amount in cash. Surplus value  $s$ , which did not already exist at the first stage  $M$  or in the first transformation  $M-C$ , of course, must have a different biography. Its generation, the surplus-creation, occurred in production  $C\dots C'$ . In terms of value-in-use, it consists in the physical difference between chickens and chicken sausage; in terms of value-in-exchange it consists in the additional value-component  $s$  in the produce  $C'$ , which joins  $c$  and  $v$ . According to Marx’s belief, whether the capitalist succeeds to sell  $C'$  and collect  $M'$ , nothing changes at the level of value-in-exchange. If the capitalist manages to sell the whole produce, the surplus-value  $s$ , which was already in  $C'$  has only transformed from the commodity-form to the money form. Marx calls this swap, in which the capitalist is crucially interested, rather than keeping his output in kind, “realization” of surplus value. If the capitalist can’t sell the whole produce, he has a “realization problem”, but it is important for Marx that, as the labor-power has already been applied in production and exploitation has already happened ( $v + s > v$ ), surplus value already sticks in the unsold (or even unsellable) produce.

We have so far observed two supra-personal subjects, “constant capital”<sup>159</sup> and “variable’ capital”<sup>160</sup> travel together from the beginning and being joined by an “infant element”  $s$ , which they beget in production.<sup>161</sup> But in Hegel and Marx, supra-

---

the produce (value-in-exchange-attribution by prospective customers vs value-in-exchange-imbuement by workers).

- 157 The term “depreciation”, of course, comes from accounting and taxation and is not Marxian. But it meets the Marxian intention pretty close.
- 158 We name four stages here as we have split up  $C$  into  $C\dots C'$ .
- 159 To repeat: “constant”, as it remains the same in value-in-exchange notwithstanding the alteration of its value-in-use-appearance.
- 160 To repeat: “variable”, as it only carries the magic wand or sperm to create  $s$ .
- 161 Capital, in Marx, is not only a supra-personal subject, but a process, a dynamic, a relationship in action, a moving and processing contradiction. The up-coming comparison of variable and constant capital with males and females, jointly giving birth to babies in the barn of factories, in fact, even overrates the role of constant capital in Marx. The female gender is certainly regarded as fertile in biology and the earth is mythically celebrated as “mother earth”; however, constant capital in Marx, while it is almost always present in production, does not possess such attributes. He often calls it “dead labor” as opposed to “living labor”.

personal spirits cannot only transubstantiate and proliferate but also “double”, and after they have moved around separated for a while, re-unite. While  $c$  and  $v$  operate in production as machines, oil and chickens,  $c$  also travels to suppliers of equipment and inventories as their money revenues, while  $v$  in addition to make chicken sausage out of chickens as sweating labor, also travels to workers as their wages in money form. The ghosts  $c$  and  $v$ , thus, have *doubled and gone different ways*:  $c$  is not only there as equipment and inventory and  $v$  not only as living labor in the sphere of the capitalist, but  $c$  is also there as cash in the suppliers’ cashiers and  $v$  in the working-class family’s purses. If dancing couples split up on a dance floor, the partners move lonely for some time, the couples should be able to find their partners again. What splits up can also re-unite in the dialectical dances of Marx’s spirits. The  $c$  in money-form in the pockets of the supplier firms and the  $v$  in money-form in the worker families’ purses are ready to re-unite by buying parts of the chicken sausage. We have already seen how this happens, the  $c$ , which is in money form in the sphere of suppliers, purchases the  $c$ -part of the produce, the  $v$ , which is in money form in the sphere of the workers, purchases its  $v$ -part. The two dancing ghosts, thereby, also confirm in a mystical sense, that there should be no problem, in the aggregate, to sell the  $M$ -part of  $C'$  (or  $C$ ) and to collect the  $M$ -part of  $M'$ .

The  $M'$ - $M$ -part, though, or the  $C'$ - $C$ -part, i.e.,  $s$ , so far remained out of the picture. Let us see whether Marx’s dialectics generates new insights this baby-ghost, and whether it, too, can double and whether the surplus can be realized. “Those economists”, Marx wrote in the *Grundrisse*, “who, like Ricardo... were heedless of the barriers to consumption or of the existing barriers of circulation itself... – supply without regard to demand – have... grasped the positive essence of capital more correctly and deeply than those who, like Sismondi, emphasized the barriers of consumption and of the available circle of counter-values,<sup>162</sup> although the latter has better grasped the limited nature of production based on capital, its negative one-sidedness.”<sup>163</sup> So both have their point, “the former more its universal tendency, the latter its particular restrictedness”.<sup>164</sup> Marx then works his way through these contradictions:<sup>165</sup> “The whole dispute as to whether overproduction is possible and neces-

162 A good expression for the problem: “barriers of the available circle of counter-values”!

163 Marx (1973) page 410.

164 Marx (1973) page 410.

165 He is aware that he is analyzing a model, which is incomplete and abstracts from wealth outside of the considered circuits and credit. “The point here, of course, is not yet to develop overproduction specifically, but only the predisposition to it, such as it is posited in primitive form in the capital relation itself. We must also, therefore, omit here any regard for the other possessing and consuming etc. classes, which do not produce but live from their revenue...”. This abstraction takes place here although these classes, in Marx’ own words, “are most important for the historic formation of capital.” Marx also admittedly abstracts from “[t]he entire credit system, and the over-trading, over-speculation etc. connected with

sary in capitalist production revolves around the point whether the process of the realization of capital<sup>166</sup> within production directly posits its realization in circulation whether its realization posited in the production process is its real realization.<sup>167</sup> Marx calls Ricardo as witness: “Ricardo himself has a suspicion that the exchange value of a commodity is not a value apart from exchange, and that it proves itself as a value only in exchange...”<sup>168</sup> Marx allows the contradiction to survive for the moment and adds that “Sismondi... emphasizes... the encounter with the barriers” and “their creation by capital itself...”<sup>169</sup> Then he returns to the dialectical dance floor: “So far in the realization process, we have only the indifference of the individual moments towards one another; that they determine each other internally and search for each other externally; but that they may or may not find each other”<sup>170</sup> “... Still, we are by no means finished. The contradiction between production and realization – of which capital, by its concept, is the unity – has to be grasped more intrinsically than merely as the indifferent, seemingly reciprocally independent appearance of the individual moments of the process, or rather of the totality of processes...”<sup>171</sup> Marx now shows how capitalism imposes (“posits”) a condition on dancers, which complicates their re-uniting; they may only come together again, if they have a baby, profit, and that baby also needs to find somebody else to unite. To find a match for the baby is the “barrier” to the re-union of the parents. We will forgive Marx here that he expresses his thoughts enchaind in his theory of labor value and exploitation. He says “...capital forces the workers beyond necessary labour to surplus labour (the baby in Marx theory of labor value, G.W.). Only in this way does it realize itself, and create surplus value. But on the other hand, it posits necessary labour only to the extent *and* in so far as its surplus labour and the latter is realizable *as* surplus value. It posits surplus labour, then, as the condition of the necessary, and surplus value as the limit of objectified labour, of value as such. As soon as it cannot posit value, it does not posit necessary labour... It therefore restricts labour and the creation of value – by an artificial check... – and it does so on the same grounds as and to the same extent that

---

it, [which] rests on the necessity of expanding and leaping over the barrier to circulation and the sphere of exchange.” (Quotes from *Marx* (1973) page 419, 416)

- 166 Marx normally uses “realization” in connection with surplus for the sale of the M'-M-part of the produce or the transformation of the surplus part of the produce into cash.
- 167 *Marx* (1973) page 410 et seq.
- 168 *Marx* (1973) page 411. Marx appears to be, and actually is, very close to giving up the labor theory of value: “The exchange value of a commodity is not a value apart from exchange” and the exchange value “proves itself as a value only in exchange”.
- 169 *Marx* (1973) page 411.
- 170 The c-dancer and v-dancer find complementary partners of the other sex, the s-dancer must dance with another s-dancer.
- 171 *Marx* (1973) page 415.

it posits surplus labour and surplus value. By its nature, therefore, it posits a barrier to labour and value-creation, in contradiction to its tendency to expand them boundlessly...”<sup>172</sup>

The preceding quotations are rendered difficult and uncustomary not only because of their dialectics but also because of their focus on labor and labor time. Gratefully, Marx also expresses the same substance in terms of values-in-exchange, which is easier to come to grips with for non-believers in the theory of labor value: “In one and the same moment, it [capital, G.W.] posits the values on hand in circulation – or, what is the same, the proportion of values posited by it to the values contained in it and presupposed in circulation – as the barrier, the necessary barrier to its value-creation; on the other hand, its productivity as the only barrier and creatrix of values.”<sup>173</sup> There is no guaranteed baby-dancer waiting for the baby. Therefore: “Overall, capital has a “tendency... to relate to every limit on its self-realization as to a barrier. The boundless enlargement of its value – boundless creation of value – therefore absolutely identical here with the positing of barriers to the sphere of exchange, i.e., the possibility of realization – the realization of the value posited in the production process.”<sup>174</sup> Or, Marx writes, capital “posits the exchange of surplus values as the barrier to the exchange of necessary value”<sup>175</sup> “...overproduction”, had Marx said before, is “the sudden recall of all these necessary moments of production founded on capital; hence general devaluation in consequence of forgetting them.”<sup>176</sup>

So much for Marx’s dialectical treatment of  $M-C-M'$ ,  $c$ ,  $v$  and  $s$ , or “capital”. We now see more clearly that in Marx  $M-C-M'$ ,  $c$ ,  $v$  and  $s$  are moments in capital’s motion and that it lies in the nature of the “over-ghost”, which capital is, that, while it is able to transubstantiate, split up and to re-unite, to be also caught in conflict, in particular, *by relating* “to every limit on its self-realization as to a barrier”.<sup>177</sup> In particular, capital – as the relation and process, which has taken control of the economic system, “...posits the values on hand in circulation... as the barrier, the necessary barrier to its value-creation”.<sup>178</sup> In the end, Marx’s analysis here has no definitive answer *where* capitalisms’ barriers are exactly “posited”, *how* they operate and, whether, in particular, they generally exclude the realization of the surplus part of the produce and, thereby, stand in the way of circuit closure and capitalist integration. The dialectics of  $M-C-M'$ , thus, confirm that the realization of the surplus part of the pro-

---

172 Marx (1973) page 421.

173 Marx (1973) page 423.

174 Marx (1973) page 422.

175 Marx (1973) page 423.

176 Marx (1973) page 416.

177 Marx (1973) page 422.

178 Marx (1973) page 423.

duce is the critical issue, which can lead to overproduction and crisis. Integration is not impossible, but conditional upon babies finding a mate. What about the babies coupling and dancing with other babies?

### The Theories of Surplus Value: Marx's critique of Malthus theory of "mutual swindling"

The Malthus-Section of Marx's *Theorien über den Mehrwert*, written between 1861 and 1863, also deals with barriers to production posed by capitalism itself. As already stated, Marx adores capitalism for it being powerful, forward-driving dynamics, before he unveils it as contradictory, ugly and in need to be overcome. He has an aesthetic preference to first embrace paradoxical situations before he dissolves them by dialectics. Even though Marx "inverted" Hegel's idealistic dialectics by putting it "on its feet", he could not protect himself against Plato's notional idealism, which stuck in Hegel. This, and Ricardo's labor value theory, which both resemble "realist" Catholicism, alienated Marx from the nominalist catholic tradition, in whose footsteps Malthus, a sober Anglican clergyman, who satisfied his spiritual desires outside of economics, was travelling. Marx expected and liked the central moment of capitalism to be sitting at a deeper level; hence, pivotal surplus or profit could not be a trivial mark-up on costs, which capitalists would discretionarily add out of greed, if they had the power, and which their victims would only endure because of their weakness. Rather than being a swindle or pushed through by force, *surplus value had to be a miracle*. This miracle, Marx himself aspired to solve. Already for these aesthetic reasons, Malthus must have greatly displeased Marx before he had even studied him thoroughly and he generally portrayed Malthus in an negative and aggressive way: Malthus was a plagiarist of Sismondi<sup>179</sup> and Marx used the arsenal of "ideology-critique" on him, e.g. by debunking him as an apologist of landed wealth.<sup>180</sup> The negative attitude remains present, even if Marx sometimes follows Malthus' thoughts with evident interest and applause and joins Malthus' for a part of his voyage.

Marx, particularly, treats with disgust what Malthus had to say on profit in his section on Malthus in volume 3 of the *Theories of Surplus Value*. We quote extensively: "In fact", Marx writes, "it comes to this: the value of a commodity consists of the value paid for it by the purchaser, and this value is equal to the equivalent (the value) of the commodity plus a surplus over and above this value, surplus-value. Thus, we

179 Marx, *Theorien über den Mehrwert*, MEW 26.3, page 8, similar on page 47. While Marx blamed Malthus for a "skillful" plagiarism of Sismondi. Sismondi himself did not raise any accusations against Malthus, but treated him as an equal in a joint battle against Ricardo and Say. "...mais presque tous les hommes d'affaires se conduisent d'après les principes exposés par M. Malthus et moi...c'est le débit qui leur parait être la cause immédiate de leur prospérité ou de leur souffrance..." (page 410). He even apologized for an early criticism of Malthus population theory (See *Sismondi* (1827) page 388, 389, 409, 410).

180 Marx, *Theories of surplus value*, chap. XIX, 14.

have the vulgarized view that profit consists in a commodity being sold more dearly than it was bought.”<sup>181</sup> It is worthwhile to look at this argument in more detail. To repeat the quotation: “it comes to this: the *value of a commodity* consists of the *value paid for it by the purchaser* [hence, the price paid, G.W.], and *this value* [still the price paid, G.W.] is equal to the equivalent (the *value* [this must be less than the price paid, G.W.] *of the commodity* plus a surplus *over and above this value* [this must, again, be less than the price paid, G.W.], surplus-value”.<sup>182</sup> Marx is, thus saying: In Malthus, the value equals the value plus the surplus value – but he is not following up on this contradiction (not even in a book on *Theories on Surplus Value*) – so much he despised Malthus. Now, of course, in Malthus, the value does *not* equal the value plus the surplus value added in production. Malthus adheres to a subjective theory of value (in-use and in-exchange), which is attributed by customers. And, as there is more than one subject in the world, there can be different values. This applies in a specific way in a sale. A sale being concluded proves instantly that, at this moment, the subjective value-in-exchange of the seller is not higher than the sales price and that the subjective value-in-exchange of the buyer is at least the sales price. The subjective value-in-exchange of the seller may either come from either keeping the sales object and using its value-in-use (e.g., a car, an apartment house) or by selling it at a certain price or by renting it out to somebody else. The subjective value-in-exchange of the buyer comes either from a rather discretionary attribution of value-in-exchange based on his consumptive desires, e.g., from the qualities of the commodity as a positional good, or from the money he can draw by using it as a money-making machine. Ultimately, neither the costs of production nor the time of application of a specific productive force (such as labor) matter on any side of the trade to determine value-in-use or value-in-exchange. Setting values-in-exchange for a commodity is, thus, an independent act of the market, and if *nobody* attributes higher value-in-exchange than the costs, there is no possibility to make a profit.

Marx also obviously gets the emotional and moral connotation wrong. The negative touch connected to his interpretation of Malthus’ view as “profit by mutual swindling” (violation of *iustitia commutativa*) is unjustified. Sellers who sell at a margin seek a profit, true – but that has nothing to do with “swindling”. A seller or producer

---

181 Marx, *Theorien über den Mehrwert*, MEW 26. 3, page 14 (translation taken from <https://www.marxists.org/archive/marx/works/1863/theories-surplus-value/>), italics added. We repeat for reasons of precision that profit arises by selling at a value-in-exchange, attributed by customers, which, as hoped by firms, is higher than their costs. This is so as the value-in-exchange attributed by customers reflects their attributed value-in-use. Hence, whether there is surplus value or profit in the produce is not predetermined by anything, but if it emerges out of what markets can use the produce for. It is the difference between properties of the produce, which reflect costs, and later and externally attributed value-in-exchange.

182 Quotation above, emphasis and comments added.

is only openly asking for an advantage, which he stipulates as a condition for a transfer of a commodity of his. Marx is concerned that by acknowledging this – profit in capitalism being based on owner power – the apparent “objective level” of the analysis, which Ricardo brought into play with his theory of labor value, and which Marx could use so conveniently to explain capitalism with exploitation, was disappearing. How different would the history of economic thought have been if Marx had accepted the dismay of this false deep structure!

Marx believed to be able to show that the idea of a mark-up was particularly nonsensical if capitalists sold commodities to other capitalists: “But if the purchaser is himself a capitalist, a seller of commodities, and his money, his means of purchase, represents only goods which have been sold, then it follows that both have sold their goods too dearly and are consequently swindling each other, moreover they are swindling each other to the same extent, provided they both merely secure the average rate of profit.” Marx tries to show the consequence to be “...that each loses as a buyer what he gained as a seller.” No profit can be made, Marx believes, if capitalists merely mutually “swindle each other”. Accordingly, profit by “swindling” could only be made by selling to the working class. “The only exception is the working class.” It cannot “counter-swindle” as it does not sell commodities to capitalists (other than their labor) to capitalists. But there is another problem with it. “Since the price of the product is increased beyond its cost, they can only buy back a part of that product...” – here Marx, quite correctly, meets Proudhon, Sismondi and Malthus – but that cannot be sufficient. “... as profit arises precisely from the fact that the workers can only buy back part of the product, the capitalist... cannot realize [his profit] by exchanging the whole product against the workers’ wage, but rather by exchanging the whole of the workers’ wage against only part of the product.” We have: Contrary to Malthus, capitalists can’t make a profit by exchanges with capitalists by “swindling” as they mutually “counter-swindle” and they also can’t make a profit in exchanges with workers as workers, while there is no risk of “counter-swindling”, have too little salary income. After all, Marx refutes Malthus’ theory of profit, which uses owner’s power to get customers to pay more than the producers’ costs for value-in-exchange attributed beyond these costs, on false grounds.

Still Marx continues to follow Malthus’ argument. “...additional demand and additional buyers apart from the workers themselves are... necessary, otherwise there could not be any profit”. Accordingly, Marx asks within the parameters of Malthus’ thinking: “Where do they come from? If they themselves are capitalists, sellers, then the mutual swindling within the capitalist class mentioned earlier occurs, since they mutually raise the nominal prices of their commodities and each gains as a seller what he loses as a buyer. What is required therefore are *buyers who are not sellers*, so that the capitalist can realize his profit and sell his commodities ‘at their value’. Hence the necessity for landlords, pensioners, sinecurists, priests, etc., not to forget their menial servants and retainers. How these ‘purchasers’ come into possession of

their means of purchase, how they must first take part of the product from the capitalists without giving any equivalent in order to buy back less than an equivalent with the means thus obtained, Mr. Malthus does not explain.”<sup>183</sup>

Marx believes to have found here – aside the disliked subjective theory of value – a second reason to refute Malthus: If circuit closure depends on some ominous “third class”, how would this class finance its spending? Unfortunately, Marx plays unfair here: Malthus is working hard to understand the operation of a system of goods provision to society, which depends on profit-enabling  $M-C-M'$ -drives. Only such production will take place, which promises sufficiently profitable revenues; and only such production will generate employment for non-owners. Yet, there may not be enough of such required revenues/spending in the system. Malthus ponders if anything could close the gap – and finds something like what we call “prosthetics”. Marx now skips the part whether Malthus is right with his discovery of the deficiency of circuit closure and shifts the attention only to the question that the artificial means may not be sufficient (“Mr. Malthus does not explain.”). Yet, even if they were not sufficient, the importance of the original discovery of Malthus – that they are needed – would not be affected.

Still, Marx continues to pivot around Malthus’ problem for some time, and even rather often, notwithstanding his negative attitude to Malthus, gives authentic accounts of Malthus reasoning: “It is difficult to understand”, he writes, “how any profit at all can be derived if those who engage in mutual exchange sell their commodities by overcharging one another at the same rate and cheating one another in the same proportion.” But then “This incongruity would be remedied if, in addition to exchange by one class of capitalists with its workers and the mutual exchange between the capitalists of the different classes, there also existed a *third class of purchasers*”<sup>184</sup> — a *deus ex machine* — a class which paid the nominal value of commodities without itself selling any commodities, without itself playing the same trick in return; that is a class which transacted one phase only:  $M-C$ , but not  $M-C-M$ ; [a class] which bought not in order to get its capital back plus a profit, but in order to consume the commodities: a class which bought without selling. In this case the capitalists would realize a profit not by exchange amongst themselves but 1) by exchange between them and the workers, by selling back to them a portion of the total product for the same amount of money as they paid the workers for the total product (after deducting the constant capital) and 2) from the portion of luxuries as well as necessaries sold to the third sort of purchaser...The profit would be made in dual fashion by selling as little as possible of the total product back to the workers and as much as possible to the third class, who pay ready money, who, without themselves selling, buy in order to consume.” This cannot be read otherwise

183 Marx, *Theorien über den Mehrwert*, MEW 26. 3, page 14–16, italics added.

184 One might add, a third class who functions like the cl. des proprietaries in Quesnay’s tableau.

than as Marx at least being in agreement with the logic in which Malthus poses his problem. He goes on: “But buyers who are not at the same time sellers, must be consumers who are not at the same time producers, that is unproductive consumers, and it is this class of unproductive consumers which, according to Malthus, solves the problem. But these unproductive consumers must, at the same time, be consumers able to pay, constituting real demand, and the money they possess and spend annually must, moreover, suffice to pay not only the production value of the commodities they buy and consume, but also the nominal profit surcharge, the surplus-value, the difference between the market value and the production value. This class will represent consumption for consumption’s sake in society, in the same way as the capitalist class represents production for production’s sake, the one representing ‘the passion for expenditure’, the other ‘the passion for accumulation’.”<sup>185</sup> The urge for accumulation is kept alive in the capitalist class by the fact that their returns are constantly larger than their outlays, and profit is indeed the stimulus to accumulation. In spite of this enthusiasm for accumulation, they are not driven to over-production, or at least, not at all easily, since the unproductive consumers not only constitute a gigantic outlet for the products thrown on to the market, but do not themselves throw any commodities on to the market, and therefore, no matter how numerous they may be, they constitute no competition for the capitalists, but, on the contrary, all represent demand without supply and thus help to make up for the preponderance of supply over demand on the part of the capitalists.”<sup>186</sup>

Unfortunately, thereafter Marx reverts to the old killing argument: He lets the fact that Malthus did not convincingly explain where the financing of the prosthetic purchases is to come from, fire back on Malthus’ discovery of the problem. Here is Marx’s second reprisal, we quote at some length: “But where do the annual financial resources of this class come from? There are, in the first place, the landed proprietors, who collect a great part of the value of the annual product under the title of rent and spend the money thus taken from the capitalists in consuming the goods produced by the capitalists, in the purchase of which they are cheated. These landed proprietors do not have to engage in production and do not on the average do so. It is significant, that insofar as they spend money on labour, they do not employ productive workers but menial servants, mere fellow-consumers of their fortune, who help to keep the prices of necessaries up, since they buy without helping to increase their supply or the supply of any other kind of commodity. But these landed proprietors do not suffice to create “an adequate demand”. Artificial means must be resorted to. These consist of heavy taxation, of a mass of sinecurists in State and Church, of large armies, pensions, tithes for the priests, an impressive national debt, and

185 Marx quotes Malthus’ *Principles of Political Economy*, [second ed.] page 326.

186 Marx, *Theorien über den Mehrwert*, MEW 26. 3. Page 44 et seq. (translation taken from <https://www.marxists.org/archive/marx/works/1863/theories-surplus-value/>).

from time to time, expensive wars. These are the “remedies”<sup>187</sup>. Marx continues: “The third class, proposed by Malthus as a “remedy”, the class which buys without selling and consumes without producing, thus receives first of all an important part of the value of the annual product without paying for it and enriches the producers by the fact that the latter must first of all advance the third class money gratis for the purchase of their commodities, in order to draw it back again by selling the third class commodities above their value, or by receiving more value in money than is embodied in the commodities they supply to this class. And this transaction is repeated every year.”<sup>188</sup> “At any rate, what *follows from this*<sup>189</sup> is his plea for the greatest possible increase in the unproductive classes in order that the sellers may find a market, a demand for the goods they supply. And so it turns out further that the author of the pamphlet on population preaches continuous over-consumption and the maximum possible appropriation of the annual product by idlers, as a condition of production. In addition to the plea arising inevitably out of this theory, comes the argument that capital represents the drive for abstract wealth, the drive to expand its value, which can only be put into effect by means of a class of buyers representing the drive to spend, to consume, to squander, namely, the unproductive classes, who are buyers without being sellers.”<sup>190</sup>

Marx, torn apart between polemics and honest interest, ultimately misses the gist of Malthus’ argument: If a “third class of purchasers” is needed, but cannot not be found in a Quesnay-like insatiable and annually re-financed class des propriétaires, *that by no means speaks against the analysis that such third class or its spending is needed!* Malthus, like Sismondi, dissected, what would be required in the abstract for a circuit closure (what already Quesnay had shown implicitly), but Marx, although he seems to understand the argument, convulsively declines to accept it as fact. Marx rejects to acknowledge that Malthus is primarily giving a *theory of a problem* which is independent on whether Malthus’ considered prosthetic solutions for it can work, in particular be funded. But Marx uses the lack of prosthetic solutions in Malthus, sufficiently convincing to Marx, to rebury the statement of the problem altogether.

Quite remarkably, Marx also fails to see that he is actually not so much criticizing Malthus but, indeed, mainly his admired Quesnay. For it was Quesnay, who, without justifying why, simply ordained that the cl. des propriétaires would exactly do what Malthus saw what *had* to be done if the capitalist circuits were to close. In Quesnay, the cl. des propriétaires was financed by the cl. productive – under the label of rent, hence based on ownership power – and the cl. des propriétaires used this

---

187 Marx again quotes Malthus’ Principles of Political Economy, [second ed.], page 408 et seq.

188 Marx, Theorien über den Mehrwert, MEW 26. 3, page 44 et seq.

189 Emphasis added.

190 Marx, Theorien über den Mehrwert, MEW 26. 3, page 14–16.

rent, very noteworthy, fully and immediately for employment-generating spending – and thereby closed the productive circuits. Quesnay, thus, avoided the problem, Malthus was after. Malthus stipulated in contrary, that circuit closure does not emerge by itself. Rather, prosthetics are needed, and even then, it may not work. Marx should accordingly have recognized Malthus as a brother in arms, who, while accepting the great systemic framework of Quesnay that spending of the one is income of the other, challenged Quesnay's axiomatic harmonic outcome and sought to understand the conditions under which, if at all, a solution could arise. Instead of appreciating this valuable contribution of Malthus, though, the political beast in Marx went down on the clergymen and foreclosed another chance for progressing with a sober and realistic understanding of capitalism. Marx's treatment of Malthus was another great opportunity lost.

### The labor theory of value and employment-generating spending

In order to examine whether the Ricardo-Marx labor theory of value, notwithstanding its essential fallacies, can still contribute to a theory of employment-generating spending, it must be set apart from two similar concepts. Labor, as other factors of production, carries costs; hence, there is a possibility of a *labor cost theory of value*. Furthermore, if you own commodities, you can trade them against labor just as against other commodities or money (as remuneration). Some commodities will trade against more labor than others or they “command” more labor. Hence, there is also a possibility of a *labor commanded theory of value*. Both are different from the Ricardo-Marx labor theory of value, which is a *labor quantity employed theory of value*.

#### Value as costs of labor employed?

Not much is needed to determine the costs of production. They can be counted and added up. Wages will account for a significant share of the costs. Furthermore, if equipment and inventory are used in production (in Marxian nomenclature both are constant capital or  $c$ ), a significant share of the costs of equipment and inventory are salaries for the production of this equipment and inventory. This is so as what from the perspective of a capitalist buying equipment and inventory is  $c$  dissolves itself into  $c + v + s$  from the perspective of the supplying capitalist. Yet, how far this analysis may ever be pushed, it will remain in the *realm of costs calculation*, on the supply side, and, it will therefore remain a “labor theory of costs”. True, if an entrepreneur knows his costs of production, he may use this knowledge to calculate what sales prices he needs for a profit – but that does not give us a theory of value.

Sometimes it is argued that the value of a commodity is the *total of all claims for a share of the sales price* of a commodity or the *total of all incomes derived from it for the*

involved “stakeholders” (wages, rent and profits).<sup>191</sup> However, the investment of any amount of costs combined with *hopes* to recover the costs plus a profit mark-up does by no means ascertain that the commodity can be sold at such price. A producer learns about his costs of production, when he makes the investment. Whether the produce is attributed enough value-in-exchange to allow a profit, he only learns if he brings the product to the market. Accomplices of a planned robbery incur costs to prepare it, which they “invest” (together with the risk to later go to prison); they, then, also mostly *expect* a certain value of the loot and of their share. But these expectations do not bring about or determine the loot. Equally, the expectation of a capitalist (or of all factors of production jointly) to obtain a satisfactory sales price in the market does neither create value-in-use nor value-in-exchange. We may only say that a robbery/production would not have taken place had the “accomplices”/factors of production not expected a certain value of the loot/produce enabling a proper reward. But that is a theory of investment, not a theory of value.

### Value as labor commanded by exchange?

Subjective theories of value look at the opposing side of the market and observe whether buyers with purchasing power attribute value-in-use and, hence, value-in-exchange. If they desire to buy a thing, but do not have the money, then this can be expressed by saying, as we do, that they attribute “esoteric value”. Yet, the only relevant way through which to attribute value comes from people who also have the money to pay. This is why, as we have already seen, the attribution of value to a thing can often almost be equated with purchasing the thing. Value, then, is nothing other than the expectation “will be bought for  $x$  very soon” or “will be bought in such a near future that the discounted present value is  $x$ .”<sup>192</sup> Value is the *anticipated* reachable price, a prognosis at  $t_1$  of a price received at  $t_2$ . To use the notion of value, hence, always implies bridging the present and the future, and always has a speculative moment.

Now, money is normally the unit in which the expectation or hope is expressed and by which it is made measurable. If the expectation is measured in terms of labor units instead (commanded by the commodity offered for exchange: men at such and such qualification will work 10 hours in exchange for my product), then this is only a negligible modification; it is like expressing an expected sales price in Dollars rather than in Euros and remains fully within the subjective theory of value, which expresses the value of a thing by what people will give for it, if no longer in terms of money, but in terms of labor.

191 “Wages, profit and rent are the three original sources ...of all exchangeable value” (Smith (1776) chapter VI).

192 See already footnote 4 on page 40.

### Value as quantity of labor employed: the Ricardo-Marx labor theory of value

We have now arrived at the “real” Ricardo-Marx labor theory of value, which has preoccupied so many minds and which is as different from the theories treated previously as it is wrong.

Marx wanted his theory of value to explain *surplus value* or *profit*. As we have observed, a mere theory of costs can never do this. Therefore, he is also not interested in the costs of the labor employed (the salaries), but in the amount, mass, quantity, of volume, i.e., in the *time and quality*, of the labor employed, or, as is sometimes rightly stressed, in the *socially necessary* amount of such labor employed.<sup>193</sup> Marx said that labor power is the single commodity whose value-in-use has the “eigentümliche” (particular) property to be a source of value in-exchange.<sup>194</sup>

We *first*, impolitely, note that the mechanism of value generation in this labor theory of value is *one-sided* (suppliers or producers alone exert control), *autistic* and *reified*; value comes over a thing in a similar way to how the holy spirit imbues a worshiper or as water fills a bottle. Marx’s general conviction that value, the “commodity form”, capital, and so forth are *social relations* remains wholly invisible at this core place of his economics. Subjective theories of value, on the contrary, look at prospective buyers with their attributions of value-in-use and value-in-exchange in the first instance; they are relational up to observations of the 2nd or 3rd, degree (reflections of reflections, and reflections of reflections of reflections). *Second*, a credence is often attached to the Ricardo-Marx labor theory of value, which is that commodities will not only have, inconsequentially, such or such amount of value “in them” because of the labor incorporated within them, but that they will *indeed exchange according to the amount of labor with which they were endowed*. Marx called this the “Wertgesetz” (“Law of value”), which he sometimes even labels as “ehern”<sup>195</sup> (“brazen”). Theories of value themselves decide on their claim as to their reach – and the labor theory of value is challenged at this point: Does it, in combination with the “law of value”, only mean that commodities exchange at their labor value, *if* they exchange at all? Alternatively, does the labor theory of value in combination with the “law of value” mean that it is pre-ordained at a deep level of economics that everything what has labor value will exchange at its labor value? If the latter is true, then we ought to understand the labor theory of value in conjunction with the “law of value” also as a *theory of effective demand*. In fact, it would be a theory, which in essence re-states Ricardo’s law of

193 On labor embodied vs labor commanded, see also: *Keen* (2011) page 419.

194 *Marx*, *Das Kapital*, vol. I., MEW 23, page 181.

195 *Marx*, *Das Kapital*, vol. I., MEW 23, page 12. Marx speaks there of “Naturgesetzen der kapitalistischen Produktion” as with “eherner Notwendigkeit wirkenden und sich durchsetzenden Tendenzen”, i.e. of “natural laws of capitalist production” as “trends operating and prevailing with brazen necessity”.

Say, that there will always be sufficient employment-generating spending. If the latter applies, then the most important macroeconomic question (will there be enough employment-generating spending to buy the produce?) would have become a non-issue and, the prerequisite of economic integration could be taken for granted as a corollary from the theory of value. As we have already seen, Ricardo fathered “the Law of Say”. We have now found an additional reason why a “law” with this substance should have been particularly convincing to the labor-value-theorist, which he was: It can be directly derived from his labor theory of value! We saw that Say’s original statements only said, quite correctly that produce buys produce, without committing to the view that this produce would buy *all* produce. Ricardo’s labor theory of value could have been the hidden missing link, which induced him to promote Say’s innocent and correct observations to Ricardo’s Law of Say. Why would produce be able to buy all other produce? It is because it all contained labor and was therefore valuable! Marx was an express opponent of Ricardo’s Law of Say; however, through his labor theory of labor value, at least combining it with a “brazen law of value”, he found himself on a slippery, downhill path and could have glided into something very close to Ricardo’s Law of Say himself.

### **Marx’s parade against gliding into Ricardo’s Law of Say: value creation vs value realization**

But Marx was too good an observer of real capitalism to fall into that trap. Much like how he had done elsewhere, the historian and critic saved the speculative economic thinker and, in the end, he avoided the labor theory of value and the “Law of value” from flipping into Ricardo’s Law of Say. He did so by introducing a distinction between *value creation* and *value realization*. Labor can create value, but that does not already mean that the value will always exchange itself against other value. This can already be shown through  $M-C \dots C'-M'$ . The surplus value, created by labor, is already there in  $C'$  ( $C'$  expresses value in the form of commodities, which is higher than the amount  $C$ ). Hence, the surplus value ( $C'-C$ ) exists in the commodities produced before they are sold, if this ever comes to pass. If commodities endowed with labor value cannot be sold, but instead rot in storehouses, then surplus value has still been produced (value creation) but it cannot be “realized” (no value realization). Marx, thereby, kept the labor theory of value and the “law of value” separate from the macroeconomic theory of demand and of employment-generating spending. What remained was the claim that *if* commodities exchange, then they exchange at prices somewhere near the “deeper level” labor values. Hereby, Marx himself declared his labor theory of value and the “law of value” as irrelevant to a theory of demand or employment-generating spending.

## Marx's exploitation theory and employment-generating spending

### Marx's exploitation theory

What about Marx's exploitation theory? Does it open a path to understanding the problems of circuit closure? Marx had regarded his own "general formula of capitalism"  $M-C-M'$  (or  $M-C\dots C'-M'$ ) as being too unspecific. In his opinion, it did not yet fully express the essence of capitalism, given that it allowed us to conceive of surplus value only as a mark-up that sellers were able to get buyers to pay because of their owner's power. Yet, Marx wanted the difference between  $M'$  and  $M$  to not be created only in exchange, but already in production. And he was also looking for another reason why  $M'$  would be greater than  $M$ ; the reason should not only trivially be owner's power but better suit his superior taste for theory design: The searched for explanation had to operate at a deeper level, in a Newtonian or, even better, a Hegelian style.

The industrial revolution had developed the productive forces and had allowed for a larger surplus produce than ever before. Marx moved this observation, from the realm of *values-in-use* into the realm of *values-in-exchange*, and combined it with the Ricardo-Marx labor theory of value for his exploitation theory. Thus, he could progress from  $M-C-M'$  or  $M-C\dots C'-M'$  in the 1st section of the 4th chapter of volume I of *Capital* volume I to the 3rd section of the 4th chapter of *Capital* volume I. We have already quoted Marx as stating that labor power is the single commodity the value-in-use of which has the "eigentümliche" (peculiar) property of being a source of value in-exchange.<sup>196</sup> Marx now added that "the specific value-in-use of this commodity [labor power, G.W.] [is] to be source of value,<sup>197</sup> and of *more value than it has itself*."<sup>198</sup> The old insight that a new value-in-use is created by labor was conquered by value-in-exchange-thinking and the new, physical or otherwise, properties resulting from the employment of labor were demoted to only being one side of the result. The more important aspect became the imbuelement of the product with abstract labor power as a creator of new value-in-exchange. As we have already touched upon several times, for this purpose Marx splits up the value of finished commodities into three parts representing the used-up equipment and inventories, which he calls *constant capital*  $c$ , the wages for labor, which he calls *variable capital*  $v$ , and, finally, *surplus value*  $s$ , which is the value-in-exchange expression for the surplus produce, which has been created during production. He can now easily show that while labor power was purchased at its value, the variable capital  $v$ , its use or application, due to the

196 Marx, *Das Kapital*, vol. I., MEW 23, page 181.

197 Marx, *Das Kapital*, vol. I., MEW 23, page 208, translation by author.

198 Marx, *Das Kapital*, vol. I., MEW 23, page 181. Italics added.

aforementioned fantastic “eigentümliche” property, not only reproduces its ingoing value-component  $v$  (its costs or the wages), but also generates surplus value  $s$ .<sup>199</sup>

In this terminology Marx, thus, arrives at  $c + v + s$  as the value of the whole produce, which corresponds to his  $M'$ . Accordingly, he can point to the surplus value  $s$  as the new part, which is identical with  $M' - M$ , and can argue that, as labor was only applied in production, that  $s$  must also have been created by labor in production. He has achieved what he wanted to achieve. He can now provide a theory for the observable fact that  $M' > M$ , which relies on production and not on exchange, and does no longer need owner's power to explain surplus value or profit as a discretionary mark-up. From there, he moves forward to draw banal corollaries in mathematical forms. E.g., he can now express degrees of exploitation as “exploitation rate”  $s/v$ <sup>200</sup> or as “profit rate”  $s/(c + v)$ ,<sup>201</sup> etc.

### Marx's exploitation theory and employment-generating spending

Marx's labor exploitation doctrine, based on the Ricardo-Marx labor theory of value, was to become Marxism's brand essence and is often seen as Marx's greatest achievement. What is more surprising is that Marx, as little as he tried to use  $M - C - M'$  for this purpose, made a serious effort to unfold this exploitation theory into a theory of employment-generating spending of business cycles, of crisis, or into a theory of trends in capitalism (with one minor exception, which will be discussed in due course). In Quesnay, the system had been in sync and there was unity between the exchange relations in the tableau: e.g., the Livres 2 bn., which the cl. des propriétaires received, enabled it to crucially purchase the respective parts of the produce of the cl. productive and of the cl. stérile. In Proudhon and Sismondi, where the system was not in sync; the exploitation, which they observed, naturally transformed into insufficient employment-generating spending. One might have expected that Marx would also make an effort to use his more elaborate exploitation theory with this intent. E.g., he could have expressed Proudhon's, Sismondi's, or Malthus' skepticism in terms of  $v$  not being sufficient to buy  $v$  plus  $s$ . Alternatively, he could have used  $c + v / c + v + s$  to try to examine quantitatively how exploitation must leave workers without sufficient means to buy the produce and to show that it must, thus, backfire on capitalists' attempts to sell their whole produce. But Marx did not do that. We may, one more time, attribute this omission to the fact that his historical knowledge

199 Remember: In Marx, the value of the equipment and inventories is only reproduced in production in the amount of the value of the ingoing equipment and inventories; therefore, equipment, and inventories called “constant” capital  $c$ . The labor input purchased for  $v$ , in contrary, does not only re-appear in the same amount  $v$  in the produce, but causes a new value-component, the surplus value  $s$ , to emerge; therefore, it is called “variable” capital  $v$ .

200 Marx, Capital, volume I chapter 7.

201 Marx, Das Kapital, vol. I., MEW 23, page 428, footnote 150 and Capital, volume III, chapter II. We do not need to pursue this issue any further.

and intuitive understanding of capitalism was better than his labor value and exploitation theory. That compliment for the bearded man, but not for his pet-theories, may, yet, not please him very much.

Many Marxists from later generations would probably explain the omission by arguing that it was not at all the purpose of the exploitation theory to evolve into a theory of demand or employment-generating spending. But, what purpose, then, did the exploitation theory have beyond anchoring who is the good guy and who is the bad guy in history? And we might also ask: Should we not be entitled to expect such an effort from a theory that goes after the core contradictions in capitalism? Marx is often credited by Marxists for having spared them the troubles of a “*pauperization theory*”. But whether the result would have been pauperization, or whatever, could we not expect, from somebody who claimed to have discovered the “laws of motion of capitalism”, at least a rough description of where the journey will go? If we are told to live in a non-Quesnayian world, in which things are not in sync and not in good order but where evil exploitation rules, should we not be told where its alleged wrong will drive the economy? It is quite weird, but in a way, Marx left Marxism open to the same criticism that Minsky and others raised against neo-classic economics: It cannot explain depressions and crisis. In the case of Marxism, this is even more difficult to understand as it has forged all sorts of tool, which appear to be made for the purpose, but which are left idle.

### Marx’s “Law of the tendential fall of the profit rate” and employment-generating spending

There is a section on the “tendential fall of the profit rate” in what Engels would later publish as *Capital volume III*. Does Marx give us a theory of employment-generating spending or of a trend of capitalism here? In the end, he does not.

The “tendential fall of the profit rate” is a mathematical corollary from the formula for the profit rate under conditions of an ongoing development of productive forces. Profit is nothing other than the surplus value  $s$ , but now it is put in relation to constant capital *plus* variable capital rate,  $s/(c+v)$ . The continued development of productive forces will unavoidably increase the mass of equipment and inventories applied in production in relation to labor, first on a value-in-use-level. Marx calls this an increased “technical composition” of capital. The trend can also be looked at from a value-in-exchange perspective, then called an increased “organic composition” of capital; this means that  $c$  will go up relatively in terms of money outlays in relation to  $v$ <sup>202</sup> when capitalists purchase the inputs for production. E.g., if producing 1,000 shirts by manual labor in a manufacture costs a manufacture owner 70 money units for labor  $v$  and 30 money units for equipment and inventory  $c$ , in a mechanized factory the same 1,000 shirts may cost him only 30 money units for labor  $v$  but, perhaps,

202 Marx, *Das Kapital*, vol. I, MEW 23, page 640.

40 money units for equipment and inventory  $c$ . If robots are used, then 5,000 shirts may be produced at the cost of only 15 money units for labor and maybe 50 money units for equipment and inventory  $c$  etc. Hence, the applied input of variable capital “tendentially” falls in relation to the constant capital applied and it also falls relative to output. Increases of productivity cut back on the mass of “living labor”  $v$  used, which alone, as we know by now, has the property to be source of surplus value and profit.

Marx thought a lot about causes of all sorts, including superficial, individual, and unsystematic causes (whereby he methodologically almost dropped his preference for “deep structure”-causes), which would counteract the “law of the tendential fall of the profit rate”, and he listed a significant number of such “factors” (e.g., a rise in the exploitation rate  $s/v$ , a fall in prices of constant capital inputs...). In the end, though, the profit rate  $s/(c+v)$  must still fall tendentially. Nevertheless, he once again did not attempt to use this “law of the tendential fall of the profit rate” as an entry route into a general theory of demand, employment-generating spending, or of capitalist development (cycles, crises, long-term trends). This precaution did not keep Marxist writers from pointing out that the “law of the tendential fall of the profit rate” was Marx’s most developed concept, which not only contained all of the elements found in his exploitation theory ( $c$ ,  $v$ , and  $s$  coming out of  $v$ ), but was also already formulated on the level of the “process of capitalist production as a whole” (subtitle of volume III of Capital). E.g., *Rudolf Hickel* once argued that the “law of the tendential fall of the profit rate” should be the “corner pillar” of the Marxian theory of crisis.<sup>203</sup> Marxism derives the need to overcome capitalism from capitalism’s contradiction to the development of productive forces. The “tendential fall of the profit rate” expresses exactly this kind of conflict. The productive forces, which drive towards a higher “technical” and then “organic” composition of capital, turn against the relations of production, a capitalist profit economy, as they spoil profit generation by forcing capitalists to apply lower and lower relative inputs of “living labor”, which can only give rise to profit.<sup>204</sup> However, Marx and Marxists after him made no serious effort to develop the limits of the markets to absorb production out of the

203 This argument is made in *Hickel* (1979) page XXXVII – LV.

204 There was a nice discussion in Marxism on whether the “law of the tendential fall of the profit rate” resides in the “production-sphere” or in the “circulation-sphere”. *Hickel* supports the view that it already operates in the production sphere: The same output of goods, which capitalists can produce more easily, due to higher organic composition of capital, contains less surplus value as fewer workers have touched it with their magic wand of labor value creation. (E.g., 1,000 shirts produced in a mechanized factory contain much less surplus value than 1,000 shirts produced at a manufacture). Capitalists react by increasing the absolute labor input, which means that they also have to increase their absolute output. They, thus, try to solve the contradiction, which emerged in the production sphere, in the circulation sphere (*Hickel* (1979) page XXXVII – LV.)

tendential fall of the profit rate.<sup>205</sup> They deny the benevolent operation of Ricardo's Law of Say, but they do not use the tendential fall of the profit rate to explain to us why.

We, thus, as already happened with the Marxian theory of labor value and the exploitation theory, abort our attempt to detect useful insights for a theory of employment-generating spending in the "law of the tendential fall of the profit rate". All these theories are inconsequential rump theories, useful to draw young trade union members into communist parties, but not to explain capitalism. We move further to the famous reproduction schemes.

### Marx's macro transmissions – the reproduction schemes and employment-generating spending

When Marx died in March of 1883, he left behind him a major stack of unpublished drafts. Engels reports that shortly before his death, Marx had told his daughter Eleanor that Engels should make "something" out of them.<sup>206</sup> Engels did and volume II of *Capital*, with its chapters 18–21 (roughly 170 pages) containing the reproductions schemes, was published in 1885.<sup>207</sup> In the "reproduction schemes", or as they may also be called, "accumulation schemes",<sup>208</sup> Marx undertakes a serious and interesting effort to come to grips with the question whether at all and under what preconditions capitalist reproduction or accumulation is possible. In a way, this was only a consequential step after having conceived the main motion in capitalism as  $M-C-M'$  and after having split up  $M$  into  $c + v$  and  $M'$  into  $c + v + s$ . Given this, the task was to examine who can purchase the constituents  $c + v + s$ , once they exist as produce in kind, with the moneys either received as original investment pay-outs  $M(c + v)$  or with the expected profits  $M'-M(s)$ .

We have already seen a propaedeutic effort in Marx's dialectical treatment of how the ghosts of  $c$  and  $v$  can double, separate, dance, and re-unite again in the *Grundrisse*.<sup>209</sup> However, working this out in a more systematic and math-like way required distinguishing between different departments of capitalists and between the scenarios of simple reproduction (stagnation) and of extended reproduction (growth,

---

205 There is, by the way, another method by which capitalists could have logically reacted to the law of the tendential fall of the profit rate, namely by simply blocking the progress of productive forces. The theory of labor value, if it were true, should have driven capitalists into machine-wrecking. Obviously, that is not what happened.

206 Engels (1885) page 12).

207 Marx, *Das Kapital*, volume II, MEW 24, page 351–520. Marx's legacy also encompassed what was later edited as the third volume of *Capital*, the *Grundrisse*, and the *Theorien über den Mehrwert*.

208 Hoffmann (1971) page 75.

209 See page 251 et seq.

accumulation). This led directly to the reproduction schemes. They require more intellectual work than watching dancers, they are more of a number cruncher's job.

The result of Marx's analysis appears broken-off, unfinished, and without an express conclusion. It still shines through that he would have probably answered the question, whether extended reproduction is possible in capitalism, even if only employment-generating spending is considered which is generated in the observed production itself, in the affirmative. Yet, once more, he made this dependent upon preconditions, now in particular of a proportionality being observed. As little as Marx attempted to use  $M-C-M'$  as such as a means to examine whether capitalism can generate sufficient employment-generating spending, does he, though, seek to use the reproduction schemes, which evolve out of  $M-C-M'$ , for this purpose. He neither announces that he will pursue this question, nor does he in fact undertake this. He even missed several clear opportunities to expand his analysis in the direction. Furthermore, if he had regarded his reproduction schemes as possessing fundamental relevance, concerning the closure of capitalist circuits (and hence undisturbed dynamical evolution or crises of capitalism), then why did he not publish them during his lifetime?<sup>210</sup>

### Departments, sub-departments and flows in the reproduction schemes

The description of capitalism in the reproduction schemes found in *Capital* volume II is more concrete than the description of  $M-C-M'$  found in *Capital* volume I.  $M-C-M'$  allowed us to observe how  $M$  grows into  $M'$  and, from the perspective of circuit closure, to deal with Malthus' question "how can costs buy value?" in the more evolved way of "how can  $M$  buy  $M'$ ?" For this purpose,  $M$  was split up into  $c$  and  $v$  and  $M'-M$  or  $s$ , and it became possible to pursue these value-components distinctly in circulation. The further treatment of this in the reproduction schemes is based on certain axioms: *First*, there are no other classes or categories who make purchases or supply labor or produce except for capitalists and workers; hence, there are only two units, not three. *Second*, only income earned in the observed circuits themselves, i.e., from investment outlays to factors of production, other capitalists supplying equipment and inventories, or from wages outlays to workers can be used to buy produce. *Third*, it is yet still assumed that enough money is technically available (in the right places) for the initial  $M$ -outlays, including if production is extended, i.e., in growth, to buy the additionally generated produce. Other financial means, pre-existing old wealth,

---

210 The author continues to remain unconvinced of the story that Marx's illness kept him from finalizing *Capital* volumes II and III. Engels tells us that Marx filled the pause, when Marx suffered from illness between 1870 and 1877, with studies of e.g., the "money market and banking,...natural sciences...geology and physiology, and namely autonomous mathematical works" (MEW volume 24, page 12, translation by author). If that is true, why did he not continue his economic work?

or wealth generated outside of the observed circuits is not a factor. *Fourth*, it is also still assumed that physical labor power and natural resources are available in the volumes needed for simple or extended reproduction; the reproduction schemes involve no theory of the origination of natural resources or of population and do not imply a restriction of production from either of these vantage points. *Fifth*, the exclusion of wealth not being generated in the observed circuits (the aforementioned exceptions notwithstanding) implies that workers also have no other means of subsistence than the wages they draw; furthermore, it is assumed that they spend their wages wholly and completely. Laborers receive what they need for their subsistence and reproduction, and they neither save nor invest.

Marx gives up his prior only “formelle Manier der Darstellung” (formal manner of presentation) in the reproduction schemes and now acknowledges the view that the movements are actually “nicht nur Wertersatz, sondern Stoffersatz”.<sup>211</sup> He does not go so far to distinguish different branches and trades (mining, agriculture, manufacture, transport, services, foreign trade, etc.), but, based on *Smith*,<sup>212</sup> he uses one specific value-in-use-related distinction, namely the one between the *production of means of production* and the *production of means of consumption*.<sup>213</sup> The tableau-like-character of the reproduction schemes comes from this in conjunction with the splitting-up of  $M'$  into  $c$ ,  $v$ , and  $s$ . There is, thus, capital producing means of production and capital producing means of consumption. The means of production are purchased by other capitalists, consumption goods are not purchased by either capital producing means of production or by capital-producing consumption goods, but only by consumers, whether it be capitalists or workers.<sup>214</sup> Marx speaks of two “Abteilungen” or “departments” and baptizes the producers of investment goods “Abteilung I”, (*department I*), and the producers of consumption goods “Abteilung II” (*department II*); investment comes first.

A further differentiation follows that gives even more of a tableau-character to the reproduction schemes: The production of investment goods for the production of investment goods can be conceived of as occurring in a distinct *sub-department I.a.* of department I and the production of investment goods for the production of

---

211 *Marx*, *Das Kapital*, vol. II., MEW 24, page 393. Marx gives up the “formal manner of presentation”. The movements are “not only a substitution of value, but also of material” (translation by the author).

212 *Marx*, *Das Kapital*, vol. II., MEW 24, page 365–369 ff. Notice that the distinction had already been implicit in Quesnay, where the “classe sterile” depended on the cl. Productive with regards to raw materials and the cl. Productive on the cl. Stérile with regards to equipment and tools.

213 *Marx*, *Das Kapital*, vol. II., MEW 24, page 394.

214 Hence, one cannot tell from the good’s physical properties what category it belongs to. Chickens may be consumption goods or production goods, depending on their use.

consumption goods can be conceived as occurring in its *sub-department I.b.* Furthermore, the production of luxury consumption goods for capitalists and of more mundane consumption goods for workers can also be conceived of as occurring in two different sub-departments of department II; the production of luxury consumption goods for capitalists happens in *sub-department II.a.* and the production of consumption goods for laborers in *sub-department II.b.*<sup>215</sup> The distinctions mentioned previously are partly explicit and partly implicit in Marx. Marxian literature has sometimes further elaborated upon them. It may use two or three departments or two departments with each two sub-departments, as this book mostly does. Finally, while Quesnay did not make a distinction between the laborers and the capitalists in the cl. productive and the cl. stérile, Marx made this distinction at least implicitly. We believe that it is helpful, which results in eight elements<sup>216</sup> and the following asymmetric flows between them:

- Money will flow for *means of production* from department I.a-capitalists to department I.a-capitalists (themselves), from department I.b-capitalists to department I.a-capitalists, and from department II.a and II.b.-capitalists to department I.b-capitalists;
- Money will flow for *luxury means of consumptions for capitalists* from capitalists of all departments (I.a, I.b., II.a and II.b) to II.a.-capitalists;
- Money will flow for *necessary means of consumption for workers* from laborers of all four departments to department II.b.-capitalists;
- Money will flow for *wages* from capitalists of all departments (I.a, I.b., II.a and II.b) to laborers of all departments (I.a, I.b., II.a and II.b).

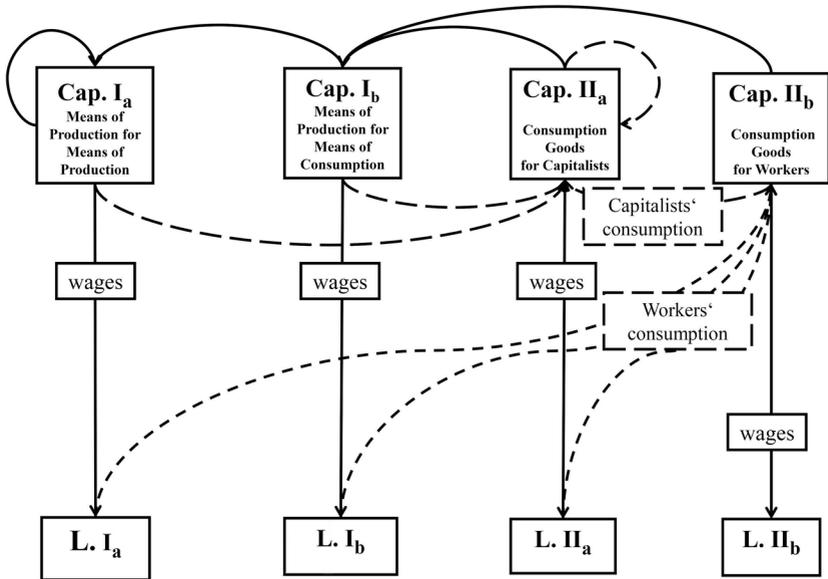
Beginning with  $M-C-M'$ , splitting up  $M$  into  $c + v$  and  $M'$  into  $c + v + s$ , the notation can easily be applied to the two main departments, i.e., I ( $c + v + s$ ) and II ( $c + v + s$ ), or, to the two sub-departments as well, i.e., I.a ( $c + v + s$ ), I.b ( $c + v + s$ ), II.a ( $c + v + s$ ), and II.b ( $c + v + s$ ). Alternatively, we might speak, as Marx sometimes does, of  $cI + vI + sI$  or create sums of values of different departments, e.g.,  $cI + c2$ , or of  $c1a + v1a + s1a$  or of  $c1a + c1b$ , (subscript Arabic numbers and letters indicate the departments). Similarly, equations can be given, e.g.  $I (v + s) = II c$  which is the same statement as  $vI + sI = c2$ ,

215 The borderline between the two categories is rather unclear: Is the distinction based on *who buys* the produce (capitalists, workers) or on the *qualitative* nature of the produce (e.g., simple necessary means of reproduction or luxury goods)? Given that it is possible for the same firms to partly belong to I.a. and partly to I.b. or even partly to department I. and partly to department II., there is, of course, no problem with one firm partly being in sub-department II.a and sub-department II.b.

216 This is the maximum number that can be derived from Marx who, apart from treating the laborers mostly as one class, has sometimes two and sometimes three or, implicitly, four departments. Kalecki uses three (with one single department for investment goods).

the latter setting out the requirements for balanced reproduction, as we shall see. While Marx did not use a special notation for the different departments' workers, we have amended the notation in this regard and name the workers of the four sub-departments L1a, L1b, L2a, and L2b. The following flow graph is the outcome of this process:

Figure 12: Marx's reproduction schemes (graphic by author)



### Simple reproduction

Simple reproduction means reproducing a stationary economy without accumulation, which goes on by operating on the same level forever; it could also be called no-growth or stagnant. In real life, there is mostly growth or, sometimes, shrinkage; therefore, simple reproduction is more of a theoretical starting point than it is a practical thing. The existing production facilities, equipment, and inventories are only “refilled” out of production in simple reproduction, but equipment or inventories are never increased beyond what has been used up, or needs repair or substitution. In bookkeeping terms, we may say that only the amount of depreciation of equipment is re-invested and that the working capital is kept at the same level. When looked at from the other side, this means that the part of the annual produce, which is not needed for the substitution of the used-up equipment and inventories, is consumed (unproductively), e.g., eaten up, worn as clothing, sacrificed to gods,

destroyed in wars, or otherwise annihilated or at least taken out of the productive context and transferred into the wealth economy.

Here, Marx's reproduction schemes already make us aware of interdependences in the sense that certain quantitative relationships will prevail (as a tautology or identity) or must prevail (as a requirement) if simple reproduction is to function frictionlessly. *First*, the sales by the department II.b-capitalists, of necessary consumer goods to workers, will automatically be equal with the total of the wages received by all laborers (hence of workers of both departments or of the four sub-departments I.a., I.b., II.a. and II.b., i.e., by the laborers L1a, L1b, L2a and L2b., all being the same thing). This must be the case, given that the wages received (whether we refer to them as  $I v + II v$ ,  $v1 + v2$  or as  $v1a + v1b + v2a + v2b$ ) are everything that the workers receive and is all they can spend, given that they have no further wealth. It follows that all paid-out salaries will end up with the department II.b.-capitalists because we have also assumed that workers spend their wages completely and exclusively on consumption and because the workers of all departments (L1a, L1b, L2a and L2b), while they receive wages from four different sources, have only have one address in which to spend them. The purchases from II.b.-capitalists, hence, must be equal with the total of wages earned. Accordingly, we must conclude that if the II.b-capitalists were to produce more necessary means of consumption for workers than the total of all wages, then they would not be able to sell them – at least not at the planned profits. Department II.b-capitalists can only collect what all capitalists together pay to their workers L1a, L1b, L2a, and L2b as wages. All of these relationships are logical or tautological conclusions from our axioms that reflect identities.

*Second*, the total sales of I.b-capitalists of investment goods for the production of consumption goods to II.a and II.b-capitalists will automatically be equal with the total purchases by II.a and II.b-capitalists. There is, simply and per definition, nobody else to possibly buy investment goods from for the production of consumption goods; this is yet another logical or tautological conclusion from the axioms that reflects an identity.

*Third*, the total sales of I.a-capitalists of investment goods for the production of investment goods will automatically be equal with the sum of their own purchases (by I.a-capitalists) and of the purchases made by I.b.-capitalists who produce investment-goods for department II.a and II.b; this is yet another logical or tautological conclusion that reflects an identity.

*Fourth*, we now come to the critical relationship, which is no longer a logical or tautological conclusion from axioms reflecting an identity appearing as automatism, but is actually a *requirement* or a *precondition* for the flows to integrate and to reproduce the state of the economic departure in simple reproduction. It can be met or not met and there will be simple reproduction, friction, shrinking or growth of the economy depending on that. This requirement expresses a *cross-relationship* between the departments: All capitalists and workers of the investment department I, taken together

(the capitalists I.a and I.b and workers La1 and La2) can only receive as income that which department II-capitalists, without department II-workers,<sup>217</sup> purchase from department I. Marx stated the requirement as:

$$Iv + Is = IIc \text{ or}$$

$$I(v+s) = IIc.$$

The requirement of this equality, which must be fulfilled for the flows to integrate without friction, can also be written:

$$vI + sI = c_2,$$

which is even more transparent and which we know already.<sup>218</sup> Marx commented: "Es ergibt sich, daß bei einfacher Reproduktion die Wertsumme  $v + m$  des Warenkapitals I (also auch ein entsprechender proportioneller Teil des Gesamtwarenprodukts I) *gleich sein muß* dem ebenfalls als proportioneller Teil des gesamten Warenprodukts der Klasse II ausgeschiednen konstanten Kapital IIc; oder  $I(v+m) = IIc$ ."<sup>219</sup> "Der Tausch  $I(v+m)$  gegen IIc bezeichnet die ökonomische Klammer, die beide Abteilungen zusammenhält."<sup>220</sup>

Summarizing simple reproduction, then, the surplus value of department I-capitalists (i.e., their profit, which, in simple reproduction, they consume completely) plus the wages (or "variable capital") of department I-workers must be

217 This is because department II-workers, like all workers, only purchase from department II.b-capitalists.

218 Following Hofmann (1979) page 69. Marx's equations were possible for Marx because he considered the value sums of his expressions as equal. In Marx, this was so by necessity, given that the respective values-in-exchange either came out of production while the same values that had gone into production ( $c, v$ ), or had originated in production ( $s$ ). However, the reproduction schemes do not become futile for non-believers in the labor value theory if one assumes that the value attributed by the market to the processed commodities is  $c + v + s$  (or  $M$ ). Always remember that the notations can easily mislead a reader: The express *values-in-exchange* incorporated in values-in-use, e.g.,  $c_2$ , in the last version of the equation, points to goods that, before they have been sold to department I and transformed into money, exist *in the physical form of consumption goods* (department II only produces consumption goods) even though the subscript "c" stands for constant capital, equipment, and inventory, i.e., means of production.  $v_1, s_1 = c_2$  means that the *value-in-exchange* of these *consumption goods produced by department II* is equal with the value-in-exchange of the investment goods needed by department II, against which they will exchange.

219 Marx, Das Kapital, vol. II., MEW 24, page 401. Italics added.

220 Quoted according to the concise summary of Hofmann (1979) page 67. In the German language "m" stands for "Mehrwert" which is surplus value or s.

equal to the “constant capital” produced by department I-capitalists and purchased by department II-capitalists. Less technically phrased, we might say: That which department I-capitalists produce beyond what they need to maintain their level of equipment and inventory must be equal to that which department II-capitalists need to maintain theirs and it must exchange against what department II-capitalists produce as a means of consumption beyond what they need themselves; this excess must also suffice to feed and otherwise provide subsistence to all members of department I, capitalists and workers alike. Rosa Luxemburg quite correctly observed that this quantitative relationship *applies to every and all economies*, including pre-capitalist ones. The amount of labor must *always* be distributed between producing investment goods and producing consumption goods in such a way that enough consumption goods are being produced for those preoccupied with producing investment goods; nobody else can do it apart from those producing consumption goods. The amount of investment goods produced by the producer of investment goods must be sufficient for those producing investment goods and consumption goods. So, what Marx found was that  $Iv + Is = Iic$  or  $I(v+s) = Iic$  or  $v1 + s1 = c2$  expresses a “general absolute fundament of social reproduction”.<sup>221</sup> The tribes of the Neolithic must have had some method, e.g., by tradition or myth, to allocate their labor accordingly; otherwise, even if there are no floods, no droughts, and no locusts and even if the weather was good, they would have suffered hunger at first or not have had the necessary tools or seed later. Of course, if more is produced than required, disregard for the “general absolute fundament of social reproduction” will be less detrimental; it will only mean that unnecessary excess production took place in the respective department.

We can already say that it is quite nice to be able to express this abstract economically and socially necessary relationship, which gained prominence in Marxian theory, in math – but will it also help us to understand whether enough employment-generating spending is generated? Before we think about a conclusion, we must look at “extended reproduction”.

### Extended reproduction

We know that  $M'-M$  or  $\Delta M$  in the  $M-C-M'$ -notation is equal to  $s$ , Marx's surplus value. In simple reproduction it was assumed that capitalist behave like workers and completely “eat up”  $s$  or their profits or that they, at least, refrain from investing a part of them in additional equipment, inventory, or labor in the next circuit. In extended reproduction, capitalists change this behavior and reinject a part of  $s$  into the next circuit as  $c$  or  $v$ . There may be different reasons for why this is. They may have become less attached to luxury, more parsimonious for religious reasons (in the sense of *Max Weber's* “protestant ethics”), greedier to increase their future profits, or they

221 Luxemburg (1966) page 56.

may have been forced to do so to remain competitive. Whatever the reason, re-investment of parts of prior profits in additional equipment, inventory, and labor is good news for employment and for the productive economy. Technically,  $s$  is then split up *into three parts*, one part which goes into new additional equipment and inventory,<sup>222</sup> one part which goes into additional labor, and the remaining part which they still consume.

This shift to extended production (accumulation or growth) puts the *basic equation of simple reproduction*, which we already know, ( $Iv + Is = Iic$ , or  $I(v+s) = Iic$  or  $v1 + s1 = c2$ ), which defines the preconditions for integration in simple reproduction, *under stress*. The obvious question is whether a similar integration of flows can be achieved in extended reproduction. In order to examine this, we give labels to the aforementioned three parts of  $s$ , whose use changes:<sup>223</sup> The first part, the part capitalists might add to investment in additional equipment and inventory beyond the old level  $c$ , is  $sac$  (ac standing for accumulated constant capital,  $s$  reminds us that surplus value is being used). The second part, the part of  $s$  that capitalists might use for *additional labor*, i.e., wages beyond the old level of  $v$ , is  $sav$  (av now standing for accumulated variable capital). Finally, the third part, the reduced remainder of capitalist consumption funds, which the capitalists will continue to use for consumption (or at least not reinject) in the subsequent circuit, is  $scr$  (cr standing for consumption remainder). We can now insert this split-off with the new labels into the produce of department I before accumulation begins. Instead of  $c1 + v1 + s1$  this becomes:

on a departmental level:

$$c1 + v1 + sac1 + sav1 + scr1 \text{ (for department I) and} \\ c2 + v2 + sac2 + sav2 + scr2 \text{ (for department II) or}$$

on a sub-departmental level:

$$\text{(sub-department I.a): } c1a + v1a + sac1a + sav1a + scr1a \\ \text{(sub-department I.b): } c1b + v1b + sac1b + sav1b + scr1b \\ \text{(sub-department II.a): } c2a + v2a + sac2a + sav2a + scr2a \\ \text{(sub-department II.b): } c2b + v2b + sac2b + sav2b + scr2b.$$

222 As already noted on page 273, the reproduction schemes assume that requirements for money, labor, and materials, etc. resulting from their operation will be available; hence, an increase of production by capitalists will not be frustrated by a shortage of money, materials, or labor.

223 We use Hoffmann's notation here, see: *Hoffmann* (1971) page 69. Please remember once more that the produce of department I, including  $v_1 + s_1$ , is *always* "physically" ("stofflich") existing in the form of means of production and the produce of department II, including  $c_2 + s_2$ , is *always* "physically" existing completely in the form of means of consumption.

We can now also describe what happens when departments I and II attempt to accumulate or grow, hence to reproduce at an extended scale; we will do this on the sub-departmental level. While the sub-departments do not absolutely have to accumulate simultaneously, we shall initially assume that they try to do so. As stated, we do not assume a shortage in natural resources, money, or labor, which would impair this attempt:

*Department I:* Department I.a continues to buy its means of production, equipment, and inventors, which must be substituted,  $c_{1a}$ , as in simple reproduction, from itself, i.e., also from within department I.a – there is no other place from to buy them. However, it buys *more* from itself than it used to by the amount of  $sac_{1a}$  because it wants to grow in this circuit. In total, it thus buys  $c_{1a} + sac_{1a}$ . Department I.b. also likes to grow in the same circuit. For this purpose, it would also have to buy more from department I.a; it would buy what it also bought in simple reproduction,  $c_{1b}$ , but in order to grow, it would have to increase its purchases by  $sac_{1b}$  to obtain  $c_{1b} + sac_{1b}$ . Furthermore, the two sub-departments of department I would have to hire more workers; they would, in addition to  $v_{1a}$  and  $v_{1b}$ , have to also spend  $sav_{1a} + sav_{1b}$  on salaries for workers  $L_{1a}$  and  $L_{1b}$ ; the workers, who receive these increased salaries, stand ready to spend them in department II.b. Finally, the capitalists from department I.a and I.b consume at the reduced amounts of  $scr_{1a}$  and  $scr_{1b}$  by buying luxury consumption from department II.a.

Altogether, department I would have funds available for purchases from department II (added up on the aggregated departmental level) of  $v_1 + sav_1 + scr_1$ .<sup>224</sup>

*Department II:* Department II cannot accumulate or grow except with the purpose of producing more consumption goods, either for workers (department II.b) or for capitalists (department II.a). For this purpose, department II-capitalists hire new workers for both sub-departments II.a and II.b. and pay additional wages for the (now larger) number of workers  $L_{2a}$  and  $L_{2b}$ . The amounts of single reproduction of  $v_{2a}$  and  $v_{2b}$  will, thus, be increased by  $sav_{2a}$  plus  $sav_{2b}$ . To pay these additional wages, department II-capitalists must reduce their own consumption by the same amount of  $sav_{2a}$  plus  $sav_{2b}$ . Of course, the additional workers need additional equipment and inventory and department II.a and II.b-capitalists will, beyond  $c_2$ , spend more money for the means of production by which to produce the means of consumption. The additional amount, which they intend to purchase from department I.b.-capitalists, will be  $sac_{2a}$  plus  $sac_{2b}$ . Department II.a and II.b-capitalists will continue to consume, but less; their consumption is reduced to  $scr_{2a}$  and  $scr_{2b}$ . These lesser amounts flow to department II.a. Altogether, department II will have

224  $V_1 + Sav_1 + Sr_1 = V_{1a} + V_{1b} + Sav_{1a} + Sav_{1b} + Sr_{1a} + Sr_{1b}$ . The original or accumulated  $v$ -payments, of course, flow there via the workers of department I who used them for the purchases of consumption goods in department II.b.

funds available left for purchases from department I of  $c_2 + sac_2$  on the aggregated departmental level.<sup>225</sup>

We have now set out the capitalists' program from both departments who want to accumulate simultaneously and will go on to investigate whether this fits together without conflict or friction crosswise: As observed previously, department I would have  $v_1$ ,  $sav_1$  and  $scr_1$  left in the physical form of the means of production, while department II would have  $c_2$  and  $sac_2$  left in the physical form of consumption goods. Accordingly,  $v_1$ ,  $sav_1$  and  $scr_1$ , which are means of production, still in the hands of department I-capitalists, would have to exchange against  $c_2$  and  $sac_2$ , which are consumption goods that are still in the hands of department's II-capitalists. Marx expressed this *necessity of extended reproduction*, which is now neither an identity or tautology nor an automatism, but a true requirement, in what he called the *basic equation of extended reproduction*:<sup>226</sup>

$$v_1 + sav_1 + scr_1 = c_2 + sac_2. \quad 227$$

Here comes the problem:

*First*, what department I wishes to give away in kind as means of production (the left side) *goes down* in extended reproduction; it is reduced by what department I itself wishes to use more of its self-produced means of production, hence, by  $sac_1$ . However, what department II wishes to buy in kind as a means of production (the right side, its demand) *goes up* by the additional investment it desires to carry out by purchasing more means of production for the production of means of consumption, hence, by  $sac_2$ . There is, thus, a conflict: Department II wants more means of production in kind; department I wants to give away less.

*Second*, what department I desires to buy as consumption goods *goes down* in extended reproduction. In simple reproduction, department I bought consumption goods in the value of  $v_1 + s_1$  or of  $v_1 + sac_1 + sav_1 + scr_1$ . However, department I's capitalists now only want to consume  $scr_1$ . Even if they must enable their workers to consume more than in simple reproduction,  $v_1$  plus  $sav_1$ , there remains an overall reduction of department I's consumption by  $sac_1$ <sup>228</sup> (the same amount which department I invests in more additional means of production) in the end.

225  $c_2 + sac_2 = c_{2a} + c_{2b} + sac_{2a} + sac_{2b}$ .

226 See Hoffmann (1971) page 69.

227 It corresponds to the basic equation of simple reproduction of  $I_v + I_s = II_c$ , see on page 276 et seq.

228 Department I's reduced consumption is redirected; there is an increase in the share of workers' consumption going to department II.b. and a (greater) loss of capitalists' consumption going to department II.a.

And there is a *third* conflict as well: Department I wants less means of consumption in kind; department II wants to give away more. That is not then end of trouble: *Fourth*, department II wants more means of production for means of consumption from department II.b, but more resources are already absorbed within department I by department I.a. the production of means of production for the means of production.

There is, thus, conflict, friction, and stuttering everywhere instead of smooth accumulation and growth. We shall leave the issue here for the moment and will consider how bad the problem really is only later.

### Russian revolutionaries, Rosa Luxemburg, and the reproduction schemes

The issue of whether, beyond analyzing proportionality matches, the reproduction schemes could be used to examine limits to capitalist circuit closure became prominent particularly in Russia at the turn from the 19th to the 20th century. Given the underdeveloped state of its capitalism, Russian revolutionaries doubted whether it could ever find sufficient employment-generating spending to take off and to grow. The poor peasantry was not capable of buying a significant mass of products from capitalist factories; the layers of capitalists themselves and the bureaucracy of the tsar were too small. Hence, the *narodniki* believed that Russian capitalism would need foreign markets or it would fail. *Woronzov* claimed the futility of capitalism in Russia because of a lack of export markets. *Nikolai-on*, a personal friend of both Marx and Engels, even observed that the role played by workers and by peasants as consumers had decreased because of a reduction in the labor force and because capitalist production had deprived peasants of income opportunities from side activities. He too considered foreign exports as a necessity, but doubted that Russian products could be so well-positioned as to find sufficient buyers.<sup>229</sup> Some Russian Marxists also supported reasoning of this style with Marx's reproduction schemes.

Russian "*legal Marxists*" opposed this view and believed in a successful development of Russian capitalism. *Struve* believed that a sufficient number of "third persons" existed, between capitalists and laborers, who would buy the products representing the surplus value, thereby allowing sufficient profit for capitalists. *Bulgakov* also believed in Russian capitalism's ability to develop independently of foreign markets. He tried to support this with the same reproduction schemes that the *narodniki* had used for the opposite purpose. He particularly pointed to the increase of department I relative to department II, which would render capitalism partly independent of demand for consumption goods and set into motion a self-sustaining closed circle, in which "the sole market for the products of capitalist production would be this production itself".<sup>230</sup>

229 *Luxemburg* (1966) page 244 – 260.

230 *Bulgakov* (1897) page 238, quoted after *Luxemburg* (1966) page 276, translation by the author.

However, *Bulgakov*, does not, as *Rosa Luxemburg* remarks, explain where sufficient buyers for the means of production, who would have to substitute the produce of department II, are supposed to come from.<sup>231</sup> *Michail Tugan-Baranovsky*, a third Russian “legal Marxist”, even went beyond *Bulgakov* and saw Marx’s reproduction schemes as the proof that “capitalist production creates a market for itself”.<sup>232</sup> Crises in capitalism could, thus, ultimately only result from a lack of proportionality in accumulation.<sup>233</sup> *Baranovsky*, thus, almost came close to reading Ricardo’s Law of Say into Marx’s reproduction schemes. This called *Rosa Luxemburg* to the forefront. She mocked “legal Marxists” who “showed the capacity of capitalist development in Russia so thoroughly that, by the same token, they proved the possibility of it existing in perpetuity.”<sup>234</sup>

*Rosa Luxemburg*, instead, proposed a theory, which she places between the *narodniki* and *Sismondi* on the one side and the Russian “legal Marxists” and *Ricardo* and *Say* on the other.<sup>235</sup> Both groups, she argued, did not explain “for whom extended reproduction takes place”.<sup>236</sup> She answers this question that, even if other theoreticians “up to Marx” assumed the opposite, “the to-be-capitalized part of the surplus value... cannot possibly be realized by the workers and capitalists themselves”.<sup>237</sup> Rather the “romantic” skeptics of the possibility of capitalist accumulation had the right feeling to look for “third persons”, for feudal landowners, militarism, the liberal professions, or for foreign trade as “safety relief valve.”<sup>238</sup> The “solution lies ... in the dialectical contradiction that for its movements capitalist accumulation requires non-capitalist social formations as its environment, progresses in permanent metabolism with them and can only exist as long as it finds this milieu.”<sup>239</sup> *Luxemburg*, thus, in the end<sup>240</sup> explains the limits to what, with *Marx*, she calls the “realiza-

231 *Luxemburg* (1966) page 269, 280.

232 *Tugan-Baranovsky* (1901) page 25, quoted after *Luxemburg* (1966) page 281, translation by the author.

233 *Tugan-Baranovsky* (1901) page 231, quoted after *Luxemburg* (1966) page 283.

234 *Luxemburg* (1966) page 296, translation by the author.

235 *Luxemburg* (1966) page 338.

236 *Luxemburg* (1966) page 299.

237 *Luxemburg* (1966) page 320, 321.

238 *Luxemburg* (1966) page 321.

239 *Luxemburg* (1966) page 338, translation by author. She emphasizes also that the products sold or “abgesetzt” outside of the two departments (op. cit. page 325) in a “non-capitalist social environment” (op. cit. page 338) may take any form and will “correspond to the needs of those non-capitalist circles, which help to realize it”, e.g., it may equally appear as cotton or material for railways (op. cit. page 325). *Luxemburg* runs into the problem of how to distinguish “inside capitalism” from its outside environment; see e.g., op. cit. 322–324, 327–329.

240 To *Luxemburg* this limitation appears to be valid only with regards to the produce representing surplus value in extended reproduction, not to such produce in simple reproduction. In her view, in “extended reproduction” all surplus value *must* be realized “abroad” or “outside

tion” of a part of “the surplus value” with a limited absorption capacity of capitalists and workers.<sup>241</sup> This is, indeed, close to the interpretations provided by Sismondi and Malthus.

### The reproduction schemes and employment-generating spending

We now return to the reproduction schemes and ask: Can the challenges of the mental exercises, which they entail, in extended reproduction in particular, ultimately teach us anything new about employment-generating spending beyond what  $M-C-M'$  could not? More specifically: From the study of  $M-C-M'$  we learned that if capitalists buy from each other that which represents the selling capitalist's surplus product, and pay for it by that which represents the buying capitalists' surplus product, there would be no shortage of employment-generating spending. This was confirmed by the study of simple reproduction at a more sophisticated level, using split-offs of  $M'$  into  $c$ ,  $m$ , and  $s$ . Only in extended reproduction things got more complicated because extended reproduction proved impossible in all departments at the same time

But what happens if we jettison the assumption that accumulation or extended reproduction must take place simultaneously? What happens if different departments or sub-departments are *allowed to accumulate in an oscillating sequence*? And what if *a certain amount of friction is admitted*? Assume e.g., that sub-department I.a has a technical lead and sub-department I.b. has to wait until department I.a. is ready to sell its higher output to sub-department I.b.; why should that be a high-caliber-problem? Furthermore, if, while department I, as a whole, accumulates and employment-generating spending from department I to department II shrinks for some time (resulting in an overproduction of consumption goods in department II in the amount in which both departments refrain from consumption, i.e., by  $sac_1 + sac_2$ ), why should this shortfall of demand for consumption goods not possibly be recuperated later after department I-capitalists have become more consumption-friendly again? Even if some overproduced food is to rot, so be it!

In the end, it thus appears that Marxists have exaggerated the additional problems of circuit closure in extended reproduction (beyond the problem which also exists in  $M-C-M'$  and in simple reproduction) and, in a way, fallen victim to their own strict mathematized notation. It is true that the observation of exchanges in the reproduction schemes is less abstract than in  $M-C-M'$  and that there are more

---

of capitalist circles” (op. cit. pages 339, 330), while the produce representing “constant’ and variable” capital may not necessarily have to have the problem (op. cit. page 338, 339, 330)

241 Immediately after it was published, Rosa Luxemburg's “Accumulation of Capital” got bad grades from the most famous Marxist theoreticians of her time, e.g., *Bucharin*, *Lenin*, *Hilferding*, and *Bauer*. She answered in her “Antikritik”, written in prison, which was only published in 1921, after her death.

possibilities of conflicts and frictions. However, do we not know – even without the exercise of the reproduction schemes – that baby animals can only grow into adult animals by eating more and breathing more and that their stomach, digestion organs, and lungs somehow manage to grow, *even if not completely in lockstep*, but in some zigzag-motion? Systems do come under stress when they grow and they, thus, need the capability to grow in a fluctuating, and unequal way and to endure transitory overcapacities at one place and under-capacities at others. Why should the extremely resilient capitalism be an exception? It is also an evident fact that capitalism managed extended reproduction quite well, did it not? After all, while Marx's reproduction schemes are helpful as a mental exercise in Quesnayian analysis, Marx was right not to try to use his departmental analysis to close the door for circuit closure.

\*\*\*

At the end of our treatment of Marx we conclude that neither his labor value and exploitation theory, nor his theory of the tendential fall of the profit rate, but his early “general formula of capitalism” and his notation  $M-C-M'$ , whether in the split up of  $M$  into  $c + v$  and of  $M'$  into  $c + v + s$ , and in the language of the reproduction schemes or not, offer the best connection point to a theory of employment-generating spending. These notations at least allows to phrase the problem hidden by Quesnay's axiomatic numbers, which surfaced in Sismondi's and Malthus', and which was chewed back and forth in the third interpretation of Ricardo's Law of Say, in a more concise way: In a two-classes-model, capitalists must mobilize their *expected*  $M'-M$  themselves in order to pay for their collective  $M'-M$  or profit; in a two-classes-world, they are the only ones who can do this. From here we jump after the Great Depression.

## **Section 8. Keynes: Firms' deficient employment-generating spending as deficient remedy for consumers' deficient employment-generating spending**

### **John Maynard Keynes**

With *John Maynard Keynes*, *Michal Kalecki*, and *Hyman P. Minsky* we come to the final part of our journey through historic contributions to the theory of employment-generating spending. The three authors jointly treat firms' productive investment spending as the critical component and determinant for the activity in the economy and employment. Their theories have to deal with microeconomic motives, expectations, and decision making because individual firms, entrepreneurs, or capitalists decide upon their investment based on their individual profit considerations.