

Section 3. A tableau économique of modern capitalism

While the terms of employment-generating and sterile spending or revenues, and of a productive and a sterile economy will still need some cleansing and purification, it makes sense to already give the basic idea of our model's result.

Arrival and departure ports of wealth owners

Quesnay modelled his tableau with three classes. Given that he falsely split off artisans, manufacturers, and commerce from his cl. productive and mislabeled them as “sterile”, these three classes can no longer be used. Marx's model, which is based on ownership and non-ownership of the means of production, has only two classes (workers and capitalists). At this point, we agree with Marx. However, Marx did not assign a systematic role to sterile wealth and the Marxian model has no place in which to properly deal with it. Quesnay, in contrary, we may suggest, at least foreshadows the distinction between sterile wealth and productive wealth in opposing his *classe des propriétaires* to his two other classes. Mainstream economists mostly use another two-units model, based on the distinction between investment and consumption: households, which consume, and firms, which do not, at least not in the narrow sense. Households also sometimes make sterile investments by buying assets in their model. Households, accordingly, are not too remote from Quesnay's *classe des propriétaires*, but they unfortunately mix up wealth owners and non-wealth owners and thereby, in a way, make the opposite mistake to Marx.

To overcome the weakness of Quesnay, Marx, and the mainstream model, our tableau, at first much like Marx, operates with two classes. They are, as in Marx, wealth owners and non-wealth-owning workers (non-wealth owners and workers are the same) and their existence is the result of the social differentiation that has occurred since antiquity. This highlights that capitalism is an owner economy with yet a large majority of embedded non-owners. However, we need more than just two players to show how the distinctions of sterile vs productive and investive vs consumptive⁷⁰ become operative in our tableau. For this purpose, we figuratively equip the wealth owners' class with *four* “ports”. It has *two* “arrival ports” through which it receives revenues, a sterile arrival port for sterile spending of others, and an employment-generating arrival port for employment-generating spending of others. The employment-generating arrival port collects the whole employment-generating spending of the society, hence of all wealth owners and of workers. The sterile arrival port collects sterile spending from all wealth owners and workers. The distinction between the sterile and employment-generating arrival ports reflects dif-

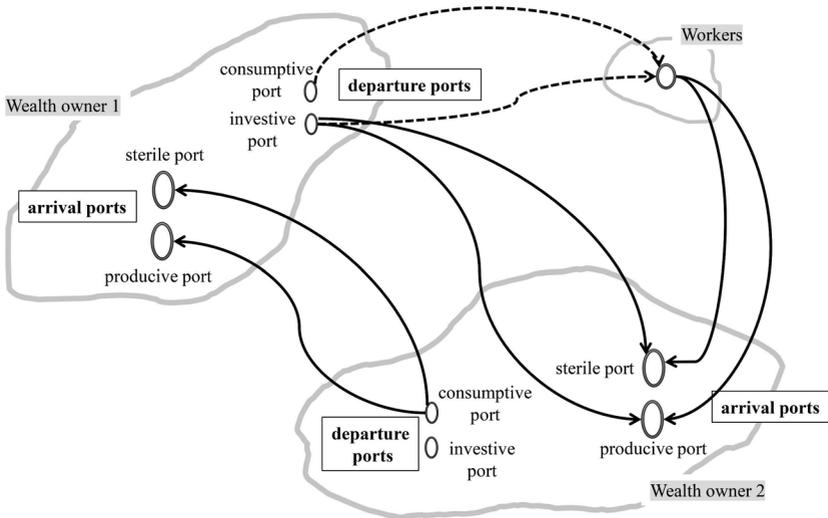
70 See Foreword page 23

ferent *effects* of revenues or spending, in particular with a view to the employment induced by it.

The distinction between *motives* of the spending, which can be either investive or consumptive, leads to two “*departure ports*” of the wealth owners. Wealth owners have a *consumptive* and an *investive departure port*. If they consume (whether their consumption is productive or sterile), then they emit payments via their consumptive port; if they invest (whether their investment is productive or sterile), then they dispatch them via their investive departure port. Flows leaving from there will be partly sterile and partly productive and, accordingly, will arrive at other wealth owners’ sterile or employment-generating ports.

Workers need *only one in-and-out-port*; their departures are only consumptive (sometimes sterile and sometimes productive)⁷¹ and their arrivals are only productive (as firms made them to induce them to work). Wealth owners make salary payments to workers from either their consumptive or investive departure port.⁷²

Figure 5: Arrival and departure ports of wealth owners



71 If workers make investive spending, then they do so not as workers but as wealth owners, see page 120. Workers, contrary to what may appear as implied in Marx’s reproductions schemes, mostly cannot use their full salaries for consumptive productive spending, i.e., consumption to Marx’s II.b.-department, as they also have to make sterile spending in the form of rent and debt services.

72 Wealth owners sometimes pay salaries for consumptive reasons, e.g., for menial services etc. These leave through their consumptive departure port.

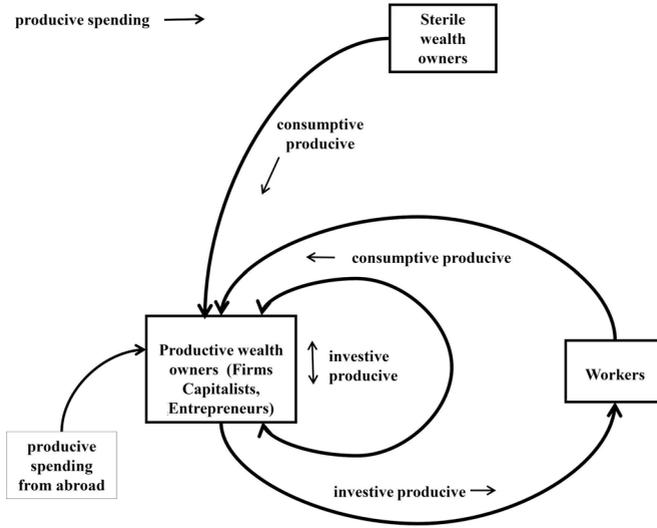
Quite importantly, the models used in this book part with the idea, that an individual, physical or legal entity, *belongs exclusively to only one single category or class*. Instead, we hold that individuals can simultaneously belong to several categories in a functionally differentiated system, such as in the economy. As such, they can participate in different processes or they can change their roles between processes. Workers in particular can sometimes be wealth owners aside of also being workers. They cannot only move up, leave one class and join another, much like wealth owners can drop into the workers class, but workers can also sometimes, at the same time, be wealth owners with a part of their wealth.⁷³

A three-unit- tableau économique of “original” capitalism (without prosthetics)

The preceding graph represented how the distinctions of the Matrix I (productive vs sterile and investive vs consumptive, on page 23) affects the flows of the economy and separates flows with different macroeconomic properties into distinguishable flows between specific ports. Yet, we also envisage a Quesnay-like tableau flow model with sterile wealth owners (our heirs of Quesnay’s *classe des propriétaires*), productive wealth owners (firms, entrepreneurs, or capitalists) and workers. This tableau, with, thus, three subjects, positions, or units, only shows the productive economy in a first version.

73 The idea that an individual ought to belong to one class was “natural” in stratified societies and was upheld by Marx for the purposes of social analysis and political practice; the working class was supposed to be the revolutionary subject and Marx wanted economic classes to correspond with social classes and even, if possible, political forces. Giving up this artificial postulate frees economic analysis and renders it more plausible. Of course, some workers are also wealth owners and if we, thus, add workers and wealth owners up, the total will exceed the number of citizens in a state. But that is neither a theoretical problem nor does it alter the distinction between non-wealth-owners and wealth-owners.

Figure 6: Tableau with productive economy without wealth economy and prosthetics

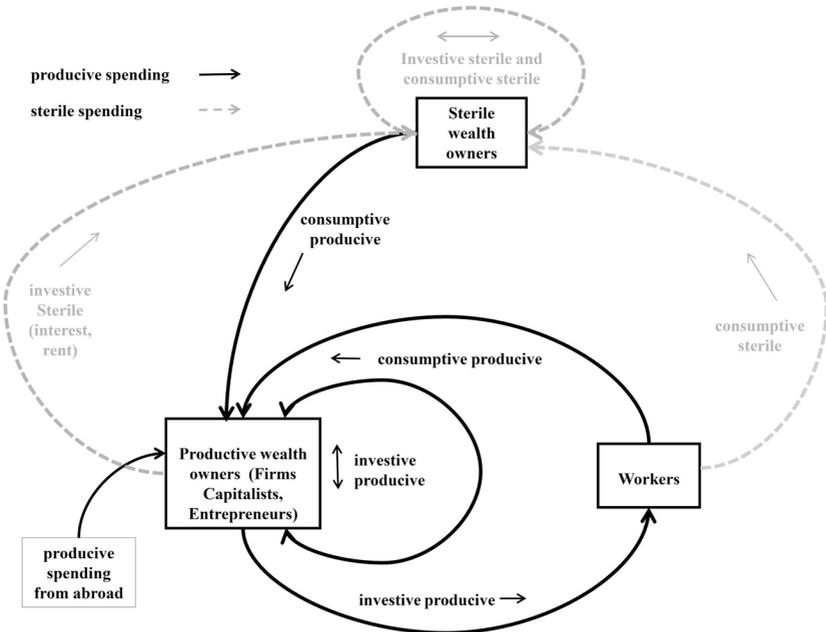


On hast to look at it from the workers' perspective with the question in mind: "What employment-generating spending must be forthcoming to induce salary flows to workers?". Just as in *Quesnay's* tableau, it is also helpful to imagine economic activity as commencing with sterile wealth owners making employment-generating consumptive spending, e.g., by ordering meat and wine or having a new countryside mansion constructed. This spending, as only expected or already contracted spending, will trigger productive wealth owners (firms, entrepreneurs, capitalists) to hire workers and to make salary outlays thereto. These salaries partly flow back, as employment-generating consumptive spending, to firms. Furthermore, the expected or contracted spending induces employment-generating spending of firms to other firms for the purchasing of equipment and inventories (including services), which will again partly flow back to firms or workers.⁷⁴

The *second* tableau now also includes the wealth economy, i.e., sterile spending or sterile revenues.

74 Marx's reproduction schemes split up firms into departments that produce production goods (dept. I) and consumption goods (dept. II). This is helpful and allows to describe transactions amongst capitalists and between capitalists and workers as asymmetrical processes. The reproduction schemes are introduced later in more detail, see on page 271 et seq., but they are not crucial for the argument of this book.

Figure 7: Tableau showing productive and sterile economy



The dotted grey curve at the top with arrows on both sides, beginning and ending at sterile wealth owners, shows sterile spending between them, e.g., sterile (purified) interest and rent, paid in product markets, for investive and consumptive purposes, and purchase prices in asset markets, i.e., in transactions regarding debt (bonds), real estate, and businesses (in stock market, private equity, etc.).

Firms and workers in the productive economy also have to make sterile “tributes” to the wealth economy.⁷⁵ Firms have to make investive sterile spending to sterile wealth owners, e.g., interest on money borrowed for productive investments (*i*), rent paid to use buildings for productive purposes (*r*), or even sterile purchase prices (*stpp*) for real estate, etc. for productive purposes, e.g., to build a factory. Workers have to pay interest on debt and rent for dwellings to sterile wealth owners as sterile consumptive spending. This is shown in the dotted grey downward lines on the left and right on the outsides. The solid black lines, showing employment-generating spending are a copy of the first tableau.

Verbally expressed, the capitalist sterile and productive economy have the following units, stations or subjects with the following spending/revenues:

75 Note that it is not normally possible to make productive spending without at least some sterile spending. “Tributes” must be paid into the wealth economy to be allowed to be otherwise productive. This point will be elaborated on pages 123 et seq. and 351 et seq.

Productive wealth owners or firms, entrepreneurs, capitalists: They receive employment-generating consumptive spending from other wealth owners and workers and investive employment-generating spending from other productive wealth owners or firms, entrepreneurs, and capitalists (each via their employment-generating arrival ports). They dispatch investive employment-generating spending to other productive wealth owners or firms, entrepreneurs, capitalists, salary spending to workers, and investive sterile spending (each via their respective investive departure port).

Sterile wealth owners: They receive sterile investive spending from productive wealth owners', the "tributes to the sterile economy", sterile consumptive spending from sterile wealth owners and from workers, each through their sterile arrival port ($i, r, stpp$). They also make consumptive sterile spending to other wealth owners, productive and sterile, via their consumptive departure port.

Workers: They receive investive salary payments from productive wealth owners and consumptive salary payments from sterile wealth owners.⁷⁶

While the state is already assumed to exist as guarantor of the ownership-structure, taxes or protectionist state policies are still not yet considered as a factor influencing the flows in both tableaux. There are no relevant social transfers or fiscal or monetary policies. Private banks and a central bank are still missing. They will only come into play as our investigations progress.

Elaborating sterile and employment-generating spending

We noted that the distinction between the sterile wealth economy and the productive economy is not intrinsic to the economic system. E.g., if a building is sold, it does not at all matter for the participating economic entities – not the vendor seeking capital gains, not the purchaser seeking investive or consumptive value-in-use or future capital gains – what part of the sales price rewards recent productive investment in the building and what part is merely for the transfer of the property-title to the God-given land.⁷⁷ The economic system, in its operations and self-observation, does not care about circuit closure and about whether its operations provide employment opportunities for the non-owners, i.e., only-owners of labor power – as little as whether a band of bagpipe musicians can sell out all of their gigs. The distinction between the sterile wealth economy and the productive economy is rather a distinction *post factum* made by scientists for the purpose of analyzing effects of the economic system upon society at large and for the state to possibly act.

76 The flows derived, using the distinction between the productive and sterile economies, could obviously be used for national accounts (which reflect "time periodical" flows), yet this possibility is not pursued further in this book.

77 It may only, in certain regards, be relevant for balance sheet and tax laws.

Furthermore, the distinction is not a distinction, which is manifest and readily visible in the operations of the economic system. There is no physical borderline between the productive and sterile economy. Unlike blood with and without oxygen in humans, which are nicely separated in arteries and veins, flows of sterile and employment-generating spending, like vitamins and cancerous particles in food, *travel together in a blended mix*. Imagine the desks of employees of a big firm being still connected by an old-fashioned pneumatic tubes system, through which they exchange official and private messages. They do that sometimes even in one and the same capsule – the tube system does not care about the character of the messages and this character is not visible from the outside.

Figure 8: Production, expenditure, income

Production	Expenditure	Income
Sterile revenues	Workers' consumption	Workers' salaries
Productive revenues	Wealth owners' consumption	Firms' productive profits
(minus "intermediate consumption")	Firms' productive investment (gross)	Wealth owners' sterile profits
	Wealth owners' sterile investment (gross)	Increases of productive stock
output	output	output

So far, we have used the distinction between the productive and sterile economy in an intuitive *prima vista*-sense, which gave us a preliminary list of sterile and productive economic activities. We regarded in particular loaning out money and renting out real estate or selling real estate and debt, as well as selling existing productive businesses (in M&A or in the stock market), as a sterile activity. Constructing houses or building factories anew and the daily running of factories or service firms were productive on the other side. This now needs elaboration. We need to acknowledge that rent and interest (or revenues for loaning out money) as well as purchases prices for real estate, debt and businesses contain productive components while the construction of buildings and businesses contains sterile components.

To begin with the *first case*: At some time, the original planning, managing and physical construction of buildings and businesses, e.g., of factories, which are later rented out or sold, lead to a high of productive activity. In fact, even the creation of debt does not only consist in handing over money but involves employment-generating marketing, administrative, legal, bookkeeping and tax-related activities, which cannot be denied to be productive. Afterwards, physical assets require ongoing care,

maintenance, administration, repair and occasional remodeling. The ultimate sale of real estate, debt or of business (through M&A or in the stock market) leads to a second high of productive activities of the seller in regard of the respective asset, e.g., marketing, due diligence, negotiations, legal work, banking, tax work, bookkeeping etc... Even if the buyer is not interested in these activities as such – but only in the value-in-use or value-in-exchange accruing to him – the seller engages in them because they are necessary to realize his M' , these spending are employment-generating. The buyer too has similar costs, which he also incurs because he expects a later higher M' of his. This spending, a part of his M , is obviously employment-generating, and it is, also rewarded by a employment-generating spending, his later M' , e.g., higher rent, which tenants, or higher purchaser prices, which buyers of the asset will pay.

We must, thus, notionally identify and *carve out* certain productive components or splitters in what we have so far regarded as solely sterile spending (as interest, rent, purchase prices for real estate and businesses etc.), and assign them as employment-generating spending to the productive economy.

How can this “carving out” be properly achieved? We return to the fact that all prices result from a play of ownership power, utilities, value-in-use-ascriptions, value-in-exchange-ascriptions and budget limitations. From this perspective, the amount of an expected M' , including of any component and splitter thereof, which induces an investment on the seller’s side, does not depend upon the amount of costs spent on a good but only upon whether the result of the application leads to a higher ascription of value-in-use and value-in-exchange by the buyer. Accordingly, no investor would have spent any amount of M , had he not expected a value-in-exchange increase, ascribed and paid by a prospective customer, which would allow him to recover his costs and to make a profit. Furthermore, we cannot deny that causal chains are running from e.g., the investment decision of a builder to erect a beautiful house at the “Grote Markt” in Brussels in the 17th century to today’s existence of the building and its phantastic present value (discounted future rent surpluses or its market price, which, due to today’s high multiples, is likely even higher than the discounted rent surpluses). We can also take for granted that every investor goes after the maximum profit and may even assume that some investors of the 17th century were so greedy and crazy to dream of the aggregate surpluses, which the building at the “Grote Markt” actually afforded since its construction.

Still, we only carve out a small part of these aggregate surpluses and assign them as employment-generating spending to the productive economy. The purpose of the distinction between employment-generating and sterile spending is *to point at those expected future revenues M' , which actually induced employment*, and these are not all surpluses, which are ultimately *caused* by an investment. The later M' , which induces the investment are, thus, neither the surpluses in the wildest dreams of investors nor the surpluses, which were luckily realized, but *only the surpluses, which would have*

sufficed for the investment decision of the historic investor at the time. This turns the task of splitting up M' into a sterile and employment-generating revenue-component into the task of setting a minimum profitability for employment-generating spending. If ever needed, a quantification of the productive component could, hence, be derived by a “cost-plus”- approach.⁷⁸ All M' is sterile, except for the recovery of costs and a profit add-on, which an investor would reasonably demand to make the investment. This implies that not only the revenues, which the investor could have expected without any employment-generating spending remain sterile (this anyhow), but also such revenues which he could only expect after he made the investment remain sterile to the extent they lead to an extra high profit. The method, thereby, ascertains that extra-profits due to, e.g., location or timing, remain sterile.⁷⁹

If we look at the homogenous flow of revenues (or spending, looked at from the other side) and try to tell an employment-generating from a sterile part, we may find the two parts either distributed in time or in space. There could be a “revenue-history” of an asset with a (first) phase, in which the asset only earns its employment-generating revenues, recovering its production costs plus a reasonable profit, and, after this is achieved, a second phase when the asset is promoted to the heaven or demoted to the hell of the sterile economy, where it merely draws sterile revenues.⁸⁰ Alternatively, we could imagine the asset as drawing a sterile and a employment-generating revenue component, in a certain proportion, in parallel for some time, until the collected M' will no longer contain any employment-generating revenue

78 Contrary to Marx's labor value and exploitation theory, there is nowhere in the economic system an intrinsic objective relationship between outlays or costs and the value-in-exchange or price of a product. Accordingly, such a relationship can not be used to isolate the productive spending-component in M' . We are also not attempting to re-introduce some kind of *justum pretium* through the backdoor into economics. Rather, we view prices result from a power play between ownership power, subjective value-ascriptions of prospective customers and budgets. For the macroeconomic purpose of splitting up an expected M' into an expected sterile spending and an expected productive spending of a customer, we only assume that the productive investor expects average profitability on his *c*-outlays or *v*-outlays, but no more, and that profits beyond are sterile.

79 The construction of the building was, microeconomically and legally, a *conditio sine qua non* for all later rent revenues for the structure in the high valuation area and time and, in that sense, the production of the structure has “caused” the high rent revenues (or sales price) M' to flow. Yet, macroeconomics is not *causal*, but *teleological*; it must seek to understand what motives and expectations move the economy. As mostly profit-making-expectations bring about ongoing system building, the macroeconomic character of a flow must depend on what expectation ignited the flow. A later collected M' - revenue is, thus, to repeat the point, not productive because it was caused by a productive investment, but only in the amount which would already have sufficed to induce the investment in low valuation conditions.

80 The time period, in which revenues are still considered to reward and have motivated the productive investment could be called “pre-maturation”, the time afterwards, when all collected revenues are wholly sterile, could be called “post-maturation”.

component and be wholly sterile. If, during the existence of an asset, e.g., a building at the “Grote Markt”, maintenance, repair, remodeling or administrative work is being executed, as it will frequently, this will always lead to re-assign a part of the incoming future M' to employment-generating revenues. Overall, the employment-generating revenue component in the aggregate M' will, hence, show eruptive jumps upward and slow falls afterwards, comparable to depreciation in bookkeeping.

The *second case* of carve-outs relates to revenues for *prima vista productive activities, which yet contain sterile components*. Productive firms make M' -outlays (c -outlays) which include interest, rent and purchases prices for real estate and businesses, which are sterile. If they draw revenues for commodities or services produced using rented real estate, debt-financed equipment or inventories or purchased assets, a certain component recovering these costs and allowing a certain profit is sterile. E.g., the price for an espresso in a café on the Champs Elysée will contain a component that rewards the sterile ownership of the building and may contain a component that rewards the taking out of a loan by the restaurant operator. That component, as great it may be to sit in that café, may even be significant. There is no difference with service fees paid to education, medical and care services or production industries.

Only after carve-outs” will there be a “purely” sterile economy and an equally pure productive economy. The suggested method to split up employment-generating and sterile spending of customers or revenues M' replicates the actual way, in which real investment decisions are made, insofar as they, too, can only be made on the basis of rough, vague, and uncertain guesses and estimations of M' realizable in the future, or of increases of M' attainable by additional productive investment inputs. We close the theoretical elaboration on sterile and employment-generating spending here.

Lack of a proper distinction between wealth economy and productive economy in mainstreams economics

Most mainstreams economists hate the idea of distinguishing between exchanges, which are somehow economically (or socially, politically, culturally, aesthetically, intellectually, biologically, morally, etc.) “valuable”, “beneficial” or “salutogenetic” etc. and which are not. They consider such attempts as unscientific and insidious attacks on economic freedom. While we have already acquiesced that the operations of the economic system *itself* do not use such distinctions, we hold that observing the economic system from the perspective of society may use whatever distinctions it con-

siders useful.⁸¹ The distinction, which this book will apply between employment-generating spending (consumptive or investive) and sterile spending (consumptive or investive) and a corresponding productive economy and sterile economy, will, indeed, be the crucial tool to analyze the precondition of circuit closure in productive economy.

Mainstreams and other economists sometimes use distinctions, which are similar to our distinction. For instance, they make a distinction between a so-called “*real economy*” and a “*finance economy*” (or simply “*finance*”). This distinction ignores that land, real estate, commodities, gold, antiques, art, classic cars and businesses, which ought to belong to the “*finance economy*”, are utterly physical or otherwise “*real*”. There is nothing more “*real*” than real estate, but even bonds are “*real*” as they represent legal claims, which enable, in the last instance, to attach assets of the debtor in case of default. In other words, this distinction between “*real economy*” and “*finance economy*” is misleading and fallacious.⁸² The distinction between the wealth economy and the productive economy avoids the calamity of attaching the label of “*real*” or “*physical*” to one of its sides. It rather distinguishes between tangible or intangible (the development of ideas, know how, strategies, advice, software, designs, inventions, scripts etc. are included) products being produced *anew*, either completely anew, or *being altered*, on the one side, and transactions taking place without this being the case. The wealth economy only draws revenues from pre-existing old tangible or intangible assets or from shifting such pre-existing assets around, the productive makes new tangible or intangible things.

The distinction between the wealth economy and the productive economy must also be distinguished from the distinction between “*productive*” and “*speculative*” economic behavior. While it is true that purchases in the wealth economy are very often made for “*speculative*” reasons (in a way all $M-C-M'$ -motives are “*speculative*”), e.g., to later resell the purchased bonds, land, buildings, stock, businesses, commodities, art, antiques, etc. with a capital gain, we must note that there are also a significant number of purchases of old, pre-existing wealth assets, such as land, city apartments, suburb homes, art, or antique cars, gold, commodities, etc., which are not or not predominantly motivated by speculation, but are motivated instead (1) by consuming the respective values-in-use, e.g. by living in an apartment, or (2) using them in an investive way in a productive business, e.g. to build a factory on land,

81 Neue “wirtschaftswissenschaftlichen Reflexionstheorien” writes Luhmann (1988, page 83) müssen “gegenüber der Differenz von reich und arm kühles Blut bewahren..., während die gesamtgesellschaftliche Reflexion genau dieses nicht kann...”

82 That something is wrong between the distinction between “*real economy*” and “*finance*” can already be recognized in the fact that if “*real economy*” is the “*marked space*”, then the opposite of the “*unmarked space*” ought to be “*irreal*”, “*surreal*”, “*virtual*” etc. The distinction applies different criteria to each side in order to define what belongs to that side.

open a call-center (a particularly sad job!) in an office building, or to decorate a board room with a piece of art. Consumers and firms, in other words, often have to “trade” with the wealth economy and pay a “tribute” ($i, r, stpp$) to sterile wealth owners if they only want to consume or make a productive investment, but without any or a predominant speculative motive.⁸³ The riches of the wealth economy, in other words, are sometimes needed for consumption or for productive investment. Insofar, the distinction occasionally made in mainstreams economics between “productive” and “speculative” gives worse marks to the wealth economy than it deserves.

Thomas Piketty’s book *Le capital aux XXIe siècle* of 2013 has recently stirred significant debate.⁸⁴ Written from a classical social-democrat perspective, it analyzes and criticizes today’s increasing wealth inequality and considers ways and policies to slow and to reverse the trend; it also looks to generate greater employment and productive growth. In this context, Piketty examines the question of the relationship between wealth and employment-generating production. We set out the differences between his approach and ours as follows: First, we neither consider inequality as a rather recent phenomenon nor do we think that recently a significant “qualitative jump” in inequality took place. Mrs. Thatcher, Ronald Reagan, financialization and globalization and the neoliberal 1980s or later austerity policies are *not* the historic culprits for social inequality. Rather, income and wealth inequality emerged already with the economic specialization into C–M–C’-players and M–C–M’-players in profit economies. This has reigned since antiquity, e.g., in China, Greece, or Rome, and recuperated vigor after the lazy Middle Ages in Venice, Florence, Genova, Spain, the Netherlands, the UK, etc. It is true that capitalism has a general tendency to always increase inequality, because its ongoing operation increases inequality, but beyond it is useless to ruminate on whether Greek, Roman, Spanish, or US slaves, laborers in Spain’s silver mines, children-workers in Manchester, the unemployed in the Great Depression or German or French workers of today are “more unequal”. It also does not really matter for the present social master drama whether the Fuggers, Rothschilds, Rockefellers, etc. were relatively “richer” in relation to the middle and lower classes at their times than Elon Musk, Jeff Bezos, Bill Gates, Warren Buffett, or George Soros are today. Employment depends upon motives for wealth to “go productive” and not on wealth or income ratios. In fact, there is a strong counter-narrative against the narrative of generally increasing inequality: If we compare the income level of the broad masses in developed Western countries to the income level of the broad masses in BRICS-countries over the last thirty years, then we cannot

83 He who purchases a wealth asset, if for consumptive or investive use, will often be aware of its potential to generate capital gains and that may even co-motivate the acquisition. But if the expected value-in use or return without capital gains are high enough, the acquisition would also take place for the consumptive or investive motives alone.

84 See also Piketty (2019).

but observe a significantly *rising equality*, e.g., hundred millions of people having been catapulted into middle classes in China, India, Brazil, and other countries in the last decades – capitalism's self-praise to unleash economic development and to bring wealth retains some truth even today! In other words, Piketty's concept of rising inequality is too unspecific, too general, and not targeted enough to explain the deficient closure of productive circuits.

We also differ from Piketty by positing the necessity of a distinction between a sterile wealth economy and productive economy while Piketty does not.⁸⁵ Piketty's treatment of rising wealth inequality, in what he calls the "general contradiction of capital" and his "two basic laws of capitalism", consistently puts productive apples and sterile oranges into one basket. If he calls " $r > g$ ", (rentability of capital⁸⁶ $>$ growth) "la contradiction centrale du capitalisme" and summarizes "la principale force déstabilisatrice est liée au fait que le taux de rendement privé du capital r peut être fortement et durablement plus élevé que le taux du croissance du revenu de la production g ", and if he, finally, states "l'inégalité $r > g$ implique que les patrimoines issus du passé se recapitalisent plus vite que le rythme de progression de la production et des salaires", he gives no thought to the question of whether the continued high-flying of profit, compared to growth, could have to do with the existence of a sterile and productive economy. He is on a good track, but does not follow through nearly enough. Moreover, if he puts forward the view that the average rentability of capital is lastingly 4 %-5 %, while long term annual average growth in countries at the frontline of technological progress hardly exceeds 1 %-1.5 %, ⁸⁷ then this ought to raise the question: How can this work? There are two possibilities: either capital in general reaps an ever-significantly larger share of whatever growth or the profits of capital, which could explain the higher-than-growth-rentability, are reaped *outside* of production. This is similar to what occurs in something like our sterile economy. Piketty even points to this possibility by saying: "Le capital se reproduit tout seul, plus vite que ne s'accroît la production", ⁸⁸ but he still makes no attempt to follow this trace and to attack the issue of what this production-independent and growth-independent profit-growth economy might be.

The terms that Piketty uses to state his "deux lois fondamentales du capitalisme" permanently intermingle the two economies. His "première loi fondamentale du capitalisme" relates the stock of capital of an economy to the flow of revenues from

85 See already Foreword page 21.

86 The rentability of capital or the "taux de rendement de capital", encompasses not only productive profit but also rent, interest, capital gains, royalties, etc. See *Piketty* (2013) page 93. Piketty also mentions profit and dividends in his list (also on page 94)

87 Unlike China or Europe in their respective "thirty glorious years" from 1990 onwards and from 1940 to 1970 (*Piketty* (2013) page 161, 166).

88 *Piketty* (2013) page 942 (all prior quotes).

capital. It reads $\alpha = r \times \beta$ ⁸⁹ and means that α , a fraction of revenue of the capital to the aggregate national revenue (Piketty states that this is around 30 %),⁹⁰ equals the fraction of the profits to invested capital, i.e., the rentability of capital, which is r (often, says Piketty, around 5 %),⁹¹ multiplied with the multiple of the national capital over the annual national revenue, which is β (often, Piketty claims, around 6).⁹² This first law, which Piketty says is a “pure égalité comptable” and “tautologique”,⁹³ clearly involves no distinction between different components of the revenues of capital related to sterile and productive activities.

Piketty’s “deuxième loi fondamentale du capitalisme”, $= s/g$,⁹⁴ means that β , which is in both equations and connects them, the multiple of the national capital over the annual national revenue (which Piketty often sees as around 6) equals the fraction of the saving rate (often, Piketty states, around 12 %) over the growth rate (often, Piketty states, around 2 %). The second law, *Piketty* claims, is not tautological, but “le résultat d’un processus dynamique; elle représente un état d’équilibre vers lequel tend une économie épargnant à taux s et croissant à taux g ...”⁹⁵ Again, Piketty neither splits up β nor the growth rate g into a productive or sterile component. In other words, he skips the option to pursue his research interest – where does increasing inequality come from? – by considering that profits could arise outside of production and, hence, in a sterile manner.

Silvio Gesell deserves a special mention in the present context, too. He was interested in employment-generating spending and closure of productive circuits more directly than Piketty. He was also looking for moments in capitalism itself that stood in the way and picked wealth stored in the form of hoarded money as its maleficent flow-interrupter. This track was well-selected, but his choice was too narrow. It was not solely excessive intermediary hoarding of money that lay in the way of investment in the productive economy, but long-term investment in the wealth economy within a far broader meaning and in far more forms than just in cash holdings. Accordingly, *Gesell*’s recipe of “expiring money”, money which would automatically lose value (which aimed at discouraging hoarding), remained inadequate too.

In summary: The widely used distinctions between a “real economy” and “finance” or between “production” and “speculation”, Piketty’s finding of $r > g$ and *Gesell*’s finding of money hoarding blocking production and employment, while

89 *Piketty* (2013) page 92 et seq.

90 *Piketty* (2013) page 92: “la part des revenus du capital dans le revenu national, part qui sera noté α ,...”.

91 *Piketty* (2013) page 92: “Ou r est le taux de rendement moyen du capital ...”.

92 *Piketty* (2013) page 92: “le rapport capital/revenu β ...”.

93 *Piketty* (2013) page 93, 266.

94 *Piketty* (2013) page 262 et seq.

95 *Piketty* (2013) page 266 et seq.

they confirm the project of this book and the necessity to distinguish a productive and sterile sector in the economy, all fall far short of solving the task.

Section 4. An original assembly

The introductory elementary economics of profit economies, which will now be concluded, has equipped us for the further journey undertaken in this book. We deny “objective value” and shall not be misled by the theory of labor value and exploitation. We possess a basic concept of money, and specifically the idea of the importance of money creation, and understand its difference to fiat money (fiat money being only one, if the most efficient, form of money creation). We have, furthermore, come to appreciate that the economic system must be regarded as a temporalized system that is created and re-created by elementary events in time, more like a dance, where dancers swap partners in between, which have exchanges. Classes or units, including our two classes and their ports, are only spatial representations of where players take roles as sellers or buyers in exchanges in time as part of their strategic two-leg-behavior, which aims beyond the single exchange. Marx’s $C-M-C'$ and $M-C-M'$ are these two-leg-circuits, but only if we also lay the distinction between sterile or employment-generating (or the wealth economy and productive economy) across the distinction of consumptive ($M-C'$ in $C-M-C'$) and investive ($M-C$ in $M-C-M'$), we are truly equipped to analyze the problems of circuit closure in capitalism and to ultimately combine it with a theory of prosthetics.

We shall close the elementary economics of profit economies with a romantic moment: Contrary to natural law theories, the state was *not* founded by social contract. Capitalism was likewise not introduced following deliberations in an original assembly.⁹⁶ Yet, *imagine*, contra-factually, capitalism *had* been erected per resolution after such an original assembly and assume that the speakers (contrary to what we know from democracies from ancient Athens to the present) had only made honest and reasonable arguments. In this case, proponents of capitalism could still have possessed strong and intelligent arguments in its favor (which would have somewhat resembled Hobbes’ honest and true arguments in favor of Leviathan). They could have argued: “See, we all like values-in-use and produce them to consume them or to exchange them against other values-in-use. This ($C-M-C'$) works, more

96 Social institutions are normally not founded neither to serve a commonly agreed purpose, such as to fulfill a social function, nor do they, e.g., states, owe their existence to an insight or teleological intervention of a steering god or a social contract in the sense of Hobbes, Locke or Rousseau. They rather come into being because a political entrepreneur with some mix of financial means, political allies and hard and soft power in the background has successfully established them for certain purposes. They, then, become part of the social landscape and are later appropriated for other purposes.