

# World Economics Association Newsletter

To *plurality*. The Association will encourage the free exploration of economic reality from any perspective that adds to the sum of our understanding. To this end it advocates plurality of thought, method and philosophy.

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## WEA Pedagogy Blog

...welcomes posts about your experiences and suggestions on teaching and learning economics, with a strong focus on methods leading to deep understanding of current real world economic issues.

## A historical political economy of capitalism—an interview with Andrea Micocci

*Andrea Micocci has recently published a book, A Historical Political Economy of Capitalism. In this interview with Stuart Birks he describes aspects of his approach.*

### 1. The term “political economy” has several interpretations. What do you mean by it?

My main concern was to overcome what I see as the typical problem of economic theories: they mix up capitalism in theory and “capitalism as we know it” in practice. This is the result of the logical flaws of economic theory and of capitalism in general, which constitute the general subject of my book. By political economy I therefore mean the materialistic study of the economic activities of the capitalist era. It comprises what we term economics, political economy in the Marxist sense, political science, sociology, psychology and history. As I explain in the book, it is a Classical approach only in the sense that is inspired by Adam Smith and Karl Marx (with his “critique of political economy”). But this is only the beginning of a theoretical reasoning that leads to a proposed “historical” political economy, which differs from everything hitherto devised even in the role it can play in practice.

### 2. Why a “history-based” critique of political economy?

I argue in the book that a “critique of political economy”, as Marx correctly named it, can only serve the revolutionary purposes of a radical critique of capitalism. In order to do so, it must challenge the basic logical tenets of the dominant intellectuality of capitalism, and hence of other theories. All heterodox approaches to economics have failed so far because they were not based on a logical “otherness” to existing economic theories. These last in turn mirror the dominant intellectuality of capitalism: its metaphysics. Heterodox theories have in other words corrected rather than replaced mainstream economics and mainstream Marxism. It is definitively from the logical ground that we must begin if we want a radical change.

I base my argument on the consideration that capitalism has produced a metaphysics, an intellectual organization of reality that fits, and corresponds to, its own flawed intellectual mechanisms. Such metaphysics, common to the economic mainstream and to mainstream Marxisms, is constituted by a vulgar dialectical logic that denies non-dialectical occurrences. Many thinkers, however, have opposed this limited and limiting intellectual framework. Hume, for instance, was the first to notice that there is no reason whatsoever to argue that humans or anything else are condemned to play the role they seem to play in society or in nature. By constraining na-



ture in an intellectual straitjacket we constrain ourselves. To achieve liberty we must free nature by freeing chance.

Take, for illustration purposes, the mainstream and Hegelian mistake that work is a good thing which must be fairly rewarded. The very opposite might be true: any work beyond what is needed for human survival is inhuman and anti-ecological. It is the widespread intellectual acceptance of such capitalist logical absurdities that implies that we must argue alternatively. We must criticize the flawed intellectual reasoning behind this and the other methodological problems of the value-labour relationship: the metaphysics of capitalism, which attributes an economic role to just about everything, including nature.

A non-capitalist situation might well mean a non-economic set of human relationships. This implies that it is not necessarily socialism as the re-organization of production that we must have as a reference. A non-capitalist situation may need planning, but not economic planning, for this is related to those human relationships that can be shown to be logically wrong and typical of capitalism only, not generally applicable to humankind. If so, then political economy cannot be more than a study of the history of economic relationships and of their institutional organizations, showing their absurdities. The above means that political economy not only cannot, but must not tell us what to do. We must look for other ways, richer and more satisfactory, to organize our lives.

In other words, logic and creativity can take us away from the dominant mentality of capitalism. In fact we can identify capitalism precisely with such a limited and limiting common logic. The point of a historical political economy is the destruction of such common logic, the capitalist metaphysics, without the creation of yet another metaphysics.

### 3. How do you view the intellectual representation of capitalism?

What is outlined in the answers to questions 1. and 2. is built on the core argument of the book, which is that, following a reasoning that is traditional in European philosophy and political economy (I refer in the book to Berkeley, Hume, La Mettrie, d'Holbach, Rousseau, Smith, Marx), we can hypothesize (as anticipated in questions 1. and 2.) that capitalism is in theory and in practice a poor and flawed, hence limited and limiting, way to interpret, (not) understand and predict reality. Such a way is typically dialectical in the vulgar Hegelian sense, and is as a consequence suspended in between the abstract (logically sound reasoning) and the concrete (the material, which we can only hypothesize about, however, as I am going to sketch in the following): the resulting metaphysics is neither material nor abstract. Yet it is generalized, and only can be so, or there would be fatal cracks in the construction. It thus compels everything and everybody to exist only as metaphysical concepts rather than as physical bodies: hence the apparent logic of commodities, value and labour with their connections. Only thus in fact can objects become commodities, people become workers, nature become the environment (an object of human positive and negative intervention).

The material nature of things becomes secondary, for there appears to exist an economic and political role to everything and everybody: this is rendered for instance by Smith's invisible hand as described in his Theory of Moral Sentiments, or by Marx's triple alienation (from ourselves, our fellow human beings, nature in general). We can only hope we can recover the material in and outside ourselves by ridding ourselves of the metaphysics, i.e. the dominant, socialized intellectuality of capitalism that, very importantly, also dominates our sentiments. To this goal, we need a process of human individual emancipation I outline in the book, calling it silence so as to signify the importance of the flawed language of capitalism for the functioning of the metaphysics. In fact all capitalist objects and relationships correspond to words (concepts) which, being logically faulty in the sense directed by the metaphysics, have the paradoxical characteristic of being vague while all the time striving to appear precise. Take the concepts of market, profit, equilibrium.

The basis to free ourselves from all this is the recovery of free chance to begin with (Hume's "liberty as chance"), and, beyond Hume, the recognition that in capitalism we consider only the imaginable and the unimaginable, while there is a third category: the un-conceived. In other words, the realm of freedom and of precision in words must, paradoxically for the capitalist logic, acknowledge the presence of the un-determined. This is present in intuition in Marx. Only then can we hope to recover nature, the material.

### 4. Does your analysis provide any insights into current events related to neo-liberalism and Brexit?

Only as a by-product and as an example, for my purposes are mainly theoretical. In particular, I take the Tsipras Cabinet defeat in the negotiations with the EU as an evidence of the power the vulgar Hegelian dialectical mediations of capitalism have to make conflicts appear as catastrophic ruptures despite having eliminated from capitalist relationships the very theory and practice of ruptures through their vulgar Hegelian dialectical functioning. The ensuing iterative mediations capitalist life comes down to are as a consequence always won by the status quo, because everything appears (but is not) as clear cut tragic: the mediations of capitalism, being moderate in nature, do not accept otherness, but make conflict look final nonetheless. Hence, they always imply a degree of violence (a compromise must be reached: someone has to give in, or be forced to do so), contrariwise to the recognition of non-dialectical otherness, which only can signify tolerance of what you do not understand or conceive. Small differences (Tsipras' modest proposals to the EU) are in other words transformed into ruptures that cannot be accepted, and are not accepted, for the sake of the stability of the capitalist system itself.

There is no denying that with this book I also intend to criticize left wing approaches for agreeing to play on the capitalist metaphysical ground: this makes them weak vis-à-vis powers, and incapable of offering true alternatives to capitalism. Also, and I do hope that this is much more practical, my approach points out the logical inevitability of financialization, which is the highest and easiest form of capitalist metaphysics, for it responds much better to the logical limitedness of capitalism than material production.

## Thomas Palley on a financing union for the Euro Zone

In a recent article [Thomas Palley](#) wrote, "The original sin within the euro zone is the separation of money from the state via the creation of the European Central Bank (ECB) which displaced national central banks. Under the euro, countries no longer have their own currency for which they can set their own exchange rate and interest rate, and nor can they call on a national central bank to buy government bonds and finance government spending."

As a solution, he proposes a "Financing Union". [Read more here.](#)

## Why the study of transnational companies should be part of the economics curriculum By Grazia Letto-Gillies<sup>1</sup>

[Editor's note: an earlier version of this piece was published in the WEA Pedagogy Blog]

The business media is awash with news about transnational companies (TNCs) be they in the services or manufacturing or agriculture sector. The news may refer to performance or strategies or plans for real investment (or the lack of them) or takeovers. There is currently also considerable interest in their tax minimization strategies.

Yet economics textbooks and courses are still shying away from this most relevant part of our contemporary economies. This is true of both orthodox/neoclassical approaches and – I regret to say – of alternative ones as a quick analysis of textbooks recommended in the WEA Pedagogy page shows.

It could be argued that the nationality of the investor, employer, or producer does not matter: a firm is a firm and the task of economics is to study it independently of where it invests or its nationality. I have argued (Letto-Gillies, 2004 and 2012: introduction and Ch. 14) that the existence of nation-states with their different regulatory regimes makes a specific study of the TNC necessary. The regulatory regimes refer to taxation or labour and social security or currencies or environmental laws. The differences in regulatory regimes across different countries generate opportunities for alternative, profitable strategies for firms able to operate across national frontiers. Such operations allow the TNC to take advantage of different fiscal, currency or labour and social security or environmental regulations. Most relevant, transnationality increases the bargaining power of TNCs over labour as we see on an almost daily basis throughout the world. On the fiscal side the advantages that TNCs derive from their tax minimization strategies are partly linked to strategic location of their headquarters in tax-friendly countries and partly to the widely used manipulation of transfer prices (Eden, 2001; OECD, 2010).

Additional advantages of transnationality for companies may also derive from: (a) the spreading of risk across different locations; and (b) the acquisition of knowledge from a variety of cultural and business contexts that the location of production in different countries allows. There are, of course, also costs and risks associated with operating in different locations.

There is more to this issue. Most of us who have embraced alternative and realist approaches to the study and teaching of economics are still, on the whole, stuck with the distinction between micro and macro economics largely taken by us from the orthodox literature. How appropriate is this distinction in a world in which a few firms dominate markets and industries even at the global

level? The domination is not just in terms of market shares. On the production side we must take account of the domination that principal firms exercise over smaller contractors many of which operate in other countries. The domination by a few large firms in a particular industry affect labour, consumers and smaller firms linked to the large ones by contractual arrangements. It also affects governments and their policies. Celi et al. (2017: Ch 2) show how the offshoring and outsourcing investment strategies of French, German and Italian automobile manufacturers can largely explain changes in the country's trade balance. Moreover, the tax-minimization strategies of TNCs have considerable effects on: governments' revenue; allocation of tax revenue between countries; and – most relevant – an overall transfer of surplus from the public to the private sphere. The micro is almost the meso and greatly affects the macro. Governments and labour force as well as economics teachers take note.

If we WEA economists want to disseminate among our students an alternative and realist approach to the study of economics, then we need to include the study of TNCs in our courses. The task is feasible because there is, indeed, a large literature on theories and effects of TNCs and their activities. The topic is widely researched mostly in Business Schools. Here are some sources of literature.

UNCTAD publishes, among others, the following:

*World Investment Report*: a yearly thematic analysis with considerable empirical content; full databases available free online.

*Transnational Corporations*: a quarterly academic, peer reviewed journal which focuses on analysis and policy.

Among the many journals that deal with 'International Business' are the following:

*Journal of International Business Studies (JIBS)*

*International Business Review (IBR)*

*Critical Perspectives on International Business (CPoIB)*.

Most of the journals tend to be multi- and interdisciplinary dealing with economics, management, accounting and organizational issues. CPoIB deals also with social and political issues and its content can be of particular interest to WEA members. It has published, among others, papers by a radical accountant, Prof. Prem Sikka of Essex University (including Sikka and Wilmott, 2013).

My (2012) listed below has a comprehensive treatment of the various theories of the TNCs (Part II) and of their effects (Part III) specifically, effects on labour, trade, the balance of payments and on innovation. There are suggestions for further reading at the end of each chapter. The chapters on theories first summarize a specific theo-

ry and then critically analyses it in a separate section.

See also 'The theory of the Transnational Corporation at 50+' in the WEA journal *Economic Thought*.

The same issue of the journal has a debate with John Cantwell on the questions raised in the article. The debate is the result of the Open Peer Review process adopted by the journal. It has led to interesting debates on a variety of issues considered in the journal's articles.

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1. I am grateful to Maria Alejandra Madi for useful comments on an earlier draft and to Andrea Ginzburg for information on offshoring in the European automobile industry.

## Piecing Together a Paradigm

*YSI Plenary · October 19-22, 2016 · Central European University, Budapest*

Economic thinking is in crisis. New frameworks are needed to guide our thinking. New approaches are being developed, but efforts are fragmented and need to be brought together if we hope to piece together a paradigm.

On October 19-22, 2016, at the Central European University in Budapest, the Institute for New Economic Thinking's Young Scholars Initiative (YSI) will hold its first plenary, under the title "Piecing Together a Paradigm".

YSI is a community of research-oriented students and young scholars. We embrace open debate and critical and self-reflective thinking, which will lead us to better understand economic phenomena. The event will bring together 14 diverse YSI working groups — each searching for frameworks to guide their research — to place their work in a bigger picture, asking how the specific questions of each group fit together.

We envision the plenary as an opportunity for our working groups to encounter and inspire each other enriched by the mentorship of more than 40 pre-eminent thinkers, including Beatrice Cherrier, Sheila Dow, Gary Dymski, Doyné Farmer, Geoffrey Hodgson, Stephen Kinsella, Alan Kirman, Bill Lazonick, Marc Lavoie, Tiago Mata, Mariana Mazzucato, Perry Mehrling, Philip Mirowski, Julie Nelson, Arturo O'Connell, Jonathan Ostry, Zoltan Poszar, Sanjay Reddy, Don Ross, Margaret Schabas, Alyssa Schneebaum, and Lord Adair Turner.

The conference will also help to set the research agenda for YSI's coming year and will include:

- Comprehensive parallel working group meeting schedule for 14 working groups
- High profile open sessions hosted by the working groups
- Keynote addresses and big picture panels with leading economic thinkers
- Community plenaries to set our overall agenda for the coming year

To participate in the event, a registration is required. Visit:  
<http://www.ineteconomics.org/community/events/ysi-plenary-budapest>



## WEA Online Conference

### FOOD and JUSTICE: Ideas for a new global food agenda?

By Armando Fornazier and Maria Alejandra Madi

#### 1. Setting the scene

Food production has always been present in the economic debate because of the concern about the outcomes of population growth and demographic changes. In this respect, one of the most famous references is the book *Essay on the Principle of Population* (1798), written by the British economist Thomas Malthus, that describes the challenges of unbalanced growth of food production in relation to the population rate of growth. In his view, the outcomes of this unbalanced growth were seen as catastrophic because of the social problem of hunger. At that time, population control was considered to be one of the proposals to face food challenges (Malthus, 2008).

Although the Malthusian theory has not yet been proven to be true, there is a global challenge related to people's access to food. Access to food refers to the lack of financial resources that prevents households from purchasing food, mainly in urban areas, in addition to the lack of financial resources in small business to buy land and inputs and also to adopt modern technologies.

Through history, new methods of food production have emerged which allowed increases in food supply. Technological changes, however, have not occurred uniformly throughout the world (Friedmann, 1993). Indeed, some countries have expanded their agricultural production and met their food needs while the lack of access to food still creates situations of hunger that remain a reality in many parts of the world. Therefore, the current challenges in food production mean that, even with a larger supply of food, many people, mainly the poor ones, still live in a situation of starvation. Data from the United Nations World Food Program (World Food Program UN-WFP-UN) and the Food and Agriculture Organization of the United Nations (United Nations Food and Agriculture Organization-FAO-UN) have shown that hunger turned out to be greater in some groups such as women, children, especially in rural areas of the world (United Nations, 2012).

Political issues have also limited the access to food.<sup>1</sup> Wars and social conflicts not only prevent people from growing or purchasing food, but also promote social vulnerability in situations of hunger (Webb & Braun, 1994). Other political problems involve, for instance, the appropriation of land (land grabbing) by hegemonic groups and corruption (Borras *et al*, 2011).

In truth, the current food challenges need to be considered in the context of the promotion of economic sustainability and social justice.

#### 2. The globalization of capital in agriculture and food production

Agriculture and food industries are part of the list of "global" sectors. Indeed, a global network of institutions supplies the worldwide food markets. In this scenario, one of the major outcomes of the expansion of the global supply chain is the changing role of the local farm sector under the high pressure of international competition.

The process of globalization of capital in agriculture and food production raises other problems related to the growth of big investment projects led by transnational companies, national states and institutional investors that purchase land in various parts of the world. In truth, these investments often expose small farmers to a situation of hunger and food insecurity by expelling them from the land where they live.

Today, contract farming and integrated supply chains are deeply transforming the structure of the agriculture and food industries. In addition to these changes, the advance of the biotech revolution and the introduction of genetically improved varieties of seeds have also fostered structural changes in the global agriculture and food industries. It is worth remembering that these systemic changes are linked to financial and trade flows largely driven by the search for wider markets and less expensive sources of raw materials.

#### 3. Food challenges and policies

International organizations have been discussing the challenges of hunger since the 1940s and organizations such as FAO have been created (Shaw, 2007). To reduce the problems of hunger, the United Nations, other international organizations and non-governmental organizations have shaped programs oriented to food distribution and to school feeding programs, among others. In addition, hunger reduction projects have been widespread through international cooperation aimed at incentivising food production and local shopping. More recently, targets for poverty and hunger reduction were defined for inclusion in the Millennium Development Goals (MDGs) of the United Nations Development Program (UNDP). In truth, the discussion about the problem of hunger is linked to poverty and, thus, political and economic actions are required to combat extreme poverty and hunger.

Actions to facilitate food access have encouraged local production, financial strategies and market regulation

(Morgan & Sonnino, 2008).<sup>2</sup> Policies to combat extreme poverty and hunger have involved the distribution of financial resources (transfers) and even the distribution of food to poor people. As hunger is primarily linked to income access, other issues such as the slowdown of the economy, unemployment and rising food prices can put thousands of people on the road to poverty and hunger. For example, the increase in food prices that occurred mainly in the years 2007-2008 caused many people to return to situations of poverty and hunger (United Nations, 2011). In this scenario, international organizations also aimed to control agricultural commodity speculation in order to prevent thousands of people from becoming exposed to food vulnerability (Institute for Agriculture and Trade Policy, 2011). Another relevant issue is the competition between food and biofuels, since agricultural products that are used as food can also be oriented to bioenergy production.<sup>3</sup>

In addition to the challenges related to food access, another relevant issue is food waste (Institution of Mechanical Engineers, 2013; HLPE, 2014). Actually, a large percentage of the world food production is lost at different stages of production, transportation, processing and consumption. Indeed, among the main current concerns, there is the need to search for actions that can reduce food losses in order to defeat global hunger.

Although the challenge of hunger has not been widespread in developed nations, other concerns have been part of the agenda of these countries, such as the type of food to be supplied. In this debate, the concern is centred on the excess of fats, salts and sugars that increase health problems such as obesity, hypertension, diabetes, among others. As a result, in some developed countries, the food debates have stimulated new strategies of fiscal policy oriented towards unhealthy products and the regulation of marketing strategies, for example (WHO, 2013). Other actions involve the protection of food sovereignty in relation to decisions about food production methods, such as the acceptance or otherwise of pesticides or even of genetically modified organisms (GMOs).

#### **4. The WEA Conference *Food and Justice***

Considering this background, current food challenges involve issues ranging beyond food to include access to national and international regulation. Although the scope and intensity of these challenges vary according to the economic performance and the institutional set up, the debate has been global.

The purpose of the 2016 WEA Conference *Food and Justice* is to enhance a debate that could stimulate further research and analysis on current issues, such as:

- a. **Map of poverty and hunger:** Causes and consequences of poverty and hunger; Hunger and poverty in rural and urban areas; Vulnerable groups of people; Historic factors that shape a restricted access to food.
- b. **Access to land:** Territories and conflicts within globalization; Capital expansion: foreign investments, land acquisitions and land grabbing; Agrarian reform; Food, bioenergy and land use policy.
- c. **The global crisis and the financialization of food:** Global trade: main commodities, tradings and transnational corporations; The global crisis and its consequences on food prices; Trade barriers, tariffs and other restrictions to free trade of food; Food security.
- d. **Programs and public policies oriented to the reduction of hunger and poverty:** International cooperation and multilateral institutions: main challenges; National policies oriented to consumers: access to income and food distribution; National policies oriented to producers: finance, technology, land and water; Food sovereignty: production and culture, supply chains, local markets.
- e. **Food, health and regulation:** New health concerns about food security; Incentives to health food: fiscal policy rates, regulation of marketing campaigns; Food waste.
- f. **Ideas for a new global food agenda toward justice?** In truth, this conference calls for a deep examination of current power, politics and economics in a social context where food security is being threatened. This attempt also involves critical thinking of theories of justice in light of the current food challenges. What are justice conditions and criteria, given the concern about hunger, poverty and food security?

<http://foodandjustice2016.weaconferences.net/>

**Deadline for Paper Submissions: 15th September, 2016**

**Discussion Forum: 1st October – 1st December, 2016**

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1. See, for example, <http://www.farmlandgrab.org/>, <http://www.stopafricallandgrab.com/>, <https://www.tni.org/en>, <http://www.oxfamamerica.org/take-action/campaign/food-farming-and-hunger/land-grabs/>

2. In relation to the number of Americans participating in food-stamp programs, see: <https://rwer.wordpress.com/2010/10/15/graph-of-the-week-number-of-americans-participating-in-food-stamp-programs/>. Access on 20 April 2016.

3. A discussion about Food, Fuel, Forests and Climate can be found at <https://rwer.wordpress.com/2012/10/22/food-fuel-forests-and-climate/>. Access on 20 April 2016.

## Models and measurement in economics 3

By Merijn Knibbe

### [Continued from Part 1 and Part 2 in previous Newsletters]

#### 1. Introduction and summary

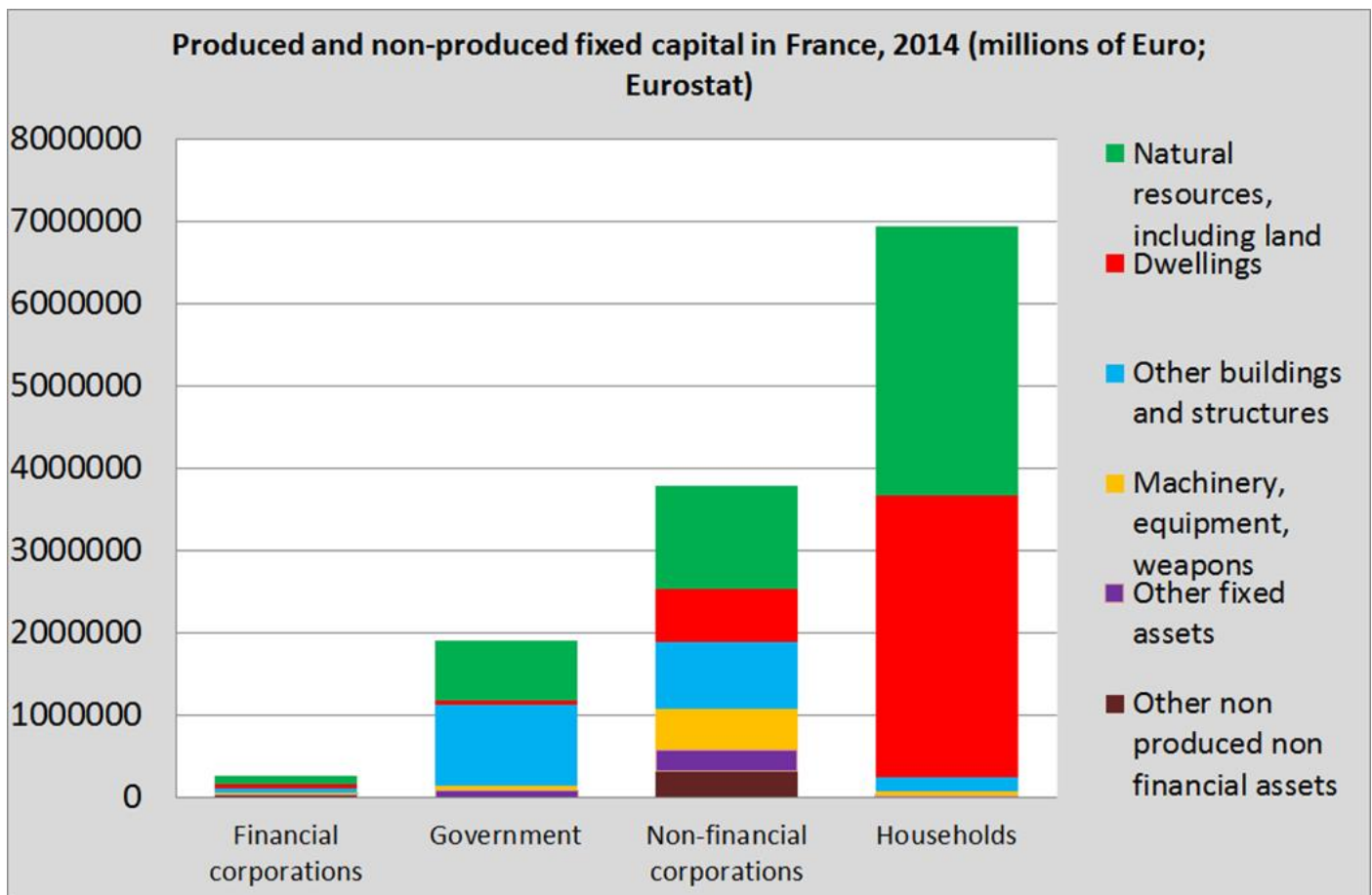
This post is the third in a series which investigates differences between the concepts of economic variables in (neoclassical) macro-economic models on one side and in the national accounts on the other side. Earlier posts, an introductory one and one which provides a comparison of the national accounts with the models, can be found [here](#) and [here](#). This third compares the concept of ‘fixed capital’ as used in the models and the national accounts. Differences are large: neoclassical macro ‘DSGE’ models exclude non-produced capital like land and the government can treat capital as a kind of fixed ‘jelly’ which can be readily substituted into consumer goods. This must be rated as a regression compared with earlier ‘vintage models’ of capital goods used in for instance growth models. Remarkably, the recent introduction of ownership of capital into these models leads to a much more classical approach, including a class of capital owners and a class of labourers. Neither the accounts nor the models include non-owned natural capital, like clean river water. The accounts contain a detailed operationalization of capital goods, which precludes the possibility of ‘jelly’ and recently extended the concept of ‘unproduced’ fixed capital to items like production permits and patents. The (re-)introduction of economic classes into the models and the extension of the concept of unproduced capital in the accounts shows an increasing divergence between the models and the accounts. The inclusion of non-monetary banks, international flows of capital and real estate into the models however mitigates this. The re-introduction of economic classes – which were purged from economics by the marginalists - into neoclassical economics really is a big thing.



## 2. The concept of (fixed) capital

One of the remarkable data in the famous Piketty book, *Capital in the twenty-first century* is an estimate of the value of pre-civil war fixed capital, expressed as a percentage of GDP, of the slave holding states of the USA (Piketty, 2014A, figure 4.11 on p. 161). Fixed capital includes for instance the value of houses, land, means of transport, cattle and machinery. Despite this, the value of slaves was over 50% of total value. After the US civil war (1861-1865) this value dropped to zero as slavery was abolished. After 1865 cotton production soon rebounded – but the southern slave society was destroyed forever. Clearly, what we call ‘fixed capital’ is not homogenous over time and not just an economic but also a legal and political variable which is (at least) as important to distribution as to production. It changes, sometimes gradually but sometimes also in a revolutionary way. This is not only true for fixed capital itself but also for the way economic statisticians define the concept. In the last version of the guidelines of the system of national accounts (Eurostat/European Commission 2013; further references: ESA 2010) the concept of ‘fixed capital’ is extended to include not just machinery, dwellings and land but also production permits, patents, ‘goodwill’ and even research and development. See the annex at the end. Which leads to the question: what is ‘fixed capital’? Why are patents included and privately owned cars excluded while slaves were included? What are the economic or legal demarcation lines used to make these choices? The question this post tries to answer is how ‘fixed capital’ is, explicitly and implicitly, defined in the national accounts and neo-classical macro-economic models and if there are any discrepancies between the concepts of the accounts and the models, to investigate if there are any discrepancies between the concepts of capital used by economists. It might well be possible that the implicit and explicit definitions of the models are not the same as the (much more explicit) concepts and definitions of the accounts.

## 3. (Fixed) capital in the national accounts



### 3.1 Concepts

Capital in the sectoral balance sheets of the national accounts consists of financial capital (loans and stocks and the like) and fixed capital. This post is about ‘fixed capital’: what is it? The graph gives some clues. For one thing: we do measure it. But what do we measure and why? In this paragraph I will use a ‘bottom up’ approach to investigate this, not starting with the formal definitions but with the measurements. As the concept of capital of almost any

economist is, consciously or unconsciously, strongly influenced by neoclassical economics, I will make some explicit comparisons with these ideas. In the next paragraph a more detailed overview of the way modern neoclassicals use (and therewith define) the concept of capital is provided.

Capital consists (looking at the asset side of the balance sheet) of items like dwellings, land, machinery and equipment, weapons systems and production permits (in the graph the last item is included in 'other non-produced non-financial assets'). The annex contains an exhaustive list. But these items are only the operationalization of 'fixed capital'. The question is: why and how do we lump these items together? Looking at the graph, a first characteristic of fixed capital is clearly, and probably surprisingly, something which at least in France (which in this respect is typical) is mainly owned by households. This leads to the first characteristic of capital. It is owned, by a person, an institution, an organisation or the government. This may seem trivial, but it isn't. Non-owned natural resources, like clean air or fish in the ocean, are not considered capital. According to the most recent Eurostat national accounts manual (Eurostat/European Commission 2010, hence: ESA 2010), which is consistent with the UN guidelines, *"Natural assets where ownership rights have not been established, such as open seas or air, are excluded"* (ESA 2010 7.26).<sup>1</sup> I'll return to this below when I discuss 'natural capital'.

Also, *the second characteristic of fixed capital*, it shows that it mainly consists of 'dwellings' and 'land', or unproduced capital goods, while (delving deeper into the data) this land is to quite an extent 'land underlying houses'.<sup>2</sup> 'Unproduced' fixed capital is of prime importance! The present preponderance of land in the total value of capital is not a law of nature. In the nineteenth century land was, in non-slavery societies, the most important kind of fixed capital (Piketty 2014A). But back in the fifties of the twentieth century, when Solow formulated his famous growth theory (Solow 1956), the value of land had (driven by a decline of relative prices of agricultural goods (Knibbe 2014)) reached a historical low (Piketty 2014A). Which enabled Solow to state that his growth theory, consistent with neoclassical ideas but in stark contrast to the ideas of the classical economists of the nineteenth century, was about produced capital only and not about land and other unproduced capital. This (plus assuming that capital goods and consumer goods are totally comparable) enabled him to link total stock of 'fixed capital' to the rate of investment and depreciation. But 'land' is back. The increase in the value of land in fact drove the large long term swings in the capital to GDP ratio which is central to the analysis of Piketty (Piketty 2014A, 2014B, also Knibbe 2014, De Rognlie 2015). This means that, focusing on distribution, we are living in a much more classical, 'Ricardian' economy again where banks have taken the role of the nineteenth century land owners (Hudson 2012). It might not be entirely coincidental that almost at the same time when one set of researchers (Bokan et al., 2016) (re-)introduce economic classes into neoclassical macro-models (see below) De Rognlie de facto (re-)introduces land in the corpus of neoclassical thinking (De Rognlie 2015)! In both cases, this has major implications for the distribution of income. Anyway: produced capital, like bridges, as well as unproduced capital, like 'land' as well as subsoil assets like natural gas, diamonds or water in aquifers are considered to be 'fixed capital' in the accounts. At this moment, economic statisticians have even extended the concept of natural unproduced capital to 'human' unproduced capital items, like patents, production permits and even research&development (R&D): *'non-produced non-financial assets ... are economic assets that come into existence other than through processes of production. They consist of natural assets, contracts, leases, licences, permits, and goodwill and marketing assets.* (ESA 2010 7.24)". Fixed capital, as defined in the national accounts, is not just a function of investment. It is also a legal and political variable – just think of copyright law.

Depending on the rules and the laws, the distribution of the monetary benefits connected with the ownership of capital can vary. Just think of the duration of a patent or the fact that sub-soil assets in continental Europe are, thanks to the code Napoleon, owned by the state while in Texas the owner of the surface is also owner of the sub-soil assets. Which leads to *a third characteristic of fixed capital* (as measured in the national accounts): capital is not just a factor of production but it is, via ownership and the legal system, also an independent factor of distribution (just think of prices of patented pharmaceutical products): *"an economic asset is a store of value representing the benefits accruing to the economic owner by holding or using the entity over a period of time."* (ESA 2010 7.16). In the national accounts, this distribution aspect is, all lemma's considered, even more important than the production aspect of fixed capital! And one of the storylines of the history of capitalism is about revolutionary and non-revolutionary changes in ownership of capital, like the seizing of the extensive land holdings of the cloisters in the protestant parts of sixteenth century Europe, the abolishment of slavery in the USA after the civil war and, nowadays, the struggle about TTIP and the denationalization of government fixed assets in countries like Greece.

The accounts define 'value' and 'benefits' as monetary value and benefits. These benefits do not only consist of a return on capital but for instance also of the possibility to spend chartal money (part of financial capital, not of

fixed capital) after holding it for some time. It also consists of, in case of valuables, the possibility to sell these in a later period, or even production costs of fixed capital foregone. Without its extensive, costly coastal defences, which are part of government owned fixed capital, my country, the Netherlands, would not even exist. Benefits are in this case the costs of production which do not have to be paid by the future generation because the asset already exists (which is not the same thing as paying for maintenance). Assets that do not engender a clear identifiable flow of monetary rewards like return on capital, resale value or identifiable production costs foregone to an identifiable owner are not considered to be 'fixed assets'. Examples are consumer durables, human capital and 'contingent assets and liabilities' (like implicit government guarantees for banks).<sup>3</sup>

This monetary nature of national accounts fixed capital is not an accident. In the national accounts fixed capital is included in balance sheets which also show the net financial position of *entire* sectors owning fixed assets, a financial position which next to fixed assets of course also includes financial assets and liabilities, i.e. the net financial relations (debts!) between one sector and the others. This means that fixed assets without a resale price, like coastal defences, *have* to be valued. Much more on this in the next sub-paragraph. On the national level, financial assets and liabilities net out, which is the reason why Piketty only looked at the value of fixed capital (plus the often rather small Net International Investment Position, NIIP of countries). Using balance sheets to show the value of capital leads thus, by necessity, to *the fourth essential characteristic of fixed capital*: it has a monetary value and are part of an economic system in which they, somehow and depending on contracts and legal system, often serve as some kind of collateral for all kinds of debts (including commercial credit and, in the Eurozone, government debt and even equity). The national accounts only show net positions of entire sectors. Such aggregate balance sheets do not show differences between for instance generations of households (many members of the younger generations of house owners may be under water, contrary to older generations). The value of fixed assets can be used, though, and together with information about financial assets and liabilities, to gauge not only net wealth of a sector but also balance sheet risks or the extent to which a sector, after a financial crisis, is withdrawing money from the flow of expenditure to rebuild its balance sheet position. Or, as the ESA 2010 states it, the balance sheet '*completes the sequence of accounts, showing the ultimate effect of the entries in the production, distribution and use of income, and accumulation accounts on the stock of wealth of an economy*' (ESA 2010 7.03). We should not forget that this 'accumulation account' is influenced by housing bubbles, too. Which means (and this is a fundamental criticism of the analysis of Piketty) that national accounts capital is not stock-flow consistent with the production and income accounts!

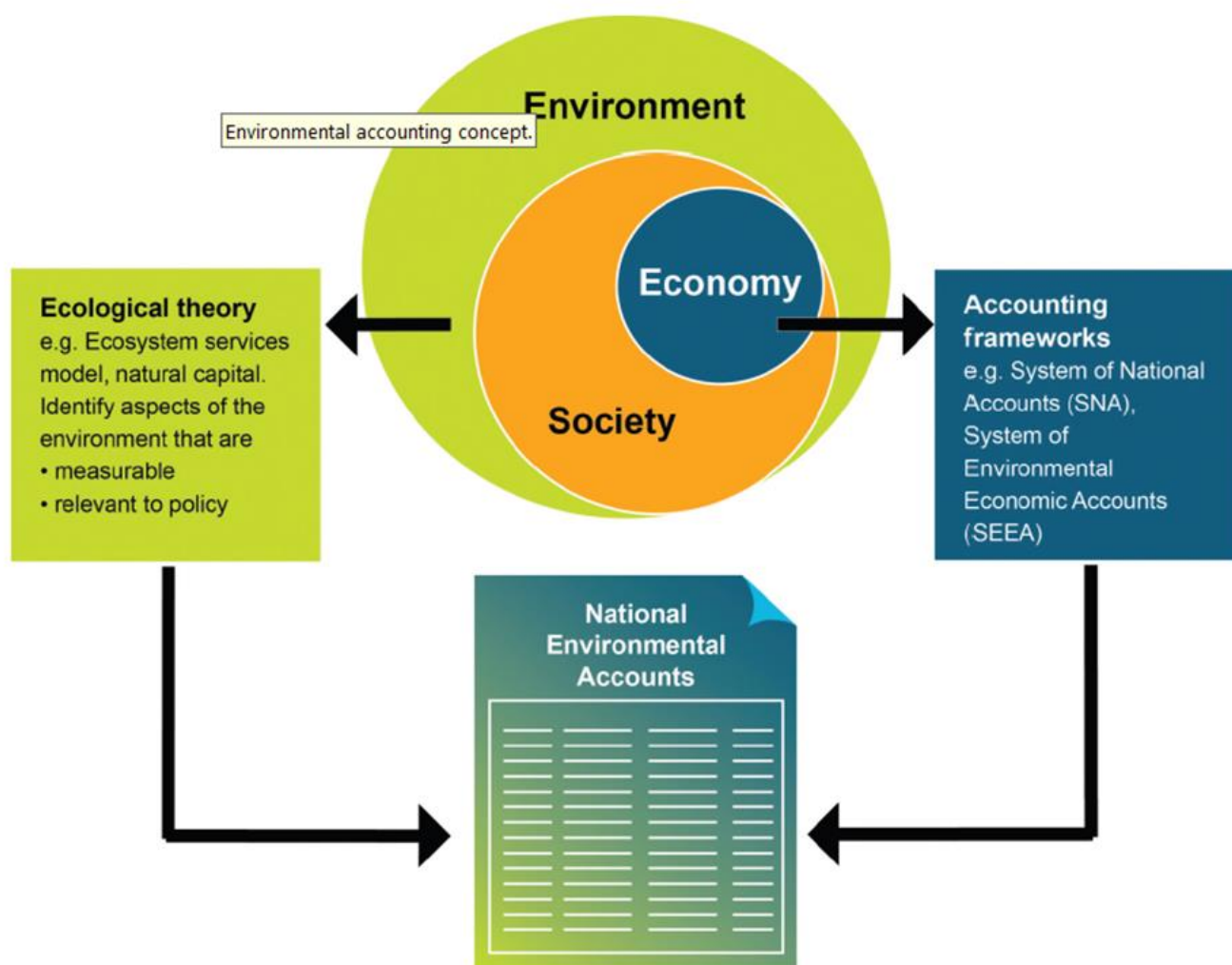
It is of course possible to call non-owned items, like whales and other 'free game', capital, too. Often the phrase 'natural capital' is used to do this. This is remarkable. The word capital, as used by economists, has an impeccable monetary background and was used, in the middle ages, to denote the principal sum of a money loan (compare: 'raising capital'). The concept has however been extended to all kinds of 'principals' which yield returns of a monetary or non-monetary nature. Examples are 'human capital' (i.e. education and experience) or 'natural capital'. In an excellent overview of 'natural capital accounting' the (Australian) Bureau of Meteorology (BM), which is highly interested in water accounts, defines natural capital, as: '*The stock of living and non-living components of the earth that provide a flow of valuable ecosystem goods or services*' (BM, 2013) (see also Figure 1 below). It is even possible to find scientific articles which (I do not approve) include the sun in our concept of 'capital' (Monfreda, Wackernagel and Deumling, 2004). The national accounts however restrict 'capital' to private, government or institutional ownership and identifiable *monetary* benefits. Which also means that 'capital' (and therewith the distribution of income) has a clear legal and political side to it – a point which might not always be appreciated enough by people defending the idea of 'natural capital' (I recall the cod wars between the UK and Iceland in the twentieth century). It is however important to define 'national accounts' capital and especially unproduced natural capital as part of the total stock of 'living and non-living components of the earth' and the ESA 2010 might well be rewritten in this regard (picture). After all, we do spend a lot of money to (re-)create (or at least to try to re-create) non-monetary assets, like clean air. Just think of all the production costs of all the catalytic converters built into hundreds of millions of cars (which, when the car is a consumer durable, are not counted as fixed capital...). But there are very good reasons to separate 'monetary' assets, natural or not, from non-monetary assets. Money does matter. But, returning to natural capital, this of course also means that depletion of stocks of the natural assets which are included in the accounts should be a negative when we calculate GDP. Which would also enhance the stock-flow consistency of the balance sheets.

### 3.2 The value, price level and volume of fixed capital

In growth theory the amount of fixed capital is theoretically related to GDP via investments and depreciation. The

value of capital is, i.e., stock-flow consistent. We've already seen that this is not the case, which leads to remarkable developments. In the western world, the level of investment has been declining for decades, often by as much as 8 to 10% of GDP (Knibbe 2014). Even when fixed capital is not entirely stock-<sup>flow</sup> consistent one would expect a decline of the value of fixed capital (expressed as a % of GDP). Piketty pointed out that the opposite happened, until 2008 (Piketty 2014A). This increase was (fuelled by credit creation) not caused by a high level of investments but by price increases of houses and especially land underlying houses (Knibbe 2014; De Rognlie 2015). We use (a running average of) the house price index to value these houses. But can we really value houses which are not 'on the market' with the price of houses which are sold? And isn't it more interesting to have an estimate of the volume of capital instead of only an estimate of its value, i.e. the stock of capital valued with some kind of fixed prices? But which fixed prices should we take to make such a volume estimate? Can we really value heterogeneous capital goods with different ages and rates of depreciation with fixed prices, taking discontinuous technological change as well as changes in demand, availability of credit, interest rates and legal systems into account?

Figure 1. The national accounts in a 'broad' system of accounts including natural capital.



Source: Bureau of Meteorology, 2013 .

There are problems. In the case of the flow of value added choosing a price to value transactions is not too difficult: we use transaction prices. But in the case of existing fixed capital

- There often are no transaction prices.

Can we use the price series of the flow of investments to overcome this problem? Or, as in the DSGE model of Bokan (2016) even the consumer price index? There are conceptual problems with this procedure – unless we assume, like Bokan et al. (2014), that there is a homogenous 'jelly' stock of capital which does not show any



historical changes in its composition and can be readily substituted into consumer goods. But there isn't. Which means that some of the conceptual problems are comparable to those of the consumer price level, though they loom (much) larger because of the larger variability in prices of investment goods as well as the larger variability of the set of products purchased (partly due to the often large sums involved). This means that the price series of investments is influenced by:<sup>4</sup>

- Changes in relative prices
- Changes in the set of products purchased (more planes or more bridges?)
- Changes in quality (computers are the obvious example, genetically changed farm animals another)

And in the case of fixed assets some additional problems have to be added, like

- large differences in depreciation rates
- changes in prices of existing assets not due to depreciation (houses, but also assets which become worthless because of technological change or changes in for instance environmental rules)

When we deflate the stock of assets with the investment price series we will overstate the importance of items with a high rate of depreciation which, exactly for that reason, have, compared with their importance for the rate of investment, a relatively low value in the stock of fixed assets (Groote (1995) is an example of this procedure, but he only looks at infrastructural investments which mitigates these problems). The low depreciation rate of buildings and structures is one reason why they figure so heavily in the graph! Next to this, the house price bubbles are of course a reason. Aside: Bokan et al. (2016) show that even a DSGE model consisting of different countries and using a loanable funds instead of a credit creation model of the lending market, deregulation (i.e.: institutional change) in one country (read: Spain) can lead to capital inflows from other countries (read: Germany) and a housing bubble. Constructing a deflator for the flow of investments is already difficult; constructing a deflator for the entire stock of fixed assets is even trickier.

So, it is pretty difficult to construct a series of the volume of our stock of assets. But can we at least construct a series of their value? Piketty (2014A) uses these series, taking data from the national accounts. So we do value capital. But how? The ESA 2010 suggests that market prices are best. And Piketty wrongly states that a market price valuation is the defining criterion to include items in our definition of fixed assets (Piketty 2014). But even market prices are, when it comes to specific pieces of equipment or dwellings not sold in a specific year, not real transaction prices of the assets in question. In such cases, they only are a metaphor. In many cases they are however used to value capital. Many well developed second hand markets exist for fixed assets (planes, trucks, houses, military equipment) and in these cases second hand market prices are often used to value such assets. But for other items (like coastal defences) no second hand markets exist.<sup>5</sup> In such cases, production costs, replacement costs or 'perpetual inventory value' are used, production costs in cases like coastal defences and perpetual inventory calculation (value at time  $t$  plus investments minus write offs) in cases when the stock of assets changes at an irregular pace. Or even other methods. The natural gas reserves of the Netherlands are valued using a three year average of market prices. Sometimes it's stated that assets should be valued by discounting the expected flow of future monetary benefits to gauge the value of assets. In ESA 2010, this method is mentioned – but as a method of last resort. Statisticians deplore discounting expected future flows of income as expectations as well as interest rates as well as available technologies change all the time in unpredictable ways (Knibbe 2014). Discounting just does not deliver any kind of stable estimate. This does not mean that the other methods which are used do deliver any kind of estimate of the 'true' value of fixed capital. The value of fixed assets on the balance sheets is nothing more than a rather crude guess of some kind of value which itself changes all the time (this contrary to the value of the debts on the liability side!). This does not mean that those estimates are worthless. There are clear long term patterns. The post 1965 increase of the capital to GDP ratio in almost all western countries which is pointed out by Piketty (2013) were driven by increasing house and land prices (Knibbe 2014; Rognlie 2015) – prices which are used by households to plan their future (and which through connections with lending and borrowing brought down the western economic model in 2008). The momentous run up of household debt alone warrants some kind of estimate of the value of the assets at the other side of the balance sheet. But it is a crude shot at a fast moving target. More about the value of capital and the way economists tried to circumvent the valuation problems in the next paragraph.

#### 4. Capital in neoclassical macro models

A decrease in the real interest rate from 3% to 2% is a 33% decline. In neoclassical macro-models this tends, as the amount of fixed capital is related to the interest rate as well as a (stable) depreciation rate, to lead to an *immediate* increase of the capital/output ratio of about the same magnitude unless some kind of friction is introduced into the model. What does this tell us about the nature of 'fixed capital' in these models? Typically, neoclassical



macro-models do not provide detailed discussions of the conceptual nature of the variables they use while – quite an omission when we compare neoclassical economics with other branches of science – no manual or anything like it is available. This means that we have to read between the lines of texts for the implicit neoclassical definition of capital. As stated before we will base ourselves mainly on ECB DSGE models, fortunately a recent ECB text which extends the neoclassical concept of capital as used in DSGE models has been published (Bokan et al. 2016). First we will however delve a little into the history of the concept of capital in the history of neoclassical economics.

An important name is John Bates Clark who, to counter the ideas of Henry George (Mason 1994), purged ‘land’ and unproduced inputs from the neoclassical concept of capital by focusing on the liability side of the balance sheet and the fact that the total value of liabilities was ‘eternal’ and not dependent on the fixed assets in question, which (except land) would wither away anyway (Clark 1899 IX.7)). Clark was criticized for using a ‘jelly’ concept of capital already in 1907 by Böhm-Bawerk (as quoted in Cohen and Harcourt, 2003). Reading Clark this does not seem just: subsequent economists, not Clark, mixed up the asset and the liability side of the balance sheet – Clark is only guilty of using the marginalist idea that economic classes (for instance: land owners) do not matter and stating that it is the liability side which really matters. I could find no mention of the ‘one good’ idea of fixed capital, used by Solow, in the work of Clark (which I did not read in its entirety).<sup>6</sup> And the posts on the liability side *are* of course highly substitutable and ‘eternal’ (a main point of Piketty 2014A). But the idea that as firms can substitute fixed assets for others society can do so, too, is a fallacy of composition. Firms can divest or purchase existing assets (though even these possibilities are limited) while this does not necessarily have to lead to a change in the total value of the balance sheet. But on a national scale this does not lead to a change in the physical composition of the stock of capital. And we’ve already seen that, taking a historical view, it is quite complicated to make an estimate of the *volume* of fixed assets. Only looking at the liability side doesn’t solve this problem.

A second defining moment was the publication of the growth theory of Solow (Solow 1956). He did look at fixed assets. Unlike Clark, Solow explicitly rejected ‘land’ from his analysis and understood fixed capital as a ‘one good’ concept to solve the problems of composition. He had some empirical (though not convincing) reasons to do this as his article was published when ‘land’ had reached a historical minimum as part of the stock of capital (see the data in Piketty, 2014). A theoretical reason to do this was however that one of the basic rules of accounting is that land itself does not depreciate, including a non-depreciating non-produced kind of capital in his model would have played havoc with the way his model crucially relates the stock of capital and the capital/output ratio to investment and depreciation. Another reason to do this is that supposing the existence of one good which could be both an investment good and a consumer good enables the economist to deflate the stock of fixed assets with the consumer price index. None of these reasons is very convincing.

A third defining moment was the fall out of the ‘battle of the Cambridges’. After World War II economists increasingly focused on estimates of the stock of fixed capital and growth theory. A side show of this tendency was this confusing discussion that was in the end about the obvious (but not very neoclassical) fact that when you have an *existing* stock of capital and interest rates change the existing stock of fixed capital (which includes capital/labour ratios) won’t change in any immediate way, which is however what neoclassical models imply (remember the 33% above). But the composition of the existing stock of capital does matter. Even when oil prices decline and interest rates rise, many *existing* oil wells will keep producing. The practical solution to this problem was to get rid of ‘jelly’ and to use so called putt-clay models, which used different vintages, every vintage with its own labour/capital ratio. See also footnote 17 in Stiglitz, 2006. An example of this approach is Wei, 2003. Another modelling solution will be discussed below.

A fourth defining moment was Samuelson’s definition of public goods and, hence, the introduction of government fixed capital into the corpus of neoclassical economics. In the course of the twentieth century, government investment and government owned capital goods had become ever more important. The Hoover dam in the USA, the Afsluitdijk in the Netherlands and the highways in Germany (Konrad Adenauer opened the Bonn-Cologne highway in 1932) are iconic examples. Samuelson’s theory of public goods incorporated such investments into the corpus of neoclassical ideas.

A fifth defining moment was the introduction of neoclassical DSGE macro-models (first originated as Real Business Cycle models) which in the cases in which they model capital discarded government owned produced and non-produced capital, did not use the putt-clay models in vogue by earlier generations of neoclassical economists. In almost all DSGE models the government is however not more than a set of monetary rules and a redistribution mechanism and government expenditure, including government investment in dams, dykes and roads, is considered to be wasteful by definition – it just diminishes the amount of goods available for consumption or private in-

vestment. The 'putty clay' models of existing capital as well as the idea of government capital were abandoned without even discussing them. Capital is also defined as by definition yielding a rent income, resale value of 'valuables' or production costs foregone are not important.

This leaves modern neoclassical macro-models with a limited set of capital goods: private, produced fixed capital with a 'jelly' structure which can be rented. Bokan et al. also adhere to the 'one good' idea of an economy. *"Final goods can be used both for private consumption and investment"*, while the model at the same time states that all final goods are the same. There is no difference between a plane and a haircut. This enables 'total substitutability' between investment goods and consumer goods. A plane and a haircut are the same. The total substitutability of capital in DSGE models causes modelling problems. On 'Stackexchange' (a site where economists can pose questions to other economists) one question was (New Keynesian models are neoclassical macro-models):

*In New Keynesian models, like the ones in Gali's simple New Keynesian model or even Mankiw-Reis NK model on sticky information, capital is often not included. Now people do say that there are modeling difficulties and that's why capital (K) is not included, but is there another justifiable reason...?*

Part of the answer was, *"Capital is included in all the big estimated New Keynesian models"*. But also: *you're absolutely right that the stylized core NK model does not have capital - which is hard to defend on empirical grounds, since capital investment is a very important part of business cycle fluctuations and the response to monetary policy.*

The reason given why it is often excluded is enlightening:

*the two core equations (the intertemporal Euler equation and New Keynesian Phillips curve) of the ordinary log-linearized NK model are completely forward-looking. Adding K to the mix eliminates this nice analytical feature" and "seemingly small changes in the real interest rate must be accompanied by massive swings in the capital-output ratio, which we never see in practice' and 'Capital adjustment costs are needed to avoid absurd results'.*

The models do not specify the nature of these ad-hoc adjustment costs in any way. Bokan et al. also introduce two kinds of fixed capital into their model and have to be lauded for this: real estate as well as 'other fixed capital'. *"Households and entrepreneurs demand real estate, which is assumed to be nontradable across countries and in fixed (per capita) aggregate supply"* (Bokan et al. 2016). The nontradeability of houses across countries limits the substitutability, which enables Bokan et al. to model asset price bubbles caused by international flows of capital.

A most remarkable aspect of Bokan et al. is that introducing ownership of capital into their model also necessitates them to introduce economic classes – the very idea that Clark and other marginalists had purged from economics. This makes their model clearly less neoclassical and (in combination with a flexible concept of capital - more classical and indeed almost Marxist.<sup>7</sup> It distinguishes between a class of 'entrepreneurs' (10% of the population, might we call them 'capitalists'?) who own all fixed capital (called physical capital in the model) as well as a lot of real estate, a class of 'normal' households (labourers?) who seem to have nothing to sell but their labour and which are subdivided into 'patient' (which lend deposit money to the banks) and not so 'patient' households (who are borrowing existing deposit money from the banks). Aside from this there are some bankers. Capital as well as real estate is used in a Cobb-Douglas production function which related the model to growth theory. In technical terms the authors seem to have a putty-putty as well as a putty/clay model of capital in the sense that normal fixed capital seems to be totally substitutable while real estate has a fixed relation to labour and does not seem to be substitutable at all. *"Households and entrepreneurs demand real estate, which is assumed to be nontradable across countries and in fixed (per capita) aggregate supply"*.

Reading the Bokan paper it seems as if the authors are in a naïve way unaware of their introduction of elements of political economy (economic classes) as well as, next to the standard DSGE putty-putty production function, a kind of putty-clay production function into their model (houses in their production function). Next to this, they also introduce at least elements of stock-flow consistent modelling into their model. And they acknowledge the destabilising nature of institutional deregulation in combination with international capital flows. They however do not try in any way to compare these theoretical concepts – none of which are discussed in a meaningful way - with the rich array of empirical estimates we have about these concepts or earlier literature. Still, it is fascinating to see how a number of European economists who are not aware of the 'Chicago' tradition and who try to make sense of the post 2008 world reintroduce all kind of classical elements into their models, as well as old school improvements. But again: the empirical and theoretical discussion of these improvements is woefully lacking.

## 5. A Comparison

The information above leads to the next comparison of fixed capital the models and the accounts:

	National Accounts	Neoclassical macro models
Basic method of accounting	Quadruple accounting (for the stock flow consistent idea even eightfold accounting, see Bos 2000).	Basically single accounting though inclusion of a financial sector in the models by necessity leads to more emphasis on double and even quadruple accounting
Basic method of valuation	Using market or cost prices or estimates of replacement costs	Model consistent valuations (a mark-up on the consumer price level)
Contains not owned natural capital (including human capital)	No	No
Contains owned 'unproduced' natural capital, like land and sub-soil stocks of oil	Yes	No
Contains owned 'unproduced' human capital, like production permits	Yes	No
Contains government owned produced capital, like coastal defences	Yes	No in the case of DSGE models, yes in the case of growth models. DSGE which acknowledge the existence of productive government capital exist but this idea is not incorporated in our benchmark ECB models.
Contains accounts for Household, company and non-financial monetary institutions owned produced capital	Yes	Yes but not explicit. NPISH and monetary financial institutions, i.e. money creating banks, are excluded.
Contains accounts for financial monetary institutions and Non Profit Institutions Serving Households (NPISH) owned produced capital	Yes	No
A distinction between capitalists ('entrepreneurs') and labour exists	No	Yes
Nature of fixed capital	Heterogeneous with regard to composition and depreciation rates, detailed classification of items exists. Capital can only in special cases be used for household consumption (i.e. second hand cars). Defining criterion is 'possible future economic benefits' which include resale value and production costs foregone.	Except for distinction between real estate and other capital: homogenous. All capital can be used for household consumption instead of production. Capital yields rents, no other monetary benefits are acknowledged.
Measured or derived price of existing capital	Measured amalgam of cost prices, perpetual inventory methods, replacement prices and the market price of items which are sold on the second hand market. Only a limited relation with investment prices.	Derived mark-up on consumer prices which is influenced by borrowing behaviour and borrowing rules, as all capital is 'jelly' all capital has the price of investments of period $t$ .
Stock-flow consistent with production accounts?	Partly. Autonomous price changes of assets (houses, sub-soil assets) are excluded and declines of the stock of natural assets are not subtracted from GDP. Autonomous price changes might overwhelm investments. Grave measurement issues.	To a limited extent. There is no unproduced capital, but prices changes because of exogenous changes in the financial market do exist.
Sectoral consistent (sectoral balance sheets match with each other)	Yes (but measurement problems with NIIP)	Theoretically: yes. But sectoral division is incomplete (government, NPISH and monetary financial institutions are excluded).
Nature of financial market	Money creating banks plus loanable funds.	Loanable funds, with international flows of capital.

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1. He did introduce the idea of the representative consumer.
2. Classical economists, including Marx and Mises (in his Ph. D thesis), used an economic definition of classes. Your economic position (labourer, capital owner) and not for instance your education, profession and income define your class.
3. These problems might also be understood as basic characteristics of the dynamism of our economy, which to me seems a more fruitful way to think about them. A good example of the insights an analysis of these developments yields: Lafranc 2016.
4. My opinion: as the national accounts more or less define fixed assets as a factor of distribution it seems all right to me to include production permits and the like into the concept. R&D is however a 'sunk cost' as well as, in business accounts, not treated as an investment. It might yield patents which can be included in our concept of capital. But R&D itself should be excluded even when it yields a whole bunch of small but significant improvements in quality or productivity.
5. The '7.26' is a lemma of the ESA 2010 manual..
6. The concept of 'land' sometimes leads to confusion. It relates to 'unimproved' land and is more or less the 'location, location, location' value of real estate.

## Call for papers—The Political Economy of University, INC.

Neoliberal restructuring includes an unprecedented attack on the autonomy of universities, their faculties, administrators, support staffs and students. How has your work—as a professor, graduate student, educational support professional, administrator or researcher—changed in response to policies designed to remake the University in the image of the for-profit business concern? How have you and your colleagues organized resistance to these changes?

The premise of this special issue of ***World Economic Review: Contemporary Policy Issues***—an on-line peer reviewed journal with a global subscription of 13,000—is that every aspect of post-secondary education is affected by the corporatization of the university. Thus, we seek contributions from all disciplinary fields and every location within the university. We welcome papers exploring the intellectual, personal, pedagogical, and theoretical dimensions of the attack on public higher education. Submissions may document, explain or analyse movements to resist University, INC.

Topics of interest include, but are not limited to:

- Research initiatives that support this resistance;
- Classroom/pedagogical strategies for helping students understand what's at stake;
- Curricular materials exposing the corporate pressure to vocationalize and de-intellectualize the university;
- Labour organizing as tool to resist the drive to corporatize;
- Debt financing education and the corporate education model; and
- Personal reflections on the impact of corporatization.

Submissions from all disciplines are welcome. If you have an idea for a paper, please send us an [email](#) sketching your thoughts. We will let you know very quickly if you are on track for producing a piece (from 2000 to 5000 words) suitable for publication in WER.

Thank you for your consideration,

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## World Economic Review, No 7, July 2016 – Worldwide Fiscal Crisis: Fact or Fiction?

**Worldwide Fiscal Crisis: Fact or Fiction?** John T. Harvey

**Taxes are for Redemption, Not Spending** L. Randall Wray

**The Debt Ratio and Sustainable Macroeconomic Policy** Scott T. Fullwiler

**Eurozone Groupthink and Denial on a Grand Scale** William Mitchell

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