Why assets are not things, why buying is not paying

and why a new macroeconomic paradigm needs to integrate both (microeconomic insights).

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Abstract

This paper attempts the systematic interconnection of basic *micro*economic insights within two seemingly separate fields of research, namely law and accounting, with the aim to create the sound basis for a new monetary *macro*economic paradigm. The basic insight out of law is that an asset is not a *thing* but a *right*. Assets (rights) can therefore be split up into two fundamental categories: so called "real assets" (i.e. property rights) and legal claims. Since legal claims - as opposed to property rights - have corresponding obligations on another (set of) balance sheet(s), this fundamental distinction helps to make a meaningful transition from the micro view of a single balance sheet to the macro view of the economy as a whole. The basic insight out of accounting is that buying is not paying, hence cash accounting is different from accrual accounting. The interconnection of these basic insights has chilling effects on monetary theorists: the controversies between banking and currency school and between (neo-)metalists and (neo-)chartalists can be resolved right up front. But also "property economists" and "Modern Monetary Theorists" can benefit by the integration of these basic insights into their theories. The former by integrating the micro-macro integration via claims-obligations-balances (COB) supposed in this paper, the latter by prospectively making the distinction between moneyflows that do change the claims-obligations-balances and those moneyflows that do not (Copeland's "moneyflows" do *not* make this distinction). The integration of the aforementioned insights allows for the realization that "markets" presuppose an institutional infrastructure (i.e. a state) that guarantees enforceable private (property and contract) law, which in turn presupposes taxation of its free citizens. Thus, contrary to cold war market or state fundamentalism, market and state form an essentially *hybrid system* by logical, legal and economic necessity.

Table of Contents

1 Introduction

This conference paper is a humble first step towards a new macroeconomic paradigm, by employing basic microeconomic insights out of legal and accounting practice. The working title for this new paradigm is “legal theory of political economics”. Essentially this is an attempt to face the Lucas critique[1] by building a macroeconomic paradigm resting on a microfoundation that gets its building blocks right out of legal and accounting actuality. Hence this is not an attempt for a new theory. It is rather an attempt to closely observe practical microeconomic legal and accounting actuality and connecting these observations to eventually be able to aggregate them into a macroeconomic paradigm. This paradigm we will not be able to develop here in its entirety, but we want to approach a sketch of this paradigm in this paper.

The first microeconomic insight out of law is that assets are not *things*, but *rights*. Economists, orthodox and most heterodox alike, are bound to think of *things* and the coping with the “scarcity” of those things, when they are thinking about economics. Yet, economics is not about scarcity of things, but about the competing interests of persons in *rights* to things and other rights (see e.g. Commons, 1934).

Without any doubt *things* do exist everywhere on this planet, they exist in any type of society or community. *Rights* do not. To cope with this fact requires us to create a sound legal foundation by comparing pre-state societies with states and the inter-state level of so called international public law.

The differentiation within Law (“State”) – which itself is opposed to Non-Law (“Pre-State” and “Inter-State”) – between private law and public law leads to what we call the private/public-law dialectic. If the private/public-law dialectic is not understood as a *dialectic* but conceptualized as a dichotomy, then there are only two types of storylines in the history of economic thought of the last 250 years. The classical, neoclassical and contemporary neoliberal storylines are of the one type (“market” or private law focused), Marxist and Keynesian storylines are of the other type (“state” or public law focused). The former predominantly emphasizing the individual (private), while the Marxist and Keynesian storylines comprise a type of stories that are emphasizing the collective (public). While the public indeed does play a significant role in economics *in any case*, in Marxist (and other state fundamentalist stories, which the Keynesian storyline is not) the role of the public is becoming entirely dominant, rendering the economy eventually defunct by destroying the very private-public-law dialectic that brings about the economy in the first place. However, the private-public-law *dialectic*, misunderstood as a dichotomy, can not only be destroyed by **state** fundamentalist storylines but by **market** fundamentalist storylines as well. Any theory only looking at private law and the individual, essentially omitting the role of the public in the very establishment of functioning private law, is misunderstanding the private-public-law dialectic as a dichotomy. Market fundamentalism being nothing but the simple opposite of state fundamentalism in this false dichotomy .

1 For the “Lucas critique”, see (Lucas, 1976)

Neither state nor market fundamentalism promise valuable insight into the dialectic of private and public law that is at the very foundation of economics (see chapter 2) Hence, the "legal theory of political economics" sketched in the work at hand is designed as the framework allowing a synthesis of the two dichotomised "storylines" of either market or state, as our framework fully embraces the dialectic at the core in recognizing constitutional law as an attempt to mediate this very private/public-law dialectic. To intellectually "rest with" this private/public-law dialectic, to cope with it, embracing it, is probably as political as it can get. We will still try to embrace this dialectic within this paper without mingling analysis with political viewpoints.

For any practitioner of any one of the different areas of research employed in this paper (among many others these are mainly law, anthropology, accounting, economics and history) the insights out of any one of these areas will be extremely simple. Laughably simple, in fact. Most insights used in this work will not only be laughably simple but simplified so much that they have to appear incomplete – possibly may even appear to be plainly "wrong"[2] – to apt experts in the respectively relevant field of research. We do therefore not claim any fundamentally new insight at all, except for the presentation of these individually for any expert extremely simple insights in relation towards each other, integrated by one single terminological framework that gets its building blocks mainly out of law and accounting.

2 One example might illustrate this: we are using balance sheet depictions within this paper for didactic reasons. We are tracking flows by showing balance sheet depictions at multiple points in time. For accounting professionals this is entirely misusing the balance sheet concept for they are designed not to track *flows* but to show *stocks* at one single point in time.

2 Legal Foundation

Quite contrary to preceding notions about the presumed “end of history” with the fall of the iron curtain (Fukuyama, 1989), the former neoconservative Francis Fukuyama more than 20 years later stated:

> “Political Institutions are necessary and cannot be taken for granted. A market economy and high levels of wealth *don’t magically appear* when you “get government out of the way”; they rest on a *hidden institutional foundation* of *property rights*, *rule of law*, and basic *political order*. A free market, a vigorous civil society, the spontaneous “wisdom of crowds” are all important components of a working democracy, but *none* can ultimately replace the functions of a *strong, hierarchical government*.” (Fukuyama, 2011, 13, our emphasis)

The purpose of this chapter is the attempt to take a closer look at what Fukuyama in this quotation simply termed “political institutions”. Institutions he deems to be essential for “a market economy and high levels of wealth”. We will start to explore this field comparatively by a look at what is called reciprocity by cultural anthropologists (e.g. Sahlins, 1974).

2.1 Reciprocity

Asked for institutions of “statehood” in general, individuals that have grown up in european (or “western”) societies – that might be considered properly functioning states – may regularly respond quite similarly to this question for statehood as did the proverbial fish that was asked for water.

“What water?”

Unfortunately this does include the most prominent contemporary economists within these very western states, by taking the universalist aspirations of neoclassical economics into account. In this chapter we want to try to “jump out” of the water – the “water” of western private and public law actuality – and right onto the “shore”, by comparing western societies based on the state concept to pre-state societies or communities. Furthermore we will take a very brief look at the inter-state level of international (public) law.

Our approach therefore is intentionally *non-universalist*. We do not claim to have, nor do we even look for, a “theory” that is applicable to human behaviour *in general,* under all circumstances, in any kind of society or community. Quite the contrary is true, we want to be able to look at the specifics of the institutional prerequisites that make up the framework for what we call “economy” in western societies today. To do that we want to look first at the kind of reciprocity that is found *outside* of states in pre-state (tribal) communities.

2.1.1 Pre-State

To start our analysis of pre-state communities we will use Marshall Sahlins' proposal for distinguishing different forms of social relations he calls “reciprocity” and puts into three different categories: generalized, balanced and negative reciprocity (Sahlins, 1974).

The lawyer, legal anthropologist and historian Uwe Wesel investigates these three types of pre-state reciprocity along the lines of commonalities and differences to the principles of (German) contract law (Wesel, 1997, p. 22).

According to Wesel generalized reciprocity is the kind of relationship that is shaped by solidarity, friendship and close kinship. It clearly differs massively from the consensus principle of contract law. We therefore want to focus here on the remaining other two forms of reciprocity that do have commonalities *and* differences with contract law that we want to have a look at here.

	Balanced Reciprocity		**Negative Reciprocity**	
	Commonalities	Differences	Commonalities	Differences
Contract Law	Balance as a basic idea and principle	Circumstantial balance within small community vs. consensus principle and enforcement in a possibly entirely anonymous society	Each party acting primarily on basis of self-interest	Transactions without compensation vs. contract being null and void without consideration

This table is by no means complete, it is sufficient to show some commonalities and differences. The main reason why we have been looking into distinctions within reciprocity here, is to show what relationships based on the different kinds of pre-state reciprocity have in common with (mutual) creditor-debtor-relationships that are created by consensus within (private) contract law. But there are not only commonalities but there *are* also differences. We believe to have shown by the table above that these relationships do share commonalities *and* differences. The mere existence of one difference alone would be enough to realize that any universalist approach (implicitly treating these relationships as entirely equal or based on the same – i.e. universalist – principles) to human relationships is deemed to fail eventually in its explanatory power for the very reason of the – unseen – differences.

There is a second reason why we've laid out these distinctions here. It is being able to more easily project this type of comparison onto the relationships of inter-state reciprocity and those based on (intra-state) contract law.

2.1.2 Inter-State

The cultural, political and legal anthropologist E. Adamson Hoebel was very trenchant concerning inter-state law, i.e. “international public law”:

> “International Law, so-called, is but primitive law on the world level.” (Hoebel, 1954, p. 331)

By “primitive law” Hoebel means the type of “law” (social relations) we described in the section above, i.e. pre-state reciprocity. We would not even call it “primitive law”, but – using a more restrictive term of “law” – would call pre-state reciprocity simply non-law, for it firstly lacks

enforceability in its entirety and also lacks the power monopoly that is itself bound by law, i.e. the principle ot the “rule of law”[3].

In international public law certainly terminology can be found that might indicate a simulation of (intra-state) legal relationships (e.g. “treaty” or “compact”) with the difference that the legal persons are not individuals or corporations but (nation) states[4] themselves. Depending on the exact definition of the term “law”, it might be stated that international public ***law***, for the lack of international enforceability by action in a court of law, is hardly much more than a simple misnomer. In real world international actuality it might as well be called international public ***power*** and would thereby be named at least as aptly. We might want to call the field of international relations “inter-state reciprocity” as a working title, thereby indicating that an inquiry into the different forms of reciprocity, creating distinctions and comparing those with intra-state (contract) law might be very promising indeed[5].

2.2 State & Law

Stone age Man did not have Law, yet we clearly do today. Realizing this, the question immediately arises: when did Law emerge? One might also want to know what Law is and under what circumstances it developed. Intuitively, one might think that Law somehow evolutionarily emerged out of customary rules that over time got more and more established and eventually were even codified into what could then be called “law”. This notion however needs to be clearly rejected after investigation:

> "Law emerges together with centralized authority during transition from segmentary to early state-level societies. Custom and Law are not, as Henry Maine believed, continual forms of basically the same kind of rules that could be seen as developing in an evolutionary sequence from custom via customary law to Law. They are **contradicting opposites**.” (Wesel, 1979, p. 233, translation WT, our emphasis)[6]

If law itself emerged together with a centralized authority, while custom can be found in communities without centralized authorities, we need to look closer at the differences and commonalities of law and custom. Wesel continues:

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3 This means absolutist governments, be they religiously or secularly “legitimized”, that are not bound by law themselves, we do not consider to provide the framework for what we will call “law”. Using a fairly restrictive term of “law”: we consider law to be able to emerge only within an environment of a power monopoly that is itself bound by the rule of law (as opposed to the rule of “god” or “divinity”).

4 “Nation” and “state” are of course not the same. As the type “state” has “nation” as a subtype. States are furthermore historically much older than “nations”.

5 For this paper we are unable to provide an in depth analysis of inter-state reciprocity. But we want at least mention a couple of potentially promising distinctions for example in any states power about flows of information (political, economic, financial among other types of information), diplomatic capabilities, overt and covert military capabilities, etc. It should be very clear in any case, that international relationships among states are not identical to relationships amongst legal persons within a state. Therefore to speak of “competition” (e.g. “tax competition”) in an international context, without providing insight into the differences to the type of competition that can be experienced amongst legal persons *within* a state, is at best plainly negligent and certainly is misleading.

6 Orig.: "Recht entsteht mit Herrschaft am Übergang von segmentären zu kephalen Gesellschaften. Gewohnheit und Recht sind nicht, wie Henry Maine meinte, kontinuierliche Formen, von im übrigen inhaltsgleichen Regeln, also in einer Reihe zu sehen als Entwicklung von custom über customary law zu law. Sie sind Gegensätze.”

> “Not only do they (Law and Custom, A/N) differ in enforceability, but also by fundamental conditions and content. *Law does not evolve the customs of the old order, it destroys them and creates a new order*. Law [...] emerges, subordinates, absorbs and finally destroys the old order of custom, expands to dominate more and more realms of social order and can determine the entire lives of people, like in capitalism, which is totally dominated by law. Custom, in contrast, the old egalitarian order, is static, more or less peaceful, self-regulating, consensually striving for mediation, informal settlement and compromise, not just by consent of two parties, but based on the consent of the entire community. *Law, by contrast, is the **subordination and destruction of custom** by centralized authority* ... the history of law is the history of centralized state authority, of developing inequality and of the destruction of a customary, egalitarian [...] order." (ibid.)[7]

Not only are Law and Custom not the same, they are *opposites*. Emerging Law *destroys* Custom and replaces it with a completely new order, a “legal order”. We are going to continue by introducing a key distinction here, that can be found in any good textbook on law: the distinction between public and private law, starting with public law (cf. Larenz, 1967).

2.2.1 Public Law

The basic principle of public law is order, authority and subordination. This means that within an entirely egalitarian society or community a “public law” is simply impossible to find. To distinguish public law, based on subordination from consensus and equality based private law, we want to quote Georg Jellinek, a distinct German legal professional at the beginning of the 20th century:

> „In order to understand the system of public law, the essence of private law has to be considered in contrast to the essence of public law. The contradiction between public and private law can be traced to the basic idea that in private law, individuals are treated as equals. Private law thus regulates the relationships between equals whereas public law regulates [...] the organization and function of governing bodies and their relationship to the subordinated subjects. [...] All private law is connected to a right of acknowledgement and protection by public law. Thus, **all private law rests on the foundation of public law**.” (Jellinek, 1905, 372-373, translation WT, our emphasis)

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7 Orig.: “Sie (Recht und Gewohnheit, Anm. d. A.) haben nicht nur verschiedene Geltungskraft, sondern auch verschiedene Grundlage, Bedingungen und verschiedene Inhalte. Recht ist nicht die kontinuierliche Weiterentwicklung von Gewohnheiten der alten Ordnung, sondern ihre Zerstörung, die verbunden ist mit dem allmählichen Entstehen einer neuen. [...] Recht ist nicht nur ein qualitatives, es ist auch ein quantitatives Element menschlicher Existenz. Es entsteht, breitet sich aus, überlagert, absobiert und zerstört schließlich die alte Ordnung der Gewohnheiten, erfaßt ständig neue Bereiche gesellschaftlicher Ordnung und kann im Extremfall das ganze Leben der Menschen bestimmen, wie in der bürgerlichen Gesellschaft, die total verrechtlich worden ist. Custom dagegen, Gewohheit, die alte egalitäre Ordnung, ist statisch, eher friedlich, selbstregulierend, konsensual auf Einigung gerichtet, nicht nur auf die Einigung zweier Parteien, sondern auf den kollektiven Konsens aller, Gemeinschaftlichkeit. [...] Recht dagegen ist die Überlagerung, Absorption und Zerstörung von Gewohnheit durch zentrale Herrschaft, die es zunehmend und bewußt als Instrumentarium von außen einsetzt ... . [...] Die Geschichte der Entstehung von Recht ist also auch die Entstehung von Herrschaft als zwangsausübender Macht. Sie ist die Geschichte der Kephalität, der Entstehung von Ungleichheit und der Zerstörung einer egalitären und freiheitlichen Ordnung." (Wesel 1979, pp. 233-234)

We want to bring out this assertion again: **all private law** (including all that emerges from it, including property rights, claims, personal freedom, ...) **rests on the foundation of public law**.

As we are continuing to enquire private law and property rights in the following section we want to point out again in slightly different terms that without public law – that is based on authority, order and subordination – private law – that is itself based on the principles of freedom, equality before the law and consesus – would simply not exist, for it rests on the foundation of public law.

2.2.2 Private Law

Being a part of Law, private law is as little to be found in so called "primitive" societies as Law itself. "Primitive" societies – we termed them pre-state societies or communities above – is a term by William Seagle, who ascertained:

> "Civil law (synonymous to private law, A/N) is necessarily scant in primitive societies ... this is the result of the prevailing group solidarity." (Seagle, 1941, 57)

With "prevailing group solidarity" within a society or rather community, private law is not to be found. For private law is based on the very idea of everybody being a single legal person, equal before the law, and therefore able to individually engage in commercial communication by what we will be calling "creditor-debtor relationships" (CDR), that are mutually created in what is called a contract.

These CDRs create a web of relations between individual legal persons, that exists for the very fact, that these private legal relations could be publicly enforced. The very fact that these private relations could be publicly enforced, if it was ever necessary, makes it all the more improbable that they actually have to be publicly enforced. The lack of enforceability means the nonexistence of this very web of private contractual relationships:

> "The legal vinculum, the claim of obligation, the bilateral and multilateral bonds which unite individuals in legal transactions, with all their endless possibility for disputes, are still lacking."(Seagle 1941, 57)

Yet, the "vinculum" or enforceability may not only be lacking in "primitive societies", as Seagle mentions above, speaking about hunter-gatherer-communities, but in every society that does not provide for the legal and fiscal infrastructure ("institutions") that is necessary to be able to enforce private (or public) rights.[8]

The potential public enforcement, specifically the potential enforcement of the idea of "freedom" as a right, leads us straight on to what we call the private/public-law dialectic that we want to inquire in the following section on Constitutional Law.

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8 In this paper we are unable to delve deeper into this topic. Yet, we believe it is the very lacking of the just mentioned legal and fiscal infrastructure in certain individual nation states within Europe and within the non-law, inter-state European Union as a political entity itself, The EU being a called a mere "ruling organization based on public international law" (i.e. "Non-Law" in our terminology) by the German Constitutional court; Orig.: "völkerrechtlich begründete[r] Herrschaftsverband" (Pressemitteilung Nr. 72/2009 vom 30. Juni 2009 zu 2 BvE 2/08, both accessed Apr. 1st 2016).

2.2.3 Constitutional Law

Constitutional Law is the attempt to mediate what we are calling the private/public-law dialectic. The mediation by Constitutional Law is not a mere theoretical approach to an apprehended and ensuingly thoroughly analysed challenge, but it is part of a long exercised political practice. This political practice of Constitutional Law is by no means anywhere close to being once and for all settled, as continuous "constitutional crisis" all over the world regularly show. John Commons beautifully picked up the debate of enlightenment Europe:

> "When the science of Political Economy began to emerge in the Eighteenth century, it fell in line with the theory, then dominant, of an original state of liberty and rationality of human beings. It was Rousseau, in his famous book The Social Contract (1762), who popularized the theory. Man was originally free but government had made him a slave." (Commons 1934, 390)

Rousseau, living in absolutist Europe at the time, did not even have to consider building or creating a power monopoly in the first place, for it was already established. Considering this, Rousseau's notion of the originally free man "enslaved by government" becomes much more understandable. That there would not be any (individual) freedom without any state, but that there would be unreleasable relationships of reciprocity in pre-state communities is something Rousseau did not need to think about. Commons continues:

> "Man was also a rational being who would act according to reason if only he were free. This was the theory of the Declaration of Independence and the French Revolution. It remained the primary assumption of the classical, optimist and psychological schools. They based their theories on an absolutely free individual who knows his own interest, and, if allowed freely to act, then the sum total of all acts would be a harmony of interests." (ibid., 390)

This idea of the harmony of interests is effectively Adam Smith's micro-macro paradox of "private vices" leading to "public benefits" which is probably still the most present line of thought right at the core of rational choice, public choice and similar theories (cf. e.g. Lindenberg, 1985). Commons continues:

> "These theories of liberty and rationality accomplished extraordinary results in overthrowing absolute monarchies, abolishing slavery, and establishing universal education. But *it was **not** because they were **historically true*** – it was because they set up *ideals for the future*. Historically it is more accurate to say that the bulk of mankind lived in a state of ***unreleasable debts***, and that liberty came by gradually ***substituting releasable debts***. And historically it is more accurate to say, as Malthus said, that man is originally a being of passion and stupidity ***for whom liberty and reason are a matter of*** the slow evolution of moral character and the ***discipline enforced by government***. (ibid., 390, our emphasis)

We do not follow Commons here in his assessment of pre-state human behaviour as "stupidity", for this is a normative notion that is not ours to make. However, Commons greatly points out that there is a dialectic of individual freedom and enforcement by government, for the government is

supposed to enforce the very freedom of the individual *for* the individual *against* everybody else *including* the government itself. This dialectic we call the **private/public-law dialectic.**

Continuing with Commons:

> "With the modern development of historical research, and especially with the aid of the modern sciences of sociology, anthropology, and historical jurisprudence, it is possible to reverse the Eighteenth Century illusion of an original state of liberty and reason, and to show the actual but resisted steps by which, out of the practices and aims of subordinate classes, releasable debts became the foundation of modern capitalism. Political Economy becomes, not a science of individual liberty, but a science of the creation, negotiability, release, and scarcity of debt." (ibid., 390)

And we want to add: that is only possible to exist by the astute mediation of the private/public-law dialectic with appropriate measures of constitutional law.

We want to conclude this chapter with a citation of Edmund Burke, who very clearly sees the fundamental challenge that the attempt of mediation of the private/public-law dialectic poses to constitutional lawyers, in fact to anyone thinking about issues of "government", "power", "freedom" and the like:

> "To make a government requires no great prudence. Settle the seat of power, teach obedience, and the work is done. To give freedom is still more easy. It is not necessary to guide; it only requires to let go the rein. ***But to form a free government****, that is, to* ***temper together these opposite elements of liberty and restraint*** *in one consistent work*, requires much thought, deep reflection, a sagacious, powerful, and combining mind." (Burke, 1890, our emphasis)

In the ensuing chapter we are going to employ the distinctions about law we have depicted here to enquire our first "insight":

assets are not *things*, but *rights*.

3 Assets are not things

The notion that assets are not things but rights is an insight that potentially is as old as private law itself. In discussing the 19th century workings of Henry Dunning MacLeod, John Commons states very clearly in 1934:

> "The *material things* have *no value* for economics except as they can lawfully be owned and their ownership lawfully transferred. Other sciences deal with *things* – economics deals with *legal rights over things*." (Commons, 1934, p. 400, our emphasis)

A question that arises from this insight is what sort of distinction or classification should we make for these rights? If it is not things, but rights, what kinds of rights are we talking about? Is it applicable for our needs as (new european political) economists to stick with just "rights"? Thereby treating all assets as being of one type, namely of "legal right". Maybe we could even term the totality of these legal rights just "property" to complete the confusion. To make a decision on what are useful distinctions we want to take a brief look at accounting actuality and the differentiation that accountants, based on business needs, make today.

3.1 Private[9] balance sheet categories

A balance sheet is set up and ordered for the needs of merchants, dealers and other businesses. Balance sheets for private businesses, who are bound by a hard budget constraint[10], are typically ordered by the (presumed) liquidity[11] of assets and (contractually known) maturity of debts to be able to fulfil obligations as they come due and therefore being able to avoid any legal and other consequences of illiquidity. For this purpose the most current assets are put on top of most balance sheet orderings, followed by less current assets (or vice versa). The same is done for liabilities. As an example we want to show a (stylized) balance sheet according to IFRS rules (where balance sheets are called "Statement of Financial Position").

9 In the world of accounting "private business", does not only mean "business, run by private (law) interests", but it means that the business is a "non-public business", in the sense that it is not listed or traded publicly on a stock exchange etc. In this work however, we are using the term "public" whenever public law principles and the term "private" whenever private law principles apply. Hence a "publicly traded" corporation is still a *private* business in this sense. We emphasise Private balance sheet categories here, as opposed to – yet to define – public balance sheet categories.

10 On discussion of hard budget constraint vs. soft budget constraint (cf. Kornai, 1986)

11 We do not have the ability to discuss this at length here, but want to pose some slightly provocative questions: how many users of this term ("liquidity") actually do realize that this liquidity-metaphor is exactly that: a *metaphor*? How many see in their imaginations Scrooge McDuck jumping in a "pool" of metal (coins) and happily swimming in his very own "liquidity"? Prosperously spurting metal coins out of his mouth? How many do realize that there is no "liquidity tap" at the central bank, that just needs to be opened up decidedly enough, so that "liquidity" can "flow" into the economy as much as is needed? How many do realize the legal and accounting actuality of central banks and their predominant business partners (banks), instead of simply sticking to "liquidity" coming from the central bank, hoping it will eventually be "flowing down" wherever this "liquidity" might be needed?

Statement of financial position (IFRS)			
Assets			**Liabilities**
Current Assets		Current Liabilities	
Non-Current Assets		Non-Current Liabilities	
		Equity	

Please note that except for the maturity or “liquidity” there is no distinction within assets or within liabilities made here at all.

For their needs to keep track of the financial position of businesses as closely as possible, professional accountants have created a huge set of distinctions for balance-sheets. It is however not our aim to become or train professional accountants here, but we want make very specific distinctions for the asset side of balance sheets that we deem most useful for macroeconomic analysis.

It is not necessary for every interested (new european political) economist to become a professional accountant, a legal professional and a cultural anthropologist, epistemologist, sociologist etc., therefore being able to draw every distinction that professionals in these respective fields are able to make. We do however believe that some basic distinctions we should be able to draw in each of the required fields of research. So, for accounting we want to look at one common example of how asset sides of balance sheets are distinguished:

Stylized balance sheet, common distinction			
Assets			**Liabilities**
Financial Assets		Liabilities	
Non-Financial Assets			
		Equity	

This very same distinction can look slightly differently, as “Non-Financial Assets” are replaced with “Tangible Assets” (Godley and Lavoie, 2007) or “Real Assets” (Wray, 2015), which makes the stylized balance sheet look as follows:

Stylized balance sheet, common distinction			
Assets			**Liabilities**
Financial Assets		Liabilities	
Tangible/Real Assets			
		Equity	

"Tangible" or "Real" sound most definitely as if the authors were talking and thinking about *things* here in their asset distinctions. This nomination as "Tangible" or "Real" we deem very misleading. Assets, we maintain, are not things, but rights. This is an insight directly out of the legal profession, as Karl Larenz diligently retains:

> "Total assets are a sum, an aggregation of rights and legal relationships a specific person or company is entitled to. Again, we notice the misleading identification of the thing or object with the property rights in the thing or object: usually, we find on a typical balance sheet a list containing: land, immobile objects, mobile objects, accounts receivable and other claims. From the perspective of law, we should clearly and precisely distinguish between things as first order objects of law and rights as second order objects of law. In consequence, it would be correct to say: property rights in land, property rights in immobile objects, property rights in mobile objects, accounts receivable and other claims. V. Tuhr correctly states: "The objects of the property rights belonging to someone's assets do not represent the assets. The assets consist of the property rights in the things/objects, not in the things themselves; and in the claims of the creditor themselves, not in the objects which can eventually be legally claimed on their grounds." (Larenz 1967, 306, translation WT, our emphasis).[12]

For the purposes of the terminological framework we are sketching out in this paper, we deem the following distinction of the asset side of balance sheets as absolutely critical for our ensuing (macro-)economic analysis:

Property Rights vs. Legal Claims

12 Orig.: "Das Vermögen ist eine Summe, eine Zusammenfassung von Rechten und Rechtsverhältnissen, und zwar im Hinblick auf eine bestimmte Person, der sie zustehen. Auch hier begegnet uns wieder die Gleichsetzung der Sache mit dem Eigentum an der Sache; so, wenn in einer Vermögensaufstellung nacheinander angeführt werden: Grundstücke, bewegliche Sachen, Forderungen und andere Vermögensrechte. Rechtlich gesehen sind Sachen, als Rechtsgegenstände erster Ordnung, nicht mit Rechten als Rechtsgegenstände zweiter Ordnung auf den gleichen Nenner zu bringen. Es müßte daher heißen: Eigentumsrechte an Grundstücken, Eigentumsrechte an beweglichen Sachen, Forderungen und sonstige Rechte. Mit Recht sagt v. Tuhr: „Keine unmittelbaren Bestandteile des Vermögens sind die Objekte der zum Vermögen gehörenden Rechte; das Vermögen besteht aus dem Eigentum an den Sachen, die dem Berechtigten gehören, nicht aus den Sachen selbst, aus den Forderungen, nicht aus den Leistungsgegenständen, die vermöge der Forderung verlangt werden können."

3.2 Property Rights

Being the main topic of this conference we will keep this section on property rights – except for a quotation of H. D. MacLeod – mainly limited to the distinctions of property rights and legal claims, as we assume these distinctions (see below) will create food for thought and potentially controversy. We are convinced that the differences from property rights to *things* will be made very clear by our fellow colleagues at the conference[13] following in the path of people like Henry Dunning MacLeod which we want to cite here, as mentioned:

> "When we understand the true and original meaning of the word **Property**, it will throw a blaze of light over the whole Science of Economics: and clear up all the difficulties which the word Wealth has given rise to. In fact, the meaning of the word Property is the *key to* the whole sciences of *Jurisprudence and Economics*.
>
> Most persons, when they hear the word Property, think of some material things, such as lands, houses, cattle, corn, money etc. But that is not the true and original meaning of the word **Property.**
>
> Property, in its true and original meaning, is not any Thing at all material or otherwise: but it is the Ownership or **Absolute Right** to something. Savages have very feeble notions of abstract Rights. Their ideas of Wealth are something which they can lay hold of: something which they can only acquire by violence, and which they can only retain by bodily force. They have not idea of abstract Rights separated from anything material.
>
> So in archaic Jurisprudence, Wealth, or Property, is described as anything material, which can only be retained by manual force and transferred by manual delivery.
>
> In early Roman jurisprudence a person's possessions were called **Mancipium:** because they were supposed to be acquired by the strong hand: and if not held with a very firm grasp would probably be lost.
>
> But as civilisation and firm government succeed, men's ideas are transferred from the actual material things to the **Personal Rights** in them.
>
> Thus in the course of time the word **Mancipium,** which originally meant the material things which were held by the hand, came to mean the absolute **Right** to them: and in early Roman Law, Mancipium came to mean **Absolute Ownership.** [...]
>
> In process of time the word **Property** came to be denoted by a term which meant a pure **Abstract Right."** (MacLeod, 1893, pp. 33-34, HDM's **emphasis**, our *emphasis*)

You may want to read this quote of MacLeod again, it is well worth it. In this quotation MacLeod mentions a lot that is worth to say about property rights (as opposed to things), he does however not draw the distinction of property rights and legal claims, which is what we deem another key to

13 For example rejecting the notion that one might just add enough "work" to a "thing" and one will end up with "property". While still being an idea retained (specifically in liberal or libertarian thinking) this notion is completely false and was rightfully rejected by Jeremy Bentham long ago and in the German speaking world by Kant and Hegel even before that.

“Jurisprudence and Economics”. Having said that, we will close out this section by simply listing the noteworthy differences of legal claims to property rights. Please note carefully that – as opposed to legal claims – property rights are:

- no other legal person's obligation,[14]
- nominally variable[15]
- and do not have a due date.

3.3 Legal Claims

First we will have to distinguish claims from property rights in this section (i.e. this time we distinguish the other way around, as we listed already the distinctions of property rights and claims), then we will distinguish within the realm of claims two types of claims: private claims and public (tax) claims and finally we present a short subsection on a transition from the microlevel of a single balance sheet to the economy as a whole, based on the distinctions in terminology we created in this chapter.

3.3.1 Distinguishing legal claims from property rights:

Differences of legal claims and property rights. Legal claims are:

- some other private person's obligation,
- nominally fixed,
- and do have a due date

Claims and property rights undoubtedly do have features in common with property rights. First and foremost claims and property rights are both *rights*, i.e. they are ***publicly*** guaranteed and enforceable, otherwise they would not be rights. If legal claims (or property rights, for that matter) are not *rights* in that respect, they are not legal claims (or property rights) but something else. It does not make sense however to conceptualize a property right to a claim, in an attempt to comprise property rights and claims as one single type (“property”). Karl Larenz and Claus-Wilhelm Canaris, the latter being the successor of the former as professors of civil law and legal philosophy at Munich's Ludwig-Maximilians-Universität (LMU), unequivocally state about property rights and claims:

> „To think of disposing of a *claim* as a sale of a *property right in the claim* only means an *unnecessary* and confusing doubling of rights.” (Larenz 1987, p. 573, our translation, emphasis)[16]

14 We use the term legal person here as including individuals and corporations acting according to private law principles. Property rights in a sense *are* a special kind of obligation to the state, as its infrastructure is supposed to protect and enforce property rights. This “service” does have to be financed, as it does not come “naturally”.

15 i.e. potentially *consistently* valued and *revalued* by the owner.

16 Original: *“Die Verfügung über die Forderung als Veräußerung eines an ihr bestehenden Eigentums aufzufassen bedeutet nur eine unnötige und verwirrende Verdoppelung des Rechts.“*

Furthermore both types of rights are valued in a unit of account, which means property rights and claims are saleable or “a-lien-able” rights as opposed to unalienable rights that do not get put on any balance sheet boasting a monetary value (e.g. personal freedom, freedom of speech, etc.).

3.3.2 Private claims and tax claims

The distinction between private claims and tax claims here will be nothing but a simple list:

- private claim:
  - private law principle (freedom, equality, consensus)
  - claim by a private legal person (against public or private entities)
  - corresponding obligation on some other legal persons (implied) balance sheet
- tax claims
  - public law principle (authority, subordination, order)
  - claims by the state (against its own subjects)
  - corresponding obligation with ***all*** citizens (subjects to public law).

Within this paper we will proceed with the term “claim” only, thereby meaning “private legal claim”[17] and will keep in mind the notion of claim's “corresponding obligation” on other person's balance sheets for section 3.5 (page 20) on the transition form the microeconomic view of one single balance sheet to the macroeconomic view of one aggregated balance sheet for the economy as a whole. But let's first integrate what we just learned and create a *private balance sheet in legal terms*.

3.4 Private balance sheet in legal terms

Here we are applying the insights generated above out of legal actuality and are restating the stylized private balance sheet with our chosen distinctions now in *legal terms*:

Private Balance Sheet *in legal terms*			
~~Assets~~ Rights		**~~Liabilities~~ Obligations (+ Net Worth)**	
~~Financial Assets~~ Legal Claims		~~Liabilities~~ Legal Obligations	
~~Real Assets~~ Property Rights			
		~~Equity~~ Net Worth	

17 Investigating tax claims more thoroughly we will postpone at this point for another venue.

We want to stress here, that every single balance sheet entry on any balance sheet will be in exactly one of the three legal categories described above (excluding net worth that conceptually is a mere *balance*):

1. Property Rights
2. Legal Claims
3. Legal Obligations

If we wanted to add the differentiation for “liquidity” (as is proposed by the IFRS) into our balance sheet in legal terms this would be looking like this:

Private Balance Sheet in legal terms + differentiation for liquidity			
Rights			**Obligations**
Claims • Current Claims • Non-Current Claims		Obligations • Current Obligations • Non-Current Obligations	
Property Rights • Current Property Rights • Non-Current Property Rights			
		Net Worth	

But for now we won't do anything with this balance sheet, since for what we want to show here is something else than running a business (which a balance sheet sorted by “liquidity” would be valuable for). We want to make a macroeconomic point here. To make visible the relationships within one balance sheet first, let's look at an arbitrary little example: If Alice owns a house (that she values at 100), has 50 in her savings account and owes 60 in a mortgage on her house. Her balance sheet would look like this:

Alice – arbitrary example			
Rights			**Obligations + Net Worth**
Claims	50	Obligations	60
Property rights	100		
		Net Worth	90
Total	150	Total	150

The distinctions within in this balance sheet in legal terms are related as follows:

Total Rights (TR)	= Property Rights (PR) + Claims (C)	= 100 + 50 = 150
Net Claims (COB)[18]	= C – Obligations (O)	= 50 - 60 = -10
Net Worth (NW)	= TR - O	= 150 - 60 = 90

From these three definitions it follows directly that

NW	= PR + COB	= 100 - 10 = 90

With these basic distinctions we have defined for our balance sheet in legal terms we are now able to recognize just another key distinction concerning total obligations vs. net obligations:

Alice's *total* obligations	= 60	= other's *C* (60) against Alice's *TA* (150)
Alice's *net* obligations	= 10	= other's *C* (10) against Alice's *PR* (100).

3.5 Micro → Macro

In a closed economy – and the "world economy" is one – every claim has a corresponding obligation on some other private persons (implied) balance sheet. This means COB for the world economy is always and always exactly zero. John Commons realized this in 1934, by stating:

> "[...] the credit exists as the identical quantity on the "asset" side of one firm and the "liability" side of another firm. [...] Cernuschi had said: "The balance-sheet of every individual contains three accounts: existing goods, Credits, and Debts. <u>But if we collected into one all the balance-sheets of everyone in the world, the Debts and the Credits mutually neutralize each other, and there remains but a single account: **existing goods**.</u>" (Commons 1934, 410)

Please note carefully: <u>*every*</u> legal person's <u>*claim*</u> is **some other** legal person's **obligation**. If we add to that our legally more carefully chosen terminology we would replace the notion of "existing goods" (assets are *things?*) with "property rights" (assets are *rights!*) in Commons statement. Since claims and obligations cancel out to zero for the world economy, a stylized aggregated balance sheet of the world economy in legal terms would look like this:

Aggregated balance sheet of the world economy in legal terms			
Rights		**Obligations + Net Worth**	
~~Claims~~	~~XXXX~~	~~Obligations~~	~~XXXX~~
Property rights	100		
		Net Worth	100
Total	100	Total	100

18 This balance we will also call the claims/obligations balance or COB. If COB >= 0, it amounts to net claims, i.e. the owner is a net creditor. If COB < 0, COB can be called net obligations, which means the owner is in a net debtor position. In our example Alice is a net debtor with her COB = -10

The value 100 is but an arbitrarily set value in some arbitrary unit of account. The point being here is this: The world's net worth is always and exactly equal to the valuation of the world's property rights. Claims and obligations do (always exactly, by accounting identity) net out to zero (COB = 0).

However, please note: if claims and obligations actually were both zero (C = 0, O = 0) as opposed to only COB = 0 (which is always true for the world economy anyway, we cannot repeat this too often), then the valuation of property rights would be rather difficult. In such a “debt free” world (C = 0, **O = 0**) we would all starve[19]. So, the belief that a “world without debt” (which this world would be: C = 0, O = 0) is supposedly a world to strive for, is nothing else but sheer incompetency in terms of accounting and macroeconomic actuality.

19 With the exception maybe that by then we – as a human race – had found totally different means for material reproduction in huge collectives as we have found so far in known human history the past. Limited to known means, a debt free world of still huge collectives would be a starving world. Without debt (and credite), we starve, since it would make impossible the private commercial communication that runs on credit purchases, as we shall see in our illustrative example within the following chapter in section 4.2 starting from page 27.

4 Buying is not paying

Our everyday intuition rejects the notion of "buying is not paying" and justifiably does so. Most everyday purchase transactions we are involved in are cash purchase transactions, where buying is immediately succeeded by payment, specifically from the perspective of the purchaser, who is "spending money". We will look at cash purchase transactions first and the bookkeeping needs these types of transactions create, and will then proceed to investigate credit purchase transactions.

4.1 Cash purchase – buying *is* paying

If we incur a cash purchase, say of groceries, we see the good "change hands" and right after that the payment happens. It looks and feels like one single transaction that is entirely completed at one single point in time. So for the purchaser "buying *is* paying" for cash purchase transaction. A cash purchase transaction can be illustrated completely without any need for keeping track of claims and obligations for purchaser and seller. If a third party claim is used as a means of payment[20], the third party needs to keep track of his obligations.

4.1.1 Commodity money as a means of payment

Here we will illustrate a cash purchase that is completed by means of an exchange of property rights, which combines buying and immediate paying. The illustration employs the balance sheet for rights and obligations we have developed earlier in this work. In our example here the purchaser Alice buys a barrel of red wine from the seller Bob and immediately pays him by transfer of a property right ("commodity money"), here the payment is realized as the transfer of the property rights in 3 gold coins. Before the transaction the stylized balance sheets of Alice and Bob might look like this:

Alice (purchaser) – before the purchase transaction, t_0			
Rights			**Obligations + Net Worth**
Claims	0	Obligations	0
Property rights: - 3 gold coins	3		
		Net Worth	3
Total	3	Total	3

20 The means of payment is determined by the contractual relationship between purchaser and seller. The seller, offering his goods or services at a specific price, nominated in a money of account, may imply the means of payment, by publishing his bank account identifier. This can be interpreted as acquiescence to accept a wire transfer – an assignment of a claim in balance sheet actuality – as a means of payment.

Bookkeeping, as it is done here by balance sheet entries, requires a unit of account that all assets and rights are nominated in to make them summable. Alice uses gold coins as money of account[21] in her bookkeeping and does currently hold no other rights or obligations than rights to the three gold coins, hence her net worth and also the is three (gold coins).

Bob (seller) – before the purchase transaction, t_0			
Rights		**Obligations + Net Worth**	
Claims	0	Obligations	0
Property rights: - 1 barrel of red wine	3		
		Net Worth	3
Total	3	Total	3

Bob has valued his property right to the barrel of red wine at 3 gold coins, which means that gold coins serve as the unit of account. Alice and Bob are literally exchanging their property rights.

After the completion of the exchange the balance sheets of Alice and Bob look like this:

Alice – after the purchase transaction, still t_0			
Rights		**Obligations + Net Worth**	
Claims	0	Obligations	0
Property rights: - 1 barrel of red wine	3		
		Net Worth	3
Total	3	Total	3

21 For a differentiation of unit of account, money of account and money proper we refer to (Hofer, 2014, pp. 24-26)

Bob – after the purchase transaction, still t_0			
Rights		**Obligations + Net Worth**	
Claims	0	Obligations	0
Property rights: - 3 gold coins	3		
		Net Worth	3
Total	3	Total	3

We have marked changes in the balance-sheets in red colour and will continue to do so in ensuing transactions. Please note that even after the purchase transaction is completed we've put time t_0 on both balance sheets to indicate that no (economically relevant) time has passed from before the purchase transaction until after its completion.

If this purchase transaction in general looks very simple, it's because it is. And if using balance sheets to illustrate this simple transaction looked like overdoing it to you, you'd be completely right. We wanted to make a point here: the claims and obligations of purchaser and seller are not involved in the transaction at all. This makes it obvious that using the domain specific language[22] of double entry bookkeeping is indeed completely overdoing it in this case. Using balance sheets for this sort of simple transaction suggests very clearly that double entry bookkeeping hardly emerged on the basis of the bookkeeping needs that *these* kinds of ("barter" or cash purchase) transactions imply. For transactions of this kind simple cash accounting would be completely sufficient[23]. Double entry bookkeeping and balance sheets do however exist in empirical accounting, hence the ensuing question is: Since "barter transactions" of the kind depicted here could not possibly have created the need for double entry bookkeeping, what kinds of transactions did create the needs for this type of accounting? We will be exploring these transaction types that do call for double entry bookkeeping, to systematically keep track of them, in the following sections. We will be starting with the same cash purchase transaction, but changing the means of payment to the assignment of a claim against a third party debtor, which means the involvement of claims and obligations as opposed to the "pure" property rights transaction in this section.

[Why do actors engage in "barter" transactions of this kind at all? Utility?]

4.1.2 Credit means of payment

We will continue in this section with the same cash purchase transaction, however this time not the transfer of a property right, but the transfer of a claim will be used and accepted as a means of

22 A domain specific language is a language developed specifically for the needs of a certain domain. Here the domain would be bookkeeping as a practice and the domain specific language would be double entry bookkeeping that is developed precisely to match the specific needs of the domain.

23 This realization makes it all the more noteworthy that it is precisely this type of "barter" transaction that is - implied in relative price determination - at the very core of general equilibrium theory, see for example (Hicks, 1939)

payment. So, again, it is “buying” followed by immediate “paying” from the perspective of the purchaser, yet the means of payment is the assignment of a claim against a third party debtor. In the concrete example we want to make here, the purchaser, Alice, buys wheat, valued at 100, from a seller, Charlie, and pays him immediately by an assignment of a claim against a third party debtor called Bob. The claim Alice holds against Bob is also valued at 100 and payable on demand. Purchaser Alice, seller Charlie and the third party debtor Bob do all use the same money of account in their balance sheets and transactions.

Alice does hold a claim payable on demand against Bob that is valued at 100, but does not hold any property rights or other claims. Alice does not have any obligations. Hence her balance sheet in t_0 looks like this:

Alice (purchaser) – before the purchase transaction, t_0			
Rights		**Obligations + Net Worth**	
Claims - Claim against Bob, on demand	100	Obligations	0
Property rights:	0		
		Net Worth	100
Total	100	Total	100

Bob holds property rights valued at 500, and has an obligation of 100 that is payable on demand. His balance sheet before the transaction looks like this:

Bob (third party debtor) – before the purchase transaction, t_0			
Rights		**Obligations + Net Worth**	
Claims	0	Obligations - Obligation, payable on demand	100
Property rights:	500		
		Net Worth	400
Total	500	Total	500

The only property rights the seller, Charlie, holds are those to wheat that are valued at 100. He has no claims or obligations. His balance sheet at t_0 therefore looks like this:

Charlie (seller) – before the purchase transaction, t_0			
Rights		**Obligations + Net Worth**	
Claims	0	Obligations	0
Property rights: - wheat	100		
		Net Worth	100
Total	100	Total	100

After the purchase transaction is completed by the transfer of the property right to wheat and the subsequent payment by assignment of Alice's claim against the third party debtor Bob, the balance sheets of the parties involved look like this:

Alice – <u>after</u> the purchase transaction, still t_0			
Rights		**Obligations + Net Worth**	
Claims	0	Obligations	0
Property rights: - wheat	100		
		Net Worth	100
Total	100	Total	100

Bob – <u>after</u> the purchase transaction, still t_0			
Rights		**Obligations + Net Worth**	
Claims	0	Obligations - Obligation, payable on demand	100
Property rights:	500		
		Net Worth	400
Total	500	Total	500

Charlie – after the purchase transaction, still t_0			
Rights		**Obligations + Net Worth**	
Claims - Claim against Bob, on demand	100	Obligations	0
Property rights:	0		
		Net Worth	100
Total	100	Total	100

We see, again, that neither the purchaser's, nor the seller's obligations side of their balance-sheets are involved at all here. This is different for Bob, the third party debtor, whose claim was assigned here as a means of payment. Bob does keep track of his obligation (the corresponding claim acts as a means of payment for Alice) on his obligations side of his balance-sheet. However, we need to note that absolutely nothing has changed in the financial position of Bob by the assignment of the claim. He has the same expected cash outflow (100) at the same time (payable on demand). His creditor has changed from Alice to Charlie, nothing else.

We want to point to the fact that no economically relevant time has passed from purchase to payment from the viewpoints of purchaser (Alice) and seller (Charlie). Therefore even after the completion of this cash purchase transaction the time is still noted as t_0.

4.2 Credit purchase – buying is *not* paying

While buying does indeed always imply a payment, the payment may be performed at a later point in time and does not necessarily have to be performed at the point in time of the purchase, if the seller accepts later payment. So, buying is *not* always immediate paying. The payment does not always have to happen right after buying as it is the case in a cash purchase or barter transaction. In a credit purchase the payment regularly does happen so much later in fact, that the incurred creditor-debtor-relationship is documented by generally accepted accounting principles.

4.2.1 An illustrative example[24]

If sellers do agree to be paid later by the purchasers they are contracting with, buying and paying cease to happen at the same point in time. To illustrate the effects of that we will use another example involving Alice, Bob and Charlie. This time all three persons have property rights of one single kind and all property rights are valued at the same amount in the same money of account.

24 Especially if you are not used to the look of balance sheets we highly recommend walking through this example thoroughly and step by step. We decided to use balance sheets on purpose to effectively track *flows* here, even though balance sheets are by definition only capable of showing the financial position of a legal person **at one point in time**, thereby always showing *stocks* only. Yet we are convinced taking the time to walk through this example is well worth the effort. If you are an accountant, feel free to laugh at us for the hassle of using balance sheets to depict flows.

Neither one of them has any claims or obligations. hence their balance-sheets in t_0 look as depicted in section 4.2.1.1 below.

4.2.1.1 Setting up all three balance sheets in t_0

Alice, t_0			
Rights		**Obligations + Net Worth**	
Claims	0	Obligations	0
Property rights: - wheat	100		
		Net Worth	100
Total	100	Total	100

Bob, t_0			
Rights		**Obligations + Net Worth**	
Claims	0	Obligations	0
Property rights: - wine	100		
		Net Worth	100
Total	100	Total	100

Charlie, t_0			
Rights		**Obligations + Net Worth**	
Claims	0	Obligations	0
Property rights: - meat	100		
		Net Worth	100
Total	100	Total	100

4.2.1.2 Buying in unison within t_0 and t_1

After t_0 and before t_1 Alice buys wine from Bob, Bob buys meat from Charlie and Charlie buys wheat from Alice. This means all three persons are purchasers and sellers within the said time frame (within t_0 and t_1). All the property rights get transferred from seller to purchaser before t_1. To make it as simple as possible, the purchasers buy the whole amount available (100). The purchasers and sellers agree on payment after t_1 but at (or before) t_3.

Implementing all the noted changes in rights and obligations at time t_1 into the balance sheets we have set up in section 4.2.1.1 the three balance sheets look as follows:

Alice, t_1			
Rights		**Obligations + Net Worth**	
Claims - Claim against Charlie, due at t_3	100	Obligations - Obligation, due at t_3	100
Property rights: - ~~wheat~~ - wine	~~100~~ 100		
		Net Worth	100
Total	200	Total	200

At t_1 Alice holds the property rights to wine (valued at 100) while she has transferred the property rights to the wheat. She has a brand new obligation that she is obligated to pay at (or before, but not after) t_3 and she has a brand new claim against Charlie that he is obliged to pay until t_3. This results in an extension of Alice's balance sheet by 100 to a total of 200, while her net worth remains completely unchanged. Bob's balance-sheet changes in an analogous way:

Bob, t_1			
Rights		**Obligations + Net Worth**	
Claims - Claim against Alice, due at t_3	100	Obligations - Obligation, due at t_3	100
Property rights: - ~~wine~~ - meat	~~100~~ 100		
		Net Worth	100
Total	200	Total	200

Due to the way we have made the distinctions in the balance sheets (property rights vs. claims & obligations) it is very apparent here that the claims-obligations-balance remains zero. It was zero at t_0 with no claims and obligations at all and it is still zero in t_1 with claims of 100 and obligations of 100.

Charlie, t_1			
Rights		**Obligations + Net Worth**	
Claims - Claim against Bob, due at t_3	100	Obligations - Obligation, due at t_3	100
Property rights: - ~~meat~~ - wheat	~~100~~ 100		
		Net Worth	100
Total	200	Total	200

We want to point out a couple of noteworthy observations here:

- The balance sheet total of all three persons increased, while every individual's net worth remained unchanged.
- If this was an economy of these three persons only, the economy's total debt (the sum total of all three person's obligations) would just have skyrocketed from 0 to 300.
- The claims-obligations-balance is zero (COB = 0) for every individual *and* for the economy as a whole. For the whole economy the claims-obligations-balance is zero all the time by definition. But that does not at all mean, that individual claims-obligations-balances are zero all the time. In the real world economy this would be an extraordinary exception[25].

4.2.1.3 Payment by assignment of a claim

Our example here continues with the first payment that is made after t_1 and before t_2. It is made antecedent to maturity of the obligation by Charlie (t_3), who pays Alice by means of the assignment of his claim against Bob, which Alice accepts[26] (cf. Chapter 4.1.2 ,p. 24). The assignment of Charlie's claim against Bob to Alice results in Alice now being the new creditor of Bob. Hence, the claim against Bob will show up in Alice's balance sheet after the assignment. Alice's claim against Charlie however will not show up anymore, since it is considered fulfilled by both parties. The balance sheets in t_2 therefore look as follows:

25 On the inter-state level this would mean no net exports (no current account surplus or deficit) for any state. The relevance of current account imbalances on the inter-state level was discussed during the so called "great recession" following the financial crisis of '07/'08, see for example (Davidson, 2009)

26 Within this intentionally oversimplified example we are not analysing the payee's interests in detail at this point. For in real world actuality, a payee being paid by assignment of a claim prior to the maturity of the claim would demand a discount on the claims' nominal amount. This discount we will at a later point call 'interest'.

Alice, t_2			
Rights		**Obligations + Net Worth**	
Claims ~~- Claim against Charlie, due at t_3~~ - Claim against Bob, due at t_3	 ~~100~~ 100	Obligations - Obligation, due at t_3	 100
Property rights: - wine	 100		
		Net Worth	100
Total	200	Total	200

We realize that for Alice nothing has changed, except that she now holds a claim against another debtor[27]. Her property rights, net worth, balance sheet total and claims-obligations-balance remains exactly the same.

Bob, t_2			
Rights		**Obligations + Net Worth**	
Claims - Claim against Alice, due at t_3	 100	Obligations - Obligation, due at t_3	 100
Property rights: - meat	 100		
		Net Worth	100
Total	200	Total	200

For our third party debtor Bob, whose claim is assigned by Charlie to Alice, visibly, absolutely nothing has changed in his balance sheet. A circumstance that may change – sort of behind the scenes – is that Alice might possibly behave differently as a creditor than Charlie may have done if he had remained Bob's creditor. We see here that a balance sheet of this kind does not and cannot contain all possibly relevant information, it is but a snapshot of the current position in valued legal rights of a person. What does change in this specific example is, that Bob's creditor changed to a person that he was holding a positive bilateral claims-obligations-balance before and now does not anymore. For his claim against Alice nets out to zero with his obligation to pay Alice, who now holds a claim against him. The bilateral claims-obligations-balance of Bob and Alice is one possibility to use our distinction of rights, to make netting possibilities visible. In the continuation of

27 Changing the debtor is of course not “nothing”, since the probability to be payed by Bob in full may differ from the probability to be payed in full by Charlie.

our example Alice and Bob are going to make use of this fact by netting out their mutual claims as a means of payment between t_2 and t_3

Charlie, t_2			
Rights		**Obligations + Net Worth**	
Claims ~~- Claim against Bob, due at t_3~~	~~100~~	Obligations ~~- Obligation due at t_3~~	~~100~~
Property rights: - wheat	100		
		Net Worth	100
Total	100	Total	100

Charlie does not hold his claim against Bob anymore, since he assigned it to Alice. Alice on the other hand now considers her claim against Charlie as fulfilled by the assignment. So Charlie may strike out his obligation to pay. In effect his balance sheet total is reduced by 100 to the new total of 100. Charlie's net worth is not involved. So this transaction is neither profitable nor does it generate losses.

4.2.1.4 Payment by offsetting claims

Finally, Alice and Bob realize that they now are each others mutual creditor and debtor and that their claims are due at the same time (t_3) and of the same amount. They consequently decide to offset their mutual claims as a means to fulfil their mutual obligations. The three balance sheets now look as follows:

Alice, t_3			
Rights		**Obligations + Net Worth**	
Claims ~~- Claim against Bob, due at t_3~~	~~100~~	Obligations ~~- Obligation, due at t_3~~	~~100~~
Property rights: - wine	100		
		Net Worth	100
Total	100	Total	100

Alice's balance sheet in t_3 effectively is completely equal to her balance sheet in t_0, which was the balance sheet she started with. Comparing the balance sheet in t_0 with the one in t_3 the only difference is the change in the property rights she holds. She initially held property rights to wheat

and now holds property rights to wine (of the same amount). In effect she exchanged her property rights to wheat for those to wine without actually having to do so. She did not have to actually do this exchange ("barter") for the availability of credit to her, i.e. she was able to buy first and pay later. The same can be noted for Bob and Charlie, which we want to briefly look at here:

Bob, t_3			
Rights		**Obligations + Net Worth**	
Claims ~~- Claim against Alice, due at t_3~~	~~100~~	Obligations ~~- Obligation, due at t_3~~	~~100~~
Property rights: - meat	100		
		Net Worth	100
Total	100	Total	100

Bobs t_0 and t_3 balance sheets do not differ except for the change in property rights. He effectively "bartered" his initial property rights to wine (t_0) for the property rights to meat he now (t_3) holds without actually having to barter and was therefore able to avoid the stalemate if he had not found a party to "barter" with[28].

Charlie, t_3			
Rights		**Obligations + Net Worth**	
Claims	0	Obligations	0
Property rights: - wheat	100		
		Net Worth	100
Total	100	Total	100

For Charlie nothing has changed from t_2 to t_3. If we compared his balance sheet now (t_3) to his balance sheet in t_0 we'd also see that nothing has changed except for the kind of property rights he is now owning. He initially (t_0) was holding property rights to wine and does now (t_3) hold property rights to wheat. All three parties are happy with their current position, for they now hold exactly the property rights they wanted to hold on to at (t_0) which was the reason for the whole process to

28 This is the "double coincidence of wants", that was first noted by (Jevons, 1875) and is consequently employed as an explanation for the emergence of "money" as a means to "reduce transaction cost" in neoclassical economics (cf. Brunner and Meltzer, 1971).

begin with. Our participants Alice, Bob and Charlie did not have to *barter* one single *thing* for the completion of the process.

4.2.2 Brief discussion

We want to briefly discuss the outcome of our example here by using it to illustrate certain points about credit itself, the micro-macro transition of our framework and what that allows to do. We will start with the final result, the final position in rights for every individual, of our example.

4.2.2.1 The final result

The final result of the example we have given here (exchange of property rights) is similar to the outcome of the very first example in chapter 4.1.1 that we called a cash purchase transaction. The example in 4.1.1 was completed by means of a "commodity money", i.e. payment by transfer of a property right[29]. It is similar in the sense that in the end all participants hold the property rights they wanted to own in the first place. Yet the first example does not leave any room for anything "financial" at all. There are no claims and obligations. If there is nothing "financial" there can be no "financial" crisis. If we were ever to create an economic model based on transactions of the "barter" kind[30], we should not wonder that our model would not be able to contain, explain or even forecast financial distress or crisis.

4.2.2.2 Emergence of credit

Although much needed, it is entirely beyond the scope of this paper to give a historical analysis of the emergence of credit. We still believe that the credit purchase example given above already allows to carefully make the assumption that it is not purchase contracts that are "children of credit contracts" (Heinsohn et al., 2013; Heinsohn and Steiger, 1996), but that credit emerges out of (credit) purchasing. Hence, not "credit banks" precede "deposit banks", we consider that a given, but that purchasing itself (first amongst non-banks) precedes the emergence of "credit banks" in the first place. Non-banks (involved in purchasing transactions) certainly have to precede banks. Without buying and selling non-banks, who would the banks be banking for?

4.3 Paying

Looking closely at and sticking with the distinctions for a private balance sheet in legal terms we have created in chapter 3.4, we see that for a payor there are effectively three ways to finally pay

29 Such a "barter" example we could have construed as a three party bartering example as well, thereby using one type of property rights, say property rights in grains, as a "medium of exchange", in the sense that one party acquires the property rights to grains not to eventually hold on to those but for the reason to "barter on" for the property rights, say to meat, that she actually wanted in the first place. Real world, historical actuality – that we are unable to go into here – much more resembles the "buy now pay later" tripartite example of this chapter than the multi-party bartering example of this footnote.

30 As does neoclassical economics, specifically of the "general equilibrium theory" kind, once pioneered by Léon Walras (Walras, 1896). We don't find it surprising that wanting to be a "physicist of society" was worth striving for in the 19th century. Yet specifically in the light of the inability of contemporary macroeconomics to deal with economic actuality of constant financial and sovereign debt crisis, the ongoing 'success' of general equilibrium theory for us can only be explained by the lack of a serious "competitor". We want to contribute to the debate that aims to create this earnestly competitive framework that is able to replace trivial (yet mathematically complicated!) economics.

her creditor. We will use the term payment, for the circumstance that by the completion of the process of payment the payor has reduced her obligations towards the creditor[31]. So we need to look at what happens to the other two categories (property rights, claims) during the payment process. The first option is that the payor transfers a property right to the creditor, thereby reducing her obligations (as requested by our definition of payment) and reducing her property rights. The second option is the transfer of a claim, that – along the lines of legal terminology – we call an assignment. A third option becomes visible, when we look at the balance sheet of the creditor as well. The first two options left the balance sheet total of the creditor at the same amount, our third option, the offsetting of mutual claims, will reduce not only the payor's balance sheet, but also the payee's, for the offsetting of mutual claims is a vice versa payment process. Both creditor and debtor are creditor and debtor at the same time in a mutual creditor-debtor relationship, and by offsetting their claims and obligations reduce both: claims and obligations and thereby their individual COB and their balance sheet totals.

4.3.1 Transfer of a property right

The process of the transfer of a property right we have already described above, that is why at this point we only want to look at the prerequisites for such a payment to be able to happen in the first place. If two parties plan to use the transfer of a property right as a means of payment they certainly require the very existence of property rights, i.e. all the institutional requirements for property rights to exist and persist. Property rights do not emerge by adding "work" to things[32]. The key issue thereby is the ability to reliably transfer property rights, as noted by John Commons:

> "[P]roperty ... is the right, not to *use* the thing, but is the *right* to *alienate the ownership* of the thing and to give a good title to the buyer." (Commons, 1934, 405, our emphasis).

4.3.2 Assignment of a claim

Another possibility to pay, as we have seen, is by the assignment of a claim. This however requires additional points to be explored, for claims do have common features with property rights, as they are rights as well. However there are some key differences to property rights as we have pointed out in section 3.3 on page 17. We will start with a commonality here though, as it is completely essential for payment by assignment of a claim for them to be fully negotiable.

4.3.2.1 Negotiability

John Commons clearly sees the relevance of negotiability to what he calls the "debt market" and which we would have to call "claims market"[33] in our terminology:

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31 We do not consider a swap of obligations (e.g. novation) as a payment here.

32 We consider the exploration of this circumstance the core topic of this conference. That we intend to kind of sort and shelve in this work by pointing to other important processes "right around" property rights, but that can be missed if the – very important – focus on property rights is all too narrowly put.

33 If we realize that money market and credit market are both claims markets, the institutional separation of the investigation of these two markets in academia, the former being studied in economics, the latter in finance, might be justifiably rethought.

> "The debt market is usually known as the "money market", although it is only the market made possible by the negotiability of debts." (Commons 1934, p. 395)

Negotiability is needed for what is known as the "money market" (debt market, claims market) to function. Commons realizes that the "claims market" cannot exist if claims were not negotiable. This raises the question what it is that does make claims negotiable. The legal anthropologist William Seagle noted about Roman Law:

> "The Roman law had a wonderful phrase which suggested the unlimited possibilities created in the life of the law by contract. Distinguishing between the nude pact and the pact which the law enforced, it defined an obligation as a iuris vinculum. The legal obligation rested upon a bond of law. Law to really flourish needs a vinculum." (Seagle 1941, p. 265)

The ability to create "negotiable instruments", i.e. the negotiability of claims we consider to be a vital part of what Seagle here calls the "flourishing" of law. Without a "vinculum", i.e. the ability to enforce a claim, there is no negotiability of claims. Imagine a third party payee, who is supposed to be paid by the assignment of a claim against a potentially unknown party to him. The payee will only be willing to accept this kind of payment if he is able to rely upon his ability to enforce the claim if such enforcement was ever necessary.

4.3.2.2 Maturity, Discount, Interest

A key difference of a claim and a property right concerns its maturity. A property right does not mature, as it is no other legal persons liability[34]. If a claim was ever assigned before maturity in real world actuality, the payee (creditor) would demand what is called a discount on the nominal amount of the claim. This we consider the origin of what came to be called interest. It is in the payee's interest to demand a discount if the assignment of a claim is offered to him as payment, for he can reject the offer of payment by assignment of a claim and may request another form of payment. The payee could demand the payment by transfer of a property right in specie, for example, instead of a promise to make such a payment at some point in the future (namely the date of maturity of the claim). In our view "interest" therefore does not emerge from a "property premium" (Heinsohn et al., 2013; Heinsohn and Steiger, 1996) but is rather closely linked to the assignment of *claims* as opposed to being related to *property rights* in some form.

4.3.3 Offsetting of claims

The bilateral offsetting of claims, i.e. simple reduction of balance sheet totals on both sides, might be fairly called the most elegant form of payment there is. However, the requirements for the bilateral offsetting of claims being the sole means of payment are so strict, they very much resemble the "double coincidence of wants" (see FN 28 on page 33). As balances and current accounts (implicit) offsetting of claims is a very common practice.

34 Even though the protection and enforcement of rights in general is a sort of "liability" or rather a responsibility for a state bound by the rule of law.

A whole different level of use for the "offsetting of claims" can be reached by multilateral offsetting, which certainly played an important role in what became banking, but we cannot go deeper into this topic within this paper[35].

5 Possible applications of our framework

We want to show here a small selection of possible applications of our framework that we have developed so far and to do that we are going to explore some possible fields of application to some degree. Hopefully our framework will be able to contribute to further enhancing the current state of scientific knowledge (which always is and always will be the current state of error) in some respective fields. We will not be able to provide more than a few thoughts on some of the possible fields of application within the scope of this work.

5.1 Banks as claims dealers and clearinghouses

According to the expectation you as our reader ideally have gained about banking by reading this paper up to this point, it might come as a surprise to you that banks are being portrayed as "intermediaries", taking cash in by lenders and passing on stashes of cash to lenders even in standard literature on banking management (Hartmann-Wendels et al., 2004). A common example given to illustrate banking from this particular viewpoint (that is very, very limited, to say the least) is the following little story:

> "Grandma" is the initial lender – being equipped with a stock of cash for some unexplored reason – deposits stashes of cash with the "Bank" and the "Bank" in turn hands the stashes of cash – being a diligent "intermediary" now – to some industrious "Entrepreneur" seeking financing for investment purposes.

This story might be considered as compelling for our everyday intuition as was the cash purchasing ("buying is paying") initially, but it is by no means even close to real world banking actuality. The mere fact that such stories are put in distinguished banking management literature may give a hint on how deep the misunderstandings of property rights, claims, obligations and claims-obligations-balances really go, even right into the field of brilliant "experts". We consider it about time for lawyers, accountants and banking practitioners, among other professions, to start some seriously intense interdisciplinary conversations about banking actuality. We sincerely hope this conference will be a fantastic success and initial spark for such much needed multilogue.

Given the unfortunate state of (mainstream) research on banking, the basic realization that banks are by no means intermediaries of stashes of cash however is not at all new. This realization, again, potentially is as old as private law (and therefore banking) itself. John Commons gives an example of a non-bank credit purchase in 1934, implying the very reason for banking to exist:

35 The *multi*lateral offsetting of claims is a very promising field of investigation from our viewpoint – all the more so in an international context – and specifically being at some point fully equipped with the tools we are starting to develop with this work. While a thorough analysis of multilateral offsetting of claims ("clearing") seems very promising indeed, such analysis is beyond the scope of this conference paper.

"A manufacturer alienates the ownership of his output and accepts in *full payment* (!) the *ownership* (!) of a commercial debt payable in 60 days." (Commons, 1934, p. 415, our emphasis)

The important point being here: the manufacturer does accept the ownership of a commercial debt payable in 60 days in "full payment" in the sense that he does not require anything else but the commercial debt from the purchaser. However, "full payment" does not mean that the payment process as such is finished. The manufacturer rather accepts to be finally payed in 60 days by the purchaser, however the seller might need to be payed earlier, which opens up business opportunities for banks. Commons continues:

"He (the manufacturer, A/N) sells the debt to a dealer in commercial paper or to a bank *at a discount* (!) and accepts in *full payment* (!) a banker's debt payable on demand and therefore payable *without discount* (!)." (ibid., our emphasis)

The banker's debt, payable on demand, is accepted in payment *without discount*, because it is payable on demand of the creditor and not at some future point in time. In an assignment of a claim before maturity of the claim, the creditor will have to demand a discount for his own interests and he will be able to do so.

5.2 Inherent instability of private credit

"I promise, I won't overpromise!",

said the well intending private party before entering into a contract, thereby setting terms ex ante for circumstances ex post, that the private party could not possibly know about at conclusion of contract. We believe that using our framework we will be able to clearly show how nominally fixed claims and nominally variable property rights are entirely sufficient to create booms and busts including massive financial crisis (while the COB of the economy will be zero all the time!). There is no fraud and not even money needed for *financial* crisis at all.

If the world – whoever that is exactly – ever had enough of so called "financial crisis", it would do very well to study the inherent instability of private credit very thoroughly and subsequently start to create institutions of public law that are able to cope with the instability of private credit in a way that does not have (too much) illegitimate adverse effects on the (unequal) distribution of rights ("assets" or even a more arbitrary term: "wealth") within the economy. In the past the inherent instability of private credit was most visible in private banking, producing ample financial crises throughout history[36]. The most advanced backstop of the inherently unstable private credit is what we call "central banks"[37] today (Mehrling, 2015, 2013, 2012a).

36 We suggest to start with comprehensive comparative historical research on the emergence of private credit and the role private parties play as issuers of "private money" as well as political actors in the establishment of private law and the mediation of public law by constitutional law. Furthermore we suggest comprehensive comparative historical research on the emergence of public (tax) claims and their use as means of payment amongst private parties and the role this type of "public money" played. And finally, with the completion of the two preceding issues, we suggest to proceed to comparative historical and legal research on the *mediation* of these two types of money by the emergence of what came to be called "central banks".

37 In our current view central banks are the very embodiment of the private/public-law dialectic. Visible by observing

5.3 Essential hybridity of money

Contrary to "pure" ownership economists[38] belief[39] – who created the term "arbitrary money[40]" for any money that is not purely created on private law principles – money **cannot be** "purely" and **entirely private**. For money based on private law only (without any public backstops whatsoever) can never be inherently stable, let alone that (private law) rights (property rights and claims) do not even exist without public law in the first place, primarily for lack of enforceability.

Contrary to (neo-)chartalist beliefs however, money **cannot be entirely public** either, as money is essentially linked to private credit creation out of credit purchasing. To see this link we do not even need (private) banks (and their "money creation" powers), credit purchases and the consequential payment by assignment of non-bank claims is entirely sufficient to recognize the principle. Even private banks, in fact, are not at all purely private, for they are heavily regulated by public law principles. Although we cannot give a thorough historical analysis at this point, this public regulation of private banks today clearly is deeply connected to the historically experienced instability of private banks and their (private) credit.

To draw the line between "money" and (private) "credit" (cf. Mehrling, 2012b), means drawing in that (initially purely) private credit into the public realm, for this (initially purely) private credit is now included in "money", excluding every other (still purely) private credit[41]. We want to give the example of commercial bank short term liabilities that are considered "money" (M1) for the non-banks. The paradoxical situation is that non-banks are the major part of all "taxpayers", i.e. the source of public credit. The public credit however is what is needed to stabilize inherently unstable private credit, in this case is used to stabilize private bank credit. Public credit has been used and is being used in multiple ways to stabilize private bank credit. Banks are publicly regulated and publicly (and privately) backstopped corporations in funding liquidity (and since 2008 ff. in market liquidity, too) and even in solvency.

If we were a commercial private banker we would fear but one thing: checking accounts (or equivalents) for non-banks with the central bank. Today, everybody using cash (central bank notes) does effectively (in balance sheet terms) have a checking account at the central bank that cannot be overdrawn and comes at no cost. These special "checking accounts" for non-banks (central bank notes, circulating amongst non-banks) would be eventually closed if cash was ever to be

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closely the type of claims that are put on the assets ("rights") side of central banks balance sheets. Even if there were to be found private claims only, a central bank would remain essentially hybrid, if it can be sure of an (implicit) solvency backstop by the polity (or polities) it is attached to and often also owned by. This cannot be said however if a central bank would insist to hold claims against public debtors only. For in this case the central bank would lose its institutional connection to the private setting of prices for private rights. Private parties would probably try to evade as much as possible the transfer of their property rights for issues of such a purely public central bank, that has by then become a mere state bank, having lost its state of public/private hybridity.

38 (cf. Heinsohn, 2009; Heinsohn et al., 2013; Heinsohn and Steiger, 1996, 1984)

39 Eventually similar to other "private" or "market" theorists, like for example "goldbugs", "libertarians", "anarcho-capitalists" and the like.

40 Orig.: "Willkürgeld"

41 Purely private credit could still be used as a means of payment though, see our section 4.3.2 on "assignment of a claim" (page 35) or go back to our illustrative example that also contained assignment of a claim as a means of payment in section 4.2.1.3 on page 30.

entirely abandoned. However, there is a new threat to private commercial bank interests: cryptocurrency-emissions by central banks (cf. Danezis and Meiklejohn, 2015). While “entirely private” cryptocurrencies pose but no threat to established payment systems or governments[42], since neither money nor law can be constructed entirely private or entirely based on a priori set rules that then merely need to be perfectly executed by some algorithm[43], but central bank's emitting cryptocurrencies is going to be a field we will keep a close eye on. Specifically being equipped with the “glasses” (the terminological framework) we have sketched out in this work. We hope you will use these “glasses”, too.

6 Summary

An economy without markets is no economy. Markets however do not consist of barter transactions that might happen anywhere under any circumstances, but are comprised of the negotiations of private parties entering into contracts thereby creating claims and obligations according to private law principles (freedom, equality and consensus). Private law, on its own, lacks the negotiability of claims. If no public law is available, issues will arise about the availability of enforcement of claims against potentially anonymous third parties. Without reliable institutions based on public law, payees will refrain of getting paid in third party claims. Public law, as opposed to private law, is based on the principles of subordination under one single power monopoly. The power monopoly does not come for free, but has to be financed by taxes. Furthermore it is this very power monopoly that is supposed to protect the property rights (and all other rights, including not only claims but also personal freedom amongst others) of individuals against everybody including the very power monopoly that is supposed to protect these rights (“freedom from the state, within the state”). Hence, the essential dialectic of private/public law.

To mediate the private/public-law dialectic the application of private law principles to the power monopoly of public law is attempted by what is called constitutional law. It is right here, within constitutional law, where the negotiations about essential powers happen. A crucial next step in the (r)evolution of constitutional law will be the integration of the “money question”, i.e. the role that the means of payment play concerning “power”, that for the most part remained entirely outside of discussions about constitutional law, up until this point.

42 We do not come to this conclusion by our failure to understand cryptocurrencies, see (Hofer, 2014).

43 Law in essence will always be fluctuating somewhere between “executability” (dream of crypto-anarchists and “blockchainers”, see “Ethereum”) and “nihilism” (i.e. non-law). All in between will be “elastic” and law (and by that money) always will be (Deakin et al., 2015; Pistor, 2013a, 2013b; Pistor and Xu, 2002a, 2002b, 2002c). We refer again to the ideas on the mediating functions of constitutional law in section 2.2.3 (page 11) for what we called the private/public-law dialectic in this work.

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