

emigrated in 1919. Knapp's son in law Theodor Heuss, the first president of the Federal Republic Germany, praised his impartiality and precision. Before the publication of "The State Theory of Money", Knapp wrote about economic development. He was called "the best expert on German agricultural history" in a book on biographies of Germans by the *Verband der Deutschen Akademien*, the Association of German Academies (1928, p. 596). Wicksell (1906) thought him to be "one of the pillars of the German Historical School", which was led by Gustav Schmoller.

In the author's preface to the English edition, Knapp states that the English translation is based on the 4th edition in German. He mentioned the review by Dr. J. Bonar (1922) that was based on the German edition.<sup>7</sup> Thereupon, Knapp writes, "the Royal Economic Society determined to set on foot an English translation, in an abridged form" (v). Knapp in particular thanks "Messrs. Keynes and Bonar" as well as the translator and her adviser. The role of Keynes in the translation of Knapp's "State Theory of Money" escaped notice of later scholars of Keynes. Neither Skidelsky (1992) in his three volume biography of Keynes nor Patinkin (1982) in his book on anticipations of the General Theory mention Knapp. On the other hand, Knapp was not completely forgotten, as Trautwein (2003) in his chapter on Knapp in a book on European economists of the early 20th century shows. Wray (1998) and other Post-Chartalists of the Modern Monetary Theory variety then brought Knapp back into the academic discourse.<sup>8</sup>

## 2.1 Summary – ‚Money is a creature of law.‘

The first sentence of ‚The State Theory of Money‘ is a direct attack on the existing idea that money has intrinsic value, is based on precious metal. Knapp (1924, 1) defines money as a creature of the law and concludes that ‚we must deal with legal history‘.<sup>9</sup> He opposes the widely-held view that money can be understood from the numismatics, the study of the collection of coins. Knapp (1924, 1) instantly distances himself from embracing a ‚paper money pure and simple‘, like that of Austria issue in 1866 during the Austro-Prussian war (see Dub 1902, p. 566-7).

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<sup>7</sup> Sanger (1906) published an enthusiastic book review - "So masterly a piece of reasoning is not often presented to the reader" - on Knapp (1905) much earlier in the same journal. The book review ended with the sentence: "[A] reviewer must express the most earnest hope that *Staatliche Theorie des Geldes* will be translated into English without delay".

<sup>8</sup> See Wray (1998), Wray (2014), [Kelton \(\)](#), [Tcherneva \(\)](#), [Fullwiler \(\)](#), [Mosler \(\)](#).

<sup>9</sup> A very readable short version of his book is Knapp (1925 [1906], pp. 243-255)

Knapp looks for a definition of money and starts with specie. After some pages he writes: „Let us assume that this exchange-commodity consists of a metal - which is not absolutely necessary, but occurs in the most important case - we can then give a name to this simplest form of the means of payment; it is „autometallic“.<sup>10</sup> This autometallism „gives no juristic consideration to the form of the pieces“ – it is all about weight (and purity). Knapp discusses then the possibilities of silver being used by the recipient for „real“ or „circulatory“ satisfaction. With real satisfaction he means the use of the silver in crafts, with circulatory satisfaction he seems to mean acceptance as a ‚means of payment‘. Knapp then discusses the role of debt in providing the monetary unit of value. There are debts expressed in units of value set by the state, discharged with a means of payment. Here we have the state determining ‚as a maintainer of the law‘ what it accepts to discharge debts against itself.<sup>11</sup> This is Knapp’s definition of the means of payment. According to Knapp (1924, 15), the state also recognizes that in cases of conversion „all old debts are uniformly converted in the new means of payment“. Knapp stresses that debts are nominal, even those paid in specie. Therefore, he claims to have found a general theory of money that covers both specie (which can provide „real“ satisfaction) and paper money (which does not) as instances of it.

The second subsection of the chapter is titled „Chartal Means of Payment“. Knapp proposes to understand the movement from money based on metal to money based on paper as an evolution. Knapp (1924, 27) writes: „Our law lays it down that only pieces formed in such and such a manner are to be admitted as means of payment, and the significant marks of the pieces are prescribed by law“. It is the proclamation by the state that makes a means of payment, its „validity dependent not on weight but on fiat“. Knapp compares money to tickets, stamps and tokens, which also have no intrinsic value but derive their meaning from the institutional (legal) surroundings. The legal significance of coins would come not from the coins themselves, but from the legal interpretation. Knapp concludes: „The definition of money is therefore ‚a Chartal means of payment‘.“ Coming back to the first sentence of the book, Knapp notes that political action – first and foremost, legislative activity - of the State is the source of money, not jurisprudence itself.

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<sup>10</sup> In his book, Knapp introduces many new terms, built mostly on Greek words. Since these words did not carry over into the language used by monetary theorists I have decided not to use them.

<sup>11</sup> In Adam Smith (1776) there is a sentence in which this is described: „A prince who should enact that a certain proportion of his taxes should be paid in a paper money of a certain kind might thereby give a certain value to this paper money, even though the term of its final discharge and redemption should depend altogether upon the will of the prince.“ [SOURCE, PAGE NUMBER]

In the following, Knapp shortly discusses the international dimension. Whereas in autometallism, coins are at once international means of payments, this is not so with Chartal money.<sup>12</sup> The law does not operate beyond the state's boundaries, so the use of Chartal money is limited to the state's territory. In the third subsection of the chapter on „use in circulation“, Knapp (1924, 95) recognizes that those who hold Chartal money do so „with a view to future use for payment“. Knapp criticizes the fact that most people when they think about money think about it as an asset and forget the fact that it can be and is a liability, too. He stresses that individuals just as the state have positive (assets) and negative claims (liabilities). Money has always to be understood from both asset and liability side, Knapp (1924, 48) states. Only then it will be understood that „[s]uch tickets as paper money pure and simple are, it is said, acknowledgments of the State's indebtedness. Payment in such tickets is therefore only a claim on the State ... (50)“. In other words: the paper money discharges tax liabilities against the state and nothing else.<sup>13</sup> Knapp discusses whether paper money proper is a debt of a state – promising to pay something „better“ in the future – and concludes that in a legal sense they are not „but at most appear so“. Knapp ends the section stating that people will retort that what he says holds true only for paper money, not for specie. He believes, however, the dividing line is between pensatory (weight-based) and Chartal (by proclamation) means of payment. After a long discussion of metal-based money in the last subsection, Knapp ends chapter 1 with a length of 92 pages.

Chapter 2 deals with „currency within the home country“. Knapp discusses some empirical cases and then the role of banks. He notes that „[t]he convertibility of the bank-notes is then one of the measures by means of which the State assures a superior position to the money which it issues itself, certainly a very important object“. This comes very close to what Mehrling (2010) calls the „pyramid of money“, with bank deposits being promises of „higher“ money, like central bank deposits. Knapp states that it is assured that there is a „fixed rate for the bank-notes in terms of the State-issued money“ (141) – Mehrling's „par“, if that fixed rate is one-to-one. Banks also use „Giro groups“ to make payments among each other. After paying in a certain amount of state money, they have access to deposits at the Giro group which they can use to make Giro payments: „The members of an association of payers make their payments to one another in the following way; member A delivers a claim which stands to his credit at the central office to member B. By this means the

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<sup>12</sup> There is an interesting sentence in the context of the Eurozone on p. 41: „If two States should make an agreement for pooling their money, then for our purposes they are no longer separate States, but form a community of States which is to be regarded as a whole.“

<sup>13</sup> The quote continues: „... a provisional satisfaction still leaving something to be done on the part of the State.“

payment is carried out.“ Knapp discusses more topics, like agio and changes of standard in this chapter, which are omitted here because they are of no further interest. Chapter 3 is on exchange rates, chapter 4 consists of a historical review of countries like England, France and Germany.

## 2.2

The publication of „The State Theory of Money“ in 1905 marks a watershed not only in monetary theory, but in economics as a whole. In the preface to the German edition, Knapp (1924, vii) writes: „In the autumn of 1895, in a course of lectures in Berlin, I put forward my views fully for the first time, laying down: that the money of a State is not what is of compulsory general acceptance, but what is accepted at the public pay offices; and that the standard is not chosen for any properties of the metals, but for the deliberate purpose of influencing exchanges with the commercially important neighbouring States.“ These views are incompatible with the economic theory that the discipline’s neoclassical writers used at that time, so it would be expected that entrenched interest would rage against Knapp’s theory. Disconnecting money from metals, the supply and demand toolkit could not be applied to metal anymore: it is not scarce. The lack of scarcity – pun intended – is due to the fact that the state can produce paper money at very close to no cost at all. That such a money should have any „value“ in exchange at home (purchasing power) or abroad (exchange rate) would be unthinkable for many economists, even though this possibility was mentioned by Adam Smith (1776) in his *Wealth of Nations*.<sup>14</sup> Therefore, Knapp must have expected some backlash against his book. In his exchange of letters with Bendixen, published by Singer (1958), Knapp’s reaction to the way the book has been received had been recorded in writing. We return to this topic in section 4.

## 3. The reception in German-speaking academic discourse

In the exchange of letters between Knapp and Bendixen four reviews by three economists are discussed at some lengths. They have been written by Soda (1907), Lexis (1906a, 1906b) and Voigt (1906). From this beginning, a large literature developed, leading to whole books being devoted to "The quarrel about the State Theory of Money" (*Der Streit um die*

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<sup>14</sup> Smith (1776) writes in Chapter II (continuation): On Money considered as a particular Branch of the general Stock of the Society, or of the Expense of maintaining the National Capital: "A prince who should enact that a certain proportion of his taxes should be paid in a paper money of a certain kind might thereby give a certain value to this paper money, even though the term of its final discharge and redemption should depend altogether upon the will of the prince."

*Staatliche Theorie des Geldes*).<sup>15</sup> Döring's (1920) book on the history of monetary thought starts with Knapp, underlining the importance of his contribution.

In the following, I will provide some brief biographical information about the authors of the first book reviews and provide summaries of these lengthy reviews. I will highlight certain issues that are interest from today's perspective but at the same time not forget to mention the issues that the authors brought up at considerable length, even though they might look uninteresting from today's perspective. The book reviews are followed by a section on what Knapp and Bendixen had to say about them in their exchange of letters.

### 3.1 Calligaris (1906)

#### Biographical information

Published with the subtitle „A scientific judgment of the monetary reform“, Calligaris reviews Knapp's book from an Austrian perspective.<sup>16</sup> He starts by noting that no general theory of money exists and that metallism would be the only theoretical structure. Knapp's book changes this by trying to unite all sorts of money under one theory. The unifying concept is that of money always being a *chartal* means of payment, that it is the state that accepts a certain token for payments to itself which gives money its property. This is also valid for money based on metal, which is not worth what it weighs but what it proclaims. Even though the English pound used to be based on weight, by now, writes Calligaris, it is not. In most monetary constitutions the value of money is not connected to a certain content of metal.

Calligaris then writes about switching from one currency to another, about nominality of debts and unit of value. He then discusses the money that is accepted for payments by the state and hence to some extent can be pushed into circulation.<sup>17</sup> Calligaris states that the question of what determines the status of permanent money is decided by the skills of the monetary authorities – ‚this is not a question of law but one of economic power‘ (p. 45). This seems to imply that the State can force its citizens to accept a certain money independent from any declarations of law, like that of giving a currency the status as legal tender. Calligaris notes that the holder of a banknote does not have a claim on the emitting

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<sup>15</sup> see Palyi (1922). He concludes on page 95 that apart from the technical system Chartalism would be "invalid", belittling the book by praising its "artistic" value of connecting economic and legalistic ideas.

<sup>16</sup> Austrian as viewed from Austria, not from the Austrian school of economics.

<sup>17</sup> There is no discussion of seignorage, even though at this point the issue is clearly visible. See Reich (2017) for a discussion of seignorage in different monetary systems.

institution but rather a means of compensation when it comes to claims made from the institution on him or her. He then discusses cash as money and why money is never a commodity inside the country but rather the yardstick.<sup>18</sup> Gresham's law of bad money driving out good money would not work in the context of money that the state accepts for payments to itself.

After discussing Austrian monetary history, Calligaris makes the bold statement that there are no equilibrium exchange rates and that these would be determined by international relations of trade and payments. It is possible to fix exchange rates through economic management of the currency. This would be good for weaker states as it helps the interests connected to trade and finance. The efforts to stabilize the exchange rate work through movements of the rate of interest. These have distributional consequences. An increase in the interest rate is damaging to those borrowing from the central bank, a decrease harms the bank or, in Russia, the state, and thus ultimately tax payers.<sup>19</sup> Whether the stabilization of the exchange rate is ultimately successful depends on the economic power of the state. The actual international means of payment would be gold and this is why 1871 is such a significant year in monetary history. A discussion of Austrian monetary history follows, leading to the recommendation to concentrate all gold for use in international payments and not back up domestic currency by gold since it is rather unnecessary.

Calligaris closes with the remark that the new teaching allows an alternative to good and bad in finance, based on actual facts and recognizing existing arrangements. Calligaris then attempts to reconcile metallists with Chartalists by stating that inside the country Chartalism would rule, whereas in international business a 'theory of business' would rule. This theory would replace the quantity of money with the quantity of business, which are the ultimate ends of the issuance of money. In the end, a monetary system's fate would be connected to the economic power of a country.<sup>20</sup>

### 3.2 Soda (1907a, 1907b)

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<sup>18</sup> This is interesting with respect to later discussions about how to include money in theoretical economic analysis.

<sup>19</sup> Again, a discussion of seignorage is avoided even though the issue is clearly visible. Lower interest rates reduce central bank profits, which are an income to the State. In the early 20th century this would normally have triggered a discussion about seignorage. (See footnote 17.)

<sup>20</sup> Calligaris seems to say that the monetary system has an influence on the economic fate of a country, but it is possible to read causality the other way around as the very long statement runs over five lines.

According to Singer (1958, p.71 fn. 1) Kiichiro Soda was a very distinguished Japanese private banker and social philosopher. He was at Freiburg im Breisgau in 1907. He read a book review of Knapp's "State Theory of Money" in a Japanese journal on the law and send it - translated into German - to Knapp. Knapp ignored the book review just as he ignored all the other book reviews coming from foreign countries. This is somewhat odd since Knapp spoke English well and had studied the English political economists before 1870.

Soda starts with a short summary of Knapp's main points, then attacks the book on two fronts. Firstly, means of payment is but one function of currency. Why is Knapp so fixated on this function? Means of exchange and measure of value, according to Soda, are what needs to be examined in order to understand the nature of money (p. 339). The function as means of payment would be a derivative of the other two functions. Secondly, Knapp's idea of means of payment is different from that of other economists. Soda does not instantly provide any theoretical explanations to back up his arguments but refers to one of his writings (in Japanese). He stresses the difference of the law and economics as the result of the specialization of sciences. Later, he uses almost incomprehensible sentences to describe what he thinks money is. For instance, Soda (1907a, 342) writes: „Money is, like I said, a realized objectivity of a psychological human process, that means, of subjective value“.<sup>21</sup> He writes that the law does not force anybody to save in the form of money or wire student fees in the form of money towards where the son is studying.

The next section is on the value of money (*Wertmaß*). After some metaphorical musings, Soda states that money builds on specialization of labor and private property (343). He mentions Marx and the idea of the circuit ( $G - W - G$ ), in which money is traded for goods which are trade for money.<sup>22</sup> The point is to divorce money in economic life from money in legal terms, driving a wedge between the statements of Knapp and the real world. Soda (344) states: „That money is the objective expression of value is the nature of money“. This, obviously, is the opposite of what Knapp said, who stressed that the question of „value“ of money is imprecise, that value would not exist. Soda wants to compare the value of money with the value of goods. He concludes that the state can fix the unit of currency, then suggests to keep apart the „gestalt“ of money and its functions. Soda sees money arise

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<sup>21</sup> The original reads: „Geld ist, wie ich vorher betont habe, eine verwirklichte Objektivität eines psychologischen Vorgangs des Menschen, das heißt, des subjektiven Wertes“.

<sup>22</sup> Soda does not write  $G - W - G'$ , the usual notation that indicates that profit (more money) is the ultimate goal.

before debt (345) and hence does not support the idea of money as debt as developed by Knapp.

Soda's (347) definition of money is the following: „A thing [...] becomes means of payment because it is money“. To define money by defining a means of payment is, according to Soda, the wrong way to proceed. Soda agrees with Knapp that the state has the power to define the medium that discharges a liability. However, in the economic dimension money would be something different. Money would be the objective expression of value, bound with the function of means of barter (Tauschmittel). He thus disagrees with Knapp's definition that money is determined by legal considerations.<sup>23</sup> On the legal side, money is the measure of value and the means of payment (Zahlungsmittel).<sup>24</sup> The ideas expressed by Knapp, namely that money is a creature of the state, that past, present and future of money must be thought from a legal perspective and some other issues are due to the neglect of the economic dimension. Soda then discusses the controversy of the banking school and the currency school in the context of philosophy, acknowledging the work of Simmel (1978) [1907].

In the end of the first part of his book review (pp. 336-355), Soda develops a range of questions. One is why money should be differentiated from non-money, another why the property of means of payment should define money and also why one should call money that which the State declares as money. He continues the discussion in the second part of his book review (pp. 620-655). Since he lays down his own opinion, discussing Knies, Simmel and Marx, among others, the second part is not directly relevant in the context of Knapp's State Theory of Money. Soda returns to Knapp only in his conclusion. He rejects Knapp's ideas outright, writing at length about problems of value, the exchange rate and paper money. He claims that paper money can be money and believes to contradict Knapp. Soda (655) concludes: „The function of money to provide a numerical measure stick (*Maßstab*) to all economic phenomena and actions, independent from the subjects. And nothing else.“

Comments by Knapp and Bendixen

### 3.3 Lexis (1906a, 1906b)

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<sup>23</sup> On page 353, Soda writes that Knapp could not explain the current monetary arrangements of China, but does not proceed to make his case.

<sup>24</sup> He discusses money as a means of payment in more detail on pp. 354 ff.

Lexis wrote two book reviews in 1906. In Lexis (1906a) he starts with noting that Knapp's theory is static and does not cover the dynamic aspects of money, with the state keeping up its monetary order against „the storm of economics forces“ (557). According to Lexis, all countries have seen their foundations of monetary law being shifted without their action and without their intent. The circulation of gold turned into a circulation of currency, paper money lost 90% of its value, such are the things that need to be explained. Lexis congratulates Knapp for the vocabulary that he invented and the definition of money as a „chartal means of payment“. He rightly summarizes Knapp's view that not metal content but proclamation is what makes money money and that Knapp's book is not a call for paper money. Lexis understands the centrality of the argument that money discharges our (tax) liabilities vis-a-vis the state. He notes that Knapp's definition of cash as metal coins is tighter than the usual definition of the time (which, in Germany, included coins, bank notes, notes of other banks and the state, gold and foreign cash). Lexis then searches for examples in the real world that would fit Knapp's categories of money and spends the next pages discussing Knapp's vocabulary. A description of international currency issues follows. In all of these, Lexis confirms the views of Knapp.

Lexis then discusses the difference of metallists and Knapp. While metallist would only look at money in terms of stability of purchasing power, Knapp sees money from the perspective of nominal debt. The existence of nominal debts allows the State to insert a currency with which to discharge the debts incurred in the past. The State, according to Knapp, has no power over purchasing power and relative prices. Metallists would see the switch from cash to paper money not as degeneration (*Entartung*) of money as long as there would be a metal standard foundation. Since metallists cannot explain recent monetary phenomena of paper money keeping its value (purchasing power), Knapp was justified in putting forward a new theory. His theory, however, would only look into the being of money. The effects of money are different and they need to be addressed as well.

In Lexis (1906b) starts with the metallist's definition of money. Only that is money which, even if it loses its form as money (by conversion to pure metal), always keeps its value. The state puts symbols on metal to guarantee its quality and weight. Everything else is a surrogate and not „real“ money. However, recent phenomena have shown that paper money can take on functions and characteristics of independent money. Changes in purchasing power would complicate the matter. Knapp, however, would see money as a

creature of the law. Money in its existence is independent from its material. The further statements are mostly identical to those in the other book review. Lexis emphasizes that for Knapp money is not that which is legal tender or that which is emitted by the State, but only that which is accepted by the State for payment.<sup>25</sup> The State has to act in order to fix the exchange rate of its money with respect to gold, which Knapp is in favor of. Lexis praises Knapp for his „clearest transparency“ and „strictest logic“.

In his conclusion, Lexis argues that Knapp has written a book on money which ignores the economic – as opposed to the state – theory of money. His theory would stand the test of time, but an economic theory of money is needed. It would be of importance for the State when it designs its money. Lexis doubts that the economic theory of money, which is still firmly rooted on metallism, would take a Chartalist turn. So, for now, the doctrine of metallism would be sufficient to understand money, with the English system of gold-backed money being the normal case.

Comments by Knapp and Bendixen

### 3.4 Voigt (1906)

Biographical information

Voigt (1906, 317) starts with a comparison of Knapp with Schmoller. Schmoller would present facts and, putting them to use, would reject theories using those facts. Knapp, however, starts with theory in his very first sentence – money being a creature of the state – and then would use logic more than facts to persuade us that he is right. Only in his fourth chapter would he lead the reader down the (empirical) path that led him – Knapp – to develop his ideas about money. Unlike Schmoller, who would have presented a complete history of money, Knapp however limits himself to the recent history of money. Scholars belonging to Schmoller's school of economics would shake their head at such a methodological choice, but would find themselves in agreement with the focus on the state, the public administration and the rejection of economic laws.

Knapp, writes Voigt, builds up his theory a priori, without introducing some empirical facts to the reader. The law of the monetary institutions rests on the laws of the state, not on economic laws. The economic issues would rather disturb the legal order. Voigt concludes that Knapp's rejection of economic laws in the field of money is an application of

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<sup>25</sup> Knapp does not deny that legal tender exists – it just does not feature in his definition of money.

Schmoller's general principle of rejecting economic laws. Voigt recognizes the importance of the issue at hand. If the idea that the State with his laws is above the economic laws and can hence manipulate, change (*abändern*) or modify (*modifizieren*) them is correct, then it would have opened the door wide for any sort of radical economic policy. The state then should be able to push down the price of real estate, regulate the price of bread and meat and also the worker's wage. The question of the organization of the economy is one of legislation, and thus problems would only exist because of the „good will“ of the ruler.<sup>26</sup> The „good defense“ that the state has to protect itself from radical claims would be lost: that some things are impossible for economic reasons.

If all of this would be correct, then the discipline of economics would be no special science, but rather be applied administrative law. The role of economists would be to teach the administrators what good will is. This seems to be what Knapp would be doing, teaching financial men (*Finanzmännern*) that there are no barriers and that those that they see are imagined ones. Voigt mentions in passing that what Knapp says has been said before and that Knapp fails to cite his predecessors.<sup>27</sup> The idea of Knapp is that the state introduces new money just as it introduces new measures for weight or length. It would without consequence whether the state chose gold coins or paper as currency, as it sets nominal value of the pieces. People would not greatly care about this as they both receive money and return money to the state. Voigt stresses that Knapp writes about only one historical issue, that of the nominalism of debt going back to the past. Consumer prices can change, but the nominal debt must be upheld.

Voigt stresses the experience of paper money in Austria that Knapp mentions in his preface. It is then and there that Knapp sees the state stamping paper money which is then used for ultimate payment as the burghers cannot exchange their paper money into anything else promised by the Austrian state. Voigt notes that Knapp's attacks on economists and practitioners are relatively fierce, but since he does mention names this should not be a problem. Voigt (p. 325) then states that he „this state theory does not fit the facts of monetary history nor the current phenomenon that prompted its development“.

Voigt starts with the question whether the State can chose the currency as it wishes. He examines the case where the State replaces one currency with another that has a different purchasing power. A State doing this would be accused of breaking the law, as it would

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<sup>26</sup> I'm not sure whether Voigt is sarcastic here or this is a typo.

<sup>27</sup> Voigt (p. 321) mentions publications by Menger and Roscher.

constitute an intervention in property rights and (nominal) debts. It would be acceptable if changes in purchasing power would come about over time, but if the State would change it on purpose we would have a social “coup d’etat“ (*sozialer Staatsstreich*). A historical example from ancient Greece is put forward to support his claim, but Voigt has to admit that the consequences of the change in purchasing power had not been recorded. Voigt claims that even though Knapp never explicitly mentions it, he would think it possible for the State to change the purchasing power of currency when introducing a new one. A change in purchasing power would lead to economic disorder and hence nobody should believe that the State could change the currency in this way. Because of this they would be factually impossible. Voigt then accuses Knapp of producing a theory of money for the isolated state.<sup>28</sup> A change in the currency of England would lead to economic disorder in foreign trade, which Knapp would ignore.

The next issue concerns the term „money“. Knapp, Voigt writes, would have a narrow definition of money when he defines as money only that which is legitimized and issued by the State. No conclusions regarding the nature (*Wesen*) of money should follow directly from this definition as other definitions are possible. Voigt notes that there has been and is in use money that has not been issued by the State, a fact that Knapp would not disagree with. Voigt sees in Knapp two payment systems, one based on economic motives, the other on authority of the state. Voigt distinguishes three historical periods:

1. a period of private money only (pre-middle Ages)
2. a period of money issued by states and territories (middle Ages until late 19th century)
3. a period of monopolized state money (19th century onwards in England)

Voigt says that in the first two periods economic and not legislative moments ruled. Why was the relationship between money and the State different over time? Voigt sees the State of the pre-middle Ages periods as not having a monetary-financial base that would allow it to regulate and intervene. The money issued by the state in the third period would be based on an economic basis that was established in the past. Voigt notes that the State could not regulate the value – read: purchasing power – of its paper money. Good money, according to him, should have a constant purchasing power. He then praises gold as a good basis for money. His reasons why this is so stay in the dark as his views can be summarized as

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<sup>28</sup> The „isolated state“ goes back to von Thünen (1966), originally published in German in 1826. Voigt makes the connection explicit in footnote 1 on p. 336.

money is money because it is accepted as money all over the world. Voigt claims that the State did not cause gold money to circulate, so it cannot take away this property. A discussion of gold currency in the world economy follows. Voigt concludes briefly that economics should be an economic science, thus rejecting the idea that legal considerations play a role when it comes to money, as Knapp theorized.

### 3.5 Others

Knapp's book prompted a significant academic debate. Many prominent economists wrote about Knapp's theory and about how other economist's work would fit into the "The State Theory of Money". For instance, Schumpeter (1954, 288-9) classified Marx as a "theoretical metallist" since Marx based the value of money squarely on gold.<sup>29</sup> In chapter three of "Capital", named "Money, or the circulation of commodities", Marx starts with the sentence: "Throughout this work, I assume, for the sake of simplicity, gold as the money-commodity."

#### *Georg Simmel*

Simmel published his "The Philosophy of Money" first in German in 1900.<sup>30</sup> In the third English edition, Simmel (2004), David Frisby mentions the connection between Knapp and Simmel. Knapp followed the work and career of Simmel and read "The Philosophy of Money", commenting on it in a letter that it was stimulating to him.<sup>31</sup> Possibly, Simmel had attended lectures by Knapp when he was a student in Berlin. Knapp also had a hand in Simmel's appointment at the University of Straßburg.<sup>32</sup> Frankel (1977) writes extensively about the monetary theories of Simmel and, to some extent, Knapp. He does not agree with Knapp. The State would not be an actor, Frankel (1977, 52) thinks, and if it would be and we assume that he is "all powerful in monetary affairs [...] then we have in fact assumed away a free monetary order." Härpfer reports that during 1872-1882 Knapp, Lexis and Schmoller build up the Political Sciences seminar (*Staatswissenschaftliches Seminar*), which was led by Schmoller when Simmel attended it in the summer of 1889.

#### *Max Weber*

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<sup>29</sup> See Nelson (2005, p. 65 ff.) for more on Marx and credit theories of money.

<sup>30</sup> See Laidler and Rowe (1980) for a review article for economists.

<sup>31</sup> Simmel (2004, xvi)

<sup>32</sup> *ibid.*

## *Knut Wicksell*

Wicksell (1999) [1907] published a book review of "The State Theory of Money". According to Ronacaglia (2006, p. 415), he went to Strassburg to listen to Knapp Brentano in the year 1887 or later. He is surprised that Knapp would publish a book on theory, after having joined the Historical School. He lauds his work, including "those quiet little satirical sallies" that were so peculiar to him. Having himself examined both pure cash and pure credit economy, he is happy with Knapp's resolution of examining paper money even though it might be viewed as a bad monetary system. Wicksell (1999, p. 211) presents Knapp's basic idea - "the purely formal, conventional or 'proclamatory character of money". One thing that Wicksell deems important is that changes in the standard of payment have an effect on those who have net assets and those who have net liabilities. There is hence a distributional issue connected to the question of money.

Wicksell (1999, p. 216) also highlights "the question whether the state, too, could make itself the central player in a giro association, in which case the two stages passed through to date in the development of means of payment, the autometallic and the cartal (money) would be succeeded by a third, the 'giral', possibly without the employment of any money or metal at all. Knapp answers this question in the affirmative", but does not go into detail nor does he recommend such a system. It does not escape Wicksell that Knapp notes dryly that "gold would ultimately be superfluous; it would therefore be possible to dispense with it completely". Written in the year of the Panic of 1907 in the US, which ultimately led to the creation of the Federal Reserve Bank System, we have here the theory underpinning the latest developments in monetary systems.<sup>33</sup>

Wicksell, however, feels himself obliged to distance from Knapp at this point, again praising the first 200 pages of the book. He wonders what determines the value of money, or in modern terms, the purchasing power, both with respect to other currencies (exchange rate) and to goods and services. He is not happy with Knapp's answer to the first question and does not find his second question addressed at all. Wicksell (1999, p. 216) emphasizes "the so-called quantity theory of money, which for all its shortcomings is still probably the only

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<sup>33</sup> See Moen and Tallman (1999) for the connection between the Panic of 1907 and the creation of the US central bank.

possible or conceivable way of explaining the value of money". He further elaborates on why he is not satisfied by Knapp's explanation of the exchange rate mechanism. Apart from these inconsistencies, Wicksell (1999, p. 219) agrees with Knapp and closes his account pointing out that "in terms both of its content and its form [...] it is to be counted among the pearls of economics literature".

### *Joseph Schumpeter*

Schumpeter (1926, p. 513 f.) wrote Knapp's obituary in *The Economic*: "He had a clear, I should like to say passionate, vision of the essence of things, which pierced far below the surface. He saw the processes and problems of history and grasped them more firmly than most men do the facts surrounding them. And he based his historical analysis on a comprehensive knowledge of present-day facts." In the last paragraph, Schumpeter (1926, p. 514) mentions "The State Theory of Money", "his most successful hit" that rose him to international fame. However, Schumpeter thinks that "it went wrong" and its influence on monetary science "an unfortunate one". Given that Keynes built on Knapp only in his "A Treatise on Money" in 1930, Schumpeter probably gave his honest opinion about Knapp.

### *John Maynard Keynes*

According to Schefold (1987, p. 54), "Knapp's institutional approach and his rejection of the quantity theory [...] constituted a first step towards the later theories of Keynes and his school". Frankel (1977, ix) in chapter 4 "emphasizes the importance of Georg Friedrich Knapp's influence on Keynes's outlook". The connection is obvious as Keynes (1930, p. 5) writes: "[T]he Age of Chartalist or State Money was reached when the State claimed the right to declare what thing should answer as money to the current money-of-account - when it claimed the right not only to enforce the dictionary but also to write the dictionary. To-day all civilised money is, beyond the possibility of dispute, chartalist."

This is why Keynes (1972, p. ?) [1933] argues very clearly for an expansionary fiscal policy in times of economic crisis: "In the field of domestic policy, I put in the forefront, for the reasons given above, a large volume of loan expenditure under government auspices." The usual counter-argument would be that government spending is tax-financed and that a raise in taxation is impossible in times of depression, but Keynes when following Knapp knows that this is untrue. As Cesaratto (2016) claims, the State first spends and only taxes later. Keynes (2010 [1928], pp. 90-92) wrote: "The Conservative belief that there is some law of

nature which prevents men from being employed, that it is 'rash' to employ men, and that it is financially 'sound' to maintain a tenth of the population in idleness for an indefinite period, is crazily improbable - the sort of thing which no man could believe who had not had his head fuddled with nonsense for years and years."

*Ludwig von Mises*

#### 4. Knapp and Bendixen on the reception of „The State Theory of Money“

In the exchange of letters published by Singer (1958), Knapp and Bendixen - a banker from Hamburg - discuss the book reviews as they appear.<sup>34</sup> Bendixen discusses Voigt (1906), saying that his respect towards Lotz - another book reviewer that I did not discuss here - has increased after reading Voigt. Bendixen does not like Voigt at all, he states. The words he uses to describe the review are hollow and superficial (*hohl und oberflächlich*). It would be useless to engage in a controversy with him.

Having read the book review of Lexis (1906a) twice, Bendixen writes that Knapp should be satisfied. Lexis seems to be enthusiastic, and had to restrain himself when writing the book review. Apart from agreeing with the book he only adds that an economic theory of money is necessary, but that would be nothing new. Knapp agrees with this assessment and writes that Lexis is rightly named the most knowledgeable specialist on money. The small metallist yappers would be disgraced. Discussing the second book review by Lexis (1906b), Knapp and Bendixen agree that it is more of the same and that Lexis is a bit diplomatic by pointing out that the metallist authors write very well.

Last, and indeed least, Knapp and Bendixen discuss Soda (1906). Bendixen writes that flicked through the book with great discomfort. He complains that he cannot follow Soda's line of reasoning, stating his preference for simple and clear deductions. In his reply, Knapp never mentions Soda's book review.

#### 5. Conclusion

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<sup>34</sup> See pages 25 (Lotz), 28 (Voigt), 30 (Diehl), 37 f. (Lexis, 1906a) , 40 ff. (Lexis, 1906b), 67 (Menadier), 71 and 121 ff. (Soda).

The academic reception of Knapp's book on monetary theory was no surprise. Authors that belonged to the tradition of metallist thought saw the book as an interesting addition from a perspective of law that would be silent on the economic perspective. The book was belittled as a new perspective that would not be able to challenge the economists' view of money. Voigt understood precisely that, following Knapp's theory, the often used defense that some policy reforms are not possible for economic reasons – read: a lack of money to spend – would fall and hence the door for progressive policies of all kinds would be opened.

The book review by Soda is something of an oddity. The author seems to have read a lot of European economic theory but was more of a philosopher than an economist. It is unclear why he was chosen to write two lengthy book reviews in a field that he apparently was not an expert in. His ideas are mostly unclear and his reading of Knapp is superficial, as he argues at times against positions that were not held by Knapp. As with Voigt, it is not easy to understand what an economic theory of money is and why that is incompatible with or would override the state theory of money. Soda probably sees the other functions of money as economic functions and this is why he is not supportive of Knapp. However, he fails to address the deeper question of the reasons behind the use of money in the economic realm.

The reviews by Lexis are sympathetic to Knapp. Like the other two reviewers, he stresses that we need an economic theory of money to supplement the state theory of money. That economic theory of money would be a metallist theory and that would work well enough. In other words, Knapp's theory has won over Lexis.

From today's perspective, it seems rather odd that two theories of money – one legal, one economic – were thought to co-exist. Wicksell (1898) had already shown some years before the appearance of Knapp's book that in order to understand money one would have to understand a pure cash economy and a pure giro economy plus the interactions of the two kinds of money. Bank deposits and central bank money circulate in parallel, and bank deposits are promises of cash, which is one form of central bank money.<sup>35</sup> Since the writing of Knapp's book, we have seen the use of cash and metal coins much diminished and bank deposits have taken their place. This has to a very large extent validated the ideas of Knapp, the most prominent of which is that money is what the state accepts as payment.

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<sup>35</sup> The other is reserves, deposits that bank hold at the central bank.

Nevertheless, it has only recently been rediscovered that what follows from this – as correctly recognized by Voigt (1906) – is that the state as the issuer of currency need not go bankrupt if Treasury and central bank work together.

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