

## **Money and the French Revolution: Historical Research versus Ideology and “Creative Writing»**

### **Some question marks on historical research, based on the reading of a book by Rebecca Spang**

By Paul Huber

The publication date of the book which motivated (or provoked) me to write this essay, is not up to date:

*Rebecca Spang: Stuff and money in the French Revolution, Harvard University Press, 2015*

I had read a review of the book in the Times Literary Supplement at the time<sup>1</sup>, but I put it aside and forgot about it because I was preoccupied with other topics at that time. It was only when I recently delved deeper into the financial history of the Ancien Régime and the French Revolution that the title resurfaced. I have now read the book, and I can't help but give an in-depth account of my reading impressions.

I am sometimes amazed by the poor books published in the discipline of history today, by renowned publishers such as Harvard University Press in the present case, and by the scientifically questionable research contributions with which one can hold a professorship today (Rebecca Spang is a professor in the History Department at Indiana University in Bloomington, Indiana). This is one of many comparable books that I would rather classify under the heading "creative writing" than under the heading "serious research". The author lets her free associations run loose, compares everything with anything in order to generate sense, makes many learned references, which mostly remain arbitrary, but she shows a rather limited understanding of the actual topic of her book.

I notice a similar kind of writing in other disciplines as well. Especially in the humanities I encounter this kind of academic "feuilletonism" again and again, for example in philosophy or art history. But I am too little versed in these other disciplines to be able to write a well-founded critique of it. Rebecca Spang, however, is writing a book in the discipline of history, which is familiar to me, and on a subject in which I feel at home and where I have a fairly good overview of the literature and of the state of research<sup>2</sup>, which is why in this case I trust myself to have a reasonably competent judgment. It is therefore precisely her book that I want to have a closer look at, as an exemplary case of a questionable academic style which appears to have become a general trend. In doing so, it is indispensable to reproduce some longer quotations from the book, in order to make comprehensible the fuzzy and unclear, indeed often arbitrary way of argumentation and thinking. In literary terms, the following could be described as a kind of "close reading". In doing so, it is equally indispensable to deal in depth with some of Spang's statements on the history of money and currency, in order to examine them for their truthfulness and scientific character, because Spang's book shows considerable deficits in this respect.

### **Erudition or «name dropping»?**

The arbitrary references and quotations already turn up in the introduction of Spang's book, many of the names mentioned being totally unrelated to the subject of the book. One rather gets the impression that it is a kind of "box ticking", a checking of boxes to mark the correct attitude by mentioning the "correct" names, and at the same time to give the impression of erudition by means of the multitude of quotations and references. The series of names cited in the 18 pages of the

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<sup>1</sup> Review by Patrice Higonnet in the Times Literary Supplement, June 12, 2015, p. 27, under the heading «Commerce and economic individualism in the French Revolution».

<sup>2</sup> See my article «Bankrott», published in the magazine «NZZ Geschichte», No. 43, Zurich, December 2022, pp. 24-39 (the cover page title was: «Revolution – Stürzte 1789 ein Staatsbankrott Frankreichs Monarchie?»; in English: “Revolution - Did a state bankruptcy topple the French monarchy in 1789?”). No English translation available.

introduction alone is long: Keynes, Marx, Thucydides, the encyclopedists Diderot and D'Alembert, David Hume, Adam Smith, Condorcet, Roland Barthes, Louis Althusser, John Locke, Judith Butler, the author duo Michel Aglietta and André Orléans, the Baron d'Holbach, the Comte de Mirabeau, Max Weber, Andrew Dickson White, Marcel Marion (author of a financial history of France), Edmund Burke, Claire Crowston, Tom Kaiser, Michael Kwass, Michael Sonenscher, François Furet, Thomas Paine, the Comte d'Antraigues, Arthur Young, Charles Dickens, Ernest Labrousse, Daniel Mornet, Alexis de Toqueville, John Markoff - some others I may have overlooked. These are only the names in the actual text of the introduction, the associated footnotes or comments provide additional names, among many others that of Slavoj Žižek, for example – an opportunity to tick off another box and to set another marker of attitude and erudition, devoid of any obvious connection with the book's topic.

### **The treatment of others' research**

The "name dropping" and the arbitrary references and quotations are one thing. But the way she treats the research contributions of others is objectionable as well. Spang's judgments about them are often questionable or even simply wrong, and in doing so she likes to make generalizing judgments in the style of actual sweeping blows. Regarding the research on the assignats, for example, Rebecca Spang says:

«Yet nearly all existing scholarship on the subject ignores questions of sovereignty and governance and instead treats the assignats as a test case for economic policy.» (p. 9).

The statement is false, the research literature is full of descriptions of the political conditions and motivations for the creation of the assignats. But the author cleverly protects herself by inserting the word "nearly". Such sleight of hand can be found again and again, to relativize her own statements as well as the statements of others.

Similar generalizing, inaccurate, and in many cases false "assessments" of others' research work can be found in great numbers in Spang's book. Another example:

«In the great bulk of work on the 'origins of the French Revolution', revolutionary events themselves seem never actually to happen. Focused as they are on eighteenth century innovations, these studies treat revolution more or less as an afterthought.» (p. 53).

One wonders which books on the causes and background of the French Revolution Rebecca Spang is referring to here. If one takes William Doyle's book "Origins of the French Revolution"<sup>3</sup>, for example, one can not only read about the developments that preceded and influenced the Revolution, but also how the events of 1789 actually unfolded. If individual research contributions have examined certain features of the Ancien Régime in depth, without always focusing directly on the Revolution, it is nonetheless precisely these in-depth investigations that made it easier to understand what was new about the Revolution and why, or out of what preconditions, the explosive discharge of the Revolution came about in the first place, but also what the continuities were. (By the way, also in the passage quoted above, Spang applies her usual trick by inserting the fuzzy term "the great bulk" in order not to make her own attack itself vulnerable).

Another example of the superficial criticism of the research of others:

«Historians have heretofore rarely noted the role played by the free-market illusion in radicalizing the Revolution.» (p. 205).

This statement, again, is incorrect. The role that ideas of the free market and property rights played in the Revolution is well described by many authors. But here again the author protects herself cleverly by inserting the word "rarely". Besides the unfounded assertion, the author also applies the

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<sup>3</sup> William Doyle: Origins of the French Revolution, Oxford University Press, 1980.

pejorative term of "illusion" here. Calling the ideas of the free market a "free-market illusion" is an ideological a priori position that she does not substantiate any further, another one of her attitude markers.

One wonders whether the condescending assessment of the research contributions of others is due to today's manner of "over-selling" or self-marketing, where one always has to loudly announce every little idea of one's own as a great new finding - a "disruption" - in order to set oneself apart from others at all costs and to stand out as exceptional and unique. It is an attitude that gets tiresome after a while and does not really cover up the pooriness of Spang's own "new" insights.

### **Feuilletonism**

Equally disturbing are the many pretentious, but textually hollow and often inaccurate sentences, of which there are countless numbers in this book. A typical example:

«Though both are central to any history of the Revolution, indebtedness and temporality have rarely been brought into the same narrative framework.» (p. 17)

Has anyone ever read any essay or book on the subject of debt that did not simultaneously talk about the maturity date (or dates) of the debt (i.e., a form of "temporality")? Or does the author mean something else entirely? But what else does she mean? She does not clarify this anywhere. Similar statements occur again and again. It is as if she were under a compulsion to always come up with new, well-sounding, but essentially empty formulations - in other words, feuilletonism. It is part of the picture that the above quotation again contains an implicit reproach against the research of others that is said to have only rarely addressed what Spang wanted.

Another typical example of Spang's free association, which searches for the seemingly profound wording but lacks a clear thought or statement, is the following sentence:

«Much as the *Morte d'Arthur* is a romance about the death of Arthur, a 'mort-gage' was a gage (that is, a pledged item) that was *mort* (or dead).» (p. 35).

What is the benefit of this juxtaposition? What is the point of relating the title of the English-language late medieval compilation of Old French and Middle English tales of the Arthurian legend, drawn up by Thomas Malory and first published in 1485, and a financial instrument of the Ancien Régime? The benefit is zero, but the comparison is evidently meant to place another erudition marker. It is one example (among many) of the author's penchant for arbitrary association and for comparing everything with anything in order to simulate meaning and depth. Spang confuses wordplay with insight.

Right in the lines before the above quotation, Spang also reproaches the historians for having "often" (note again the relativization to make one's own attack unassailable) mistranslated the term "*hypothèque*" as English "mortgage", which according to her opinion were diametrical opposites according to the French legal culture of that time (p. 35). An assertion that I cannot comprehend with the best will in the world, and for which she herself gives no further explanation or evidence.

### **Unfamiliarity with the topic of research**

What is really shocking, however, is that a lot of factual information on the subject of money and currency - the actual topic of Spang's book - is simply wrong. I am amazed at how one can write a book about "money" without actually having in-depth knowledge of economics, money or currency.

A first example: Rebecca Spang says that the life annuities of the Ancien Régime were "short-term debt" (!) (pp. 19-20). A debt whose duration lasts over the entire lifetime of the pension recipients ("*rentiers*") who subscribed to the pension should be a short-term debt? Has Rebecca Spang even read the books she cites? Because uniformly, and consistent with the facts, they treat life annuities

as a "long-term debt"<sup>4</sup>. I am amazed that not even the editor of an academic publishing house (the book is published by Harvard University Press!) corrects this, but simply waves it through. Even more disturbing are the unresolved contradictions in Spang's own argumentation, when elsewhere (p. 16) she herself mentions that, according to a calculation of 1790, the payment obligations of the French state for its public debt, consisting mainly of perpetual annuities and life annuities, would remain a fixed part of the state budget until at least the year 1822. Is this a duration for "short-term debt"?<sup>5</sup>

With regard to life annuities (French: "*rentes viagères*"), Spang furthermore adds a reasoning that borders on the absurd:

«It was also widely asserted that *rentes viagères* by their very nature were contracts that could not be reimbursed; they were, after all, life-time investments. Returning the amount originally given would mean prematurely ending the life of the *rente* and, by implication, that of the investor (or whoever had been named as the 'head' in the contract).» (p. 72)

Unlike perpetual annuities (French: "*rentes perpétuelles*"), life annuities could indeed not be redeemed, but this has nothing to do with the fact that the life of the annuitant (i.e. the pension recipient) would also have ended if they were terminated prematurely. How does Spang come up with such an absurd idea? Such sentences definitely belong in the category «*creative writing course*»! The contractual benefit simply ran until the annuitant's death, as is the case with today's pensions.

### Spang about the money of the common people

Another example of a lack of technical familiarity with the subject is Spang's assertion about the production costs of coins of low nominal value. Such coins would have been vanishingly small and thus unusable or almost impossible to produce if they had only been made of precious metal. Spang writes:

«[...] Made from various alloys, the lowest denomination coins routinely had face values that exceeded the market worth of the metals composing them. [...] Mixing the silver with another metal, such as copper, made it possible to generate larger coins with the same silver content, but it also required a far more elaborate and expensive production process. So whereas mint masters and the state made money on the minting of gold and silver coins, they lost it on small change, which was therefore only produced under pressure and as a sort of 'public service' or welfare measure.» (p. 145f.)

It is true that at all times coins of low denominations have not been made of pure silver, since such a coin would have been much too small. They were made in an alloy of predominantly non-precious metal (esp. copper) with the addition of only a small amount of silver (so-called "billon" coins), sometimes even in pure copper or bronze. This had already been the case at the time of the Romans

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<sup>4</sup> For example, the book, quoted by Spang, written by Philip T. Hoffman, Gilles Postel-Vinay, and Jean-Laurent Rosenthal: *Priceless Markets: The Political Economy of Credit in Paris, 1660–1870*. University of Chicago Press, 2000 (see the table on p. 100). The book has initially been published in French under the title: *Des marchés sans prix: Une économie politique du crédit à Paris, 1660–1870*; Éditions de l'EHESS. Paris, 2001 (there, the same table can be found on p. 130).

<sup>5</sup> An excellent overview of the different types of short- and long-term debt in the Ancien Régime is given, for example, by Eugene N. White in his article «*Was There a Solution to the Ancien Regime's Financial Dilemma?*» (in: *The Journal of Economic History*, Sept. 1989, Vol. 49, No. 3, pp. 545-568):

«*When faced with a deficit, the Crown issued a variety of debt instruments. Long-term securities included the rentes perpétuelles or consols, the rentes viagères or life annuities, loans hypothecated on the revenues of the pays d'états and the city of Paris, the tax farmers' security bonds, and loans from the clergy. Most of the government's short-term debt took the form of tax anticipations - assignments, billets de fermes, or rescriptions. The government's debts also included the dettes exigibles arriérées - a heterogeneous group of non-interest-bearing promissory notes.*» (p. 546)

as well as in the Middle Ages, and equally in the 18th century, which is the subject here. Low denomination coins have always been token coins (German: "Scheidemünzen"), i.e. coins whose metal value is far lower than their nominal value.

What is incorrect, though, is Spang's assertion that the process of producing low denomination coins from non-precious metal was much more complex and more expensive than the process of producing coins from precious metal. The - largely manual - production process was in large part identical for all coins, except that the production costs per coin for a low denomination coin logically accounted for a much larger proportion of its nominal value than for a high-value coin made from precious metal. It is precisely because the authorities did not want to bear the production costs of the coins that the intrinsic value (the proportion of the metal value) of low denomination coins has always been far below their nominal value, unlike that of precious metal coins.

Equally incorrect is Spang's related claim, derived from her assumption about the production costs, that "the mint masters and the state" (Spang equates their interests, but this was not the case) produced small change coins only under pressure and as a kind of public service - whereby Spang insinuates that the state avoided these costs at the expense of the common people and insufficiently supplied the population with small change.

The research literature knows of only a few instances in the history of money where the authorities subsidized the issuance of coins. On the contrary, from the right of coinage that the lords claimed for themselves as a sovereign prerogative, they inferred to be entitled to a minting profit, including when minting low denomination coins made from non-precious metals. The minting profit (the so-called seigniorage, French "seigneurage", from "seigneur" = lord) is the value of the finished coin minus the cost of metal and production. The seigniorage is basically a hidden tax.

From the book by Thomas Sargent and François Velde, "The Big Problem of Small Change"<sup>6</sup>, in which the authors cover the period from the Middle Ages to the 19th century, it becomes evident that there can be no question of a subsidization of the production of small denomination coins. Spang refers to the book (p. 146), but one has to assume that she did not really understand its contents or that she was not actually interested in the technical aspects of the topic "money". For example, the authors write in reference to an event in France in 1461: «*This was a rare instance of a medieval government subsidizing the production of small coins, but only out of the profits made on other coins.*»<sup>7</sup>. The ruler gave the mint masters specifications regarding the expected volume of seigniorage. As this could be achieved more quickly by producing coins of high value, the mint masters preferred to produce these. For this reason, the ruler often gave the mint masters specifications regarding the volume of different denominations they had to mint. In exceptional cases it was therefore possible that the mint masters subsidized the minting of low denomination coins with the seigniorage from high-value coins. Overall, however, the sovereign himself hardly ever subsidized the minting of coins, neither in the Middle Ages nor in the following centuries.

In the Middle Ages and the early modern period, minting profits had provided a significant proportion of the means for state expenditure in many countries, including France. Particularly in times of war, in order to finance the war effort, the minting profit was increased by reducing the weight and/or the precious metal content of the coins (although the coins retained the same nominal value), while at the same time the number of coins issued was increased. Both - the lower intrinsic value of the coins and their overissuance - led to an adjustment in prices, in short: to inflation.

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<sup>6</sup> Thomas J. Sargent and François Velde: *The Big Problem of Small Change*, Princeton University Press, 2002. Thomas Sargent, by the way, is a Nobel laureate in Economics (2011).

<sup>7</sup> *ibid.*, p. 52 and *passim*

Such coin debasement, driven by fiscal interests, particularly affected small change coins as well, i.e. billon coins and copper coins. In her book "Bimetallism", the monetary historian Angela Redish gives two telling examples from 17<sup>th</sup> century France, the first the example of a recoinage:

«[. . .] in 1654-56, in the aftermath of the civil war known as the Fronde, there was a massive copper recoinage. The stated rationale was to provide low-denomination coins and to drive out foreign copper coins; however, the fiscal advantages were doubtless also significant.»<sup>8</sup>

Minting profit, not subsidization, was the objective here. The same objective also applied to the production of small denomination coins made from "billon", whose production had been interrupted since 1603 and was resumed in 1674 to finance the wars of Louis XIV:

«No billon coins were minted between 1603 and 1674, when the need to "find a healthy aid to the affairs of the State, and to contribute to the pressing expenses of the war" (ordinance cited in Mayhew [. . .]) led to the issue of 2 and 4 sols pieces 10 denier fine in Paris and Lyon. The coins were not only low in fineness but also overvalued by 33% (a mint equivalent of 36lt, compared to 27lt for the silver louis). Over-valuation meant profits for the king but equally made counterfeiting profitable, and the coins were immediately counterfeited.»<sup>9</sup>

Here too, minting profit, not subsidization, was the objective. Besides, another problem that constantly arose in relation to coins of low intrinsic value is showing up here, namely the problem of counterfeiting. If minting had only been possible at a loss, it would not be possible to explain why the permanent problem of counterfeiting existed at all. Who would counterfeit a coin that costs more to produce than the coin can buy?

In their book, Sargent and Velde equally describe various periods of inflationary currency debasement, which were always driven by the need to use the production of small denomination coins for fiscal purposes. In 1596, for example, King Philip II of Spain decided that henceforth, instead of the previous billon coins, pure copper coins (with the same nominal value) should be minted, thus saving, i.e. retaining as minting profit, the cost share of silver which had previously accounted for one-third of the production costs:

«Until then, copper, silver, and minting costs each formed a third of the face value of billon coinage. With Philip II's decree, the silver was withheld and the copper content reduced.»<sup>10</sup>

Philip II and his advisors were aware that this posed a risk of inflation, and they wanted to prevent this by limiting the number of new coins issued and retiring the earlier billon coins<sup>11</sup>. However, his successors Philip III (1598-1621) and Philip IV (1621-65) dropped this restriction, and for fiscal reasons (i.e., to increase the funds available for government expenditures) an overproduction of copper coins began, leading to severe inflation<sup>12</sup>.

The risk of inflation and the adequate supply of small change to the population were part of what Sargent/Velde in their book describe as "*the big problem of small change*"<sup>13</sup>. The fact that the

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<sup>8</sup> Angela Redish: *Bimetallism: An Economic and Historical Analysis*; Cambridge University Press, 2000. p. 133.

<sup>9</sup> Angela Redish, *ibid.*, p. 131. We will not go into the technical explanation of the "mint equivalent" of 36 versus 27 livres tournois here; for this as well as for the other technical details the reader is referred to Angela Redish's book itself.

<sup>10</sup> Sargent/Velde, *op.cit.*, p. 232

<sup>11</sup> *ibid.*

<sup>12</sup> *ibid.*, p. 230ff., Chapter "Inflation in Spain".

<sup>13</sup> The title of the book goes back to an expression from the great economic historian Carlo Cipolla. According to him in the late Middle Ages and early modern period the problems associated with the provision of low denomination coins were intricate for centuries, which is why he referred to them as "the big problem of the petty coins" or "the big problem of small change" (see in: Carlo Cipolla: *Money, Prices, and Civilization in the Mediterranean World, Fifth to Seventeenth Century*; Princeton University Press, 1956. Reprint: New York:

intrinsic value of low denomination coins was below their nominal value, plus the trend to the overissuance of such coins, repeatedly led to a creeping inflationary adjustment of prices, expressed in low denomination coins, while prices in gold or silver coins with high intrinsic value ("*full-bodied coins*") remained more stable. Low denomination coins thus gradually lost value with respect to precious metal coins, and accordingly more and more low denomination coins were needed to buy a precious-metal coin. The debasement mainly affected coins of low value, while the precious metal content of silver and above all gold coins was more likely kept stable, probably not least because such "hard currency" was indispensable in international trade, and presumably because the rulers, too, valued a means of securely safekeeping - and preserving the value of - their own fortune.

Due to the downward slide in the value of low denomination coins, their value came closer and closer to their intrinsic metal value, and there comes a point in time when the metal value of low denomination coins exceeds their nominal value, so that it becomes profitable to melt down the coins and sell the metal. Thus arose the paradoxical situation that as the demand for low denomination coins increases due to the price inflation, they become increasingly scarce. Over the centuries, the authorities have repeatedly responded to this situation by further lowering the metal content of the coins to make it interesting again for people to bring metal to the mint to have coins made from it, rather than conversely melting coins down to extract the metal. However, each reduction in the intrinsic value (metal value) of the coins tended to lead to a new cycle of decline in the value of the coins.

Until the 18th century, the state had developed other methods of taxation, the seigniorage had become less important (its share of the nominal value of coins was now often very small), and one had come to realise that the debasement of coins was detrimental to the economy and thus also to the state. As in other countries, the aim in France was therefore to keep the precious metal content of silver and gold coins stable, and in the case of small denomination coins, the aim was both to maintain their intrinsic value and to control the number of coins in circulation due to the risk of inflation.

As Sargent and Velde point out in their work (and as Cipolla had already noted<sup>14</sup>), it was only in the 19th century that the "standard formula" was found for providing small change with little intrinsic value without the earlier problems of the shortage of low denomination coins: (a) the state itself issues low denomination coins, whose intrinsic value is lower than their nominal value; (b) the quantity of circulating coins must be limited (because of the risk of inflation); (c) the convertibility of these low denomination coins into a stable anchor currency of precious metal is guaranteed (thus making confidence in the low denomination coin independent of its low intrinsic value). It was precisely the last point of the standard formula that was recognized as important and implemented only in the 19th century.

However, already in the 18th century the shortage of low denomination coins did not reach the same proportions as in earlier centuries. It is true that, in the 18th century, proportionally fewer pure copper coins were minted in France than in countries such as, e.g., Great Britain, and low denomination coins in France continued to be rather billon coins (copper coins with a small addition of silver). However, one does not necessarily need to see this as a disregard for the monetary needs of the common people. Rather, this could also be interpreted as restraint or caution, since one did not want to issue small change coins whose intrinsic value was far below their nominal value, and which might therefore have been at risk of loss of confidence and thus loss of value. France had made bad experiences in the past with experiments in "fiat money" (i.e., money that had no intrinsic value but was backed only by the creditworthiness of the state – we will come back later to the

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Gordian Press, 1967, pp. 27ff.). Sargent/Velde complement Cipolla's findings with additional examples and transpose them into a systematic economic model.

<sup>14</sup> Cipolla 1956, op.cit., p. 27

paper money of John Law), and there was a deep mistrust among the population of any form of "worthless" money. Unlike in Great Britain, the state's creditworthiness was in a deplorable condition, and France's financial and monetary system was not nearly as developed as that of its rival across the Channel, as became equally evident in the state bankruptcy of 1788 (more of which later)<sup>15</sup>.

Still, there was indeed a shortage of small denomination coins during the Revolution. But contrary to Spang's insinuation that the elites neglected the people's concerns about the shortage of small denomination coins, the parliamentarians took these concerns very seriously. Among other things, it was decided to melt down church bells in order to obtain metal for minting coins. After all, where should the required copper have come from? Yet, the shortage of small change coins persisted, and to remedy this, assignats of ever smaller denominations were printed from January 1792 onwards. These, however, suffered from the same value decline as all assignats - a value decline to which we will come back later and which goes far beyond the problem of small change.

By the way, when there was a shortage of small change, the population often made do with substitute coins or with other means (local write-up or credit money systems, where debts and liabilities were written down and offset against each other without exchanging cash, etc.). Spang cites such examples, but always with the implicit criticism of the failure of the authorities who, in her view, were unwilling to grant the people a good currency, and not with admiration for the resourcefulness of the common people, whose advocate Spang otherwise pretends to be. One could also argue against Spang that the elites had no interest whatsoever in excluding the common people from the money economy; on the contrary, the extension of the money economy to these strata would probably have been more to the liking of the elites, since this would have involved the inclusion of the common people in the exchange via anonymous markets instead of via neighborhood networks.

### **Spang's critique of the idea of "commodity money"**

A consistent feature of Rebecca Spang's statements is her criticism of the idea of the intrinsic value embodied in the coins made of silver and gold - a criticism of the idea of "commodity money". This is the term used to describe money that is made of a material that itself has value (use value or symbolic value - intrinsic value, that is)<sup>16</sup>.

Spang would have done better to read the remarks of Marc Bloch, one of the founders of the "Annales" school of historiography, in his *"Esquisse d'une histoire monétaire de l'Europe"*. His excellent account of the monetary history of Europe since Charlemagne was published posthumously by his friends in 1954 from his lecture notes (Bloch was dismissed as a professor by the Vichy government in 1942 because he was Jewish, went into the Résistance, and was murdered by the Nazis in 1944, as a Résistance fighter and as a Jew).

At the end of the introduction to his sketch of a European monetary history, Bloch writes:

«Dernier rappel: la valeur intrinsèque d'une monnaie est la teneur de cette monnaie en métal précieux. Par contre, la valeur d'échange ou pouvoir d'achat de cette monnaie est une notion d'ordre uniquement social et économique. Elle augmente quand on peut acheter plus de marchandises pour une même valeur intrinsèque; elle diminue dans le cas inverse; autrement dit,

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<sup>15</sup> See also the aforementioned article: Paul Huber, op.cit.

<sup>16</sup> The term «commodity money» is usually translated as «Warengeld» in German. Diverse are the materials and objects, as well as living beings (humans and animals), which were used in history as commodity money (and thus as a measure of value and unit of account). The examples of living beings include cows, sheep, horses, but also slaves. The examples of materials range from Babylonian grain units to gold and silver, from peppercorns to cowrie shells, and so on and so forth.



elle augmente quand les prix baissent et diminue quand ceux-ci s'élèvent. Son étude appartient à celle des prix."<sup>17</sup>

«A final recap: The intrinsic value of a coin is its precious metal content. By contrast, the exchange value or purchasing power of a coin is a purely social and economic concept. It increases when more goods can be bought for the same intrinsic value; it decreases in the opposite case; in other words, it increases when prices fall and decreases when prices rise. Its study belongs to the study of prices.»

It could hardly be said more clearly and more simply.

Spang would equally have done well to read the concise description of the complex problems of "commodity money" and of the supply of money in a currency system based on several metals, given by Angela Redish in the chapter "The mechanics of commodity money" of her aforementioned book "Bimetallism"<sup>18</sup>.

The value of money in the Ancien Régime was determined by a multitude of dynamic and interdependent parameters: by the respective oversupply or undersupply of goods (depending, for example, on the size of a year's harvest, on import and export flows, etc.), by the legally fixed values of the coins or metals among themselves, as well as by the development of the relative prices of gold, silver and copper among themselves, which often clashed with the legally fixed values. The former were primarily dependent on the supply and demand of each of these metals, including supply and demand from abroad, whether in intra-European trade or in trade with the Levant and the Orient. Especially in the latter trade, precious metals were still the only means of payment in the 18th century.

Precious metals are a commodity that has a value in itself, and they were used as a uniform medium of exchange especially in international trade - also in intra-European trade – in the form of coins, or non-minted as ingots or in other raw form, measured by weight and purity. Gold and silver are homogeneous as a material, as elements (listed in the periodic table) they cannot be produced at discretion (despite all the attempts of the alchemists!), and their relative scarcity makes them valuable (they have a high value with a low volume). And thanks to their homogeneity, they are suitable as a universally valid uniform medium of exchange even when not minted. The fact that precious metals were also traded as commodities does not contradict their role as carriers of the intrinsic value of precious metal coins, but on the contrary is precisely the basis of that role.

Spang, however, insists on criticising the idea of the intrinsic value of precious metal coins as a "cultural fantasy" (p. 238) – an opinion that is incomprehensible. For thousands of years, gold was considered to have intrinsic value. Does Spang want to tell us that for thousands of years mankind has been taken in by a "cultural fantasy" and has erred in assigning a value of its own to gold? Do we need to rewrite history? Were the Aztecs simply unlucky not to have read Spang yet? One might ask whether Spang lives in a different universe. We will come back to her "cultural fantasy" later.

Throughout the centuries, the trading of precious metals in the markets basically set limits to the authorities in manipulating the currencies they minted. In foreign trade, but also in domestic trade, the reference to the value of precious metals always remained a means for market actors to calculate the prices of their goods and the value of the coins they used with reference to a "real" anchor value, in order to protect themselves from losses in currency exchange as well as from losses due to inflation.

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<sup>17</sup> Marc Bloch: *Esquisse d'une histoire monétaire de l'Europe*, Cahiers des Annales, No. 9, Paris, 1954. p. 9.

<sup>18</sup> Angela Redish, *op.cit.* The chapter «The mechanics of commodity money» can be found on pp. 13-40.

This is exactly what the French population did when the state sought to cover its financial needs by issuing assignats during the Revolution and when this assignat currency succumbed to massive inflation.

And this brings us to a central theme of Spang's book, the assignats. Spang's critique of the idea of the intrinsic value of gold and silver coins as a "cultural fantasy" is closely connected with her description of the history of the assignats, indeed it actually forms its basis. For from the assertion that the value of precious metal coins does not correspond to any intrinsic value, she implicitly derives that the value of the assignats, the paper money created in the Revolution, did not need to correspond to any intrinsic value either (and that the loss of value of the assignats was therefore not economically justified). Not that Spang clearly shows this connection; unfortunately, such analytical and argumentative clarity is not to be found in her work, she prefers to hint at connections rather than to prove them in an analytically conclusive way. But ultimately this is exactly the idea she expresses.

### **The assignats and their value decline**

Let us recapitulate the history of the assignats here so that we can then better assess Spang's view of them.

Even before the outbreak of the Revolution, the French state had become insolvent, and the Revolution first caused a collapse of tax revenues. Faced with empty coffers, the revolutionaries sought to ensure the solvency of the state by creating the paper money of the assignats. The idea behind the creation of the assignats was that this paper money would be backed by the value of the properties of the Catholic Church confiscated in the course of the Revolution (the "*biens nationaux*", "national goods"), and that the paper money could be used by the citizens to purchase these very goods, with the notes being destroyed again after their "return" to the state. But neither were the first issued assignats sufficient to finance the monetary needs of the state, nor were all assignats destroyed again after their "return" to the state. The lack of tax revenues, combined with the massive costs of the Revolution's defensive wars against the conservative powers of Europe that were soon to begin, made the production of ever new assignats necessary to keep the state alive.

In 1789, the value of the confiscated church properties had been estimated at around 2 to 3 billion livres tournois, but by August 1795, assignats worth 11 billion livres had already been issued, and by February 1796 their volume had risen to around 45 billion livres<sup>19</sup>. In short, the assignats were far from being secured by the value of the church properties that had originally been intended as collateral. It is therefore not surprising that at the climax of their value decline, the assignats were accepted for payment only at a fraction of their nominal value: In January 1794 they were still traded at just over 50% of their face value, only to lose their remaining value at an increasing rate in the course of 1795 particularly, to a low of 0.5% in February 1796<sup>20</sup>.

The assignats basically represented a kind of promissory notes of the state which at the same time were supposed to function as money. However, the value of the national goods serving as collateral was far from sufficient to cover them (despite the later increase in the volume of the national goods by the nationalised properties of the emigrated nobles and of other enemies of the Revolution). No wonder that confidence in the assignats collapsed and that the population was willing to accept them as means of payment only at a discount to their nominal value.

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<sup>19</sup> 45 billion livres is the commonly quoted figure for the value of the assignats issued. Christian Aubin makes an estimate of the assignats taken back by the state and effectively withdrawn from circulation and arrives at an estimated value of actually circulating assignats of 34.5 billion livres for February 1796. See: Christian Aubin: «Les assignats sous la Révolution française: un exemple d'hyperinflation»; *Revue économique*, Jul., 1991, Vol. 42, No. 4, Sciences Po University Press, Paris, pp. 745-761. See the table on p. 760.

<sup>20</sup> see Aubin, op.cit., p. 760.

As promissory notes, the assignats were no longer trustworthy due to the lack of cover. Were they trustworthy as currency, i.e. in their second function into which they increasingly converted over time? Ultimately, trust in any government debt is dependent on trust in the ability of the state to service its liabilities. Equally, confidence in a currency issued by a state is dependent on confidence in the state's creditworthiness, because ultimately - in accounting terms - a currency also represents a liability of the state (nowadays listed as a liability in the central bank's accounts).

The state's creditworthiness had already been damaged before the outbreak of the Revolution, as the French kingdom had had to stop its payments in 1788. In order to have new taxes approved, which were necessary to rebalance the state's finances, the king had then had to convene the Estates General, which met in 1789 and soon constituted themselves as the sole representative of the people - the National Assembly - and increasingly deprived the king of his power. With the Revolution, the state's payment crisis worsened even further as tax revenues collapsed. However, the option to levy taxes is an essential prerequisite for the creditworthiness of a state.

Not only were the assignats covered by collateral for just a fraction only, but the French state's ability to levy taxes was no longer guaranteed after the collapse of the old tax administration in the Revolution had led to a massive drop in tax revenues, and a new tax administration had not yet been established. It is therefore quite understandable that the population's confidence in both possible supports for the creditworthiness of the assignats (national goods and tax revenue) collapsed, and that people therefore no longer wanted to accept the assignats as payment at their nominal value.

One possibility was for the population to make a difference between the prices for payment in gold and silver coins (with intrinsic value) and the (higher) prices for payment in assignats. Such behaviour, however, meant that the assignats were not accepted at their nominal face value, which was tolerated until the time of the "*Terreur*", but was then drastically punished. In the phase of the "*Terreur*" (the period of the Revolution under the leadership of Robespierre, known as the Reign of Terror, which lasted from May/June 1793 to July 1794), people even risked the death penalty if contracts stipulated different prices for payments in gold and silver coins or in assignats. Only through coercive measures could the state try to enforce that the assignats were accepted at their nominal value.

### **Fix the value of the assignats via the guillotine?**

So what is Spang's explanation of the decline of the assignats? As always, the first thing she does is to devalue other research contributions:

«Historians have long realized that the monetary crisis of the 1790s is central to the Revolution, but they have generally allowed classical and neoclassical economics to structure how they see it. Within this framework, the failure of the assignats is always described as one of quantity.» (p. 214)

Here, again, her sweeping statement is wrong, the research contributions on assignats are diverse and not limited to the approaches of classical and neoclassical economics alone.

After the introduction quoted above, Spang then begins a reckoning with the "quantity theory of money" (which assumes that the amount of money in circulation always has an influence on prices) and its explanation for the value decline of the assignats (p. 214). For her criticism of this theory, however, Spang refers to a single book, namely a book from 1876 (!) by Andrew Dickson White, "Paper Money Inflation in France". Spang simply does not take note of the many contributions from general history and from economic and monetary history that have appeared up to the present day which deal with the subject of the assignats in complex analyses. In these contributions, in addition to the topic of the over-issuance of assignats, the political influencing factors that contributed to their over-issuance (the domestic political struggles, the needs of national defence, i.e. the "defence

of the Revolution", etc.) are very well mentioned and analysed, but they all consider the excessive volume of the assignats issued as the essential reason for their failure.

Spang, however, categorically rejects the argument that the sheer volume of assignats issued could have anything to do with their devaluation and demise. In doing so, she argues as if it had been within the power of the members of the Convention (the "lawmakers", as she calls the members of parliament in the US-American way) to give validity to the assignats and to preserve their course. With coercive measures such as the above-mentioned threat of the guillotine?

Elsewhere, Spang becomes explicit in this regard, particularly where she speaks of the discussions of the "lawmakers" in the years 1790-1792 as to whether or not money should be regarded as a commodity like any other, which one should be able to trade freely. In other words, whether one should be able to freely exchange "money" (read: assignats) and precious metals for each other, with the rate being set freely. Spang comments on these discussions as follows:

«As long as money's value was understood as determined by market mechanisms, the nation was not really sovereign over it. And as long as the law allowed – in fact encouraged – individuals to trade in money as they did in any other good, formal legal equality was largely meaningless in the marketplace.» (p. 145)

Implicitly, Spang is supporting a dirigiste - ultimately dictatorial - coercive economy here, namely the enforcement of the nominal value of the assignats by the guillotine. Not even the representatives of the Modern Monetary Theory (MMT), popular among many on the left today, which strongly invokes the "monetary sovereignty" of a country, get carried away to the assertion that the sovereign state must also be able to determine the exchange rate or the value of the currency it creates. On the contrary, in MMT it is precisely inflation whose extent is accepted as the only limit to the "sovereign" money creation of the state. Also, it is not understandable why exactly a coercive measure such as the ban on currency trading is supposed to save the freedom and equality of citizens! As is so often the case, Spang simply leaves it at that with an assertion that is supposed to prove her "good" attitude. The important thing is to show that one stands on the side of "good" and "justice", even if this leads to dictatorial measures such as enforcing the "just" value of a currency by coercion - if necessary by the guillotine, as during the "*Terreur*".

Spang is even more explicit in another instance:

«[...] it was only from April 1793 to autumn 1794 that positive laws mandating the circulation of paper and coin based on their face values alone replaced laissez-faire policies grounded in the idea of gold or silver's intrinsic, 'natural' worth. In other words, only during 'the Terror' did the revolutionary state treat money as something it had the right to patrol and police, only during 'the Terror' was money dimly recognized for the political and social convention it is.» (p. 236)

One has to read this passage twice to clearly recognise the monstrosity hidden in it. Only during the time of the "*Terreur*" was money weakly recognisable as the "political and social convention" that it actually is, and that was so because during this time the nominal value of the paper currency (i.e. the assignats) was enforced as valid by law. In other words, a political and social convention such as confidence in a currency does not arise from a process of free decision by the people, but rather from the measures of the state enforced with coercion - i.e. with the guillotine! So much for Spang's concept of freedom! Fuzzy thinking, lack of expertise, and ideological bias combine into an unpleasant mix here. One is inclined to say: "The sleep of reason produces monsters".

According to Spang, only in the time of the "*Terreur*" did the state not pursue a "laissez-faire" policy, based on the view of the intrinsic value of gold or silver coins that was considered as "natural". "Laissez-faire" policy is used here by Spang as a killer term that indiscriminately disavows any other possible policy that is not based on radical coercive measures. Spang does not give a definition of the

term "laissez-faire" policy; the word is basically just another attitude marker, since in the left's view the term stands for a radically market-oriented form of capitalism without any social safety nets.

The fact that the market attaches an intrinsic value to gold and silver coins is not something Spang allows to be an expression of a scarcity relation; rather, the market value of the coins is fundamentally irrational for her. By disavowing the idea of the intrinsic value of gold or silver coins as a "cultural fantasy", she creates the precondition for considering the value of any currency as arbitrary, as outside and independent of any economic reality, and therefore as arbitrarily determinable by the state. As has been said before: one wonders whether Spang lives in a different universe.

### **A two-tier society of money circulation?**

The principle upheld by the National Assembly and the subsequent Constituante in the years 1790-1792, that assignats and precious metals should be freely exchangeable for each other (which de facto meant that assignats were traded far below their nominal value), is interpreted by Spang as an implicit decision by parliament to divide society into two classes, with the poor being fed off with the worthless paper money. The following passage, in which this is addressed, can only be reproduced as a whole, only in its full form does it allow us to follow the arbitrary connection between themes that Spang performs here:

«By endorsing the circulation of gold and silver coins alongside national paper bills without mandating equal exchange between them, the Constituent and Legislative Assemblies created a monetary version of the distinction between active and passive citizenship. Like an active citizen whose wealth, age, sex, and domiciled status qualified him for the vote and to hold elected office, a silver or gold coin had supposedly intrinsic qualities that earned it its role as money. Silver was 'durable', adult men with permanent homes and a certain income were 'responsible'. In contrast, passive citizens (all women and children, the homeless or itinerant, and those whose yearly tax payments fell below a certain level) were like paper money: they belonged to the nation but they lacked the supplemental attributes that produced a differential position in the market as well. Active and passive, metal and paper, all had the same stamp – all were the same before the law – but for the latter group of citizens this would prove a poor consolation prize.” (p. 167)

One almost has trouble transcribing the multitude of connections made here between all and everything. All the connections made here by Spang are not deduced in a clear analytical way, but connections are simply insinuated or invented without being substantiated by empirical evidence. This also applies to her statement on the two-tier society of money circulation and to her assertion that the poor people have been most harmed by the collapse in the value of assignats.

Of course, there were differences in the typical circulation of money and in the typical uses of money at the different levels of society or between the different social classes. But Spang's remarks on this topic do not substantiate these differences with concrete examples; they are rather a further instance of "creative writing". How to approach this topic analytically, and at the same time make the social dimension vividly specific and comprehensible, is demonstrated by Jérôme Blanc's short essay on the socially different uses of the various forms of money in the Ancien Régime before the Revolution: "*La complexité monétaire en France sous l'Ancien régime*"<sup>21</sup>.

Incidentally, it is not justifiable to describe the poor people alone as victims of the assignats' value decline, as Spang does. Low-denomination assignats were only available since January 1792, and those of high denomination were hardly in the hands of the common people. Therefore, not only poor people held worthless assignats in their hands, but so did numerous wealthy citizens who lost

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<sup>21</sup> Jérôme Blanc: "La complexité monétaire en France sous l'Ancien Régime : étendue et modes de gestion," published in: De Pecunia, 1994, VI (3), pp.81-111. (Post-Print halshs-00090030).

their fortunes in this way. Even though there were certainly many speculators who managed to enrich themselves in dealing with the assignats, provided they had the appropriate instinct for "market timing", i.e. for the right time to get in or out.

It is undoubtedly a fact that the Revolution, with its huge social upheavals, brought about a massive redistribution of wealth, and that the experiment of the assignats contributed to this. Who were the winners and the losers? Unfortunately, I know of no study that would describe this redistribution of wealth comprehensively and maybe even in a quantified way (hints welcome!) but only some more illustrative individual examples. One can easily imagine a citizen who buys a property from the nationalised church properties or noble estates - say, for example, a small castle with land holdings - at a favourable price which he pays for with assignats that are accepted at their nominal value when he buys the castle, but which he himself had previously acquired at a discount, i.e. at a price below their nominal value (thus acquiring a high-value property with low-value money and achieving a corresponding increase in wealth). But there were also numerous small peasants who, in one way or another, acquired a piece of land from the national goods. In fact, the Revolution created a broad class of new propertied citizens in the cities and in the countryside, who later were still an important pillar also for Napoleon's power and who fought as highly motivated soldiers in his armies, since he guaranteed them their new property. His seizure of power put an end to the turmoil of the Revolution, in which they had attained their new wealth, but if it continued they had to fear losing their possessions again. To measure the Revolution against a maximum requirement, according to which it would only have succeeded with the attainment of material equality for all, is simply to explain away the relative progress it brought as a failure.

#### «Money and stuff»

In the passage quoted above, Spang again speaks of the "supposedly intrinsic qualities" of silver and gold coins. We already know this topic. However, Spang calls the notion of intrinsic value a "cultural fantasy" not only in relation to coins made of precious metals, but also in relation to all other types of "commodity money" that the French population was resorting to at the time:

«Writing contracts specifying payment in 'gold coins' or, for the rent of rural properties, in red or grey partridges, fattened geese, and bushels of grain, individuals attempted to protect themselves and their property from further revolution by positing that a gold coin would always be a gold coin, that a partridge was always a partridge. [...] As 'land' had been for the assignats' proponents (even so a sizable percentage of the Church's property consisted of urban buildings), so gold, silver, and agricultural goods were for these contracts – a cultural fantasy of value made all the more powerful by not being imagined as human construction.” (p. 238)

Are all people who try to invest their wealth in gold or other commodities in a country plagued by high inflation succumbing to a "cultural fantasy"? For personal survival, is not a real partridge perhaps a better investment than continuing to hold a banknote that will only buy me half a partridge or even less tomorrow? Do these people only want to protect their assets from further revolution really, or are they not perhaps afraid for their physical survival? Does Spang recommend that all inhabitants of countries like Argentina, Venezuela or other inflation-ridden countries store their increasingly worthless money? And if they don't, for example in order to be able to feed their children tomorrow, are they counter-revolutionaries? Does she recommend to the governments of these countries to fix the value of money by law and by coercive measures, and to implement these draconically, if necessary by means of the guillotine?

Let's move on to the concluding "findings" that Spang claims to have substantiated in her book.

«Operating within the faux-materialist perspective that narrates the history of money as a difficult, perhaps misguided, transition from substance to abstraction (from metal to paper), the assignats' introduction and eventual withdrawal provide logical-seeming chronological

boundaries. In contrast, however, this book insists that paper, per se, was never the defining issue. Most transactions before the Revolution had, after all, been made on or in paper. Many chambers of commerce both opposed the issue of more assignats in September 1790 and actively supported local issuers of *billets de confiance*. When Parisians from the faubourgs marched into the Convention on Prairial 1, Year III, they called not for a return to some mythical gold or silver standard but for laws enforcing the circulation of paper at face value. Paper was not the problem. Politics - the struggle for cultural legitimacy and economic power among individuals defined in regional, social, and ideological terms – politics was the problem.» (p. 248-249)

If the opening sentence seems a bit convoluted to you, you are not alone. One wonders what the sentence is supposed to say. It is almost a caricature of academic writing. But let's move on.

At the end, Spang concludes: "politics was the problem". However, the statement is not followed by anything that would make clear which struggles for power among which individuals played a role here; Spang does not mention any names. And hasn't the discussion in history so far rather been about struggles between social groups (or classes) with different interests than about struggles between individuals? Spang does not say a word about this topic either. The word "politics" is an empty phrase that is not filled with further content, another "marker".

Many other points in the passage quoted above are questionable or unclear, but in the following we want to concentrate on Spang's statement "Paper was not the problem" from the same passage. The statement is simply wrong. It is absolutely untrue that there was never a problem with paper money in the Ancien Régime.

Let us mention first the failure of the "*système de John Law*" (1716 to 1720) during the Régence of Philippe d'Orléans after the death of Louis XIV. It was an attempt, promoted by the Scotsman John Law, to create a paper currency in France similar to the pound notes issued by the Bank of England (founded in 1694). After founding his Banque Générale, which was granted the privilege of issuing banknotes (guaranteed by the state) by the Regent, Law continued to expand his "system" further and further by acquiring several companies for the exploitation of the French colonies, from whose future profits Law promised investors unheard-of riches. These takeovers were financed by issuing more and more shares. A huge and hysterical speculation arose that took hold of wide circles of society and caused the price of the share (the bank and the colonial company had been merged in the meantime) to skyrocket to astronomical heights, until the confidence of the investors in Law's promises for the future collapsed, resulting in a crisis and in bankruptcy (and in Law's flight to Venice). Many of the insiders among the speculators had secured their profits in time and invested them in gold or other safe assets<sup>22</sup>. Many others, however, who had held on to the now worthless papers, lost everything. The bank notes had become worthless. The creation of a national French paper currency was thus off the table for decades, until the experiment with the assignats.

But also for later times, and in particular for the time immediately before the Revolution, the statement "paper was not the problem" is wrong. When Spang says that before the Revolution many transactions were carried out with "paper", one can agree with her statement in this general form, but this "paper" was definitely a problem. It was not a national currency in paper form that was used, but rather short-term payment orders, promissory notes or IOUs issued by state offices or tax farmers that served as a means of payment. All these papers were ultimately backed by tax revenues due in the future - just as Eugene White says in the sentence already quoted: "Most of the government's short-term debt took the form of tax anticipations - *assignations, billets de fermes, or*

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<sup>22</sup> A small detail of local history related to my hometown of Basel: One of the investors who got out in time, the Swiss Jean Deucher, used his profits to buy the moated castle in Bottmingen outside Basel, along with other properties in the region, and remodeled it lavishly in the style of his time. See in: Herbert Lüthy: Les Mississipiens de Steckborn et la fortune des barons d'Holbach; in: Schweizer Beiträge zur Allgemeinen Geschichte, Vol. 13, 1955 (pp. 143-163). p. 154.

*rescriptions*."<sup>23</sup> Precisely because the French kingdom did not have a public bank along the lines of the Bank of England, founded in 1694, it relied heavily on these short-term papers (which circulated also among the wider public as a means of payment) for its short-term liquidity.

Did this paper really not pose a problem, as Spang claims? Let us take a closer look.

The tax farmers ("*fermiers*"; tax lease = "*ferme*") played an important role in the financial system of the Ancien Régime<sup>24</sup>. They were venal offices, granted by the king in exchange for a purchase amount. They were on the one hand public officials, but acted as private businessmen and were allowed to pursue private business in addition to their official duties. They were responsible for collecting specified taxes in their geographical area of responsibility and for forwarding them to the royal administration, often granting advances to the monarchy for its current needs, the aforementioned short-term loans, which were ultimately covered by future tax revenues. Their debt papers, which also circulated among the wider public, were constantly renewed or extended and their volume was constantly expanded, so that eventually the future tax revenues of the "*fermiers*" were already mortgaged for years to come.

Their short-term debt papers did not represent a liability of the kingdom, the tax farmers were liable for these papers as private individuals. But these papers' maturity could not be prolonged indefinitely, let alone could their volume be increased at discretion. When in the second half of the 1780s, due to the deteriorating economy, both the taxes collected by the tax farmers declined and their private businesses suffered, some prominent representatives from their ranks went bankrupt in 1787, which quickly turned into a financial crisis for the kingdom. The short-term credit papers of the tax farmers became less and less accepted in the market, as their creditworthiness was no longer trusted. The other short-term credit papers ("*assignations*", etc.) issued by the government itself were also less and less accepted in the market, as they too were ultimately covered by future tax revenues which the market no longer believed would materialise in sufficient volume. Thus, further to the collapsed tax revenues, the short-term debt papers were no longer available to the kingdom as a source of financing, and long-term loans were hardly granted to the kingdom anymore due to its payment difficulties - with the result that the kingdom could no longer fully meet its financial obligations. Outstanding pension payments had to be partially postponed in 1787, and other payments by the state were also made irregularly or were omitted. Thus, in 1787, the state bankruptcy of the following year was already discernable: The catastrophic weather conditions and the failed harvest of 1788 aggravated the situation, the economic slump led to a further collapse of tax revenues and to a total drying up of all sources of credit - in August 1788, the kingdom was forced to stop its payments, a de facto state bankruptcy occurred, while at the same time the country was gripped by hunger revolts and the public order began to collapse.

It was this de facto state bankruptcy that forced the king in August 1788 to give in to the pressure to convene the Estates General ("*États Généraux*"), which he had resisted for years, in order to rebalance the state's finances by getting new taxes granted. The Estates General, which had been convened for the last time in 1614 (!), were, according to general opinion, the only authority that had the competence to grant new taxes. The king hoped to be able to dissolve them again after the approval of new taxes. However, with the convocation of the Estates General, which in May 1789 convened for the first time, another dynamic was set in motion that the king could no longer control: the French Revolution<sup>25</sup>. The Estates General constituted themselves as the National Assembly, the sole representative of the people, they resisted being dissolved and increasingly took over the power

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<sup>23</sup> See footnote 5. The "*assignations*" mentioned here have nothing to do with the paper currency of the later assignats, except the common root word in the name.

<sup>24</sup> An excellent description of this system of tax farmers can be found in the book by John F. Boshier: French Finances 1770-1795 - From Business to Bureaucracy, Cambridge University Press, 1970.

<sup>25</sup> On the tax system and the connection between the financial and debt crisis of the Ancien Régime and the Revolution, see my article mentioned earlier: Paul Huber, op.cit.



instead. This dynamic, though, had been set in motion by the state bankruptcy of 1788, for which the collapse of confidence in the short-term credit papers had played a major role. So much for "Paper was not the problem"!

Spang's statements do not offer any new insights into the Revolution, but rather blur and obfuscate or even simply misjudge what we know about the Revolution from previous research. Her work is not an advance in the state of research, but a step backwards behind previous knowledge.

### **Unfamiliarity with the topic of research - further evidence**

The accusation of "feuilletonism" and of unfamiliarity with the topic of research is not a minor one, and I therefore feel obliged to provide clear evidence of what I mean by this. That is why this chapter brings some more examples that I think are drastic.

First example. Spang writes:

«The extensive credit economy of the eighteenth century was not a 'bubble'. It was not fated to pop. Other scholars have been inclined to reach this conclusion, but it seems a failure of historical imagination to label the Old Regime credit economy 'unsustainable'. True enough, after 1789-1793 it was largely not sustained, but that accident of history does not suffice to declare it already structurally unsound in 1782 or even in 1785. Sustainable, it may well have been. Shock proof, it was not.» (p. 56)

One rubs one's eyes! Spang claims that the credit economy of the Ancien Régime was not "unsustainable" but only became so through the "accident of history" of the Revolution. However, the Revolution was not an "accident of history" that had nothing to do with the state of the public finances. Rather, the state of the public finances was one of the direct causes of the Revolution, as we saw in the last chapter!

Which "credit economy of the eighteenth century" is Spang talking about when she claims that it "was not fated to pop"? The credit economy of the private sector or of the state? Let us assume that she is talking about the state finances and the credit of the kingdom. But this credit did not start to falter in the years 1789-1793, rather the "bubble" had already burst in 1788, when the kingdom had to stop its payments and a de facto state bankruptcy occurred. So much for "was not fated to pop"!

Moreover, the literature on the financial crisis of the Ancien Régime demonstrates that the public debt was indeed "structurally unsound", not because of its absolute size but because of the inequitable distribution of the tax burden, the inefficiency in tax collection, and the lack of transparency and legitimacy of a monarchy whose financial behaviour was not subject to parliamentary control (as was already the case in the United Kingdom at the time). And "structurally unsound" was not only the national debt, but also the structure of the French state, because the Third Estate, which made up over 98% of the population of France and bore the bulk of the taxes, was not represented in any form in the institutions of the state. It is not surprising that the Third Estate used the opportunity of the Estates General to push through a definitive reform of the state and its institutions and to secure its own place in these for the long term. Spang, who elsewhere emphasizes her interest in "politics", could have studied a model "case study" of political economy here, but she ignores the subject.

In the above passage, Spang accuses other researchers of "a failure of historical imagination". Well, one would like to see less "imagination" and more historical and factual expertise in Spang herself!

Let us move on to the next example:

«In 1791, after two years of truly unprecedented challenges to royal authority, [...] thousands of investors [...] still thought of the Crown's *rentes viagères* as safe investments. One easy way to explain this perception would be that economic thinking simply did not keep pace with other

sorts of change, that people's financial expectations 'lagged behind' transformations in political culture. French men and women, in other words, did not fully understand the changing world in which they lived. Yet it is also worth considering that the relation between new-style revolution and old-style investment may have been as dialectical as it was linear." (p. 31)

Contrary to Spang's account, there is nothing contradictory in the fact that investors in 1791 continued to believe in the value of life annuities. They rightly regarded them not as an obligation of the king but of the state. As holders of life annuities, many citizens had criticised the financial behaviour of the monarchy which had had to interrupt its pension payments in 1788, and they hoped that the Revolution would improve the state's compliance with its payment obligations. The political upheavals were not a reason per se to abandon these expectations. That people - another of Spang's statements - did not fully understand the world that was changing around them is a commonplace truth that does not only apply under the conditions of a Revolution. In fact, even in 1791, the future was not yet clearly determined, but open, so why should investors have adjusted their expectations already? Talk of the relationship between "new-style revolution and old-style investment" is nothing but empty talk, as is the statement that this relationship "may have been as dialectical as it was linear" (typically in the subjunctive mood and not in the form of a clear statement - and sure, "dialectical" and "linear" always sound good).

Example three:

«The official public definition of 'money' extended only to coins produced by the king's mints, but that absolutism did not penetrate very far into many sectors of the economy. Instead, even the royal household ran a debt for most of its purchases and even the state issued a bewildering variety of circulating short-term papers. The political category of money and the credit mechanisms actually at work in the economy regularly diverged." (p. 13)

I do not know which "official" definition of money Spang is referring to. No monetary historian would focus solely on coined money when talking about the monetary system of the Ancien Régime (or indeed of any other country), and she or he would not tout it as a new discovery that the kingdom lived on credit and that in addition to coined money there were also short-term credit papers that functioned as money. All well-known facts. The existence of the public debt also has nothing to do with the fact that absolutism did not penetrate far into many areas of the economy, as Spang writes. And to talk of the state itself issuing "a bewildering variety of circulating short-term papers" is evidence of superficiality, since, as the above-mentioned quotation from Eugene White<sup>26</sup> shows, these short-term credit papers can be clearly and concisely described and defined. And what is the meaning of the sentence that the political category of money and the credit mechanisms actually at work in the economy have regularly diverged? Money and book money - created through credits - are one in monetary theory, book money is considered money just as much as physical money. The whole passage is hot air.

Another example:

«Historians, like the revolutionaries they study, have been slow to take an interest in how money is manufactured or even in what it looks like. While this era's economic thought and monetary policy have been the subject of multiple volumes, the business of printing assignats and of minting small change has gone almost completely unstudied. Inspired by authors such as Karl Marx and Georg Simmel, both of whom treated money as the modern world's chief and most powerful abstraction, scholars have generally been loathe to look at money. After all, surely only fetishists and four-year-olds really care what money looks like?" (p. 103)

Typical features of Spang's style are united in this passage, the "name-dropping", i.e. markers of erudition (Marx and Simmel), as well as the condescension towards other researchers who are said

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<sup>26</sup> See footnote 5.

not to have considered one topic, namely the production process of money. In addition, this assertion again contains a false statement, because it is not correct regarding the process of "minting small change" highlighted by Spang; see the book by Sargent/Velde, "The big problem of small change", we discussed earlier<sup>27</sup>. Sargent/Velde definitely do deal with the production process of small change coins; however, they do so in connection with relevant issues like the relative share of metal value, minting costs and minting profit as well as the development of forgery-proof minting techniques - issues that were important for all metal coins (copper, silver, gold) at the time. But with paper money, whose value is almost independent of its production costs, the production process is hardly relevant anymore, or at most with regard to issues of counterfeit protection. Hence last the question: Do you really understand more about the US dollar and the US dollar dominance in the world if you study the technical printing process for dollar notes? The answer is redundant. The whole passage above is humbug. And its ending with the "fetishists and four-year-olds" belongs directly in the category "creative writing course".

And one more:

«This chapter therefore leaves open the possibility that the relationship between the printing of additional money and the currency's loss of value may have been as much a product of history as it was of nature – that it may, in fact, have been as complex as the relation between industrialization and class formation.» (p. 216)

The sentence consists of empty phrases and conjectures ("...leaves open the possibility..."), which do not commit to anything ("...may have been..."), and the arbitrary linking of everything with anything is applied in double form here to one identical topic; not only is it said, (a) that the loss of value of the assignats "may have been" just as much a product of history as of nature (this is in itself a pseudo-profundity, and the share of "history" and "nature" is not elaborated further), but also (b) that the loss of value "may have been" a similarly complex phenomenon (in safeguarding subjunctive mood!) as the relationship between industrialisation and class formation (attitude marker!). Not a word is said about what the concrete relationship between the loss of value of the assignats on the one hand and industrialisation and the formation of social classes on the other hand really is (or might be: one would be grateful even for a hypothesis!). There is no other mention of industrialisation in the whole book, nor of class formation, even if Spang refers to the "common people" of Paris here and there.

### **Money, monetary history, monetary theory**

Considering Rebecca Spang's obvious gaps in understanding and knowledge of the subject of money and finance, it is all the more shocking that, on the other hand, she allows herself to condescendingly criticise the respective works of others. For example, she allows herself to dismissively refer to a comprehensive work such as Marcel Marion's six-volume "*Histoire financière de la France depuis 1715*" (published 1914-1931) as a work of "financial history" in inverted commas, in other words, as "so-called" financial history. This is about the same as calling Adam Tooze's book "Crashed" a "so-called history of the financial crisis", or - allow me the leap - calling Einstein's theory of relativity a work of "so-called physics". Marion is always directly on the sources and knows his subject matter very well, the reader can always see and understand exactly what he is talking about, and the fact that Marion is opposed to excessive government debt (which Spang uses as an accusation against him) does not mean that the facts he presents are wrong or that he has misread or misquoted the sources. Leftist historians, too, pay him their professional respect.

Spang makes a few critical remarks on neoclassical economics and believes that she has thus sufficiently disavowed all approaches to understanding money that contradict her. Her critique is superficial and general, she does not address individual authors and their theories, and in the process

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<sup>27</sup> See footnote 6.

she stylizes neoclassical economics into a bogeyman that has nothing to do with the reality of contemporary monetary theory. Even within economics itself, the gaps of neoclassical theory with regard to money and currency have long since been criticised and revised; economics has by now developed more complex theories on the subject. Just as economics today also has more elaborate formulations of the "commodity theory of money", fervently criticised by Spang, than the single work from 1876 cited by her on this topic!

One can easily forgive anyone who has difficulty in actually understanding the complex subject of money. But a historian who wants to write a book about the subject might be expected to make herself well versed in monetary theory and history, and equally to understand the technical aspects of the monetary system, so that she is at least immune to the grossest errors. Not to do so is like someone taking the liberty to write a book on physics without knowing anything about physics.

If Spang had read up on the history of money and currency, she could have learned what political and institutional conditions were necessary to ensure confidence in a paper currency - conditions that were comparatively absent in France during the revolutionary period, which is why the experiment with the assignats could not succeed. Given the pertinent conditions, however, also in France paper money was able to establish itself in the course of the 19th century, in a complex political and institutional process - without the use of the guillotine.

### **History or ideology?**

Having finished reading Spang's book, one wonders what actually her theoretical approach in addressing her topic of research is. The answer, unfortunately, is that the approach is primarily ideological.

There are indeed countless passages in her book where we can discern preconceived ideological views which do not result from the insights gained by the author but precede them and guide her perception. This is the case, for example, with the following passage which is to be the last quotation here and which I am more or less forced to reproduce in its entire length, since any shortening would break the chain of associative connections between the most diverse topics – unproven by any empirical evidence or actual source. The subject here is the decision of the deputies of the Convention, taken after the fall of Robespierre, to allow the free trade of gold and silver again - which meant that the assignats no longer had to be traded at their nominal value.

«Refusing to accept that the members of the crowd constituted ‘the people’ or that their daily experience of shortages and high prices gave them any right to speak on questions of monetary policy, legislators first marginalized them discursively and then, after the violence of Prairial, repressed them with armed force. Turning a deaf ear to the crowd’s assertion that ‘the assignats are declining in value because of the decrees you passed [such as the abolition of the Maximum],’ the members of the Thermidorean Convention instead responded by further deregulating the money trade. Shortly after the Germinal uprising, they voted to decriminalize the sale of gold and silver. They also ordered Cambon’s arrest<sup>28</sup>. (He fled to Lausanne.)

As they returned to the extreme version of free-market thinking predominant in 1789-1792, lawmakers again described money as a good like any other. ‘Really, what would it mean’, asked Jeanbon Saint André, ‘for us to declare that silver is a commodity? Isn’t it so by its nature? Any law that violates the nature of things must sooner or later be impotent.’ Since gold and silver were ‘universally’ valued, Vernier argued, a government that regulated their circulation also cut itself off from international commerce – feasible for the Spartans and the Incas, such measures were ‘inconceivable’ for a commercial country such as France. From this perspective, the

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<sup>28</sup> Pierre Joseph Cambon was the de facto finance minister of the revolutionary government from 1793 to 1795, without bearing the explicit title. In 1793 he had been elected to the Committee of Public Safety.

concerns of the actual, living men and women of Paris could easily be defined as 'unnatural' (as, by implication, were those who expressed them). That the Convention had ever mandated the acceptance of paper and coin on equal terms became, in the course of 1795, simply further evidence of how monstrous 'the Terror' had truly been.

Repudiating their earlier monetary policies and ignoring ordinary Parisians, legislators in the aftermath of Germinal moved to end the Revolution – and thereby silence the Paris crowd – by balancing the Republic's account books. (pp. 226-227)

It is almost perfidious how Spang forges a chain of argumentation here that is not supported by any actual source but is derived solely from her own preconceived ideological meta-theory. Here, too, one has to read several times before one fully understands which arguments Spang is serving up in empty space, so to speak. For example: The parliamentarians, by considering the free trade in gold and silver as a "natural" thing, are supposed to have implicitly sacrificed the concerns of the common people of Paris ("the actual, living men and women of Paris") to this fiction of the "natural" and to have considered these concerns - and thus the common people themselves who expressed these concerns - as "unnatural". This is an outrageous conjecture without the slightest evidence. And when Spang accuses the parliamentarians of having - with their decision - ignored and suppressed the legitimate right of the people to have a say in questions of monetary policy, based on their daily experience of scarcity and high prices, this is simple poor-people populism.

In the long passage quoted above, again, Spang's rejection of the idea of the intrinsic value of gold and silver coins as a "cultural fantasy" stands in the background. But did not the people, otherwise so praised by Spang, make the same mistake of regarding gold and silver coins as more valuable than devalued assignats? The opinion of the people that the value of the assignats is sinking because of the decisions taken by the parliamentarians is unquestioningly stipulated by Spang as a truth rejected by the parliamentarians. In any case: To simply consider the seditious population of Paris, which was often the plaything of various - and not only their own - interests, as the authentic representation of the entire common people of France is somewhat under-complex. It proves above all Spang's simplistic ideological orientation.

Spang does not consider that inflation might have had other reasons than the refusal of the parliamentarians to guarantee the face value of the assignats. Likewise, she does not consider that the poorer classes usually suffer more from any inflation than the wealthier classes who can partly protect themselves against currency devaluation through physical assets (houses, land, etc.). The fact that the attempt to stabilise the currency could thus implicitly also benefit the poorer classes remains unmentioned. The price explosion was caused not least by a lack of all the necessities of life, and normally this lack cannot be remedied in the long run by price ceilings; rather, other incentives must also take effect. Given Spang's love for quotations from the common people, she actually should have quoted also the shouts with which the people accompanied Robespierre's passage to the guillotine: "*Foutu le Maximum!*" For the laws on the "maximum" had not only set the upper limit for goods prices, but also the upper limit for wages, under which the working population suffered in the face of inflation, and for which they held Robespierre responsible.

In the above quotation, Spang further claims that the parliamentarians sacrificed the interests of the common people in order to bring the state's accounts back into balance through their measure. However, she does not prove this with any source, and it is also simply not true, because in reality the state's finances did not come back into balance at all through this measure. Spang's play on words - "silence the Paris crowd - by balancing the Republic's account books" - is again a pure case of "creative writing". In fact, Spang does not lose a word on the state of the public finances, not only here but not in the whole book, nor does she quote a single figure in this regard. In fact, the whole book, to mention this, is without any tables or statistics, which is surprising for a book on economic and monetary history. In any case, the state finances remained off balance, and the inevitable debt

cut did not take place until the reign of the “*Directoire*” (1795-1799): In September 1797, the state's long-term debt, including the old debts from before the Revolution, were cut by two thirds (“*la banqueroute des deux tiers*”). No mention of this in Spang.

In the sentences that follow the above quotation (we refrain from citing another original quotation here), Spang illustrates the measures discussed and adopted by the parliamentarians to abrogate the assignats. These were to retain their validity only for a limited period of time, during which time they would still be accepted by the state at face value in lieu of payment, but exclusively for the payment of outstanding debts from the acquisition of national goods (whose purchase price had often only been paid up to a small partial amount yet) and for the payment of outstanding tax debts.

It is not clear why these measures related to the suspension of the assignats should have harmed only the poor population, as Spang claims. Withdrawing the assignats from the market by accepting them for payment of debts due from the purchase of national goods as well as tax debts actually corresponded to the original purpose of the assignats and meant that the state kept its own original promises and obligations to the holders of assignats. Spang fails to explain why these measures should have been used to silence the common people, not to mention to balance the state's finances.

It is a big and crude polemical reduction to portray the parliamentarians as failures and enemies of the people and to accuse them that they could very well have guaranteed the value of the assignats and that they had “betrayed” the common people with their decision. We know from history the fatal consequences of the charge of “betrayal of the people”, which has been abused enough from left to right. It is not an innocent attitude that one can adopt lightly, in the certainty to be on the right side of history.

The preconceived ideological notions and opinions not only shape Spang's view of the past, but they also serve her to hand out moralising marks to the persons of the past for their good behaviour or failure, with the implicit persuasion that there would have been a true correct way of acting. In this sense, too, Spang's book is exemplary and symptomatic since this attitude can be found in many works of historical research today. The judgement or condemnation of the persons of the past is carried out according to the historians' own moral criteria of today. On the one hand, this assumes that the person writing has a superior political-moral position that cannot be questioned, and on the other hand, it assumes that the persons of the past had an absolute overview of the options given to them at the time and willingly made wrong - i.e. immoral - decisions.

Both claims must be decisively questioned. Neither can a historian claim to have the only correct political and moral opinion, unless he or she mistakes him- or herself for a grand inquisitor or other ultimate opinion authority, nor can we assume that the people who acted in history were endowed with absolute transparency about their situation - just as little as people today can know with certainty in every situation which decision is the best one, be it for themselves or for the general public. Just as the world of the present is complex and sometimes confusing, so was the world of the past for the people who lived and worked in it. Historiography, while acknowledging the contingencies that operated at any given time, should also acknowledge that history is not completely determined in its progression, that people have at all times had to seek their way in the fog, that they never are and can be unanimous about this way, and that such unanimity cannot be desired either, since it would mean the end of freedom.

### **What have we learned from Spang?**

If we try to sum up what we have learned after reading Rebecca Spang's book, the result is meagre. About money and about the currency and financial system of the Ancien Régime and the Revolution, we learn nothing that would go beyond the findings of previous research; on the contrary, earlier findings are obscured beyond recognition and covered by a web of ideological bias; indeed, earlier

findings are in part simply misjudged or negated. What we come to know, in contrast, are the ideological views of Spang that characterise her statements, all hidden behind a sympathy - obviously considered as politically correct - for "the common people".

It would do Spang already too much honour to call her a Marxist. Her whole argumentation is too fuzzy and too arbitrary for that. Rather, her book is the result of a reading of certain historical documents undertaken with vague leftist ideas and commonplace views, and the documents' selection and interpretation is motivated more by preconceived opinions than by professional interest in the actual subject of the book, the topic of money. In fact, the book is not a book on economic history or monetary history; Spang simply lacks the relevant professional expertise to place it in this category.

Is it a scientific book at all? With the arbitrariness of its references, the technically incorrect information, and its love of well-sounding and seemingly profound wording, the book, in my opinion, should rather be ranked in the category of "creative writing" than in that of science.

### **My opinion and the opinion of Spang's peers**

My opinion on Spang's book is negative, and I have endeavoured to explain the pertinent reasons at length and in detail. Of course, this raises the interesting question of what the professional university critics thought of her book at the time. I cannot say I did an exhaustive search, but I did find six reviews straight away, which, together with the review in the Times Literary Supplement mentioned at the beginning, makes seven<sup>29</sup>. In the last few days I have been made aware of two further reviews<sup>30</sup>. The tenor of the nine reviews is mostly positive (including the one in the TLS), with one exception, the review by Eugene White, a specialist in economic history of the Ancien Régime and the French Revolution. His review is basically scathing, although well-mannered, polite and objectively phrased. The other reviews are positive, but often no less strange in the way they argue than Spang's text itself, and I sometimes got the impression that they move in the same parallel universe of strange theories and truths - one could also say "codes" - as the author. In fact, Rebecca Spang cannot be an isolated case at the universities of this world, and it is equally clear that people of the same kind stick together and also support each other. Criticism of colleagues is rather frowned upon, and instead of criticising anyone, others perhaps prefer to keep silent and not write negative reviews - after all, you always meet again in one or the other board or committee. In the case of two reviews (Pierre Labardin, but especially John Shovlin), I actually had the impression that the reviewer had some reservations but had set himself the task of finding positive points and keeping the review in that tone.

Am I going astray? But such considerations necessarily come to the mind of someone from outside university and the academic world who personally has a negative opinion of a book and wonders why his own reservations are not echoed in the academic reviews. Who is right? For me, the case is clear.

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<sup>29</sup> The reviews found are by Nicolas Delalande, Michael Kwass, Pierre Labardin, Maria Paganelli, John Shovlin, Eugene White - all written in English, except for Delalande's:

- Nicolas Delalande: *Revue d'histoire du XIXe siècle* [online], Vol. 52, 2016, pp. 1-3
- Michael Kwass: *The English Historical Review*, Volume 132, Issue 554, February 2017, p. 158
- Pierre Labardin: *Accounting History* 2019, Vol. 24 (1), p. 158
- Maria Paganelli: *Journal of the History of Economic Thought*, Volume 41, Issue 3, September 2019, p. 461
- John Shovlin: *The Journal of Modern History*, Volume 88, Number 4, p. 945
- Eugene White: *The Journal of Economic History*, Volume 76, Issue 1, March 2016, p. 244

<sup>30</sup> Written by Thomas E. Kaiser and Jack R. Censer, both in English:

- Thomas E. Kaiser: *The American Historical Review*, Vol. 121, No. 1 (February 2016), pp. 191-194
- Jack R. Censer: *Journal of Social History*, Vol. 49, No. 4 (Summer 2016), pp. 999-1003

Moreover, I encounter this form of academic writing and thinking, of which Spang's book is an exemplary case, in too many places not to see it as a significant phenomenon of our time, and also as a problem. I think that in the humanities departments of many universities some people cultivate a style of thinking that is not centred on intellectual discipline, analytical clarity and the search for truth, but on the desire for self-appreciation and for differentiation from the "non-educated". This sometimes reminds me of those scholastic authors who, in a united front against the non-educated lay people, nurtured and cultivated the obscurity and difficult comprehensibility of their texts as a mark of distinction. It is particularly regrettable and saddening that this kind of pretentious and convoluted scholarly obscurity is nowadays often found among authors who tend to associate themselves with the left. Why this tendency to distance oneself to the point of incomprehension from the common people, for whom they usually declare their sympathy?

Be that as it may. In any case, the positive reviews of Spang's book have not convinced me that my own objections are null and void, on the contrary.

Now, one could simply ignore this kind of books. But they are too numerous for that and thus clog up the channels of scientific work. This kind of books represent a dubious enrichment of the scientific publications that future students will have to deal with and read and cite, even if grudgingly, in order to meet the requirements of a complete bibliography on the subject. Poor students! What a waste of time that stands in the way of real understanding, which in itself requires a lot of time and effort. How much time lost without any gain in knowledge!

Paul Huber, December 2023