

# HENRY C. CAREY'S MONETARY THOUGHT AND AMERICAN INDUSTRIALIZATION IN THE GREENBACK DEBATE

WORKING PAPER

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Henry C. Carey was one of the main theoretical advocates of the greenback, the paper money issued in order to finance the American Civil War. The greenback established an inconvertible monetary standard from 1862 to 1879. Carey proposed greenbacks as the solution to both the internal and external constraints of the emerging industry, i.e. high interest rates and a *de jure* appreciation of the exchange rate. An elastic supply of money offered by a greenback monetary standard could foster low interest rates, which in combination with a depreciated exchange rate could promote industrialization. His greenback advocacy took into consideration American sectionalism by opposing different economic interests linked to different sections of the American territory. Carey believed that the development of the emerging industry could overcome sectional opposition, as it would favor the whole nation. This paper explains how Henry C. Carey's monetary thought addressed American sectionalism by promoting greenback-fueled industrialization.

## I. INTRODUCTION

Henry C. Carey, an editor and a 19<sup>th</sup> century economist, is mainly known for his promotion of protectionism and his opposition to Ricardo's free trade doctrine and

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differential rent. He was also a virulent advocate of the greenback, and used his monetary thought in order to explain his position. His advocacy for the greenback was linked to his stance on protectionism, as it sought to provide a specific solution to industrialization and a more general solution to sectionalism – a regional division of the American territory.

What are greenbacks? Greenbacks were a form of paper currency issued during the United States Civil War. The North needed to finance the war, but the revenues of the Union states were insufficient to do so. The Secretary of the Treasury decided to print legal tender paper money: Lincoln signed the first Legal Tender Act on February 25, 1862 (Sharkey 1959, p. 45). The extensive finances required for the Civil War led to the adoption of the second and the third Legal Tender Acts. Finally, the net quantity of greenbacks issued between 1862 and 1865 was \$431,500,000. Greenback issue was followed by a high inflation rate and a gold premium that doubled (see table 1). The rise in the price of gold in greenbacks was crucial to the American economy as both tariffs and importations had to be paid in specie<sup>2</sup> (Sharkey 1959, p. 50).

At the end of the war, a debate arose concerning the resumption of specie payments. Two main opposing approaches came to the fore: a greenback approach and a specie approach that favored withdrawing greenbacks and resumption of specie payments at prewar parity (Unger 1964, p. 9). This debate was the source of great controversy, as reflected in the vast number of different legislative decisions that were taken between 1865 and 1879. The Contraction Act, approved in 1866, authorized the progressive withdrawal of

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<sup>2</sup> For a more detailed analysis of greenbacks: a) From a historical perspective see Mitchell (1903, 1908), Sharkey (1959), Unger (1964), Timberlake (1964) and Barreyre (2014a, 2014b). b) From a more analytical perspective see Kindahl (1961), Friedman & Schwartz (1963), Calomiris (1988, 1992) and Le Maux (2017).

greenbacks from circulation, but was subsequently suspended in 1868 (Suspension Act). Finally, the resumption of specie payments was voted in 1875 and completed in 1879. As soon as the resumption of the specie payments was adopted, the essential question remained as to how the return to parity could be implemented.

Carey, as a fervent promoter of greenbacks, developed his monetary thought showing how greenbacks could be the solution to both the internal and external constraints of emerging industry, i.e. high interest rates and a *de jure* appreciation of the exchange rate. He demonstrated that the elastic supply of money offered by a greenback monetary standard could foster low interest rates, which in combination with a depreciated exchange rate could promote industrialization. For Carey, industrialization through greenbacks was a way to overcome sectionalism. Greenbacks could be the impetus for Carey's stage-like development model, and consequently closely knitting the interests of different economic sectors. Hence, the Union between North and South could be strengthened and safeguarded.

In this article, I will analyze how the monetary approach that Carey developed in favor of a greenback monetary standard answers a much wider issue: sectionalism. I reconstruct Carey's monetary thought in the context of the internal and external constraints of American industrialization, and I show how Carey's monetary arguments are in accordance with his development theory, a theory that viewed development as a procedure where industrialism and agriculture march hand in hand, the "association" of those sectors being fostered by both protectionism and the greenback. This association would make it possible to overcome sectionalism by linking the divergent interests of various economic

sectors. Thus, I propose that Carey's development theory underlies his later monetary thought.

This article fits in with renewed interest in the development of American economic thought in the 19<sup>th</sup> century and the importance of the Civil War and Reconstruction period (Medema 2015). Meardon (2015) has shown how Carey's trade theory could have helped preserve the Union. Ron (2015) has shown that Carey was not only a promoter of industrialism but also highlighted the importance of agriculture by presenting the harmony of the two sectors' interests. In earlier times Kaplan (1931) underlined the importance of industrialization in Carey's greenbackism. I propose in this article to continue that line of research by focusing on the greenback question and the link between Carey's development theory and monetary thought, showing how the greenback debate and the monetary thought developed through them entails a much wider political question. This allows me also to present a counterexample to the classical economic dichotomy between real and monetary economics, as here on both a historical and a theoretical level the money and the real development questions are intimately linked.

I will develop my argument as follows: First, I will show how Carey's monetary thought can be viewed as a demonstration of how greenbacks could be the solution to both the internal and external constraints posed to industrialization. Second, I will show that this solution was also the solution to sectionalism as it sets in motion Carey's virtuous cycle of development leading to closer connections between different economic interests – thus also of different economic sections.

## II. DEVELOPMENT CONSTRAINTS

### *Internal Constraint*

Greenbacks were, for Carey, a way to overcome the internal constraint, a constraint linked to a high interest rate. According to Carey, greenbacks, by diminishing the interest rate, would promote the development of an emerging industrial sector. This was important as Carey aimed to show that greenback-fueled industrialization would overcome sectionalist division by diminishing interest rates, as will be demonstrated in section III.

The internal constraint of American industrialization concerned the level of interest rates: high interest rates make it difficult for industrialists to invest and develop their industry. Carey was implicitly hypothesizing that industrialists, and farmers, were debtors and not creditors. Thus, a low interest rate could allow them to invest or simply obtain the necessary means of payment in order to proceed with their normal transactions, and thereby cause an increase in investment and production levels (Carey 1873, p. 20). Inversely, a rising interest rate increases the value of debts, and it also causes the bankruptcy of productive structures (Carey 1865, pp. 30-1; Carey 1877, pp. 3, 6, 12). Hence, a high interest rate favors creditors and disfavors debtors, such as industrialists.

How are interest rates determined? Carey believed that nominal interest rates were monetary determined. In order to show that the interest rates were determined by the demand and the supply of money, Carey used two historical examples. In the first one, Carey investigated the reasons behind the lack of an increase in interest rates following the great money demand during the Civil War; he observed that the decrease in interest rates

was a result of the even more significant increase in the money supply offered by greenbacks.

How was it that demands for money so unparalleled, had not only caused no movement upward in its price, but had actually been attended by such decline therein as to have led to the hope that the usury laws would speedily become of no effect whatsoever? The answers to these questions is found in the fact, that for the first time in our history the supply of that machinery of exchange for whose use alone men pay interest, had come to bear a fair proportion to the need for its use (Carey 1873, p. 6-7).

In contrast, the monetary policy of contraction was followed by an increase in the interest rate.

Year after year is there an increase in the number of persons who need to use the circulating note; in the space over which they are scattered; in the quantity of 'manufactures, merchandise, or products of labor' needing to be exchanged; with steady contraction of the machinery by means of which exchanges may be made, and corresponding increase of the power of combination among the few who now control the movements of money market (Carey 1873, p. 15).

What Carey aims to show here is that the interest rate decreases when the quantity of money in circulation increases in order to meet demand, and *vice versa*. Therefore, the

policy of restriction resulted in a rise in nominal and real interest rates. In addition, the deflation policy increased real debt<sup>3</sup>.

*The burthen in every case becoming more and more severe with every step in the direction of appreciation in the value of that currency in which taxes must be paid. The farmer who in 1864 sold his corn for \$1.50 per bushel, and his pork for \$40 per barrel, finds it now, with prices in the East almost one-half reduced, much more difficult to pay the tax of transportation and those other taxes required for meeting the demands of those who have been so fortunate as to constitute themselves creditors of the general and local governments (Carey 1866, p. 5; emphasis added).*

This policy, by establishing a high interest rate is harmful to economic growth (1873, pp. 16-17).

The present sad state of things is consequent upon a policy which is daily compelling a substitution of dead [gold] for living money [greenbacks]; and that the high rate of interest which thus are caused tend to the destruction of that productive power to which alone can we look for the force required for enabling us ever again to return to specie payments (Carey 1873, p. 10).

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<sup>3</sup> Carey does not feel that there is a direct link between the quantity of money in circulation and the price level. Nonetheless, he believes that a decrease in the quantity of money will result in an increase in interest rates, which cause bankruptcy of the productive structures, followed by a diminished demand for labour and products, finally resulting in a decrease in prices (Carey, 1866, pp.10).

In order to overcome the problem of a high interest rate, established by the policy of contraction, Carey proposed a new issuance of greenbacks (Carey 1865, pp. 35-36). That supply would lead to a decrease in interest rates, thus inducing economic growth:

The North at once determined on the adoption of measures of protection...The effect of this now exhibits it in the facts – That the development of our mineral resources has been great beyond all former example: ...That the demand for labor has been so great as to cause large increase of wages...That the demand of farmers product has so largely increased...there has been a large and general diminution of the rate of interest...These are wonderful results, and for them we have been largely, yet not wholly, indebted to the re-adoption of the protective system. That alone was capable of doing much, but we should have failed...had not the Treasury, by the establishment of a general medium of circulation [greenbacks], given us what has proved to be a great *clearing house*, to which were brought labor and all of labor's products to be exchanged. Increased rapidity of circulation was a necessary consequence of this, and to that increase the greatly improved health of the societary body has been wholly due (Carey 1865, pp. 27-28).

That it may be here reduced we need that a *proper supply of the machinery of exchange* be allowed to our people, increasing the rapidity of circulation and offering *new inducements for application of capital* to the work of developing the enormous mineral and metallic resources of the Union (Carey 1873, p. 17; *emphasis added*).

The mechanism is the following: as long as there is a low interest rate, more investment is made possible, thereby increasing the demand for labor, thus wages also rise.

The rise in wages translates to an increased demand for goods, allowing a greater growth in national production. In my opinion, Carey felt that a new issuance of greenbacks would set off a virtuous cycle – as will be examined in part III.

### *External constraint*

The external constraint of American industrialization related to the appreciated gold premium, the government's gold reserve and the exchange rate. After the end of the Civil War the gold premium was still appreciated (see Table 1), and the policy of contraction aimed to restore convertibility partially through a withdrawal of greenbacks. The policy aim was a drop in the premium of gold, as prices were supposed to fall. This deflation policy tended to cause a rise in the exchange rate<sup>4</sup>. Carey viewed this policy as one that tried to increase *de jure* the exchange rate in order to return to specie payments. He argued that the return to convertibility should be established in the long run and thus the exchange rate should be appreciated *ex post*. Although, Carey thought that a *de jure* exchange rate rise hindered specie resumption as it was harmful to industrialization. Industrialization was

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<sup>4</sup> The way that the United States succeed in returning to and maintaining specie payments was long debated by both historians and economists: 1. According to Dewey (1903, p. 375) the return to specie payments was accomplished thanks to an increased stock of gold, so that “slowly but gradually the value of notes approached parity with gold”. This increased stock of gold was due to the “the favorable commercial position of the United States” and not to the contraction of paper currency (Dewey 1903, pp. 376-377). In a similar way, Friedman and Schwartz also felt that the effect of contraction was not as important as the increase in output. Thus, they mainly attribute the return to specie payments to a fall in prices due to a rapid rise in output (pp. 15-88). 2. On the other hand, Calomiris (1992) attributes the determination of prices and *ex ante* real interest rates, linked to specie resumption, to anticipation of a possible switch in the monetary regime. “In this article, I will analyse the role that anticipations of possible regime switches played in determining nominal values during the greenback suspension of convertibility...and argue that accounting for monetary regime expectations and risk are important for measuring *ex ante* real interest rates and for understanding some apparent departures from the normal procyclicality of the price level during this period” (Calomiris 1992, p. 2).

the only way to return to specie payments as long as this return depended on an increased stock of gold: a result of a surplus balance of payments.

Actually, if the exchange rate appreciates, price competitiveness of industrial products declines. This could be a serious obstacle to the development of emerging industries, a sector that relies on price competitiveness (Carey 1876, pp. 15-16). In a similar way, Carey believed that a *de jure* monetary appreciation would be harmful to the “productive classes”, i.e. industrialists, as their income would be diminished. He takes as a historical example the Act for Resumption of Cash Payments of Great Britain of 1819, where:

The term of all [contracts] of which were now to be changed for the benefit of the receivers of fixed incomes, and to the loss of those who had land, labor, or the produce of either, to sell...Farmers and laborers, mechanics and merchants, were impoverished – their taxes remaining unchanged, while their labor, and its products, commanded less than half the money for which they would before have sold (Carey 1865, pp. 38-39).

On the contrary, a depreciated exchange rate can positively affect the industrial development of a country. Carey (1876, pp. 15-16) believed that a depreciated exchange rate would lead not only to decreased imports, but also development of national production. In that case, a depreciated exchange rate operates as a protective policy – as a duty in favor of the emerging industry. Carey’s view was that in 1866 the depreciated exchange rate was the only protection for the industrial sector.

Even at the present moment some of the most important branches of our manufacturing industry, those which are making the larger demand for food, are wholly dependent for their continued existence on the fact that taxes on domestic products are payable in paper, while for payment of duties on competing foreign commodities the precious metals are required (Carey 1866, p. 6).

The depreciated exchange rate was established by the difference between the price of greenbacks (the medium of exchange used for transactions within the country) and the price of gold (the medium of exchange used for the payment of import duties). As a result, Carey thought that abandoning a policy that aimed at a *de jure* appreciation of the exchange rate, thus the continuation of a greenback monetary standard, would stimulate the industrial sector.

Carey's view was that abandoning that policy could lead in the long run to the resumption of specie payments, as the growth of the industrial sector would facilitate an increase in the stock of gold. Influx of gold and the constitution of a stock of gold were crucial during the 1860s and 1870s as they were tied to specie resumption. The resumption of specie payments not only necessitated a decline in the premium of gold, but also the increase in gold stocks. Carey felt that no contraction or money appreciation policy was needed to reach specie resumption in the long run: an increased stock of gold would be sufficient, if it were the result of economic growth due to industrialization. Increased production, the result of industrialization, would be followed by the export of industrial goods producing an influx of precious metals.

That it may be here reduced we need that a *proper supply of the machinery of exchange* be allowed to our people, increasing the rapidity of circulation and offering *new inducements for application of capital* to the work of developing the enormous mineral and metallic resources of the Union. With every step in this direction there must be *a growing tendency toward becoming exporters of cloth and iron, with growing power to retain the precious metals*, and to command their use for all the purposes of exchange (Carey 1873, p. 17; *emphasis added*).

Carey here clarifies the mechanism that allows him to state that when production increases, an increase in the stock of gold will follow. He seems to argue here that higher production is synonymous with a rise in exports. This is in keeping with his proposal in favor of a low exchange rate, which at the time was established by the greenback monetary standard, as he believed that it would lead to increased industrial production and to increased exports. A surplus balance of payments would result from increased export, making possible an increase in the stock of gold<sup>5</sup>. The different source of the stock of gold is important; an increased stock of gold from bond sales is less sustainable than an increased stock of gold from the export of industrial commodities (Carey 1865, p. 3), inasmuch as the second is the result of a long-term trend.

In that context, Carey advances that precious metals tend to flow towards those countries where the rate of interest is low.

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<sup>5</sup> A distinction is made here between raw materials and industrial goods; this distinction will be analyzed in section III.

Reduction in the rate of interest indicates a growing power of labor over capital, and it follows as necessarily consequent upon increase in the variety of demands for human service. Interest is low in England, France, Germany, Holland, and Belgium; high in Russia, Turkey, Australia and South America. The tendency of the precious metals is toward those countries where interest is low and from those in which it is high, as is now shown in these United States (*ibid.*).

Once again, industrialization is the key element that explains why precious metals tend to flow into countries where the interest rate is low. According to Carey, a low interest rate strengthens investment and production, resulting in increased exports with a corresponding influx of gold.

Consequently, the effects of a low interest rate and a depreciated exchange rate combine to stimulate industrialization. In short, a greenback monetary standard could result in industrial development in the short run, and a resumption of specie payment at prewar parity via an increase in the stock of gold in the long run. The adoption of a greenback monetary standard would provide the money supply and low interest rates necessary to develop American industry. In this context, the lower exchange rate could act as an import duty – or a protective tariff. As industry and international commerce grew, the US would be able to attract and retain more specie. The increase of the stock of gold would decrease the relative price of the monetary metals and erase their premium. As a consequence, American industry would develop and the return to parity would be achieved without a *de jure* appreciation of the value of money.

### III. SECTIONALISM

As I have already shown, the monetary thought that Carey developed aimed to propose a way to overcome the internal and external constraints of American industrialization. In what follows I will show that Carey, in developing his monetary thought, addressed a much wider question: the question of sectionalism. Sectionalism as a term refers both to the regional division of the country and to the analytical category used to analyze the sectional conflict between the North and the South of the United States. Historians use sectionalism as an analytical category through which to analyze issues other than the Civil War itself, such as the greenback monetary debate. Of course, those two perceptions of sectionalism are closely linked; the analytical category is founded in a historical reality that resulted in the American Civil War. Carey also recognized the existence of a sectional bias – both as an analytical and as a historical phenomenon – and tried to overcome it through greenback-fueled industrialization. To put it differently, according to Carey, industrialization could keep the Union together by knitting together diverging economic interests.

When considered as an analytical category, sectionalism is the geographical expression of antagonistic regional interests or the spatial metonymy of economic interests (Barreyre 2014a, p. 12; 2014b, p. 455). Sectionalism is a historiographical approach that is mainly represented by the works of Charles Beard and Mary Beard (1927) and more

recently Bense (1984)<sup>6</sup>. According to Bense's definition of sectionalism (1984, p. 6), "the historical alignment of sectional competition in America is primarily a product of the relationship of the separate regional economies to the national political economy and the world system". Hence, in my view, sectionalism is a way to express the economic interests that are overrepresented in each section of the country.

Recently, Barreyre adopted the sectional historiographical approach (2014a, 2014b) to analyze the greenback debate and showed that the money question was related to the sectional question. His view is that the debate was mostly centered on sections rather than around political parties and thence identified two main opposing poles: on the one hand, specie resumption, promoted by creditors, bankers, holders of national debt and the Northeast; on the other hand, the greenback, supported by debtors, farmers, producers and the Midwest. From a sectional point of view, the Northeast was in favor of gold convertibility, while the Midwest favored a greenback monetary standard (Barreyre 2014b, pp. 447, 451). The Northeast identified with the interests of finance and developed industries; the Midwest identified more with the interests of agriculture, and Philadelphia with the interest of emerging industries. In fact, the banking sector was developed in the Northeast, and the emerging iron industries were overrepresented in Pennsylvania. This means that each section of the country defended well-defined economic interests, and these manifested themselves in the positions that each region held in the greenback debate. To

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<sup>6</sup> There are two main historiographical approaches concerning the analysis of the American Civil War and the Reconstruction period: a) The so-called Beard-Beale approach focuses on the importance of economic interests by distinguishing the interests of farmers, financiers, and industrialists, see Charles A. Beard and Mary R. Beard (1927) and Beale (1930), and, b) The Unger and Sharkey approach that focuses more on social and political factors, though without forgetting the economic factors, see Sharkey (1959) and Unger (1964).

put it briefly, Barreyre places the opposing sides in the Northeast, which favored specie payments and the Midwest, which favored greenbacks.

However admitting the importance of the sectional division, Le Maux (2017) adopts an analytical perspective that demonstrates that the choice between a greenback and specie monetary standard translated to a choice of development models, a choice that depended upon how each section was provided with production factors and on their ability to combine monetary and tariff policies. In the following paragraphs, I will show how Carey's promotion of greenbacks was linked to his desire to propose his development model.

Before showing that Carey also perceived the link between the sectional division and the money issue in his proposal to overcome the sectional division, I will present how Carey theorized the sectional division of the United States in his "zone theory". According to Carey's zone theory, there were four main zones in the country: the "Northern" zone, "Northern Central" zone, "Southern Central" zone and "Southern" zone (Meardon 2015, p. 311). Each of them was identified with a different dominant economic interest: the South was the "Planting zone", the Northern Central and the Southern Central zones were the "Mineral zone" and the Northern zone was the "Trading zone" (*ibid.*, pp. 315-6). "In a narrow sense, the interests of the Northern zone and the Southern, the Trading zone and the Planting, were aligned: the people of the first could transport the products of the second to foreign markets" (*ibid.*, pp. 315-316). What Carey tried to show is that their real, common interests aligned with protectionism; a common interest that they also shared with the mineral zone. Nevertheless, the Trading and the Planting zone both voted in favor of free-trade policies, as they had not perceived their common interest in protectionism. If those zones could have understood that their interests were aligned with protectionism, the Union

could have been preserved (*ibid.*, p. 327). Consequently, Carey proposed protectionism as a solution to the sectional division, a division that he perceived as a diversification of economic interests resulting from the distribution of different dominant economic sectors in each region.

### *Sectionalism and the internal constraint*

Carey proposed greenbacks as a solution to the sectional division, as they would operate similar to protectionism. As we have seen in the previous section, greenbacks would be the solution to the internal constraint of industrialization. But how could this solution overcome the sectionalist conflict? Carey's reply consists in explaining that greenbacks could set in motion a virtuous development cycle that would closely link the diverging interests of different production sectors – thus of different sections. In order to understand Carey's solution, we should understand his stage-like development theory found in his pre-greenback period texts.

Carey's development model resembles a stage-like development model. Kaplan (1931, pp. 49-50) has summarized it from Carey's *The Past, The Present And The Future* of 1848 as follows:

Calling upon his wide acquaintance with general geography and economic history, Carey builds up his case in substantially the following sequence:

1. In the original stages of settlement, it is the readily worked land...that is brought under cultivation. Only as capital increases, population increases, and the implements of husbandry are improved, are men enable to enter upon the cultivation of the richer but more

resistant soils – the undrained meadow or timbered lands reaching down into the valleys below.

2. In making the progress from poorer to richer soils, the tendency is for men to come into closer association with each other, engaging in an increasing variety of activities that complement each other, working up and consuming the products which they extract from the soil at their hand.

3. In the normal course of things, every successive step should be marked by an increasing power to break down the resistance of labor, as men developed “instruments of association”.

So, according to Carey, the cultivation of lower quality land precedes the cultivation of richer land. As more capital is accumulated and population increases, people begin to develop manufacturing, which again helps to improve the productivity of the agricultural sector.

Population spreads itself along the faces of the hills and down into the lower lands [richer soils]...and with every step we find increasing tendency to combination of action for the production of food, the manufacture of clothing and household utensils, the construction of houses, and the preparation of machinery for aiding in all these operations. (...) *by the aid of improved machinery now in use, the two are brought in combination, thereby producing a soil of power far exceeding that of those heretofore cultivated* (Carey 1848, p. 15 ; *emphasis added*).

The interests of the different economic sectors would begin to be linked as economic growth continued to rise, and this would be promoted by the “instruments of association”. “All [money, ship, road, cotton-mill], however, are instruments for facilitating the work of association, and the growth of man in wealth and power is in the direct ration of the facility of combination with his fellow-men” (Carey 1858, p. 299). For Carey, the greatest instrument of association is money.

The notion of “association” is a key notion in Carey’s work; it is the element that promotes economic development and sets in motion his development model. But how is association promoted? Carey’s well known reply is that association is promoted by protective policy. The argument was the following: a protective tariff promotes the tendency to association, whereas a free trade policy hinders it and leads “to the centralization of manufactures and power on a single little island” (Kaplan 1931, p. 50). What I propose here is that Carey’s development model underlies his monetary thought; he believes that greenbacks are equivalent to a protective tariff. “Side by side with the question of protection, and equal with it in its importance, stands that of the Currency” (Carey 1866, p. 1). Actually, greenbacks not only function as a protective tariff via a depreciated exchange rate, but they could also foster the “tendency of association” and set off the virtuous cycle of development. Carey’s idea is that money serves as an instrument to overcome the “obstacles intervening between the producer and the consumer” (Carey 1858, p. 300). It should be noted here that Carey’s reference to money before the 1860s concerns convertible and not fiat money. Thus, my hypothesis is that he reuses the core of his theory when he develops his monetary thought in the greenback debate.

Of all the labor-saving machinery in use among men, there is none that so much economizes human power, and so much facilitates combination, as that which is known by the name of money. Wealth, or power of man to command the services of nature, grows with every increase in the facility of combination; and this latter grows with the growth of the ability to command the aid of the precious metals. Wealth then, should increase most rapidly where that ability is most complete (Carey 1858, p. 301).

Thus, Carey's idea is that specie money promotes his virtuous cycle of development, though there exists some evidence that Carey had in mind the same mechanism when developing his monetary thought in the greenback debate.

Let us, for a moment, suppose the existence of an individual with wealth so great that all who knew him might have entire confidence in his performance of what he promised...At once the societary circulation would have been restored. Labor would have come into demand, thus doubling at once the productive power of the country. Food would have been demanded, and the farmer would have been enabled to improve his machinery of cultivation. Cloth would have been sold, and the spinner would have added to the number of his spindles. Coal and iron would have found increased demand, and mines and furnaces would have grown in numbers and in size...What is here supposed to have been done is almost precisely what *has* been done by Mr. Lincoln and his Administration [greenback issue](Carey 1865, p. 4).

Hence, greenbacks set in motion Carey's development model and result in a "closely knit group of mutually interdependent producers, each a consumer of the products of the others" (Kaplan 1931, p. 82). In that context, greenbacks, by establishing a low interest rate and a depreciated exchange rate, would be the solution to the sectionalist conflict: closely linked economic interests of different social groups would guarantee that the Union would hold together.

But how could a low interest rate affect different economic sectors? How would the development of industry affect – in economic terms – other economic sectors? Firstly, low interest rates, the solution to the internal constraint, would favor debtors and disfavor creditors. Carey's "productive classes" were treated as debtors, and the "receivers of fixed income" as creditors. The "productive classes" included landowners, traders, manufacturers and laborers (Carey 1866, pp. 8). The "receivers of fixed incomes" included mainly financiers and bankers. A greenback monetary standard favors manufacturers, farmers, and workers – the "productive classes" according to Carey – and disfavors bankers. This is a direct effect of a low interest rate, but there is also a less direct effect, a solution to sectionalism. Again, a low interest rate fosters industrialization and thus would set off a virtuous cycle of economic development that would link the interests of the different social groups. In concrete terms, according to Carey, when the industrial sector develops closely with the agricultural sector there are two main advantages for both<sup>7</sup>: industrialization will offer a "ready consumer base, but also a source of technological novelty" (Ron 2015, p. 208). This means that the industrial sector and its workers will offer a "consumer base" for

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<sup>7</sup> The term 'near' is used here in order to signify that that agriculture and industry develop in the same nation.

the consumption of raw materials and agricultural products, and that the development of the industrial sector will render the agricultural sector more productive.

### *Sectionalism and the external constraint*

The greenbacks could also have been the solution to the external constraint by maintaining a depreciated exchange rate in the short run, in order to increase the stock of gold and restore specie payment in the long run. How could a depreciated exchange rate affect sectional division? A depreciated exchange rate operates as a protective barrier, and as such could set off Carey's "natural law" of association. It would also foster America's international independence, which is translated into the development of closer links between different economic interests: this would be another way to keep the Union together.

As we have already seen, a depreciated exchange rate, the solution to the external constraint, stimulates the development of industry, and acts as a protective barrier, as it renders their products price-competitive and thus more easily exportable. In this way, it could – in exactly the same way as the interest rate – set in motion Carey's virtuous cycle of development (Carey 1876, p. 16).

However, Carey's belief that through a depreciated exchange rate the interests of different social groups are merged could be criticized; the depreciated exchange rate opposes developed and emerging industry. A depreciated exchange rate could be detrimental to developed industry as long as this sector imports raw materials in order to transform them into finished goods. Actually, a low exchange rate renders the import of

raw materials more expensive (Aglietta and Coudert 2014, p. 80). On the other hand, an appreciated exchange rate does not *a priori* diminish developed industry's export: as long as those sectors have attained a critical size and technology development their products are more quality competitive than price competitive. Carey doesn't seem to have considered that a depreciated exchange rate could be harmful to developed industry, as he thought that the internal production, once developed, would offer the raw materials required by the manufacturing sector. On the other hand, he felt that an appreciated exchange rate is detrimental both to emerging and developed industry (Carey 1876, p. 15-16).

Notwithstanding, Carey's solution to the external constraint leads to international independence. This was the main reason for Carey's advocacy of greenbacks, according to Elder (1880)<sup>8</sup>. Carey makes a clear distinction between the export of raw materials and industrial products. Both benefit from a depreciated exchange rate, but Carey believes that only (or mainly) industrial products should be exported. Carey's argument concerning the export of industrial goods rather than raw materials was linked to his desire to establish America's international independence. Carey felt that the export of raw material, and their reimportation in the form of finished goods made the United States dependent on industrialized countries and especially on Great Britain.

Why was all this? Why did they not use the gold of which California had already sent us so many hundreds of millions? Because we had most carefully followed in the train of British

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<sup>8</sup> "His [Carey's] object is to make our currency *independent of foreign standards*...As I understand him, his publications upon this subject, made in the last year of his life, *have their true explanation in the principles here quoted from his earlier works*, and all that he has written in support the greenbacks currency and the remonetization of silver has this bearing and aim, and no other" (Elder 1880, p 13; *emphasis added*).

free trade teachers who had assured our people that the safe, true, and certain road towards wealth and power was to be found in the direction of sending wheat, flour, corn, pork and wool to England in the rudest form, and then buying them back again, at quadruple prices, paying the difference in the products of California mines! Because we had in this manner, for a long period of years, been selling whole skins for sixpence and buying back tails for a schilling! (Carey 1866, p. 3)

Thus, according to Carey, America's policy established a deficient balance of payments by exporting raw materials and importing finished goods<sup>9</sup>. This was due to the model of development chosen: free trade. It obliged the United States to be an exporter of raw materials, responding to the needs of other countries and failing to develop a national market. "Association" between different sectors was limited as the production of raw materials was at the service of the English market. Thus, Carey's development model was hindered.

Inversely, if the United States developed their industrial sector, this could be the end of their international economic dependence. They could produce their own raw material and industrial products and even export them, and thus increase "association" and start up Carey's virtuous cycle. The export of industrial products rather than raw materials could make it possible to establish a surplus balance of payments, as long as industrial products were more expensive than raw materials (Carey 1865, p. 3). A surplus balance of trade and

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<sup>9</sup> See also: "that the country which maintains a policy tending to promote the export of raw materials must have against it a balance of trade requiring the export of precious metals, and must dispense with their services as measures of value" (Carey 1858, p. 435 in Kaplan 1931, p. 60).

a surplus balance of payments where needed at the time in order to increase the stock of gold.

The increase of the stock of gold was at that time not only the *sine qua non* for the resumption of specie payments, but also a way to be able to be preserved from the British financial crises that drained America's gold (Carey 1875, pp. 2-3 in Barreyre 2014b, p. 439). This function was filled in the short run by greenbacks, as they were inconvertible to gold. In addition, a greenback monetary system could foster the United States' monetary independence by making the determination of its interest rate somewhat independent of the English interest rate. "We have for the first time [thanks to greenbacks] acquired something approaching to a *national independence*. In all time past, the price of money having been wholly dependent on the price in England" (Carey 1865, p. 6).

The country's international independence would be translated into a closer connection between different economic sectors. These closely knit economic sectors could have been a solution to the sectional opposition between different sections and their economic interests. In summary, a depreciated exchange rate would stimulate association and thus Carey's economic model. The latter would not only link divergent economic interests, but also spur commodity production and financial independence for the country. Consequently, sectional division would be overcome.

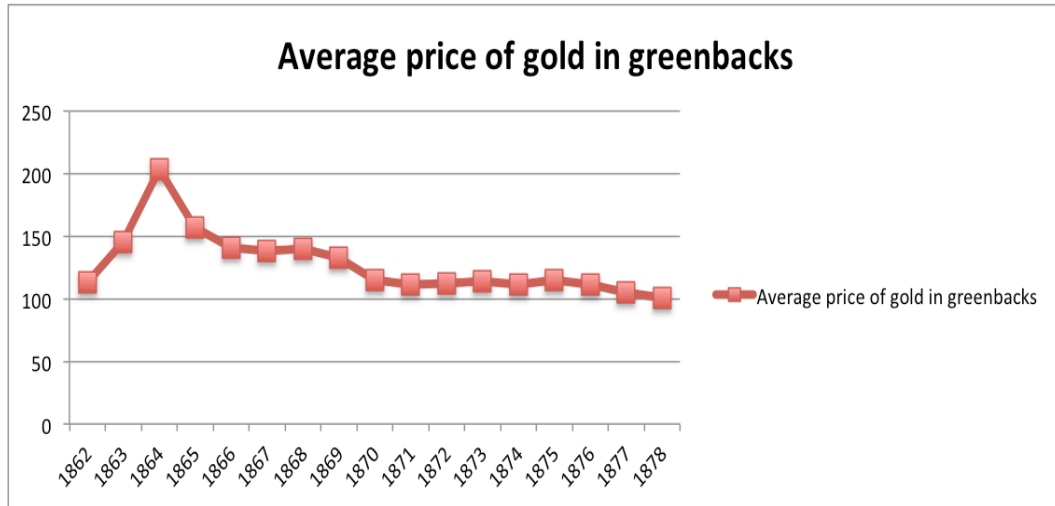
#### **IV. CONCLUSION**

I have argued in this paper that Carey's monetary thought in the greenback debate addresses and serves as a solution to a larger issue: sectionalism. Carey developed a

monetary thought, according to which a greenback monetary standard could favor industrialization, in order to argue his views in the greenback debate. I presented his monetary thought through the lens of the internal and the external constraints of industrialization. The internal constraint was linked to high interest rates imposed by the policies of contraction and resumption. According to Carey, high interest rates would be detrimental to the development of the industrial sector and to the economy as a whole. Greenback supply could provide low interest rates and allow economic growth. The external constraint was linked to an appreciated exchange rate, which was damaging to emerging industries. By maintaining a low exchange rate and stimulating industrial growth in the short run, greenbacks could render the return to the specie standard possible in the long run by establishing a surplus balance of trade. In addition, the industrialization made possible by greenbacks would set in motion Carey's virtuous cycle of development. According to this theory, money is the great instrument of association of farmers and industrialists as it fosters their mutual development. Consequently the sectional division would be overcome, as the interests of those two sectors would be closely linked. In this way, Carey's advocacy of greenbacks offers a reply to the broader issue of sectionalism.

**TABLE 1**

Average Price of Gold in Greenbacks



Source: Mitchell 1908, p. 4.

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