The H.C. Carey School of U.S. Currency Doctors: A "Subtle Principle" and its Progeny

Stephen Meardon
Bowdoin College, smeardon@bowdoin.edu

Follow this and additional works at: https://digitalcommons.bowdoin.edu/econpapers

Part of the Economic History Commons, Intellectual History Commons, and the United States History Commons

Recommended Citation
https://digitalcommons.bowdoin.edu/econpapers/19

This Article is brought to you for free and open access by the Faculty Scholarship and Creative Work at Bowdoin Digital Commons. It has been accepted for inclusion in Economics Department Working Paper Series by an authorized administrator of Bowdoin Digital Commons. For more information, please contact mdoyle@bowdoin.edu, a.sauer@bowdoin.edu.
THE H.C. CAREY SCHOOL OF U.S. CURRENCY DOCTORS:
A “SUBTLE PRINCIPLE” AND ITS PROGENY*

Stephen Meardon⁵

ABSTRACT

Henry C. Carey led a school of post-Civil War U.S. currency doctors prescribing an “elastic currency,” expanding and contracting according to commercial needs. The problem for the Careyites was reconciling elasticity, which implied inconvertibility with gold, with the related aim of decentralized financial power. Careyite currency doctors included, among others, Wallace P. Groom, editor of the New York Mercantile Journal, and Henry Carey Baird, Carey’s own nephew and inheritor of his mantle. Their prescribed reform of the banking system featured a financial innovation that would remove superfluous currency from circulation while supplying what was needed. The innovation was an “interconvertible bond,” a debt instrument of the U.S. Treasury that was to be issued upon demand and redeemable for currency at the option of the holder. Its function was supposed to be like the mechanical governor of a steam engine, operating by a “subtle principle” that obviated human governing power and discretion. The Carey school’s prescription and its rationale remained salient up to the advent of the Federal Reserve System.

I. INTRODUCTION

From 1861 to 1865, the United States enacted currency and banking laws that proved their worth for prosecuting civil war. Their suitability for a sustained and prosperous peace was

* Version of February 20, 2024.
⁵ Dept. of Economics, Bowdoin College, Brunswick, Maine, USA. Email s.meardon@mailfence.com
This essay was prepared as a contribution to the edited volume titled Money Doctors Around the Globe, ed. by Anders Ögren, Andres Alvarez, Masato Shizume and Vincent Bignon (Singapore: Springer Nature), forthcoming. With the usual disclaimer, I thank Sofia Valeonti for conversations that gave rise to the essay and the editors for its airing at the Money Doctors Workshop at the Banque de France, March 21-22, 2023.
more questionable. The financial system had been transformed in a way unacceptable to orthodox economic thinking were it not for national emergency. A legal-tender currency inconvertible to specie was the main expedient.

Although orthodoxy abhorred the inconvertible currency, it had its advocates, and not only for expediency of war. Their objective was an “elastic” currency that would become more abundant or scarce as needed for commerce and industry, not as determined by the necessity of specie payments or the discretion of some authority. Prominent among these advocates was Henry Charles Carey, erstwhile head of the Philadelphia publishing company bearing the family name and an outspoken commentator on questions of political economy from the late 1830s.

Carey was a septuagenarian before the end of the Civil War; his theoretical framework was fleshed out decades earlier in *The Past, the Present, and the Future* (1847). There and in the bulk of his antebellum writings the paramount policy questions related to trade and tariffs. Yet he did address questions of currency and banking, if not so intently. The same theory applied.

In brief, the theory held that when people are more concentrated geographically and industry is more diversified, as would happen with tariff protection, the conditions for exchange are most favorable. It follows that the demand for money, “the machinery of exchange,” is great (Carey [1847] 1872, p. 162). But money has various forms including gold and silver coins, circulating bank notes, and credits transferable by checks or drafts. Under favorable conditions, because partners in exchange are nearby and diverse in employment, the value of circulating coins and notes is small relative to credits – credits implying trust and coincidence of wants. The owner of capital invests in equity shares in local banks, whereby he extends credits to his neighbors. Thus “capital is promptly invested where it is accumulated,” tending thereby “to accumulate in towns, and to be from thence distributed over the country” (ibid., p. 172).

Under less favorable conditions, the owner of capital sends money to Boston or New York for deposit. Absent the credits of the local capital owner, the local businessman is more likely to want coins and circulating notes. But these have gone to the metropolis. Production is fostered in the metropolis but not much elsewhere. More than production, however, what is fostered in the metropolis is speculation, insofar as metropolitan banks
lend on deposits in disproportion to the bank owners’ equity. Money and banking become concentrated in cities, the countryside is relatively deprived, and the dominant forms of money interact with the banking system to yield speculation and price inflation (ibid., pp. 188-189).

To this way of thinking, currency problems are the result of policies that induce people to transact at distance and rely on forms and uses money most apt for such transactions. Money then contracts and expands in places and ways unbefitting public needs.

The aftermath of the election of 1864 was an opportune moment to advance this thinking. The war’s end was in sight, but post-war conditions were uncertain. The Republicans’ majority in Congress was expanded decisively, but what they would do with it besides quelling Southern resistance and extirpating slavery was unclear. Their platform treated all other questions sketchily. Carey saw fit to address a series of open letters to Rep. Schuyler Colfax, Speaker of the House of the Representatives, telling him how they should be treated (Carey 1865a). The series culminated in a set of five letters, dated from Feb. 13 to 18, 1865, on “The Currency Question” (Carey 1865b).

A common view, Carey (1865b, p. 7) observed, was that abundant legal-tender greenbacks produced inflation, as reflected in the rising price of gold. Carey disputed it. The causes of inflation were different; greenbacks were not too abundant but too scarce. “In a physical body health is always the accompaniment of a rapid circulation, disease that of a languid one” (ibid., p. 5) – and the populace was a physical body and money its circulating medium.

What was more, those who pretended to know the subject best usually made the worst diagnoses. “By all the currency doctors, both here and abroad, the cause of financial crises is found in the circulation” (ibid., p. 8). Poor diagnoses resulted in poor prescriptions, hence the unremitting calls for more regulation of the money supply. The more regulated the supply, the more riches accrued to the regulators, namely big-city bankers and friendly politicians. Carey found corroboration in “the erection of those great palaces which now stand almost side by side with tenement houses whose occupants ... count by the hundreds” (ibid., p. 3). He offered a different prescription: “The circulation needs no regulation, and for the simple reason that the people regulate it for themselves” (ibid., p. 8).
All they needed for successful self-regulation was a functioning “escape valve” for superfluous money (ibid., p. 22, italics in original; cf. p. 11).

It was at this moment and along these lines that what I call the Carey school of currency doctors coalesced. Its teachings, which had already existed, became sharper and more salient in the postbellum currency debate. Its teachers became distinguishable by their shared argument and metaphor.

I have three theses. First, the Carey school’s peculiar combination of prescriptions – for an elastic currency including legal-tender government-issued paper, but against any regulation of the currency’s issuance – required mixing the physical metaphor (the body and circulation) with a mechanical one (a valve and gas). Second, the mechanical metaphor, which changed after Carey’s presentation in early 1865, became the one by which the school was mainly distinguished. Third, the school’s teachings were salient up to the advent of the Federal Reserve System, a half century after Carey’s letters to Colfax.

Sofia Valeonti (2022) has identified Carey as an important contributor to the Reconstruction-era monetary debate and shown that his contribution partook of an encompassing theory of economic development. This essay extends her thinking in one direction: it positions Carey as leader of group of kindred monetary thinkers and traces their ideas beyond Reconstruction. Earlier, Irwin Unger (1964) identified several overlapping kinds of “easy money” thinking within a broad survey of postbellum social conditions and financial politics. This essay undertakes a more detailed examination of one of them. As to the Carey school and the history of the Fed, Mints (1945), Timberlake (1993), and Meltzer (2003) alike acknowledge the tide of early-20th century expert opinion favoring more “elasticity” of the U.S. currency (e.g. Meltzer 2003, p. 69). Meltzer (ibid., p. 70) quotes at length a contemporary expert (later governor of the San Francisco Fed) opining that the Fed’s most important effect was “to set up the machinery necessary to provide an elastic currency,” and all three authors discuss the real bills doctrine as the theoretical basis of such opinion. So far as they trace the intellectual roots of the doctrine, however, they turn mainly to Great Britain and specifically to Henry Thornton (ibid., pp. 19-37). This paper shows that the Careyites taught it domestically, with a different inflection, and the teachings resounded in the Fed’s architecture.
The reader has already observed that “currency doctors” is a term used by Carey himself. Perhaps that recommends him and his school for consideration in this volume. On the other hand, one may observe that Carey’s usage, which is pejorative, raises the question of whether Carey wished himself to be considered a currency doctor. Other questions arise irrespective of his wishes. As usual for economic thinkers coming of age before the Progressive-era professionalization of economics, the Careyites had scant credentials for their expertise. Are they aptly called doctors? What is more, their monetary prescription might be described as removing doctors’ discretion in giving prescriptions. What doctor deserving of the name would do that? Acknowledging these incongruities, I still apply the term. The Carey school used economic theory to formulate a prescription for monetary institutions, and the theory and prescription had currency, as it were. Its members might be considered proto currency doctors, or anti currency doctors, and be no less interesting for the contrast they present with others of general kind.

II. THE ASSUMPTIONS OF ORTHODOXY AND CAREY’S DISSENT

The legislative origin of the currency debates during the half century after the Civil War were two acts of war finance: the Legal Tender Act of 1862 and the National Currency Act of 1863.

Before the Legal Tender Act, the Treasury securities authorized for sale by Congress were redeemed with gold coin. Minted gold was legal tender for public and private debts of all sums. The innovation of 1862 was to authorize issuance of Treasury notes paying zero interest that were themselves legal tender except for payment of import duties and interest on U.S. bonds and notes. The notes were fiat currency: “greenbacks.” Greenbacks had another relevant characteristic under the original act. Their holders could trade them for Treasury certificates of deposit paying 5% annual interest for a period no less than 30 days, the deposit being available for withdrawal after that period with 10 days’ notice, or trade them for U.S. bonds paying 6% annual interest for 20 years but redeemable at the pleasure

1 Coins of other metallic content circulated for denominations smaller than those of gold coins. They were also legal tender for sums up to a stipulated limit, viz. 10 U.S. Stat. 160 (1853), cf. 9 U.S. Stat. 397 (1849). They were exchangeable for gold coin without limit.
of the government after 5 years (known as "five-twenty bonds"). Which is to say, the Legal Tender Act provided for the greenbacks’ guaranteed convertibility, in a way. They were convertible to U.S. certificates of deposit or bonds with specific terms of interest and maturity.

Significantly, this characteristic of greenbacks issued under the Legal Tender Act was limited to the first issue of $150,000,000. Within four months, Congress authorized issuance of another $150,000,000, now granting the Secretary of the Treasury discretion as to whether to give bonds in trade for tendered greenbacks, or instead coin, or instead just an equal amount of newly issued currency. The guarantee of convertibility to five-twenty bonds, which had been printed on the greenbacks’ reverse, was thereafter withheld.

Anyway, even while the guarantee held, it did not reflect the normal meaning of convertibility, which was convertibility to specie. Orthodox economic thought held specie convertibility to be an essential attribute of a good currency system. Orthodox thinkers would sacrifice it only in case of emergency, and then only under the assumption of its restoration when the emergency passed. Such a thinker was Amasa Walker, lecturer in political economy at Amherst College and also U.S. Representative from Massachusetts in the 38th Congress, 1862-1863. The assumptions of orthodoxy are articulated well in his remarks on the second notable act of war finance, the National Currency Act.

Bank notes continued to function as currency after greenbacks entered into circulation, with this principal change: the legal-tender character of greenbacks voided the specie convertibility of bank notes. The National Currency Act codified in detail the new function of bank notes. State-chartered banks issuing circulating notes under the various state rules would be supplanted by nationally chartered banks operating under uniform rules. Banks would still have the benefit of issuing currency, but only by placing on deposit at the U.S. Treasury government bonds of no less par value. In return they would receive bank notes printed by the government in their name (so long as the aggregate did not exceed a given limit, and so long as it was apportioned among states and territories as

---

3 Cf. 12 U.S. Stat. 345, op. cit., and 12 U.S. Stat. 532 (July 11, 1862); see also Drew (1874, p. 18) and Groom ([1869] 1876, p. 32).
stipulated in the act). These notes they could circulate, provided they kept on hand lawful U.S. money (coins plus greenbacks) equal to 25% of their deposits plus notes in circulation. Their notes were guaranteed to be received at par with lawful U.S. money in payment of taxes and other obligations to the U.S. government, except import duties; and they were obligated to redeem their notes for lawful U.S. money when demanded by their holders.⁵

Amasa Walker criticized the act. If “mixed currencies,” those consisting of specie together with convertible notes backed only partly by specie in reserve, portended possible trouble, then the National Currency Act ensured trouble. The U.S. government was already issuing its own notes, namely inconvertible greenbacks, a “credit currency.” The act would permit banks to circulate notes that were convertible only to inconvertible government notes. This was “promise based on promise, paper piled on paper” (Walker 1863, p. 835). With the resumption of specie convertibility – “for when the war is over we must of necessity return to specie payments” (ibid., p. 838) – banks would find the proportion of 25% between lawful U.S. money (now specie) in reserve and deposits plus circulating notes too small. They would reduce their circulation as fast as possible. A general contraction would follow.

Yet in the final analysis Walker supported the act. Importantly, it put the currency under the uniform control of the U.S. government. It did the job poorly, but that could be fixed. It could be fixed more straightforwardly than could the system of state-chartered banks, which was plagued by overissue of bank notes and reformable only by the political will of dozens of state legislatures. In Walker’s view, the flawed National Currency Act was “the first step towards that great reform by which the element of credit shall be entirely eliminated from the banking currency of the country” (ibid., p. 841).

Such was the view of orthodoxy. Specie convertibility must be resumed. Currency other than specie, if supportable, was suspect. When compromise was needed, as in civil emergency or in the face of immovable interests, it should be done with an aim toward future advances of “sound currency” (Walker 1866, p. 214, italics in original).

Apprehension of such advances drove Carey to write his letters to Colfax of early 1865. The apprehensions were well founded. By the end of the year, Treasury Secretary

Hugh McCulloch reminded Congress that the existing currency acts were war measures, expedient in their time but discreditable in peacetime. Their immediate effects were inflationary, their prospective ones destabilizing, and their ultimate ones worse. According to his diagnosis, there was “no fact more manifest than that the plethora of paper money is not only undermining the morals of the people by encouraging waste and extravagance, but is striking at the root of our material prosperity by diminishing labor” (McCulloch 1865, p. 9). McCulloch prescribed terminating the legal-tender note issuances, repealing their encompassing banking acts, commencing the work of retiring the “plethora” of outstanding notes, and continuing until it was done (ibid., p. 5).

Carey saw fit to respond to McCulloch, as he had done to Colfax, in open letters. That the bottom line of his dissenting diagnosis was “no such ‘plethora’ exists,” he repeated enough to leave no doubt (Carey 1866a, p. 3 and passim). But the orthodox diagnosis presented challenges for proponents of inconvertible currency that deserved answers in detail. If there was not presently overissue of currency, then why, absent specie convertibility, would there not be eventually? If the better prescription was to let people regulate the currency themselves, then what kind of banking system was needed for self-regulation to succeed? The answers Carey began in the letters to Colfax he elaborated in the letters to McCulloch and other commentary in the spring of 1866.

As to overissue of currency, Carey admitted the possibility. Under some circumstances he admitted even the likelihood. Only he did not think those circumstances had to do with inconvertibility versus convertibility, rather with bank lending on deposits versus lending on capital. To illustrate he sketched a street scene from New York City:

By the last report of the Superintendent of the New York banks the amount for which they then stood indebted to individuals, called depositors, was nearly $250,000,000. The owners of this vast sum might be seen passing up and down Wall Street, as fully ready to purchase stocks or notes as they could have been had it been in their private safes. Side by side with them, however, might be seen other individuals to whom that same amount had been lent, and who were equally ready to bid for any securities that might be offered. The $250,000,000 of capital had thus
become $500,000,000 of currency, so to remain until the owners might claim to be repaid. (Carey 1865, p. 18)

Carey presented tabular data showing the close correlation from 1861 to 1864 of bank deposits less specie holdings and the price of gold. The difference between deposits and specie holdings was lent out, and the variation in that difference over time was evidently large. The variation in the price of gold was similarly large and in the same direction. Amasa Walker could have presented these data to support his argument for abolishing “credit currency,” but Carey argued differently. Lending on deposits was like injecting gas in a balloon, causing the prices of gold, stocks, and commodities in general to rise. Then “skilful financiers” (sic) in the know would sell, gas would be released, prices would fall, and those who once sold could now buy, collecting great gains. Call it the “ballooning” or the “windbag system,” he offered (Carey 1865b, pp. 18, 34, italics in original; also Carey 1866b). It benefitted whoever controlled the currency, hurt anyone in debt, and meant volatility for everyone.

In view of this system, currency doctors like Walker and McCulloch would regulate the currency. To Carey, what needed regulating was not the currency per se, only the part under control of the financiers. Any part under control of the people did not partake of the windbag system, so needed no regulation (Carey 1865b, p. 19). The greenback, for instance, “represents property delivered or service rendered to the Government. ... It goes into the pocket of each individual, there to remain until he can find an opportunity to send it home, or in some other manner to use it for his private benefit” (ibid., pp. 21-22). It “has fallen on the country as the dew falls, bringing with it good to all and doing injury to none” (ibid., p. 25). Anyway, if greenbacks happened to be issued in excess there was a corrective: the holder’s right to trade them for 5% certificates of deposit or five-twenty bonds. At least, there was such a corrective so long as there was such a right. By that right, from February to July of 1862 (and thereafter at the discretion of the Secretary of the Treasury), the holder was “enabled to convert into an interest-bearing security whatsoever surplus may be in his hands,” so the danger of “gas-based” currency was averted. “Having thus provided a perfect escape-valve,” Carey insisted, “neither the captain nor the crew need fear explosion” (ibid., p. 22, emphasis in original).
With this expression the metaphor calls for a closer look. Carey refers in several instances to the gas-filled balloon. In this instance he refers to its crew. He appears to evoke the tethered coal-gas and hydrogen-gas balloons used famously in the Civil War for military reconnaissance. Those of the Union’s Aeronautical Corps had crews numbering from two to six (Glassford 1896, p. 257). “Windbag” may have been a colloquial name for such a balloon – “gasbag” at least was (Fanton 2001). Whether it had the added advantage of conjuring a kind of financier, skilful or other, he left to surmise.6

Carey’s rationale so far would seem to recommend the abolition of bank lending on deposits, the wholesale replacement of bank notes with greenbacks, and the supply of greenbacks without limit so long as the “escape valve” was operative. In fact that was not what Carey recommended – at least not abolition of lending on deposits, nor replacement of bank notes. Carey saw a significant role for bank lending, including lending on deposits (within limits) and issuance of circulating bank notes alongside greenbacks.

The role of banking and Carey’s reason are traceable to his theory articulated in The Past, the Present, and the Future. To Carey, development is fostered by geographic concentration of economic activity but dispersion of institutional authority. When the benefits of geographic concentration in any given place is fully realized, population naturally spreads itself out. But communities should spread only so far as they can support a diverse range of economic activities, because therein lies the advantage of concentration. So far as they do spread, they should be self-sufficient for most if not all economic purposes and self-governing for most if not all political purposes.

To Carey, then, proper economic and political organization is like a set of nested pyramids. At the base are numerous small pyramids (communities), subsets of them constituting the base of several larger ones (counties, perhaps). These in combination constitute even larger ones (states or regions), and surmounting all is the nation. The base of the surmounting pyramid represents the dispersion of economic activity and political power across the whole country. The height represents the aggregate of production and power. The communities at the base of an appropriately broad pyramid participate mainly

6 Also supporting the hot-air-balloon interpretation is that balloons of the time did have escape valves, described in a contemporary patent as “ejection cocks” (Sherman 1861), and were prone to being “blown to pieces” (Glassford 1896, p. 260).
in local economic and political institutions. By virtue of their local productive and civic activities they contribute greatly to the aggregate, but they hardly feel its relevance to their everyday lives, much less feel burdened by it. Anyone would acknowledge that a well-developed pyramid should be high, but Carey emphasized that it should also be broad (Carey [1847] 1872, pp. 286-289; Meardon 2005, pp. 161-163).

Considering the subject of banking in light of the pyramid theory, Carey saw an institution that had a proper form differing greatly from its actual form. The banking system should properly be designed to transfer capital from its local owners via local banks to local producers, financing their plans as far as prospects warranted. Such a system would be facilitated by free entry of banks into local markets. The system established by the National Currency Act, while nominally free in the sense of allowing any banking association to obtain a national bank charter upon certification of having the requisite capital stock, actually promoted monopoly. To Carey, the trouble was the limit on aggregate bank note issuance stipulated in the act ($300,000,000) and the rule for its apportionment. Half of the limited amount was to be distributed among the states and territories in proportion to population, and half according to the Treasury Secretary’s regard for the existing distribution of bank capital (12 U.S. Stat. 665). These stipulations have “given us a procrustean bed in which to lie, limiting, as it does, to $300,000,000, or little more than $8 per head of the present population, the amount of the capital that may be applied to the trade in money, while leaving to the owners of those few millions full power to trade to the extent of thousands of millions, and thus creating a sort of inverted pyramid” (Carey 1866b, April 12).

Because of the Treasury Secretary’s deference to the big banks of the major metropolises, the situation deteriorated further with distance from New York and Boston. What was more, the situation caused volatility and threatened financial crisis by contributing to the windbag system. Throughout most of the country, absent local rivals to the big banks, local capitalists’ inclination to invest capital locally was thwarted. Instead they put money on deposit in metropolitan banks, whose directors inflated the windbag.

Carey’s solution was to curtail metropolitan banking on deposits and promote instead local banking on paid-in capital. To effect this change, the limit on aggregate bank note issuance should be lifted. But there should be a capital requirement of 50% for bank
investments of any form other than gold, silver, U.S. notes, or notes of national banks. Limiting banks’ holdings of interest-paying securities to no more than twice the value of paid-in capital would more than suffice to promote local banking. (The assumption was apparently Adam Smith’s: individuals employ capital as near home as they can, so long as profits are not much less than they could get afar, because they “know better the character and situations of the persons” they are dealing with (Smith [1776] 1986, v.2, p. 30).) These local banks would function safely and their stockholders would earn a respectable dividend. Indeed, “such stock would be preferable to almost any other securities in the market, and there would be no difficulty in so enlarging the foundation [of the banking system] as to give the whole structure the form of a true pyramid, instead of the inverted one which now presents itself to the eye of all observers” (Carey 1865b, p. 35).

To Carey, the foregoing solution implied “free banking.” It might be regarded instead as a hybrid of freedom and regulation. On one hand, free banking and fiat currency issuance; on the other, regulation to bring about a desired distribution of banking and currency and avoid overissue. But Carey did not regard it that way.

In Carey’s view, neither the bank capital requirement nor the five-twenty “escape-valve” had the character of regulation, for two reasons. First, they were so simply applied as to obviate the discretion of any person or institution who might regulate, save the individual regulating himself. Which is to say they worked almost mechanically. Second, they redistributed power from the top of the pyramid, as it were, to the base, reclaiming for the people the freedom they had ceded to moneyed monopolists.

Devising this doctrine in his dissent against the orthodox currency thinking, Carey founded what I have called his school. But the founder was in his eighth decade. The school’s continuation required that others adopt and teach its curriculum, and that is rarely done without some amendments to the founding plan.

III. The Carey School

Acknowledgment of a co-founder is due. Stephen Colwell was Carey’s junior by seven years, and, while esteemed as an author of political economy (as well as businessman, philanthropist, and leading citizen of Philadelphia), was less renowned in that vocation
than the senior, his friend. Even so, on subjects of money, banking, and prices, “Carey not only received endorsement from Colwell but more often correction and instruction,” according to an informed chronicler (Ferleger 1942, p. 28). Colwell’s *Ways and Means of Payment* (1859) was a searching analysis of monetary evolution and U.S. monetary institutions. Its upshot, in Ariel Ron and Sofia Valeonti’s apt description, was a design for “central monetary services without centralization” (Ron and Valeonti 2023, p. 2). Carey declared that he and Colwell sought substantially the same ends, advancing them without any essential difference (Carey 1871, p. 4).7 But Colwell’s public service during the Civil War exhausted him. By the war’s end his powers for further advances were spent (ibid., pp. 26-27). He did not contribute directly to the postbellum monetary debate.

A member of the school whose powers were just gathering in the mid-1860s was financial journalist Wallace P. Groom. Born in 1839, Groom was not yet thirty when he became editor and publisher of the *New York Mercantile Journal*. He made the periodical a platform for his designs for money and banking reform, which at once echoed and elaborated Carey’s.

No later than 1868, Groom proposed a reform similar to Carey’s escape valve, although with more specificity in regard to the policy and the metaphor.8 He elaborated further in 1869. Whatever was money’s form, its value as money derived from the imprimatur of the government. Whether it was a note, bill, or coin, its value inhered in its standing as a representative of “the resources behind it – the merchandise, the corn, the cotton, the fruit, the minerals, etc., of the country” (Groom [1869] 1876, p. 47). The direct way of defining a country’s money was just to say that such was its standing. The indirect way was to insist that money was gold or silver, “metallic ‘middlemen’” interposed between

---

7 Carey’s declaration is corroborated clearly by his and Colwell’s writings in 1866. Colwell had been appointed to the postbellum U.S. Revenue Commission the year before at Carey’s suggestion. Then, just as Carey (1866a) was excoriating Treasury Secretary McCulloch in the public letters previously quoted, Commissioner Colwell (1866) reported to McCulloch on prices and currency, venturing to quote Carey’s letters for support (Colwell 1866, p. 8; cf. Carey 1866a, p. 4). His conclusions were the same: “The demand for currency has been in proportion to the business that has been done ... There has been, then, no undue expansion since the war began; no injurious expansion exists now” (Colwell 1866, pp. 15, 17). The episode is recounted by Ferleger (1942, pp. 25, 93-96).

8 Later, Groom cited July 5, 1865, as the date of his original expression of the proposal (Reynolds et al. 1911, p. 465). An examination of his cited source does not find it. I am confident of his expression of the proposal by 1868 ("The National Finances," 1868) but not earlier.
demanders of money and the larger national resources. Unfortunately, these figurative middlemen are “fickle and capricious” and “apt to leave our shores at the first alarm,” causing financial chaos (ibid.). The direct way allowed demand for money to be satisfied more readily. Money should consist of legal-tender national paper. Its ready availability would be assured by its interchangeability with government bonds bearing a fixed rate of interest, which would also guard against its overabundance.

So far the idea was essentially what Carey had presented. Groom acknowledged Carey’s authority, although with detectable restraint. “Carey is an able man, and his opinions are worthy of special consideration,” he admitted (Groom [1869] 1876, p. 37), while otherwise invoking the Philadelphian sparingly. The restraint was apparently not owing to any important divergence of their monetary ideas but to Groom’s caution about hitching monetary reform to Carey’s doctrinal wagon, laden as it was with tariff advocacy. If there were likely converts to the cause of monetary reform in the New York commercial emporium, then linking the cause to Pennsylvania protectionism would diminish their ranks. “All I can say at the present time, relative to the matter of tariffs,” Groom offered, was that his reform platform included a “judiciously arranged tariff, based on humanitarian principles” (ibid., p. 41). It was a conspicuously hollow plank. But that only meant that while Carey saw fit to connect his elastic currency ideas to the tariff question, Groom saw the connection as inopportune.⁹

More opportune was adding detail to the character of the proposed money and its interchangeability. First, its legal-tender character should surpass that of greenbacks, which were not an accepted tender for import duties and interest on U.S. bonds and notes. The national paper currency should be legal tender “for ALL debts, public and private” (ibid., p. 50, emphasis in original). Second, it should be interchangeable with government bonds “at the option of the holder,” an option that holders of greenbacks had enjoyed for only four months in 1862 (ibid., p. 50, emphasis in original). Third, the interchangeable bonds should bear a fixed rate of interest. But not just any fixed rate. The 6% rate of the

⁹ Unger (1964, p. 118) identifies Carey and Groom with two different “well-defined soft money currents” in the early postbellum years – although he admits it would be specious to insist on their flowing “self-contained and unmingled.” My argument emphasizes the mingling. Their common policy interest, similar metaphors, and shared values and reasoning support their being joined historically in the same monetary “school.” Groom’s express deference to Carey gives additional support.
five-twenty bonds proved to be too high, entailing too much absorption of greenbacks (ibid., p. 34). Groom proposed an annual rate of exactly 3.65%. Whenever currency’s uses were so lucrative that it effectively yielded more than bonds, people would trade bonds for currency; when less, currency for bonds (ibid., p. 33). Maybe the common person does not calculate so finely. A desirable quality of the interest rate, then, is that it should be easily memorable, and of interchangeability that it should be reducible to a simple rule of thumb. To wit, if currency is not useful to the extent of one hundredth of a percentage point of annual yield per day, 3.65% per year, then one trades it for bonds.

Memorability was a desirable characteristic not only of the interest rate but also of the whole currency reform proposal. Groom provided it by elaboration of Carey’s escape-valve metaphor.

Where Carey envisioned a hot-air balloon, Groom saw that indispensable machinery of nineteenth-century industry, the steam engine. The valve mechanism regulating steam pressure in the boiler was the engine’s “governor.” A common kind of governor dating back to James Watt’s innovations had a pair of spherical weights, or flyballs, rotating around a shaft spinning at a speed depending on the work being done. The greater the speed of the spinning shaft, the greater the centrifugal force acting on the rotating flyballs, which rise upward and outward from the shaft. The flyballs’ rise and fall adjusts the valve regulating steam pressure, maintaining it at a level appropriate for the engine’s work – providing power while preventing explosion. Figure 1a shows the mechanism’s place in the steam engine, Figure 1b its function.
FIGURE 1A: Diagram of a steam engine with governor (marked by dashed inset box).
Marked by the author.

To Groom, greenbacks were the steam. They powered the country's commerce, which was the engine doing the people's productive work. The interchangeability of greenbacks with government bonds was the governor: it ensured sufficient money for the needs of commerce, and no more. Thus would paralysis of commerce by lack of money be avoided, as would inflation and instability arising from overabundance of money (Groom [1869] 1876, pp. 25, 50). In his words,

there is in the interchangeability (at the option of the holder) of national paper money with government bonds bearing a fixed rate of interest, a subtle principle that will regulate the movements of finance and commerce as accurately as the motion of the steam engine is regulated by its governor; therefore, making such paper money
tokens measures of values much more perfect and stable than gold and silver (ibid., p. 48, italics in original).

Given the availability of such superior monetary machinery, the use of gold, silver, or other merchandise as money was “a barbarism unworthy of the age” (ibid., p. 48, italics in original). Fittingly, among the periodicals publishing Groom’s explanation of the machinery was *Scientific American* (“The National Finances,” 1868).

It might occur to the mechanically adept reader that a steam engine governor can be adjusted in various ways. For one, a given amount of centrifugal force acting on the flyballs could be made to correspond to a different position of the valve, thus more or less pressure in the boiler. Such an adjustment would be the metaphorical equivalent of modifying the fixed interest rate on the interchangeable bond – so that, for a given amount of commerce, people hold more or less money. One can think how the adjustment might sometimes be useful: 3.65% may be optimal at first but not forever. The thought that naturally follows is more troubling. Who would have authority to make the adjustment? A Washingtonian perhaps, or a New Yorker? A political agent of one faction or another, or a skillful financier?

Groom, who shared Carey’s apprehension about centralized power, anticipated the question and answered it. “The rate of interest (governor) would be adjusted by the action of Congress” (ibid., p. 50). The purpose of the whole machinery was to supply money amply to people far and wide while disallowing the power of regulating it to any section, much less to any officer or oligarch. As Carey had said, “the people regulate it for themselves” (Carey 1865b, p. 8). Groom agreed. So far as there was regulating to do that people could not do individually, they would do it collectively through their elected representatives. Power was to remain decentralized.

By Groom’s efforts, the lessons of national paper money and the interconvertible bond, the steam engine metaphor, and the overarching cause of central monetary services without centralized power spread intensively through the New York mercantile and financial sectors (Unger 1964, 117). Groom did his part to spread them extensively throughout the country, too. By his own account he distributed copies of the *Mercantile Journal* numbering tens of thousands in every state (Groom [1869] 1876, p. 11). So devoted was the journal to the foregoing lessons that the block quotation about the “subtle
principle” regulating finance and commerce in the manner of a steam engine governor was reprinted on its masthead. Groom became one of the most conspicuous exponents of the Carey school.

Judging by the ubiquity of the steam engine governor in postbellum monetary discussions, he was also one of the most influential. His influence required an answer from the defenders of orthodoxy. Then-congressman James A. Garfield rose to the task. Garfield had the scholarly credential of college studies in history and political economy under Arthur Latham Perry, soon to become Amasa Walker’s doctrinal ally. By the early 1870s he had the institutional credential of chairmanship of the House Committee on Banking and Currency. In 1876 he penned an essay for The Atlantic magazine deriding advocates of “soft money,” who, he admitted, had brought about a remarkable change in the public mind about money over the previous ten years (Garfield 1876, p. 221). The likes of Henry C. Carey and his nephew, Henry Carey Baird; their Philadelphia congressman, William D. Kelley; and Wallace P. Groom, together with handful of others, had gained a considerable public following for their doctrine, although it be quackery. The interconvertible bond, Garfield jeered, was “financial perpetual motion”; Groom’s metaphorical explanation of it, the “the subtle principle” and so forth, “has been so frequently quoted, that it may fairly be called their creed” (ibid., 223). Garfield himself proceeded to quote it, in block. For our purpose, his answer to the Carey school is most relevant for its corroboration, to his dismay, of the school’s saliency.

IV. CAREYISM AFTER RESUMPTION

The Careyites were unsuccessful in preventing the resumption of specie payments. It happened in stages. With the Resumption Act of January 14, 1875, the stage of planning passed and that of preparation commenced. Among the act’s provisions was the immediate repeal of the nominal fee for converting gold bullion into coin. Above all was the

---

10 On Garfield’s studies at Williams College from 1854 to 1856, see Perry (1899, p. 817-824); on Perry’s professorship beginning one year earlier, 1853, see Perry (ibid., p. 693). The mutual regard of Perry of Williams College and Walker of nearby Amherst College (from 1859), including for each other’s treatment of currency issues, is evidenced in the writings of both Walker (1866, p. iv) and Perry (1867, p. 24).
requirement that, effective January 1, 1879, legal-tender paper presented to the U.S. Treasury be redeemable in coin (18 US Stat. 296).

Carey himself, in his eighties yet undiminished in capacity and combativeness, protested. To President Hayes he remonstrated that resumption was a conspiracy of New York “money jobbers” and sundry plutocrats abetted by the U.S. Treasury (Carey 1877, p. 5). Bank liabilities repayable on demand, namely deposits plus circulating bank notes, amounted to some $2,000,000,000. Payment was required in lawful money, namely greenbacks and coin. By 1879, the stock of greenbacks would perhaps be $300,000,000, of gold coin $100,000,000. Together they would be inadequate to meet demands on the banks. After resumption, those demands would rise with general alarm about the paucity of the gold stock. The banks’ failure to meet demands for redemption would imply forfeiture of the U.S. bonds they had pledged to the Treasury as security. Then the Treasury would sell the bonds – so far as it could find buyers – to garner the gold for redemption of the insolvent banks’ circulating notes as well as greenbacks. It all amounted to a program of soaring interest rates, especially in agricultural areas where money was scarcest; a program for government “of money lenders, by money lenders, and for money lenders” (ibid., p. 12).

The argument was carried forward by Carey’s nephew, Henry Carey Baird, who had first taken over the elder’s publishing firm and now took up his theoretical mantle. Although resumption was a fait accompli after 1875, both Careys saw a way to modify the argument and maintain its relevance.

The Resumption Act itself pointed the way. Among its provisions was authorization for the coinage of silver “as rapidly as practicable,” putting it in circulation by redemption of existing fractional currency notes (18 US Stat 296). This apparently incongruous provision reflected the understanding by advocates of resumption, particularly Treasury Secretary John Sherman, that gold payments could be resumed only at the political price of remonetizing silver (Timberlake 1978, p. 114). The Treasury had stopped coining silver by act of Congress in 1873. In the interim silver had cheapened: by 1876 the bullion value of the standard silver dollar had fallen to 90 cents (Unger 1964, p. 330). So it happened that alongside the Carey school another form of soft-money advocacy gathered force, this one calling for renewed coinage of silver at the former unit weight ratio of 16 silver to 1 of gold.
It was “a more respectable form of cheap money” and had formidable backing in Congress (Timberlake 1978, p. 115). This was the constituency Sherman meant to accommodate with the silver provision. Because the provision was formulated so that new silver coins would circulate only to the extent that existing fractional paper currency was redeemed, the accommodation may have seemed economically inconsequential. So Sherman hoped. But it did get the silver advocates’ foot in the door, and they could always press for more. The Careys allied with them.

To be sure, some explanation was needed of the Carey school’s embrace of that which its teachings held to be “a barbarism” (op. cit.). A monetary commission established by Congress in 1876 questioned several authorities on the prospects for resumption and bimetallism, first among them Henry Carey. He responded that silver, like paper if not to the same degree, was an inexpensive monetary instrument that common people could really use (U.S. Monetary Commission [1877] 1879, p. 8). He excoriated the U.S. government for its reliance on “the dearest of monetary instruments, and in the suppression or limitation of those less costly ones, silver or paper” (ibid., p. 9); he lauded the government of France, where “gold, silver, and paper ... pass freely from hand to hand at par, each with every other,” all of them legal tender (ibid., p. 15). While the commissioners received written responses from Carey, they queried Baird in person. Taking resumption of specie payments as a given, they asked, how would a bimetallic monetary standard compare to a single gold standard? Answered Baird, “resumption with both metals is more practicable and would be less injurious than with one, but any resumption of specie payments must be ruinous to the people and the civilization of the country” (ibid., p. 265).

In sum, to the Careys, a metallic monetary standard was barbarous; under prevailing circumstances, silver should be monetized; and these views were not inconsistent. First, because a bimetallic standard was less barbarous than a single gold standard. Second, because one could advocate silver monetization without a silver or gold “standard.” The government could mint legal-tender silver and gold coins while also issuing legal-tender paper and without guaranteeing redemption in coin of any liabilities whatsoever. This was the position of the Carey school, and Baird maintained it through the
vicissitudes of the silver controversy of the succeeding decades (Baird 1878, 1883, 1885, 1886, 1890, 1891, 1894, 1908).

By February of 1908, Baird was like Carey in the aftermath of the Resumption Act: an octogenarian leader of a dissenting yet salient school of monetary thinking at a moment of stress to the money and banking system. The Panic of October 1907 was one of the gravest in the turbulent decades since the Civil War. Commentators from most quarters agreed it was ascribable to an ailing banking system, but they disagreed about the ailment. Some, echoing the orthodox view of decades past, looked at the laws governing issuance of bank notes and found what Amasa Walker had cautioned against: a “credit currency.” Against that view, Baird prepared again to dissent.

The specific diagnosis provoking Baird was as follows. The resumption of specie convertibility had been well and good, the diagnosis presumed, and the government’s guarantee of convertibility was credible enough for government-issued legal tender. But how credible was the convertibility of bank notes? The security for banks’ circulating notes still consisted in the government bonds they put on deposit at the Treasury. To Andrew Carnegie, this bond-secured system of bank currency, a relic of the war, was “the worst banking system the world ever saw.”11 In times of stress it engendered doubts about banks’ solvency. As to the cure, it could be found in the practices of other countries, especially England, where banks were required to keep gold coin in reserve against their deposits and circulating notes (Carnegie 1908, p. 360).

Baird scoffed at the foregoing diagnosis. The solvency of banks was in doubt because they were banking incautiously on deposits and other borrowed funds, and scantily on capital. The panic was “a mere case of over-trading,” specifically by the dominant banks of New York City. Such “learned disquisitions” as Carnegie’s, such admonitions about “credit currency,” were out of place (Baird 1908, p. 6). The “giant inverted pyramid of bank credit” should be upended, but this could hardly be done as Carnegie proposed. Instead, loans and discounts should have a fixed legal maximum proportion to bank capital. The true ailment of the banking system would thus be palliated while its great strength, namely

---

its decentralized character, manifest in the thousands of local banks with capital of under $100,000, would be preserved. Baird veered from Carey’s original teaching in one way, by holding that issuance of money in the form of circulating bank notes ought no longer to be permitted. The duty of providing the “instrument of association” was properly the government’s alone. With these and related reforms, banking would be done in and for local communities; all money in circulation would be legal-tender issuances of the U.S. government, consisting variously of paper and coin (and of coin, mostly silver and copper); there would be no promise, so in times of stress no doubts, about redemption of paper with coin; and over-trading and the consequent financial panics would abate. As to the quantity of money, “it could be made ‘flexible’ through an interconvertible bond” (ibid.).

Upwards of forty years after the Carey school’s wartime coalescence and nearly thirty after resumption, its teachings were not fundamentally changed. Likewise its saliency.

V. CONCLUSION

Carnegie had presented his orthodox diagnosis at a meeting of the Economic Club of New York convened over dinner at the Hotel Astor. Among the other invited dinner speakers was one known to hold a different opinion. It was not Baird, but an even more prominent soft money advocate; not a member of the Carey school, but a politician whose speeches resonated with its themes if not its theories. William Jennings Bryan is reported to have betrayed a smile when his turn came to speak. “I had supposed,” he began, “that for forty years our currency system was in the hands of experts. And now, to find that it is the worst system in the world – what shall I tell my people when I go back West?”

By that time, skepticism of the pretensions of experts, currency doctors, or “skilful financiers” to devise a money and banking system that would at once fulfill the U.S. public need and forestall inflation and crises had a long tradition. The political economists presented here as members of the Carey school were among the most notable contributors to that tradition. It may be granted that their sophisticated recommendations of

\[12\] Ibid.
adjustments to U.S. money and banking institutions in hopes of guarding them against opportunistic manipulations by experts put the Careyites in a seemingly paradoxical position. These proto currency doctors were, by their own lights, anti currency doctors. One might aptly say they were currency doctors against currency doctoring. Because their diagnosis held that “the circulation needs no regulation, and for the simple reason that the people regulate it for themselves” (Carey 1865b, op. cit.), their prescription had the character of a home remedy. They saw a role for government in making the remedy practicable, but it entailed no discretionary action by any human governor, whether cabinet secretary, commissioner, or financial titan. To allow discretion would be to distribute power over money to the place and personages in which the discretion was vested: ultimately New York and its moneyed denizens.

Careyites favored an impersonal and automatic mechanism that would supply the people at large with the money they wanted, and no more. They conceived metaphors to aid its design and promotion. Carey himself imagined a hot-air-balloon’s gas escape valve. Wallace P. Groom and, following him, Henry Carey Baird imagined a steam-engine’s flyball governor. The “subtle principle” by which the latter device kept steam pressure at a level commensurate with the work of the engine was the same as that by which an interconvertible bond with fixed rate of interest kept the money in circulation commensurate with the people’s industry and commerce.

The Careyite expression of that principle gave rise to an abiding progeny. The public debate that Carnegie, Bryan, and Baird joined with their commentaries of February 1908 yielded, by May of that year, the Aldrich-Vreeland Act, which made several piecemeal changes to the U.S. money and banking system. The act also established the National Monetary Commission, which was to study the system and recommend more fundamental changes. Its report came in 1910. The practical and ultimate result, in a roundabout way that involved a change of party control of both the Congress and presidency, and consequent adjustments to the recommendations as implemented, was the Federal Reserve System (Timberlake 1993, pp. 214-234).

It would be extravagant to credit (or debit) the Carey school for the Federal Reserve System. But Careyites did make their teachings heard during the debates leading up the Federal Reserve Act of 1913, and their principle of decentralizing the power of money
creation abides in aspects of the system, most plainly its regionally partitioned structure, and in its framers’ “populist” animus against Wall Street (Timberlake 1993, pp. 221-225). That their interest in a mechanism limiting the discretion of authorities in money creation is no less abiding hardly needs elaboration (cf. Taylor 1993).13

We conclude with a scene of the Carey school on the eve of the advent of the Federal Reserve. On November 11 and 12, 1910, the Academy of Political Science gave over its annual meeting to a conference on the work of the National Monetary Commission. The sessions included presentations by prominent money doctors Edwin W. Kemmerer, J. Laurence Laughlin, Charles A. Conant, and Paul M. Warburg, with some others.14 Not only their remarks but also those of prominent discussants were recorded in the proceedings.

One discussant warned that, whatever the United States may do, it should not look much abroad for positive examples for its institutional redesign. The Bank of England and Banque de France, notwithstanding their names, were private institutions serving the interests of those countries’ creditor classes. The United States needed a different design to serve the public interest. In the peroration of his brief remarks, he sketched it. Citing a back issue of the New York Mercantile Journal, the discussant, Wallace P. Groom, held that “in the interchangeability (at the option of the holder) of national paper money with government bonds bearing a fixed rate of interest, there is a subtle principle ...” (Reynolds et al. 1911, pp. 464-465).

References


13 The subsequent development of economists’ interest in such mechanisms, as distinct from the fact of their interest, does need elaboration, but it is beyond the scope of this essay. George S. Tavlas’s examination of the “rules versus authorities” element of the Chicago monetary tradition is apposite (Tavlas 2023, 175-196).


Perry, Arthur Latham. 1899. *Williamstown and Williams College.* Published by the author.


