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The Dollar's Deadly Laws That Cause Poverty and Destroy the Environment

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ABSTRACT

Laws associated with issuing U.S. dollars cause dire poverty and destroy the environment. American law has codified the dollar as sufficient for satisfying debts even over a creditor's objection (legal tender) and as the only form of payment that typically meets federal tax obligations (functional currency). The Supreme Court has upheld government bans on private possession of, or contractual repayment in, monetary alternatives to the dollar like gold or silver. Furthermore, since 1857 when the United States Congress began abandoning the silver standard in practice, the dollar has gradually been trending ever greater as a "fiat money"—a debt instrument issued at the pleasure of the sovereign—and, indeed, has been a 100% debt instrument since 1971 when the United States finally, formally, and completely abandoned gold and silver standards. States and municipalities also support these four legal aspects of the dollar despite a potentially contrary constitutional mandate.

This Article examines implications of these four legally entrenched aspects of the modern dollar—fiat money, legal tender, functional currency, and non-fiat money bans. As the first analysis in the academic legal literature to do so, this Article demonstrates that the combination of these four legal attributes leads to severe environmental damage and catastrophic impoverishment of a portion of the global population (in particular, those who are already abjectly poor). The Article shows that calls for digital currencies based on international fiat monetary alternatives to the dollar, such as Special Drawing Rights (SDRs), will not improve the environment and global economy and indeed may worsen

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them. The Article concludes by laying out possibilities for reform of laws supporting the dollar in its present form that would diminish both poverty and environmental destruction.

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I. INTRODUCTION

This Article draws attention to how laws that accompany the modern U.S. dollar cause poverty and environmental destruction. In the modern world, almost all currency is now *fiat*, meaning that (1) the issuing government authority legally declares the currency to be money and (2) its proclaimed value outstrips whatever the intrinsic value the money content (metal, paper, or electronic, etc.) has. Prominent economists frequently assume that government fiat money is a helpful and good innovation.[1] But less attention has been given to ad-

1. Paul Krugman, *Transaction Costs and Tethers: Why I'm a Crypto Skeptic*, N.Y. TIMES (July 31, 2018), https://www.nytimes.com/2018/07/31/opinion/transaction-costs-and-tethers-why-im-a-crypto-skeptic.html [https://perma.unl.edu/9JBM-VVXH] ("[F]iat currencies have underlying value because men with guns say they do. And this means that their value isn't a bubble that can collapse if people lose faith."); Paul Krugman, *Bubble, Bubble, Fraud and Trouble*, N.Y. TIMES (Jan. 29, 2018), https://www.nytimes.com/2018/01/29/opinion/bitcoin-bubble-fraud.html [https://perma.unl.edu/3AVR-2UVC] ("Although the modern dollar is a 'fiat' currency, not backed by any other asset, like gold, its value is ultimately backed by the fact that . . . [i]ts purchasing power is [ ] stabilized by the Federal Reserve, which will reduce the outstanding supply of dollars if inflation runs too high, increase that supply to prevent deflation. And a $100 bill is, of course, worth 100 of these broadly stable dollars."). *See also* JOHN M. KEYNES, THE GENERAL THE-

verse consequences of the coercive laws that ensure the public's use of the fiat currency.

In the first instance, one must draw a distinction between government notes and government fiat money. The former does not employ laws to coerce the public's use of the money; it is merely one of many debt instruments among those both public and private.[2] Government fiat, by contrast, is a lawfully anti-competitive *currency*. By legal design, it drives competing currencies out of the market, including gold and silver.[3] Some economists say that the legal enactments are necessary to create marketplace efficiency in the use of money. Without a uniform currency, the argument goes, transactions will be inefficient, as trading parties have to determine what the relative exchange values of their competing monies are.[4]

Without denying possible efficiency benefits to a legally anti-competitive currency, there are also oft-overlooked economic and environmental harms. This Article draws attention specifically to two such problems in Part II.[5] First, the laws that accompany fiat money impoverish people. Many are effectively shut out of the economy while, at the same time, they are paradoxically required to involuntarily participate in the exchange of fiat money. Second, these laws damage the environment. This is because the public must unsustainably over-extract resources to simultaneously try to stay financially solvent and comply with the laws of fiat money.

There are three laws accompanying most modern fiat currencies that cause poverty and environmental destruction. First are legal

ORY OF EMPLOYMENT, INTEREST, AND MONEY 353–58 and 370–71 (1936) (offering support for fiat money systems).

2. *See* Lawrence H. White & William Luther, *Positively Valued Fiat Money After the Sovereign Disappears: The Case of Somalia*, GMU Working Paper in Economics No. 11–14 (Apr. 2, 2011) (reporting that the fiat Somali shilling retained positive social trading value even after the collapse of Somalia's government in 1991).

3. *But see* Legal Tender Cases, 79 U.S. 457, 659 (1870) (Field, J., dissenting) ("[I]f we understand by currency the legal money of the country, and that which constitutes a lawful tender for debts, and is the statue measure of value, then undoubtedly nothing is included but gold and silver . . . . This is a constitutional principle perfectly plain, and of the very highest importance.").

4. Irena Asmundson & Ceyda Oner, *What is Money?*, 49 FIN. & DEV. 52 (Sept. 2012) ("[F]iat money is more efficient to use than precious metals.").

5. Economists and legal scholars have discussed various other problems with fiat money, such as loss of purchasing power, and "systemic solvency crises characterized by damaging asset price bubbles, unrepayable debt levels, an insolvent financial system, hopelessly insolvent governments, and rising inflation." Kevin Dowd, Martin Hutchinson & Gordon Kerr, *The Coming Fiat Money Cataclysm and the Case for Gold*, 32 CATO J. 363, 364–65 (2012). While not discounting these considerably harmful possible adverse consequences, this Article focuses on the implications for the poor and the environment, insomuch as these consequences are of virtually universally accepted importance, normatively speaking, and are often overlooked in regular commentary.

tender laws. These laws require any creditor to accept payment in a fiat currency from the debtor, even if the original contract called for payment of equivalent value in some other form of currency or exchange. Second, governments providing fiat currencies often enact non-fiat money bans, meaning it is illegal to possess or trade in currencies other than the exclusive government fiat currency. Third, government tax collection usually specifies that the fiat currency is the only "functional currency" (i.e., form of currency) acceptable for paying one's taxes. Part I of this Article reviews the history of the American adoption of these three types of laws.

Part II lays out a historical-theoretical framework to demonstrate that these three kinds of laws when combined with a fiat currency cause poverty and environmental destruction. Part II also discusses a current trend away from global reliance on the dollar and towards an international fiat currency.

Part III lays out four proposals for reform. First, legal tender laws should be repealed and forbidden.[6] Second, all non-fiat money bans, except those regulating counterfeiting and fraud, should be repealed and forbidden. Third, Congress should declare gold and silver in bar or coin form as functional currencies for U.S. tax and tariff purposes. Finally, Congress should declare any asset that exceeds a certain minimal threshold of common American monetary usage (say 66% of the population) as a functional currency until that asset's circulation declines beneath the 66% threshold. Part III also considers the possible need for redistributive justice to support those who have suffered through over a century's length of steady dollar devaluation and environmental destruction.

II. A RELEVANT HISTORY OF THE DOLLAR'S LAWS

A. Fiat Money

The creation of the Articles of Confederation in 1777 allowed the United States to operate as an independent national government for the first time. Princeton University Library curators relate well the manner in which the fledgling American government functioned monetarily in the years up until the 1789 creation of the U.S. Constitution:

> Although it had authorized the issue of medals and the creation of a national seal in 1776, it wasn't until 1786 that the Continental Congress passed an

6. *See* DANIEL WEBSTER, 4 THE WORKS OF DANIEL WEBSTER 271 (11th ed. 1854) ("[I]f we understand by currency the legal money of the country, and that which constitutes a legal tender for debts, and is the statute measure of value, then, undoubtedly, nothing is included but gold and silver. Most unquestionably there is no legal tender . . . under the authority of this government or any other, but gold and silver, either the coinage of our own mints or foreign coins at rates regulated by Congress. This is a constitutional principle perfectly plain and of the highest importance.").

> ordinance to establish the coining regime for the new nation. In the meantime, the prevailing legislation was the provision in the Articles of Confederation of 1777 that "the United States in Congress assembled shall also have the sole and exclusive right and power of regulating the alloy and value of coin struck by their own authority, or by that of the respective states." The result was a monetary circulation that included old British coins, American and foreign imitations of them, coins issued by various states, and paper money issued both by the Congress and by individual states. There were also pattern proposals for a national coinage created in England and in America.
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> [A] proposal for a national coin, of unexpressed value, is known in silver, copper, brass, and tin examples from a few die combinations. It was produced by Elisha Gallaudet (ca. 1730–1779), an engraver in Freehold, New Jersey, who made the cuts for the paper currency bearing these same motifs based on drawings by Benjamin Franklin.
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> Although [an] ordinance of 1786 called for the establishment of a mint, the only national coinage actually issued under the Articles of Confederation was a copper cent produced on contract by a private minter. It copied, with minor changes, the 1775 proposal by Benjamin Franklin that had been used on paper money and the "continental dollar patterns" of 1776.[7]

Several states, notably Vermont, Connecticut, New Jersey, and Massachusetts, as well as private minters in New York, also issued their own coinage during the Articles of Confederation era.[8]

With the creation of the U.S. Constitution in 1789, the codified U.S. fiat money system emerged. Craig Elwell of the Congressional Research Service very capably describes the history of fiat currency creation in the United States beginning with the Coin Act of 1792:

> The U.S. monetary system is based on paper money backed by the full faith and credit of the federal government. The currency is neither valued in, backed by, nor officially convertible into gold or silver. Through much of its history, however, the United States was on a metallic standard of one sort or another.
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> The United States began with a bimetallic standard in which the dollar was defined in terms of both gold or silver at weights and fineness such that gold and silver were set in value to each other at a ratio of 15 to 1. Because world markets valued them at a 15½ to 1 ratio, much of the gold left the country and silver was the de facto standard.
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> In 1834, the gold content of the dollar was reduced to make the ratio 16 to 1. As a result, silver left the country and gold became the de facto standard. In addition, gold discoveries drove down the value of gold even more, so that even small silver coins disappeared from circulation. In 1853, the silver content of small coins was reduced below their official face value so that the public could have the coins needed to make change.
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> During the Civil War, the government issued legal tender paper money that was not redeemable in gold or silver, effectively placing the country on a

7. Princeton University Library, *Coinage Under the Articles of Confederation*, CAPPING LIBERTY: THE INVENTION OF NUMISMATIC ICONOGRAPHY FOR THE NEW AMERICAN REPUBLIC, https://rbsc.princeton.edu/capping-liberty/case/4 [https://perma.unl.edu/S8BV-FRWU].
8. *Id.*

fiat paper system. In 1879, the country was returned to a metallic standard; this time a single one: gold. Throughout the late 19th century, there were efforts to remonetize silver. A quantity of silver money was issued; however, its intrinsic value did not equal the face value of the money, nor was silver freely convertible into money. In 1900, the United States reaffirmed its commitment to the gold standard and relegated silver to small denomination money.

Throughout the period under which the United States had a metallic standard, paper money was extensively used. A variety of bank notes circulated, even without being legal tender. Various notes issued by the Treasury also circulated without being legal tender. This use of paper money is entirely consistent with a gold standard. Much of the money used under a gold standard is not gold, but promises to pay gold. To help ensure that the paper notes theretofore issued by banks were honored, the government created the national bank system in 1863. In 1913, it created the Federal Reserve System to help ensure that checks were similarly honored. The creation of the Federal Reserve did not end the gold standard.

The gold standard ended in 1933 when the federal government halted convertibility of notes into gold and nationalized the private gold stock. The dollar was devalued in terms of its gold content, and made convertible into gold for official international transactions only. Even this quasi-gold standard became difficult to maintain in the 1960s. Over the period 1967-1973, the United States abandoned its commitment to covert dollars into gold in official transactions and stopped trying to maintain its value relative to foreign exchange. Despite several attempts to retain some link to gold, all official links of the dollar to gold were severed in 1976.[9]

B. Legal Tender

The question of whether the government by law may force creditors to accept payment by debtors in a currency designated by the government as such is as old as the American Republic. As early as 1702, the colony of Massachusetts was issuing Bills of Credit to finance its debts, and other colonies followed suit throughout the 1700s.[10] However, the British Parliament in January 1751 issued a proclamation that "no paper currency, or bills of credit of any kind issued in any of the said colonies or plantations, shall be a legal tender in payment of any private dues whatsoever within any of them."[11]

"Continental" bills—national paper currency issued during the exigency of the Revolutionary War—

> [W]ere not made legal tenders at first, but in January, 1777, the Congress passed resolutions declaring that they ought to pass current in all payments, and be deemed in value equal to the same nominal sums in Spanish dollars, and that any one refusing so to receive them ought to be deemed an enemy to the liberties of the United States.[12]

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9. Craig K. Elwell, *Brief History of the Gold Standard in the United States*, Congressional Research Service (June 23, 2011).
10. George Bancroft, A Plea for the Constitution of the U.S. of America Wounded in the House of Its Guardians 10–11 (1886).
11. *Id.* at 22.
12. Legal Tender Cases, 79 U.S. 457, 558 (1870) (Bradley, J., concurring) (citing 3 Journals of Congress 19–20 (1775)).

However, as one 19th century Supreme Court justice noted, "the [paper money] scheme failed and the bills became, during 1780, of so little value that they ceased to circulate and 'quietly died,' . . . 'in the hands of their possessors.'"[13]

Because of this prior experience with Continentals, most of the American founding fathers recognized dangers of the paper currencies and bills of credit that the colonies/states and the fledgling US government had issued before, during, and after the War of Independence. In the United States' original compact—the Articles of Confederation—there was no mention of legal tender. Later, Chief Justice John Marshall, in a judicial interpretation of those Articles, held that "Congress emitted bills of credit to a large amount, and did not, perhaps could not, make them a legal tender. This power resided in the states."[14] On August 1, 1786, George Washington wrote to Thomas Jefferson: "Other states are falling into very foolish and wicked plans of emitting paper money."[15] Later that year, in the Virginia House of Delegates, James Madison observed:

> Paper money is unjust; to creditors, if a legal tender; to debtors, if not legal tender, by increasing the difficulty of getting specie. It is unconstitutional, for it affects the rights of property as much as taking away equal value in land. It is pernicious, destroying confidence between individuals; discouraging commerce; enriching sharpers; vitiating morals; reversing the end of government; and conspiring with the examples of other states to disgrace republican governments in the eyes of mankind.[16]

The question of whether Congress would be empowered to issue a currency carrying legal tender status apparently came to a head during the Constitutional Convention. In Article I, Section 5, Clause 8, the Founders drafted a statement that "[t]he legislature of the United States shall have the power to borrow money and emit bills on the credit of the United States." The journal of the convention for August 16, 1787 made this record: "It was moved and seconded to strike out the words 'and emit bills,'" and the motion to strike out these words "passed in the affirmative. Yeas: New Hampshire, Massachusetts, Connecticut, Pennsylvania, Delaware, Virginia, North Carolina, South Carolina, Georgia—9. Nays: New Jersey, Maryland—2."[17] Thus the convention, by a vote of more than four to one, refused to grant to the legislature of the United States the power "to emit bills on the credit of the United States." In interpreting this event, Madison left this note: "Striking out the words cut off the pretext for a paper cur-

13. *Id.* at 646 (Field, J., dissenting) (citing 2 PITKIN'S HISTORY 157).
14. Craig v. Missouri, 29 U.S. 410, 435 (1830).
15. Bancroft, *supra* note 10, at 36.
16. *Id.* at 36–37.
17. *Id.* at 44–45.

rency, and particularly for making the bills a tender either for public or private debts."[18]

In 1792, Congress established by the Coinage Act[19] a U.S. mint and established and defined by law the U.S. dollar to be 371 ¼ grains of fine Spanish-milled silver.[20] The first U.S. dollar minted was the silver Flowing Hair dollar in 1795.

The Silver Flowing Hair Dollar

Image courtesy of the National Numismatic Collection,
National Museum of American History

It has been the subject of much discussion—from the 19th Century to present—as to what the Founders collectively intended with respect to federal legal tender laws when they drafted the Constitution.[21]

18. *Id.* at 45. A discounting view of Madison's contrary comment was given by an 1888 legal commentator who stated, "[Madison] does not give us the course of argument by which he arrived at this [conclusion]. Nor does he give us any clue as to whether the other members of the convention agreed with him. In a word, it is a purely private opinion of Mr. Madison which events have proved to be wrong. This is not the first time that an individual, in drawing a public document, thinking that he had included and excluded certain things, found out afterwards, when the instrument came up for adjudication, that he had made a mistake." Edmund J. James, *Some Considerations on the Legal-Tender Decisions*, 3 PUB. AM. ECON. ASS'N. 49, 66 (1888).
19. Act of April 2, 1792 (Coinage Act), 1 Stat. 246 (1792).
20. *See supra* note 9 and accompanying text.
21. *Compare* Webster, *supra* note 6, *and* Juilliard v. Greenman, 110 U.S. 421, 451 (1884) (Field, J., dissenting) ("If there be anything in the history of the constitution which can be established with moral certainty, it is that the framers of that instrument intended to prohibit the issue of legal-tender notes by both the general government and by the states, and thus prevent interference with the contracts of private parties.") *with id.* at 443–45, 447–48, 450 (majority opinion) (concluding that the U.S. Constitution does not prohibit federal legal tender, that there is a "danger in giving too much weight, upon such a question to the debates and the votes in the [Constitutional] convention," and that whether it is "wise and expedient to resort to [legal tender] is a political question, to be determined by congress when the question of exigency arises, and not a judicial question, to be afterwards passed upon by the courts."). *Cf.* Sturges v. Crowninshield, 17 U.S. (4 Wheat.) 122, 206 (1819) ("The attention of the [Constitutional] convention,

Whatever may have been their intent, the United States government issued paper notes throughout the 19th Century,[22] but gold and silver were considered legal tender until 1873.[23] In 1819, the U.S. Supreme Court proclaimed in the landmark case *McCulloch v. Maryland*[24] that, not only was a national bank constitutional, but states could not tax the federal government notes issued by that bank. Further, states were not permitted to issue their own notes much longer after *McCulloch*. In the 1830 case *Craig v. Missouri*,[25] Chief Justice Marshall wrote that states could not issue their own bills of credit to debt-burdened farmers because the certificates were unconstitutional under Article I, Section 10 of the Constitution, which dictates that states can only make gold or silver a legal tender. Thus, it remained somewhat of an unanswered question as to whether a national currency could be legal tender, but state currencies were specifically excluded. By 1869,

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therefore, was particularly directed to paper money and to acts which enable the debtor to discharge his debt otherwise than was stipulated in the contract . . . . The convention appears to have intended to establish a great principle, that contracts should be inviolable."). One modern constitutional originalist, Robert Natelson, after an extensive canvassing of the Founders' writings and discussions, concludes that:

> According to the original understanding, the Constitution's Coinage Clause granted to Congress the express power to coin money and bestow legal tender quality upon that money. A similar power of lesser, but still broad, scope was also created by the Commerce Clause, for part of the eighteenth-century definition of 'regulating commerce' was the issuance and regulation of the media of exchange.
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> In addition, the money thus 'coined' did not need to be metallic. Paper or any other material that Congress selected would suffice.

Robert G. Natelson, *Paper Money and the Original Understanding of the Coinage Clause*, 31 HARV. J.L. & PUB. POL'Y 1017, 1079 (2008).

22. *See* Elwell, *supra* note 9, at 4 ("Throughout the period before the Civil War, there was no legal-tender paper money in the United States. Yet a variety of paper money existed and circulated as readily as coin. These included private bank notes, some Treasury notes, and (in large transactions) financial instruments called bills of exchange. In each case, these paper claims were promises to pay gold or silver.").
23. Gold and silver were legal tender from 1793 until 1873:

> From 1792 to 1873 both the gold and silver dollar were standard and legal tender, coinage was free and unlimited. Persistent efforts were made to keep both in circulation. Because the prescribed relation between them got out of harmony with exchange values, the gold coin disappeared, and did not in fact freely circulate in this country for 30 years prior to 1834. During that time business transactions were based on silver. In 1834, desiring to restore parity and bring gold back into circulation, Congress reduced somewhat (6 per cent.) the weight of the gold coin and thus equalized the coinage and the exchange values. The silver dollar was not changed. The purpose was to restore the use of gold as currency—not to force up prices or destroy obligations.

Norman v. Baltimore & O.R. Co., 294 U.S. 240, 316 (1935) (McReynolds, J., dissenting).

24. 17 U.S. 316 (1819).
25. 29 U.S. 410 (1830).

the federal government was permitted to tax state-issued notes, thus ensuring the demise of state banks.[26] As a nineteenth century legal commentator concluded, Article I, Section 10 "in effect took from the states all the power over the subjects, both of making money and declaring legal tender."[27]

The major development regarding the constitutionality of the dollar's legal tender status came during and after the Civil War. In an effort to finance Union troops, Lincoln and Congress issued millions of dollars in "greenbacks" paper notes starting in 1862. The notes circulated widely during and after the War, and ultimately, the question came to the fore whether the notes had to be accepted as legal tender, particularly for private debts. One legal commentator observed in 1869 that initially during the Civil War, the support of legal tender was patriotic, and it was only after the war's conclusion, and after some reflection, that people began to question its validity.[28]

In 1869, the Supreme Court in *Hepburn v. Griswold* constitutionally rejected Congress's issuance of a legal tender paper money during the Civil War.[29] Griswold was a pitched-battle 5–3 decision. Although the holding and dissent centered largely on whether the Constitution's Necessary and Proper Clause permitted Congress to create legal tender paper currency,[30] both sets of justices also drew attention to the economic implications of legal tender. Chief Justice Salmon Chase opined that legal tender laws contribute to grisly effects:

> [T]here is abundant evidence, that whatever benefit is possible from that compulsion to some individuals or to the government, is far more than outweighed by the losses of property, the derangement of business, the fluctuations of currency and values, and the increase of prices to the people and the government, and the long train of evils which flow from the use of irredeemable paper money. It is true that these evils are not to be attributed altogether to making it a legal tender. But this increases these evils. It certainly widens their extent and protracts their continuance.[31]

By contrast, dissenting Justice Miller, without denying the potential harms of legal tender, described the promulgation of greenbacks and the assignment of legal tender status to them as a kind of histori-

26. Veazie Bank v. Fenno, 75 U.S. 533, 556 (1869) (Nelson, J., dissenting) ("[T]he burden of the tax . . . has proved fatal to those [banks] of the States; and, if we are at liberty to judge of the purpose of an act, from the consequences that have followed, it is not, perhaps, going too far to say, that these consequences were intended.").
27. I.F.R., *Legal Tender Notes Before the Supreme Court*, 17 AM. L. REGISTER 193, 200 (1869).
28. *See id.* at 193.
29. Hepburn v. Griswold, 75 U.S. 603 (1869).
30. *Id.* at 625.
31. *Id.* at 621.

cally inevitable evil during the Civil War to overcome a very real possibility of total economic collapse of the Union itself.[32]

However, with the addition of two new justices and the retirement of one within a year, the Court in a series of cases between 1871 and 1884 decisively reversed *Griswold*, holding with finality that it was constitutionally proper for Congress to issue legal tender paper money, not only in wartime exigency,[33] but also in peacetimes, as held in the conclusive 1884 eight-to-one decision, *Julliard v. Greenman*.[34] One commentator in 1888 observed the judicial pattern that:

> In both the former cases [since 1871] the court was evidently influenced, to a large extent, by what it supposed would be the economical evils of a contrary decision. In [*Julliard v. Greenman*] the court refused to ask itself the question whether the issue of legal-tender notes is or is not, economically speaking, a

32. Justice Miller wrote:

> All the ordinary means of rendering efficient the several powers of Congress . . . had been employed to their utmost capacity, and with the spirit of the rebellion unbroken, with large armies in the field unpaid, with a current expenditure of over a million of dollars per day, the credit of the government nearly exhausted, and the resources of taxation inadequate to pay even the interest on the public debt, Congress was called on to devise some new means of borrowing money on the credit of the nation; for the result of the war was conceded by all thoughtful men to depend on the capacity of the government to raise money in amounts previously unknown. The banks had already loaned their means to the treasury. They had been compelled to suspend the payment of specie on their own notes. The coin in the country, if it could all have been placed within the control of the Secretary of the Treasury, would not have made a circulation sufficient to answer army purchases and army payments, to say nothing of the ordinary business of the country. A general collapse of credit, of payment, and of business seemed inevitable, in which faith in the ability of the government would have been destroyed, the rebellion would have triumphed, the States would have been left divided, and the people impoverished. The National government would have perished, and, with it, the Constitution which we are now called upon to construe with such nice and critical accuracy.

Id. at 632–33 (Miller, J., dissenting).

33. Professor Natelson documents the seminal Supreme Court cases between 1871 and 1884:

> Knox v. Lee and Parker v. Davis, 79 U.S. (12 Wall.) 457 (1871) (companion cases that together are known as the *Legal Tender* cases) (overruling Hepburn and holding, 5–4, that Congress could make Civil War paper money legal tender for debts arising both before and after the legal tender enactment); Dooley v. Smith, 80 U.S. 604 (1871) (upholding, 6–3, a tender law covering paper money, relying on the Legal Tender Cases); Railroad Co. v. Johnson, 82 U.S. 195 (1872) (upholding a legal tender law, 6–3); Maryland v. Railroad Co., 89 U.S. 105 (1874) (holding, 7–2, that to sustain a contractual requirement that a debt be paid only in gold there must be a specific term in the contract to that effect); Juilliard v. Greenman, 110 U.S. 421 (1884) (holding, 8–1, that Congress had authority to enact peacetime tender law covering reissued greenbacks).

Natelson, *supra* note 21, at 1019 n.3.

34. 110 U.S. 421 (1884).

> good or bad thing, and confined itself simply to the question whether Congress had the power or not.[35]

Although gold and silver continued to function as forms of legal tender in the decades after the original legal tender cases, later cases (see section II.C) and legislative acts by Congress led to today's present circumstances, in which *only* Federal reserve notes, and circulating notes of Federal Reserve banks and national banks, not gold and silver, are decreed as legal tender.[36] Thus, the displacement has come full circle: what originally was the case that only gold and silver were legal tender has now become the opposite—only paper dollars are.

C. Gold and Silver Bans

During the Great Depression, President Franklin D. Roosevelt in 1933 issued an executive order[37] requiring citizens to surrender physical gold, gold certificates, or gold bonds to the federal government in exchange for paper dollars at the rate of $20.67:1.[38] Also, by presidential proclamation, "hoarding" of gold or silver coin, bullion, or currency was prohibited with criminal penalties for noncompliance.[39] A year later, in the Gold Reserve Act of 1934, Congress set into law FDR's executive order from the year prior and, simultaneously, formally devalued the dollar relative to gold from $20.67:1 to $35:1.[40] In 1934, the passage of the Silver Purchase Act[41] and an accompanying Executive Order by Roosevelt[42] required surrender of privately held silver in exchange for government-issued silver certificates. Also, in 1935, Congress passed the Banking Act of 1935, which vested full control of the United States' monetary supply (of paper dollar notes) in the Federal Reserve Bank's Open Market Committee (FOMC).[43]

In addition to the restrictions on gold and silver trading and possession, Congress in 1933 passed a Joint Resolution nullifying public and private contract "gold clauses" (i.e., contractual clauses that allow the creditor to expect and receive payment in gold).[44] At the time,

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35. James, *supra* note 18, at 56.
36. 31 U.S.C. § 5103 (2018).
37. Exec. Order No. 6102 (1933). Individuals were allowed to retain up to 5 troy ounces of gold bullion coins per household. *Id.*
38. 31 U.S.C.A. §§ 462, 463 (1936).
39. Proclamation No. 2039, 48 Stat. 1689 (March 6, 1933).
40. An Act to protect the currency system of the United States, to provide for the better use of the monetary gold stock of the United States, and for other purposes. ch. 6, 48 Stat. 337 (1934).
41. Act of June 19, 1934, Pub. L. No 438 (allowing for Treasury Department issue of silver certificates in exchange for surrendered silver).
42. Exec. Order No. 6814 (1934).
43. An Act to provide for the safer and more effective use of the assets of banks, to regulate interbank control, to prevent the undue diversion of funds into speculative operations, and for other purposes, ch. 6, 48 Stat. 162 (1933).
44. Ch. 48, 48 Stat. 113 (1933).

about 43% of outstanding debt in the United States was based on a gold clause, including "virtually all federal obligations, the bonds of the federal and joint stock land banks, most of the corporate funded debt, except that of certain real estate mortgage companies, and about one-half of the state and municipal debt."[45]

Subsequent legal challenges to this Joint Resolution came before the U.S. Supreme Court in three cases in 1935: *Perry v. United States*[46] (nullification of gold clauses in federal bonds), *Norman v. Baltimore and Ohio Railroad Company*[47] (nullification of gold clauses in private contracts), and *Nortz v. United States*[48] (whether someone redeeming a gold certificate was entitled to the international market price or instead the newly devalued federal government price). After oral argument in the three cases, President Roosevelt was concerned that the Court might strike down the 1933 Gold Clause Joint Resolution, and in an "unprecedented statement" publicly threatened to ignore the Court's decisions if they did so.[49]

A recent article contends that the Gold Clause justices were torn between doubting the Joint Resolution's constitutionality and maintaining legal pragmatism about a very real recalcitrant Presidential threat to the Court's powers.[50] The justices, in three five-to-four decisions all announced on the same day, therefore accepted the government's positions that nullification was a constitutional "necessity" in light of the Great Depression.[51]

The government's successful argument before the Court in these cases was formally based on an interpretation of the Legal Tender cases from the 1870s and 1880s. Angus MacLean, the Assistant Solicitor General who prepared the Gold Clause cases for the government, asserted that Congress's power

> [I]n money matters was not only plenary, by virtue of the Constitution, but inherent, and this led to the taking by us of the advanced position that power over coinage and currency is an attribute of sovereignty . . . What has been decided [by the Gold Clause Cases] is that in a conflict between the obligation of private contracts and the power of Congress over the monetary system of the country, the private right must give way to public policy.[52]

45. Richard M. Boeckel, *Invalidation of the Gold Clause*, 1 EDIT. RES. REPS. (1933).
46. 294 U.S. 330 (1935).
47. 294 U.S. 240 (1935).
48. 294 U.S. 317 (1935).
49. Gerard N. Magliocca, *The Gold Clause Cases and Constitutional Necessity*, 64 FLA. L. REV. 1243, 1243 (2012).
50. *Id.*, *passim*. *Accord* Note, *Some Aspects of the Nullification of Gold Clauses in Obligations*, 2 U. CHI. L. REV. 138, 144 (1934) ("[T]he power to nullify the gold clause is necessary to the effective exercise of the monetary powers of Congress.").
51. Magliocca, *supra* note 49, at 1243.
52. Angus D. MacLean, *Outline of the Gold Clause Cases*, 15 N.C. L. REV. 249, 252, 254 (1937). *See also* John Hanna, *Federal Currency Restrictions and Gold Contracts*, 19 AM. BAR ASSOC. J. 349, 351 (1933) ("It is for the legislature, not the courts, to determine which substances, and of what weight, quality or form, shall

The three aforementioned laws and the Gold Clause Cases had a joint effect of removing the country *de facto* from a gold currency standard,[53] and instead putting the United States on an inflationary[54] Federal Reserve note standard.[55] It was not until 1964 when gold certificates could again be bought and sold by private investors (but were still not redeemable in Treasury gold),[56] and 1974 when citizens could again trade and own gold.[57] (Up until the 1960s, the government permitted silver certificates and silver bills to be issued and required the Treasury to have on hand sufficient funds to pay back those bills at a rate of $1.292 per bill or less.[58] Congress in 1963 legislated that silver certificates were no longer to be backed by Treasury guarantees.[59])

While the Gold Clause Cases and seizures of gold and silver were justified as a national exigency in strikingly similar fashion to the con-

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pass current as money. It is one of the attributes of sovereignty to determine the relationship of the various forms of money, and when it is done the courts of law as well as individual citizens must conform to the change and regard as a dollar that which Congress declares to be so.").

53. As some economists note, "[e]ither a gold standard specifies the quantity of money in the economy, or a central bank does. A marriage of the two never lasts longer than an unhappy weekend." Mark Thornton, Richard H. Timberlake, Jr. & Thomas J. Thompson, *Gold Policy in the 1930s*, INDEP. INST. RES. ARTICLE (May 1, 1999), http://www.independent.org/publications/article.asp?id=165 [https://perma.unl.edu/RM2M-VXV6].

54. At the time, some commentators worried that this policy by the federal government would create precedent for a perpetual cycle of inflation, particularly during times of depression, that would be harmful to the economy. Indeed, the subsequent 85 years have borne out as true their worries. As one Columbia University economist put the proposition,

> To put it in a word, therefore, the devaluation, currency inflation and "commodity dollar" measures have very largely failed to achieve, to date, the objectives at which they were aimed. In addition, I fear that they have created grave inflationary dangers for the future, for they will make it harder than ever to control those over-expansions in which depressions like the one we have just been experiencing always originate. I shall consider presently the possible defense for certain types of inflation, when inflation is regarded as a necessary means for financing the tremendous costs of the recovery and the New Deal programs. But even from this point of view, I think that the currency experiments cannot be justified. It would have been better on all counts if they had never been attempted.

James W. Angell, *Gold, Banks and the New Deal*, 49 POL. SCI. Q. 481, 494 (1934).

55. It is true that President Richard Nixon dealt the final nail in the coffin of gold as a monetary standard in 1971, when he declared that even international exchange of dollars for U.S.-held gold would no longer be allowed. *See* Exec. Order No. 11615, 36 Fed. Reg. 15727 (Aug. 17, 1971). But the majority of the U.S. shift away from gold as a monetary standard occurred on President Franklin Roosevelt's watch.

56. Act of Mar. 9, 1933, ch. 1, title I, § 3, 48 Stat. 2; 12 U.S.C. § 248(n) (1964).

57. Act of Aug. 14, 1974, Pub. L. No. 93-373, § 2, 88 Stat. 445 (repealing 31 U.S.C. § 443 (1976)).

58. *See* 31 U.S.C. § 405a-1 (1965).

59. Act of June 4, 1963, Pub. L. No. 88-36, 77 Stat. 54 (1963).

troversial Legal Tender Cases a half-century earlier,[60] many people—even professional economists—were displeased by the bans on possession of non-fiat money, declaring those governmental actions disastrously inflationary and outright immoral.[61]

D. Functional Currency

The concept of a functional currency is that a government may, at its sole discretion, establish in what forms of money or assets taxes may be paid. For instance, at various historical times, the ancient Israelites,[62] the Chinese (even peasants),[63] and Arab-Sasanians[64] were obligated to pay taxes and tributes only in silver.

In Internal Revenue Service (IRS) regulations and under U.S. law, the U.S. Federal Reserve Note dollar is the functional currency unit of tax collection.[65] After President Nixon removed the U.S. dollar from

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60. Economics professor Richard Timberlake argues that the Gold Clause Case justices had a unique opportunity to revisit the *Legal Tender Cases* and *Juilliard v. Greeman* and overturn those holdings, and by failing to do so, wrecked the American monetary system embedded in the Constitution. Richard H. Timberlake, *From Constitutional to Fiat Money: The U.S. Experience*, 32 CATO J. 349, 361–62 (2012).

61. *See* Norman v. Baltimore & O.R. Co., 294 U.S. 408, 419 (1935) (McReynolds, J., dissenting) ("Loss of reputation for honorable dealing will bring us unending humiliation; the impending legal and moral chaos [from these Gold Clause decisions] is appalling."). Then-renowned Columbia University economics professor James W. Angell wrote shortly after the *Gold Clause Cases* were decided:

> What the Roosevelt program on gold, silver and paper money has thus far meant is hence roughly as follows. The gold dollar has been devalued to 59 per cent of its former gold worth; it has been tentatively stabilized, but only within maximum limits that are 20 per cent apart; it has been made, at least potentially, a bimetallic dollar of uncertain content and value, instead of merely a devalued gold dollar; gold and silver have been "nationalized"; very large silver purchases have been prescribed; and the issue of several kinds of paper money has been liberalized. These measures are all aimed, of course, at inflation, and at inflation of a particular kind: currency inflation. I have already indicated that I do not think the abandonment of the gold standard was technically necessary at the time it took place. In addition, I think that on a strict view the devaluation of the dollar and the abrogation of the gold clause were completely immoral.

Angell, *supra* note 54, at 492.

62. *Exodus* 30:13.

63. NING MA, THE AGE OF SILVER: THE RISE OF THE NOVEL EAST AND WEST 58 (2016).

64. Jonathan Karam Skaff, *Sasanian and Arab-Sasanian Silver Coins from Turfan: Their Relationship to International Trade and the Local Economy*, 11 ASIA MAJOR 67, 98 (1998).

65. Internal Revenue Service, *Foreign Currency and Currency Exchange Rates* (May 2, 2018), https://www.irs.gov/individuals/international-taxpayers/foreign-currency-and-currency-exchange-rates [https://perma.unl.edu/TF47-GBP3]. The regulations state:

> Payments of U.S. tax must be remitted to the U.S. Internal Revenue Service (IRS) in U.S. dollars . . . The U.S. dollar is the functional currency

its last remaining vestiges of the international gold standard in 1971, a large number of cases were brought in the 1970s and 1980s challenging Federal Reserve fiat paper dollars as unconstitutional forms of functional currency.[66] Other lawsuits during the same era sought holdings that state and municipal governments could only accept tax payments in gold or silver.[67] Neither of these categories of lawsuits proved successful. Similarly, attempts to pay taxes or other government fees by "public office money certificates," which are "a promise to pay when an official determination is made as to what type of cur-

> for all taxpayers except some qualified business units (QBUs) . . . Even if you have a QBU, your functional currency is the dollar if any of the following apply: you conduct the business in dollars; the principal place of business is located in the United States; you choose to or are required to use the dollar as your functional currency; the business books and records are not kept in the currency of the economic environment in which a significant part of the business activities is conducted).

Id.

66. United States v. Whitesel, 543 F.2d 1176 (6th Cir. 1976), *cert. denied*, 431 U.S. 967 (1977); United States v. Moon, 616 F.2d 1043 (8th Cir. 1980); United States v. Rifen, 577 F.2d 1111 (8th Cir. 1978); United States v. Daly, 481 F.2d 28 (8th Cir. 1973), *cert. denied*, 414 U.S. 1064 (1973); United States v. Hurd, 549 F.2d 118 (9th Cir.1977); United States v. Schmitz, 542 F.2d 782 (9th Cir.1976), *cert. denied*, 429 U.S. 1105 (1977); United States v. Wangrud, 533 F.2d 495 (9th Cir. 1976) *cert. denied*, 429 U.S. 818 (1976); United States v. Gardiner, 531 F.2d 953 (9th Cir.1976), *cert. denied*, 429 U.S. 853 (1976); Milam v. United States, 524 F.2d 629 (9th Cir.1974); United States v. Rickman, 638 F.2d 182 (10th Cir. 1980); United States v. Ware, 608 F.2d 400 (10th Cir.1979); Herald v. State, 691 P.2d 1255 (Id. Ct. App. 1984); Rush v. Casco Bank & Tr. Co., 348 A.2d 237 (Me. 1975); Allnutt v. State, 478 A.2d 321 (Md. 1984); Chermack v. Bjornson, 223 N.W.2d 659 (Minn. 1974), *cert. denied*, 421 U.S. 915 (1975); Middlebrook v. Mississippi State Tax Comm'n, 387 So.2d 726 (Miss. 1980); State v. Gasser, 306 N.W.2d 205 (N.D. 1981); Dorgan v. Kouba, 274 N.W.2d 167 (N.D. 1978); First Nat'l Bank of Black Hills v. Treadway, 339 N.W.2d 119 (S.D. 1983); City of Colton v. Corbly, 323 N.W.2d 138 (S.D. 1982); Leitch v. State Dep't of Revenue, 519 P.2d 1045 (Or. Ct. App. 1974); Rothacker v. Rockwall Cty. Cent. Appraisal Dist., 703 S.W.2d 235 (Tx. App. 1985); Kauffman v. Citizens State Bank of Loyal, 307 N.W.2d 325 (Wis. Ct. App. 1981).
67. Radue v. Zanaty, 308 So. 2d 242 (Ala. 1975) (tax check payment had memo line demanding government redemption in gold or silver); Cohn v. Tucson Elec. Power Co., 673 P.2d 334 (Ariz. Ct. App. 1983) (public utility terminated electrical service to customer who refused to pay tax portion of bill in anything other than gold or silver); Spurgeon v. Franchise Tax Bd., 160 Cal. App. 3d 524 (1984) (attempt to reclaim purported overpayment of taxes based on declining purchasing power of U.S. fiat dollar); Allen v. Craig, 564 P.2d 552 (Kan. Ct. App. 1977) (attempt to pay taxes in silver dollars); People v. Lawrence, 333 N.W.2d 525 (Mich. Ct. App. 1983) (attempt to pay traffic fine in gold or silver); Richardson v. Richardson, 332 N.W.2d 524, 534 (Mich. Ct. App. 1983) (attempt to pay state-compelled child support in gold or silver); Trohimovich v. Dir. of Dep't of Labor and Indus., 584 P.2d 467 (Wash. Ct. App. 1978) (attempt to pay government industrial insurance premium via a formula differentiating the values between "statutory dollars" computed from the daily gold price on the London exchange and "paper dollars" as issued by the Federal Reserve).

rency has been authorized as a substitution for gold and silver,"[68] were deemed "frivolous" and invalid.[69] Thus, the conclusion of modern American case law is that Federal Reserve dollars are functional currency, and gold and silver are not.

E. States and Municipalities

Article I, Section 10 of the U.S. Constitution requires that "[n]o State shall . . . make any Thing but gold and silver Coin a Tender in Payment of Debts." A simple textual reading might give the inference that states, subordinate divisions of states, and municipal governments cannot deal in a money or currency other than gold or silver coins. At least one state supreme court in the 1800s had this understanding.[70] But the Legal Tender Cases' holdings that Congress has a plenary power over both the issuance of domestic currency and any currency's legal tender status removed this possible interpretation of the constitutional clause. Instead, the judicially preferred interpretation is as one state supreme court held in 1989:

> Article 1, section 10, clause 1 applies only to the states: It "is intended to prevent states from creating new forms of legal tender not recognized or authorized by the federal government." The clause is not a directive to the states to deal only in gold or silver coin; rather, it is simply a restriction on states establishing any legal tender other than gold or silver coins. More important, section 10 does not apply to the federal government.[71]

III. ECONOMIC INSIGHTS INTO THE DOLLAR'S LEGAL ATTRIBUTES

> *"Some people are so poor and hungry that God only appears to them as a silver coin in a fish's mouth."*
>
> —Christopher Guzelian, adapted from a saying by Mahatma Gandhi

Earth has limited resources and does not yield those resources readily. Consequently, humans must work to live. But self-seeking mankind prefers the leisure of paradise to work, despite the impossibility of collective paradisiac leisure given the scarcity of resources. As

68. Parsons v. State, 745 P.2d 300, 307, n.1 (Id. Ct. App. 1987).
69. *Id.* at 307. *See* Pyne v. Meese, 172 Cal. App. 3d 392 (1985); Becker v. Dep't of Registration and Educ., 513 N.E.2d 5 (Ill. App. Ct. 1987); Dack v. State, 457 N.E.2d 600 (Ind. Ct. App. 1983); Niles v. Trawick, 512 A.2d 808 (Pa. Commw. Ct. 1986).
70. State v. Beackmo, 8 Blackf. 246, 250–51 (Ind. 1846) (holding that a state statute allowing for just compensation for property takings cannot operate unless payment is made in gold or silver).
71. Baird v. Cty. Assessors of Salt Lake & Utah Ctys., 779 P.2d 676, 680 (Utah 1989) (citing *Spurgeon*, 160 Cal. App. 3d at 529). Other modern state courts have similarly rejected facial textual readings of Article I, Section 10. *See, e.g.*, Berry v. Hannigan, 9 Cal. Rptr. 2d 213 (Cal. App. 1992); Walton v. Keim, 694 P.2d 1287 (Co. App. 1984); Chermack v. Bjornson, 223 N.W.2d 659 (Minn. 1974).

this section will demonstrate, the creation of a fiat money, along with legal enactments of legal tender (forcing creditors to take the fiat currency as settlement of a debt), functional currency status for fiat currencies (forcing taxpayers to pay the fiat currency as the only valid settlement of government tax debts), and prohibitions on possession of non-fiat monetary instruments like gold and silver enable its creator (a sovereign) to enjoy leisure relative to fellow mankind. For that reason, the temptation for sovereigns to create strong fiat currency always has existed.[72] It is no less so the case for the modern dollar.

As this section will also discuss, fiat money after its creation does not circulate evenly in society, but rather follows a *path* through society, starting with the sovereign and the sovereign's preferred patrons. Eventually the fiat money, through legal powers given it by concurrent mandates of legal tender, functional currency, and bans on non-fiat money, winds its way to the "fiat poor"—persons who cannot benefit from the fiat money to acquire the resources they could have otherwise, but who are nonetheless compelled by law to acquire and spend it. Those fiat poor compulsorily acquire the fiat currency to the detriment of the environment and to their dire impoverishment past the point of subsistence.

These economic phenomena resulting from fiat currency and legally accompanying mandates are neither unique to the dollar nor new. The fiat poor problem that results from fiat currency was known to the ancients. As related in a curious story in the New Testament's Gospel of Matthew, Jesus Christ of Nazareth saved a fiat poor (Saint Peter, a destitute fisherman) by a miracle of producing a silver coin in a fish's mouth that offset the combined harmful effects on Peter of fiat money and functional currency. The fact that it required a miracle of God to unwind the problems that laws related to fiat money had cre-

72. *See* MILTON FRIEDMAN, CAPITALISM AND FREEDOM (40th anniversary ed. 2009). Friedman writes:

> Historically, the device that has evolved most frequently in many different places and over the course of centuries is a commodity standard; i.e., the use as money of some physical commodity such as gold or silver . . . If money consisted wholly of a physical commodity of this type, there would be, in principle, no need for control by the government at all . . . The fundamental defect of a commodity standard, from the point of view of the society as a whole, is that it requires the use of real resources to add to the stock of money. People must work hard to dig gold out of the ground in South Africa—in order to rebury it in Fort Knox or some similar place. The necessity of using real resources for the operation of a commodity standard establishes a strong incentive for people to find ways to achieve the same results without employing these resources. If people will accept as money pieces of paper on which is printed 'I promise to pay —— units of the commodity standard,' these pieces of paper can perform the same function as the physical pieces of gold or silver, and they require very much less resources to produce.

Id. at 40.

ated goes to show the extent of harm that such laws can create for fiat poor and the environment.

To demonstrate fiat money's harms when combined with certain concurrent legal mandates (i.e., legal tender and functional currency mandates and non-fiat money bans), this section invokes a thought experiment to show that the leisure that some people achieve via fiat currency imperils others' lives, the environment, and the economy's general sophistication. The thought experiment also demonstrates that, under any system of fiat money with the three concurrent legal mandates, the subjective theory of value invoked by so many modern economists is rendered (1) incomplete and (2) amoral and tolerant of criminal and self-harming behavior that are likely to occur in a society governed through fiat money. Said differently, rote approval of the subjective value theory in a legally supported fiat monetary system leads to unavoidable conclusions that: (1) there will be some people (fiat poor) who lack sufficient material resources to trade (and therefore the subjective value theory, which is predicated upon exchanges, is not a *universally* applicable theory of value wherever fiat monetary systems exist); and (2) fiat poor's suicides, migrations, or transformations to outlaws are probable in a fiat system (and subjective value theory is agnostic as to the morality of these outcomes, meaning that economists typically will not bother to mount an ethical protest against fiat systems).[73]

A. The Fiat Money Thought Experiment, Part 1: From Raw Silver to Fiat Silver

We will now perform a thought experiment informed by historical events. What we will show is that when combined, fiat money, legal tender, functional currency, and non-fiat money bans act in concert to coercively create unavoidable shut-out of some direly poor human beings (fiat poor) from the economy, while simultaneously demanding their participation in it. Furthermore, these laws related to fiat money promote environmental destruction as fiat poor make a last-ditch ef-

73. The discussion is beyond the scope of this Article, but the limitations to the subjective theory of value that are witnessed when a fiat money system is introduced proves that a more comprehensive moral economic theory of value is needed to describe the optimal economy. Such a theory does not entirely displace the subjective theory of value, but compels subjectivists to acknowledge that their theory is incomplete and immoral if it stands on its own, and that God provides the deficit economic value (where value is judged in God's eyes, not men's) to complete the functional economy among selfish men. Thus, any theory of value must account not just for men's valuation of things, but for God's surpassing valuation of man and environment, and His ability to rearrange distribution of resources supernaturally to ensure all men's continued survival and the continued health of the world.

fort at survival under an extraordinarily burdensome financial system.

Let us imagine an ancient, original economy that has (only) three products: silver, barley, and fish. Silver is used only as money (an intermediate good)—a measure of account (numeraire) that serves as a trade denominator to avoid the need for barter in exchange for fish, barley, or both.[74]

In the economy, everyone except the sovereign works either as a silver miner, barley farmer, or fisherman. Everyone must eat to live, and could eat barley, fish, or both, to sustain themselves. Resources are scarce[75] but sustainable if used judiciously.

In an economy where there is specialization and differentiation of labor, trade becomes necessary. As such, there needs to be a numerical account of these products' *relative* values. Often these are referred to as exchange values or even prices, but in discussing the relative values of silver, barley, and fish, ancient peoples referred not to *prices* of products but to *exchange weights*. To modern minds, it is somewhat strange to think of money (in this case silver) in terms of a relative physical weight (e.g. a gram), but historically this was the case.[76]

In light of this, members of society would need established relative weights (values) of products for trading purposes. Let us say that in the beginning, the following ratios existed: 1 gram of silver is equal to 1 bushel of barley, and 1 gram of silver is worth 2 fish. This would establish a relative weight ratio table, enabling sales (involving silver) and barter (between fish and barley), as follows:

Table 1
Relative Weight Ratios with Silver Grams as Money (Denominator)

	Silver (grams)	Barley Bushel	Fish
Silver (grams)	1:1	1:1	1:2

Three important ontological questions about history follow from the weight table: First, *who* established these progenitor weights?; Second, *why* were the original ratios what they were?; Third, can and should those ratios have *changed*?

74. Obviously this is a simplified economy because there are only three products.
75. *See* GARY NORTH, AN INTRODUCTION TO CHRISTIAN ECONOMICS vii (1973) ("God has cursed the earth (Gen. 3:17-19). This is the starting point for all economic analysis. The earth no longer gives up her fruits automatically. Man must sweat to eat.").
76. *See* Christopher P. Guzelian, *Silver: A Morally Good Money*, 15 PROCESOS DE MERCADO 213, 214–27 (2018).

There are three potential historical sources of the initial weight table.[77] One is a divine non-human source of wisdom: a benevolent creator god told humans the intrinsic relative worth of silver, barley, and fish, and thus the "true," rate of exchange for them.[78] Under this deistic view, the relative values of things and labor are "intrinsic" and the rate of exchange is "true" as if there were objective valuations that the god has created for these things, even if those true values are unknown to mankind. Modern subjectivist economics rejects this ontology, as to be discussed below.

Why would a benevolent god have picked the weights that it did in Table 1? I argue in a different publication that, in the Judeo-Christian tradition, YHWH, the god, had ethical-factual concerns about human survival and environmental sustainability.[79] As such, and by the assumption that certain fixed weight ratios of silver money, fish, and barley at that time would prevent unsustainable overharvesting of any one (or more) of the three products, an all-knowing and benevolent YHWH sought to ensure optimal human lives and a healthy environment.[80]

If it was indeed a god who set up an original relative weight table, then the third ensuing question is whether the god intended these relative weight ratios to be changeable, based either on changing relative human preferences for fish and barley, or because the god preferred or needed to value raw silver (money) differently with respect to the consumer products. This is a question whose answer depends on scriptural interpretation.[81]

A second possible way the weight table came into existence disregards the supernatural, and instead claims an ancient "original" sovereign government (fallible humans rather than an infallible god) mandated the first weight table. Unlike YHWH, that sovereign was not all-knowing, and thus could not have guessed the optimal "true"

77. Katsuhito Iwai has written a trenchant paper insisting that theory alone cannot illumine the historical origins of money, notwithstanding many competing efforts among economists and anthropologists to do so. Instead, he insists upon historical analysis as the only solvent method for uncovering such origins. KATSUHITO IWAI, EVOLUTION OF MONEY, EVOLUTION OF ECONOMIC DIVERSITY 396, 396 (Ugo Pagano & Antonio Nicita, eds.) (2001). This Article regards Iwai's approach as correctly analyzed. Although Part II of the present Article might be regarded as theory, it is grounded in American and biblical history to make its case for why the dollar has become damaging.

78. *Cf. Leviticus* 27:16 ("If a person consecrates to the Lord any inherited landholding, its assessment shall be in accordance with its seed requirements: fifty shekels of silver to a homer of barley seed."). *See also Matthew* 17:24–27 (Jesus equating one fish with one Greek silver "stater" coin).

79. *See* Guzelian*, supra* note 76, at 214–27.

80. *Id*.

81. *Matthew* 5:17–18.

relative weights. This fact of fallibility might not have stopped the sovereign from *trying* to estimate the optimal exchanges.[82]

Indeed, this sovereign human effort is reminiscent of the top-down approach of modern central banks as they establish interest rates, exchange rates, and money supply. In effect, such a sovereign was playing God. What cannot be assumed is that the sovereign was benevolent like YHWH and sought to maximally sustain human life and the environment. The sovereign, unlike the benevolent god, may not be benevolent and may have other philosophical aims.[83] And, in any event, the sovereign is not all-knowing and therefore would be unlikely to correctly set ratios, if even that were his purpose and such ratios existed.[84]

The third question—whether the sovereign allows the relative weight ratio to change—is more likely to be answered in the affirmative than in the case of the god. This is because the sovereign may be replaced by another, the sovereign's personal philosophy or preferences may change, or because any sovereign is fallible and therefore constantly "tweaking" the exchange ratio as economic information becomes available.[85]

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82. *See*, *e.g.*, 2 *Samuel* 14:26 ("Whenever he cut the hair of his head . . . he would weigh it, and its weight was two hundred shekels *by the royal standard*.") (emphasis added).

83. *See* Board of Governors of the Federal Reserve System, ***FAQs***, FED. RES. (Aug. 9, 2017) (contending that "central banks [seek] to achieve macroeconomic policy objectives such as price stability, full employment, and stable economic growth"), https://www.federalreserve.gov/faqs/money_12855.htm [https://perma.unl.edu/WD74-FSTY].

84. *See, e.g.*, Friedrich Hayek, Nobel Prize Acceptance Lecture: The Pretense of Knowledge (Dec. 11, 1974) (transcript available at https://www.nobelprize.org/prizes/economics/1974/hayek/lecture/ [https://perma.unl.edu/SZT9-G983]). Hayek stated:

> [W]hen we are asked for quantitative evidence for the particular structure of prices and wages that would be required in order to assure a smooth continuous sale of the products and services offered, we must admit that we have no such information. We know, in other words, the general conditions in which what we call, somewhat misleadingly, an equilibrium will establish itself: but we never know what the particular prices or wages are which would exist if the market were to bring about such an equilibrium.

Id.

85. *But see* Davis H. Waite, *Are the Silver States Ruined?*, 158 NORTH AM. REV. 24 (1894). Waite, then-Governor of Colorado, wrote:

> When Congress, in 1792, created a money unit for the United States and specified 371¼ grains fine silver as composing that unit and the American dollar, the trust given to Congress by the States to fix the value of the American dollar and of foreign coins was executed, and thenceforth neither the trustor (the States) nor the trustee (Congress) had any power whatever to recall or change the performance of the trust . . . . [T]hat greatest of constitutional lawyers, Daniel Webster, [said]: "gold and silver, at rates fixed by Congress, constitute the legal standard of value in

Yet a great number of modern free market economists caution there is no such thing as intrinsic value of any material thing; value is subjective and is established in each case of exchange by the ends that people are trying to achieve by way of the means they are seeking to procure and use.[86] Under this theory, there would have been no "true, god- or sovereign-given" progenitor weight ratio, but rather any such a ratio that existed *spontaneously emerged and continuously changes* as a result of specific human needs, preferences, and negotiation at a particular moment in time between specific trading partners for particular goods or services.[87] The ratio is the product of *spontaneous order* and is always dynamic and subject to fluid, sometimes rapid, change.[88]

Let us begin, as the ancients did, with the belief that, of the three possibilities of how raw silver could have come to be the original money in our hypothetical economy,[89] the truth is that it was via a deity's mandate.[90] A benevolent god ordained raw silver to be the economy's first money, and it was the well-meaning god who also established the relative weight ratio table seen in Table 1. Because the god is well-meaning, this was done to preserve human life and to maintain a sustainable environment (also a prerequisite to preserving human life).[91] By establishing relative values of the goods, the god has also implicitly established how much relative human effort will go to-

> this country, and *neither Congress nor any State* has authority to establish *any other standard* or to *displace that standard*."

Id. at 26–27 (emphasis in original).

86. CARL MENGER, PRINCIPLES OF ECONOMICS 120–21 (2007). Menger writes:

> Value is [ ] nothing inherent in goods, no property of them, nor an independent thing existing by itself. It is a judgment economizing men make about the importance of the goods at their disposal for the maintenance of their lives and well-being. Hence value does not exist outside the consciousness of men. It is, therefore, also quite erroneous to call a good that has value to economizing individuals a "value," or for economists to speak of "values" as of independent real things, and to objectify value in this way. . . . Objectification of the value of goods, which is entirely *subjective* in nature, has nevertheless contributed very greatly to confusion about the basic principles of our science.

Id.

87. *See generally* 1 FRIEDRICH HAYEK, THE FATAL CONCEIT: THE ERRORS OF SOCIALISM (1991).
88. *See* JESÚS HUERTA DE SOTO, THE THEORY OF DYNAMIC EFFICIENCY *passim* (2009).
89. A conceivable fourth approach to relative weight ratios—a hybrid approach—begins with a top-down mandate either from a god or a sovereign to "seed" or "start" the market process, such as we saw in Table 1, but then allows for market-driven dynamics to take over and cause the relative table values to fluctuate for some or all exchanges.
90. For purposes of this Article, it actually would not matter if the means by which silver became the original, first money were through spontaneous (evolutionary) order. The key point is to assume that raw silver was *not* fiat money—meaning the first money did not come into existence via a top-down human edict.
91. *See* Guzelian, *supra* note 76, at 214–27.

wards the production of each good. Some will be silver miners, some fisherman, and some farmers. Again, the dispersion of human effort is optimal if the god is well-meaning.

Imagine in this realm where god decreed the original money (raw silver) and set the original weight table for the pious society of miners, farmers, and fishermen, but now a human sovereign (e.g., king, emperor, czar, etc.) comes into place.[92] The sovereign expects compensation for leadership and exercises his governmental right to exact taxes.[93] If the sovereign wants flexibility in using the revenue he earns through taxes, he will typically expect *money* for the tax—the numeraire intermediate good through which all other resources can be obtained. And if silver is money by divine mandate and the sovereign wishes to adhere to that mandate, then the sovereign would mandate tax payments in raw silver (functional currency)—as opposed to being paid tribute in either barley or fish.

It is a fact of history that corrupt governments and traders have sought to gain illegitimate economic advantage in their use of commodity moneys like silver by shaving corners off monetary units and passing those units off as weighing more than they actually do. This activity—debasement of the currency—surreptitiously reduces the commodity value of money by altering its physical composition. Economists have long recognized that debasement represents an implicit tax (dubbed "seigniorage"), and the tax can become onerous or destructive, even resulting in hyperinflations.[94]

But say our hypothetical sovereign is both entrepreneurially self-serving and does not want to appear to his pious subjects to disregard god's mandates about money. In other words, he wants the personal benefits of seigniorage without resorting to blatant physical debasement of silver that he controls. He could start this process by announcing the creation of a *new* product in the economy: "fiat silver."[95] Fiat silver is not really a new good. It is merely a minted silver coin with the king's face upon it, much like this Tyrian Shekel, weighing 14.3g

92. How that sovereign is selected, and the legitimacy of that sovereign, are important philosophical considerations for monetary theory, but those questions are left unaddressed for this Article's purposes.

93. *Exodus* 30:12–13 (When you take a census . . . each one who is registered shall give half a shekel [of silver] according to the shekel of the sanctuary. . . .").

94. *See* Nathan Sussman & Joseph Zeira, *Commodity Money Inflation: Theory and Evidence from France in 1350-1436*, 50 J. MONETARY ECON. 1769, 1769 (2003) (showing that physical debasement of coinage has led to historical periods of inflation).

95. In its earliest ancient forms, fiat money was minted silver or debased silver, where the face value of the coin was decreed by the sovereign to be worth more than the silver content of the coin. Coins arose around 630 BC (electrum coinage); before that, money transactions used "hacksilber," or cut up pieces of silver weighed by scales. *See* RAZ KLETTER, ECONOMIC KEYSTONES: THE WEIGHT SYSTEM OF THE KINGDOM OF JUDAH (David J.A. Clines & Philip R. Davies, eds.) (1998).

and composed of greater than 95% silver, minted in Lebanon from 126BC–56AD.

The Tyrian Shekel: Ancient Fiat Silver

Source: Etsy.com[96]

There is some (let us say negligible) cost to the king for minting fiat silver coins, but in any other respect this fourth product is just silver. And henceforth, the king proclaims, all taxes must be paid not in raw silver as would have been the case if he were following god's orders, but now in fiat silver (which is still silver and thus arguably not a substitute money for the god's mandate).

Taken on its own, this form of fiat money would appear to confer no economic advantage on the king. If he were to barter his fiat silver coins for raw silver, the exchange weight ratio should simply be 1:1. However, let us say the king is swift to pass laws ensuring that his fiat silver coin has *legal* features that raw silver (as money) does not. The laws enacted alongside the kingly roll-out of fiat silver are strategically calculated to drive people towards exclusive use of the king's currency, and eradication of the competing non-fiat money, raw silver.[97]

96. Antiquanova, Seller of *Judas' 30 Pieces of Siler – Palestine Tyros Shekel 100 BC replica coin*, Etsy (Jan. 21, 2019), https://www.etsy.com/listing/94878218/judas-30-pieces-of-silver-palestine?ref=related-7 [https://perma.unl.edu/6H8Q-D442].

97. *Cf.* Waite, *supra* note 85. Waite, then the Governor of Colorado, suggested that Great Britain facilitated the eradication of the general silver standard in the United States in 1857, replacing it with a U.S. fiat silver standard. Waite wrote:

> Great Britain, which demonetized silver in 1816, secretly procured, in the American Congress, the passage of an act, in 1857, providing that "No foreign gold or silver coins shall be a legal tender for the payment of debts." At this time there was no pretence that the foreign silver dollars were of depreciated value. In fact the bullion silver in these coins was then actually worth more than their coin value. The act of 1857 removed an ancient landmark, and reversed the policy of this government for eighty-one years–thirteen years under the Continental Congress, 1776 to 1789, and sixty-eight years under our present form of government, from 1789 to 1857.

Id. at 25–26.

First, the king enacts a revised "functional currency" requirement that henceforth all tax payments must be made in fiat silver rather than raw silver. This mandate has the effect of guaranteeing a universal demand for the king's monopoly product (fiat silver) because all denizens must acquire at least enough of it to pay the king his owed tributes.[98]

Second, the king enacts a legal tender law. This requires any creditor to accept the fiat silver in place of raw silver or any other resource when the debtor wishes to pay with such. Because there are incentives for debtors to pay with fiat silver over raw silver (see below), legal tender laws tend to drive out raw silver as the currency and substitute fiat silver in its place.[99]

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98. Krugman, *supra* note 1, at 3 ("[T]he value of a dollar doesn't come entirely from self-fulfilling expectations: ultimately, it's backstopped by the fact that the U.S. government will accept dollars as payment of tax liabilities—liabilities it's able to enforce because it's a government.").

99. That fiat money is likely to become relatively more attractive to hold than the raw silver by way of legal tender has been an argument made in the favor of invoking legal tender for fiat money. But Justice Field took exception with this position, stating that it exceeds the proper limits of the government's authority. He noted:

> The argument presented by the advocates of legal tender is, in substance, this: The object of borrowing is to raise funds, the addition of the quality of legal tender to the notes of the government will induce parties to take them, and funds will thereby be more readily loaned. But the same thing may be said of the addition of any other quality which would give to the holder of the notes some advantage over the property of others, as, for instance, that the notes should serve as a pass on the public conveyances of the country, or as a ticket to places of amusement, or should exempt his property from state and municipal taxation, or entitle him to the free use of the telegraph lines, or to a percentage from the revenues of private corporations. The same consequence—a ready acceptance of the notes—would follow; and yet no one would pretend that the addition of privileges of this kind with respect to the property of others, over which the borrower has no control, would be in any sense an appropriate measure to the execution of the power to borrow.
>
> . . . .
>
> The government, in substance, says to parties with whom it deals: Lend us your money, or furnish us with your products or your labor, and we will ultimately pay you, and as evidence of it we will give you our notes, in such form and amount as may suit your convenience, and enable you to transfer them; we will also receive them for certain demands due to us. In all this matter there is only a dealing between the government and the individuals who trust it. The transaction concerns no others. The power which authorizes it is a very different one from a power to deal between parties to private contracts in which the government is not interested, and to compel the receipt of these promises to pay in place of the money for which the contracts stipulated. This latter power is not an incident to the former; it is a distinct and far greater power. There is no legal connection between the two—between the power to borrow from those willing to lend and the power to interfere with the independent contracts of others. The possession of this latter power would justify the interference of the government with any rights

Third, the king effects a ban on holding raw silver, requiring citizens to turn in their raw silver in exchange for fiat silver. Much like the legal tender and functional currency mandates, the ban on a non-fiat money (here, raw silver) is a legal wedge designed to introduce the fiat currency swiftly and widely into society.[100]

Finally and importantly, by substituting fiat silver for raw silver, the king is able to establish a "legal seigniorage" (a sovereign "debasement delta") for his fiat money. The debasement delta is the change in the relative worth of the king's new money for the old money.[101] In other words, a "gram of fiat silver" is not the same weight as a "gram of raw silver"[102] (where the weight of a silver gram was set by the god). The sovereign has created a new benchmark weight for the society's money (because of coercion and force of law invoked by legal tender, non-fiat money bans, and functional currency regulations). The sovereign has assumed the role of the god and set up a *new* relative weight ratio between fiat silver and raw silver that is not 1:1.[103]

> of property of other parties, under the pretense that its allowance to the holders of the notes would lead to their more ready acceptance, and thus furnish the needed means.

Juilliard v. Greenman, 110 U.S. 421, 461–62 (1884) (Field, J., dissenting).

100. *Cf.* JAMES RICKARDS, CURRENCY WARS: THE MAKING OF THE NEXT GLOBAL CRISIS 72 (2012) ("In a rapid sequence of moves, FDR had deftly confiscated private gold, banned its export abroad and captured the gold mining industry. As a result, Roosevelt greatly increased the U.S. hoard of official gold. Contemporary estimates were that citizens surrendered over five hundred metric tons of gold to the Treasury in 1933. The gold depository at Fort Knox was constructed in 1937 for the specific purpose of holding the gold that had been confiscated from U.S. citizens. There was no longer enough room in the basement of the Treasury.").

101. *Cf.* Perry v. United States, 294 U.S. 330, 350 (1935) ("[I]f the terms of the government [ ] as to the standard of payment can be repudiated, it inevitably follows that the obligation as to the amount to be paid may also be repudiated.").

102. EDWIN R.A. SELIGMAN, PRINCIPLES OF ECONOMICS: WITH SPECIAL REFERENCE TO AMERICAN CONDITIONS 491 (6th ed. 1914) ("Fiat money is almost always, but not necessarily, paper money. The silver rupee in India, for instance, was fiat money from 1893 to 1899, because the government assigned to it a higher value . . . .").

103. *Compare Juilliard*, 110 U.S. at 449 ("Congress may (as it did with regard to gold by the act of June 28, 1834, *c*. 95, and with regard to silver by the act of February 28, 1878, *c*. 20) issue coins of the same denominations as those already current by law, but of less intrinsic value than those, by reason of containing a less weight of the precious metals, and thereby enable debtors to discharge their debts by the payment of coins of the less real value.") *with id.* at 465–66 (Field, J., dissenting). Justice Field wrote:

> Undoubtedly congress has power to alter the value of coins issued, either by increasing or diminishing the alloy they contain; so it may alter, at its pleasure, their denominations; it may hereafter call a dollar an eagle, and it may call an eagle a dollar. But if it be intended to assert that congress can make the coins changed the equivalent of those having a greater value in their previous condition, and compel parties contracting for the latter to receive coins with diminished value, . . . [a]ny such declaration on its part would be not only utterly inoperative in fact, but a shameful disregard of its constitutional duty. . . .

To continue our thought experiment, it is vitally important to understand that any form of fiat money is traded through society *preferentially*: it takes a *path* from the hands of the sovereign through society. It is always the case that some trading parties receive fiat money from the sovereign before others do.[104] In our case, the fiat

> Arbitrary and profligate governments have often resorted to this miserable scheme of robbery, which Mill designates as a shallow and impudent artifice, the 'least covert of all modes of knavery, which consists in calling a shilling a pound, that a debt of one hundred pounds may be canceled by the payment of one hundred shillings.'

Id.

104. *See* MURRAY ROTHBARD, THE CASE AGAINST THE FED (2007). Rothbard refers to any sovereign who issues fiat money as a legal "counterfeiter" and describes as follows how this "counterfeit" money (i.e., fiat money) follows a damaging path through the economy:

> [F]irst the counterfeiters, then the retailers, etc., have new money and monetary income which they use to bid up goods and services, increasing their demand and raising the prices of the goods that they purchase. But as prices of goods begin to rise in response to the higher quantity of money, those who haven't yet received the new money find the prices of the goods they buy have gone up, while their own selling prices or incomes have not risen. In short, the early receivers of the new money in this market chain of events gain at the expense of those who receive the money toward the end of the chain, and still worse losers are the people (e.g., those on fixed incomes such as annuities, interest, or pensions) who never receive the new money at all. Monetary inflation, then, acts as a hidden "tax" by which the early receivers expropriate (i.e., gain at the expense of) the late receivers. And of course since the very earliest receiver of the new money is the counterfeiter, the counterfeiter's gain is the greatest. This tax is particularly insidious because it is hidden, because few people understand the processes of money and banking, and because it is all too easy to blame the rising prices, or "price inflation," caused by the monetary inflation on greedy capitalists, speculators, wild-spending consumers, or whatever social group is the easiest to denigrate. Obviously, too, it is to the interest of the counterfeiters to distract attention from their own crucial role by denouncing any and all other groups and institutions as responsible for the price inflation. . . .
>
> The big error of all quantity theorists, from the British classicists to Milton Friedman, is to assume that money is only a "veil," and that increases in the quantity of money only have influence on the price level, or on the purchasing power of the money unit. On the contrary, it is one of the notable contributions of "Austrian School" economists and their predecessors, such as the early-eighteenth-century Irish-French economist Richard Cantillon, that, in addition to this quantitative, aggregative effect, an increase in the money supply also changes the distribution of income and wealth. The ripple effect also alters the structure of relative prices, and therefore of the kinds and quantities of goods that will be produced, since the counterfeiters and other early receivers will have different preferences and spending patterns from the late receivers who are "taxed" by the earlier receivers. Furthermore, these changes of income distribution, spending, relative prices, and production will be permanent and will not simply disappear, as the quantity theorists blithely assume, when the effects of the increase in the money supply will have worked themselves out.
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> In sum, the Austrian insight holds that counterfeiting will have far more unfortunate consequences for the economy than simple inflation of

money is fiat silver: minted silver legally required to be worth more than the base content of the metal would be when exchanged for other goods or services. The silver merchants and miners are the first to receive it because they are the ones who provide most of the raw silver the king uses to mint his fiat silver (who then pays them in fiat silver). So in exchange for 1 gram of raw silver provided to the king, the king might pay them back only 0.75 grams of fiat silver (in the form of a minted coin)—even assuming negligible minting costs. The king has therefore, via fiat, created a legal seigniorage that I call a "debasement delta." In other words, 0.75g fiat silver = 1g silver, *by sovereign legal decree*.[105] And the merchants *must* receive the fiat silver rather than raw silver in a trade because of legal tender (it settles the debt, by proclamation of the king), functional currency requirements (the merchants need fiat silver to pay the king's subsequent taxes), and bans on non-fiat money (they are prohibited to use raw silver as money henceforth except in acquiring fiat silver from the king).

The silver merchants forfeit some of the previous exchange value of their raw silver in exchange for the king's minted fiat silver. But they in turn, by being first in line to receive the fiat silver, can then spend it as fiat, creating *their own*, *second* "debasement delta" by doing so.[106]

So, the silver trader who gave up some extra raw silver to the king to get fiat silver in turn then takes the fiat silver and demands, say, more bushels of barley than he would have previously. The barley farmer, in turn, is compelled by legal tender (even if he asked for raw silver for payment, he must accept fiat silver) and functional currency requirements (he needs fiat silver to pay the tax) and non-fiat money bans (he cannot spend his existing raw silver reserves, if any, except to acquire fiat silver) to accept the fiat silver, which is now under

> the price level. There will be other, and permanent, distortions of the economy away from the free market pattern that responds to consumers and property-rights holders in the free economy. This brings us to an important aspect of counterfeiting which should not be overlooked. In addition to its more narrowly economic distortion and unfortunate consequences, counterfeiting gravely cripples the moral and property rights foundation that lies at the base of any free-market economy.

Id. at 24–26.

105. *Cf.* Knox v. Lee, 79 U.S. 457, 548–49 (1870) ("No one ever doubted that a debt of 1000 dollars, contracted before 1834, could be paid by 100 eagles coined after that year, though they contained no more gold than ninety-four eagles such as were coined when the contract was made, and this, not because of the intrinsic value of the coin, but because of its legal value.").

106. Note this debasement delta, rather than being a seigniorage taken in *by the sovereign*, as is commonly understood by "seigniorage," is a form of *economic rent enjoyed by the monopoly or oligopoly holders of the fiat silver* who preferentially received it from the sovereign before others did. *Accord* Hepburn v. Griswold, 75 U.S. 603, 621 (1869) ("[I]t may be said that the depreciation will be less to him who takes [fiat currency] from the government, if the government will pledge to him its power to compel his creditors to receive them at par in payments.").

oligopolistic control of the silver merchants as first in line to have received it from the king. So, if raw silver originally traded at 1 gram:1 bushel of barley (see Table 1), then the fiat silver might now trade at 0.6 gram:1 bushel of barley. This is because the farmer has need of fiat silver, which has arbitrary supply at the pleasure of the sovereign, to whom the farmer must return some or all the fiat currency in the form of tax. And the silver merchant can compel the trade even if originally raw silver, not fiat silver, was the pledged reciprocal item in the trade, due to the legal tender enactment. Notice the debasement delta through this second trade has increased from 0.25 (the initial delta that the king exacted on the silver merchants by setting the ratio at 0.75g fiat silver:1g silver) to 0.4 (the secondary delta that the silver merchants exacted on the barley farmers who don't have direct access to the king's fiat silver for a trade at 0.75g delta). Notice also that through such transactions with accompanying legal enforcements, the fiat silver begins to eradicate demand for raw silver as a possession and money.

In turn, the barley farmer now must make up the loss in weight (or purity) of raw silver that he has suffered in his exchange for his barley. His options are as follows: (1) to over-extract more barley to make up the loss in raw silver received due to the debasement deltas (this unsustainable farming tends to cause long-lasting environmental damage);[107] (2) to barter in his future trades with other resource hold-

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107. The discussion of the damaging environmental effects of high-interest government loan subsidies, and legally supported fiat money is starting to find its way into the economic literature. Elsewhere, I have written,

> [Farmer] Wendell Berry (2010) cautions that unless we sustain the Great Economy (Earth), the Little Economy (human commerce) will not survive. Berry gives an example from his own experience: tobacco farming. Common farming wisdom is that because tobacco is an exceptional nitrogen-robbing plant, if one plants tobacco in year one, then the topsoil should be restored via beans or other cover crops in year two (i.e. tobacco can only be grown in alternate years). One can push it, and plant tobacco on the same ground in consecutive year two and still get a good yield, in defiance of good practices, but then the ground is nitrogen-poor for seven years. If one plants three years consecutively (which results in declining yields in year three), then the ground is dead for all farming purposes for twenty-five years.
>
> Berry's point is that many farmers feel compelled by immediate economic necessitude of repaying compounding interest on farming loans (particularly high interest loans) to plant rapidly over the short term in defiance of good practices. He contends the incalculable long-term environmental harm is being ignored because of desire for short-term profitability. Particularly if land is monetarily cheap, one might be able to just buy or relocate to other acreage once the original ground has been pushed beyond its recoverable limits. But this results in a global race-to-the-bottom of topsoil destruction. This same concept plays out for many other renewable resources, for example overfishing, clear-cutting of forests, or aquifer collapse due to over-extraction of water. In this fashion, many resources that would be renewable if used sustainably become ex-

ers rather than resort to fiat silver payments (barter limits the robustness of his trading capacity and is not incentivized when the farmer has the option to wield to his own benefit the fiat silver he now possesses by creating a *third* debasement delta when he seeks other, non-silver resources); or (3) he exacts his own debasement delta in the next trade he commences (for fish) using fiat silver in place of raw silver or barley.

A key point is that this path of spending a particular piece of fiat money starting out of the hands of the sovereign eventually must reach an end.[108] There is some final person or group in society who suffers the full weight of multiple rounds of debasement deltas being created by the issuance of a round of fiat money.[109] In our economy of four resources (fiat silver, raw silver, barley, and fish), there have already been transactions of fiat silver for raw silver, and then barley, and now there may be a transaction for the final product: fish. Assume the fisherman (although it need not be so) is a primitive hunter/gatherer at the outer limits of unsophistication in a sophisticated economy. That fisherman has little need for money, living basically a subsistence life, but does have tax obligations to the sovereign, as all citizens do. Whenever the fisherman did trade prior to the introduction of fiat silver, he traded, per Table 1, 2 fish for 1g raw silver, or 2 fish for 1 bushel of barley. What started with the king and silver merchants as a trade ratio of 0.75g fiat silver:1g raw silver led the silver merchants to demand their own debasement delta of 1g fiat silver:1.67 bushels of barley (1/(1-0.4)) (where it should have been 1g raw silver:1 bushel barley if we take into account the trading ratios of 2 fish:1 bushel of barley and 2 fish:1g of raw silver).

> tinct when taken in an unsustainable way with a focus upon immediate profitability.
>
> . . . [S]uch troubling environmental degradation spawned by unreasonable toil may occur even for so-called "renewable" resources. This is to say nothing of the acquisition of "non-renewable" resources that sometimes causes irreversible pollution, such as fossil fuels and mining (e.g. precious metals, uranium, etc). In particular, energy demand has proved so bottomless that the phase-in of a newer, environmentally cleaner source (e.g. oil) over an older, more greatly polluting source (e.g. coal) has not at all slowed production of the latter.

Guzelian, *supra* note 76, at 223–24 (citing WENDELL BERRY, WHAT MATTERS? ECONOMICS FOR A RENEWED COMMONWEALTH (2010); Daniel Yergin, *The Power Revolutions*, WALL STREET J. (Aug. 1, 2015, 11:56 AM), https://www.wsj.com/articles/the-power-revolutions-1440172598 [https://perma.unl.edu/4B9A-NCLZ]). *See also* Leah H. Palm-Forster, Jordan F. Suter, & Kent D. Messer, *Experimental Evidence on Policy Approaches That Link Agricultural Subsidies to Water Quality Outcomes*, 101 AM. J. AGRIC. ECON. 109 (2018) (finding from experimental studies that "results suggest that water quality policies that rely on the threat of subsidy reductions are a potentially viable option for reducing ambient water pollution.").

108. *See* ROTHBARD, *supra* note 104.

109. The king can create arbitrary scarcity or surplusage of fiat currency by unilaterally deciding how much to issue.

Now the barley farmer wields his fiat silver, just as the silver miners invoked a delta against him, by demanding, say, 6 fish for the fiat silver. The third debasement delta is now 0.73 (1 - (1.67 bushels of barley/6 fish)). The fisherman, needing the relatively more expensive fiat silver to pay taxes, is now in the predicament that to pay the tax he must catch 3.7x the number of fish (1/0.73) as when raw silver was currency. This is on top of the barley farmer's previous 1.67x over-extraction of barley.

Thus, because of fiat silver's introduction, the fiat poor fisherman must invariably work harder and has the following options: (1) take often unrepayable loans to maintain his level of current subsistence (leading to compounded environmental destruction[110]); (2) choose to subsist with far less catch for himself (and risk starvation); (3) abandon fishing and try to enter the silver miner trade where he is more proximate to the sovereign source of fiat money and does not suffer the cascading effect of debasement deltas, or better yet, become a patron of the king himself, who may pay him directly in fiat silver for his labor (which might amount to mundane tasks like writing legal essays about the kingly court); (4) engage in thievery to make up the deficit; (5) commit suicide; or (6) flee the kingdom to escape his plight. Also important to note is that there is no seventh option to barter his fish for barley (or other goods and services), as the fisherman will now have no incentivized trading partners who have all begun to use fiat silver rather than raw silver. The fisherman is being squeezed out of existence as the fiat poor in the cascading chain of debasement deltas caused by the introduction of fiat currency, legal tender, and functional currency plus tax requirements. It also tends to displace occupations closest to food production.[111]

The upshot of this economic thought experiment is that because of the sovereign debasement delta (and ensuing debasement deltas created by every other person in society in the cascading path of the fiat money) certain fiat poor in society are effectively locked out of the ability to participate in the economy—or even just to exist—while paradoxically still demanded and coerced to participate in the economy.

The harmful effects of fiat silver when combined with functional currency requirements were known to the ancients. In the Gospel of Matthew in the New Testament Bible, Jesus's Miracle of the Coin in the Fish's Mouth relates exactly this problem of the fiat poor.[112] St.

110. *See Griswold*, 75 U.S. at 632–34.

111. In the United States, the number of farmers since 1920 declined from 30.2% of the population (when many people were subsistence farmers) to less than 1% in the latest 2007 census of agriculture. *See* J.Z. Kalbacher & D. Deare, *Farm Population of the United States, 1985*, 59 CURR. POPUL. REP. POPUL. CHARACT. 1, 1 (1986); U.S. DEP'T OF AGRIC., Census of Agriculture (2007), https://www.nass.usda.gov/Publications/AgCensus/2007/ [https://perma.unl.edu/46PS-WPNZ].

112. *Matthew* 17:24–27.

Peter was an illiterate, primitive hunter-gatherer with little need for money who subsisted on his fishing catches. Confronted by Israelite tax authorities to pay them the Tyrian Shekel[113] (the fiat silver coin of the Temple Treasury that was demanded in an annual head tax on all adult male Israelites), Peter, who had even abandoned his limited subsistence toil to follow Jesus, was likely flat broke with no fiat silver (or fish) to his name. Yet, his economic participation was demanded of him in fiat currency, or else he would be imprisoned or worse.

Peter could have set about frantically fishing (his only discernible economic skill) to try to create enough "value" to trade for a Tyrian Shekel. That would have required far more (unsustainable) fishing on his part than would have been the case in an economy without fiat silver. Or he could have taken out unrepayable loans. Or he could have pled for the king's mercy and sought menial work in the king's court as a result, abandoning a career of fishing. Or he could have stolen a Tyrian Shekel. Or he could have committed suicide. Or he could have fled and become a refugee. Or Peter needed a miracle.

Jesus gave him one; he told Peter to go fish, and to look in the mouth of the first fish Peter caught. There, Peter found a "stater" (a silver coin that was either the Tyrian Shekel or possibly an Athenian Tetradrachm, which would have been likewise accepted as full payment of the fiat currency tax).[114] Seldom do humans find valuable silver coins in the mouths of living fish. It is an unnatural phenomenon. It means that one's labor (fishing) yields *two* normally unpaired resources and eliminates the need for trade to get one or the other.

There are two major modern economic theories of value: Marx's labor theory of value and Menger's subjective theory of value.[115] I think Jesus was dismissive—not entirely, but mostly—of Marx's labor theory of value, as he showed in this Miracle story that even a fiat poor need not toil above a minor amount. Peter's fishing required light work (surely no more than 20 minutes of his time) to pay a heavy fiat tax. Thus, labor—while Jesus requested it of Peter—was a *de minimis* part of the Miracle story (unlike Marx's labor theory of value).[116]

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113. *See* KLETTER, *supra* note 95; picture of Tyrian Shekel.
114. Guzelian, *supra* note 76, at 232.
115. Gene Callahan, *Carl Menger: The Nature of Value*, MISES DAILY ARTICLES (Oct. 17, 2003), https://mises.org/library/carl-menger-nature-value [https://perma.unl.edu/D57J-ZRKQ].
116. *See Matthew* 6:25–33 ("Therefore I tell you, do not worry about your life, what you will eat or drink; or about your body, what you will wear. Is not life more than food, and the body more than clothes? Look at the birds of the air; *they do not sow or reap or store away in barns*, and yet your heavenly Father feeds them. Are you not much more valuable than they? Can any one of you by worrying add a single hour to your life? And why do you worry about clothes? See how the flowers of the field grow. *They do not labor or spin* . . . If that is how God clothes the grass of the field, which is here today and tomorrow is thrown into the fire, will he not much more clothe you—you of little faith? So do not worry, saying, 'What shall we

But now we turn to Menger's subjective theory of value, endorsed by both neoclassical and Austrian economists. The subjective theory of value advances the idea that the use-value (i.e., the utility) of a good is not determined by any inherent property of the good, nor by the amount of labor necessary to produce the good. Rather, use-value is determined exclusively by the importance an acting individual places on a good for the achievement of his desired ends, which is typically reflected by the price paid for the good.[117] To a subjectivist, undistorted market exchange values (prices) are therefore a perfect (and the only) reflection of economic actors' use-values of goods and services (utility).[118]

In the Miracle story, Peter faces a paradox. He must eat to live. *Simultaneously*, he must have fiat silver—a Tyrian Shekel—to live (or else he will be imprisoned, beaten, and probably killed by a coercive government). According to a subjective theory of value, in the circumstances Peter finds himself, any self-preserving person should place equally vast importance on simultaneously having both a Tyrian Shekel and a fish. Peter has neither, and indeed, the fiat money and functional currency system has guaranteed that he, a fiat poor, would eventually reach a point where he would have neither.[119] Indeed, it is no accident that a historical account of the two equally and infinitely valued goods at issue for a fiat poor involved fiat money and subsistence food.

The subjective theory of value supposes that trades will occur (and a price will form) whenever two people have use-value of the other's property more than their own property. But the subjective theory of value is, contrary to some economists' claims of its universal applicability, an *incomplete* economic theory of value under a market-distorting fiat currency system. To a subjectivist looking to the price formed in a trade for all information about a person's use-values of a good or service, the fact that fiat poor are not trading (and thereby not

eat?' or 'What shall we drink?' or 'What shall we wear?' For the pagans run after all these things, and your heavenly Father knows that you need them. But seek first his kingdom and his righteousness, and all these things will be given to you as well.") (emphasis added).

117. Robert P. Murphy, *Subjective-Value Theory*, MISES DAILY ARTICLES (May 30, 2011), https://mises.org/library/subjective-value-theory [https://perma.unl.edu/M6G8-KP6Y] (providing instructional overview of subjective value theory).

118. Despite its widespread adoption, some economists criticize the theory, because they believe it "is in many ways a fairly crude attempt to combine use-value and exchange-value" and "object to the idea that prices merely reflect subjective valuations for the basic reason of circularity: prices must be calculated before subjective valuation takes place, so they cannot purely reflect subjective values." *Reconsidering the Labour Theory of Value*, UNLEARNING ECONOMICS BLOG (July 20, 2013), https://unlearningeconomics.wordpress.com/tag/labour-theory-of-value/ [https://perma.unl.edu/LTJ9-WZL9].

119. *See* ROTHBARD, *supra* note 104.

establishing prices) would seem to indicate that they do not value highly enough the resource they otherwise claim to be seeking. But a fiat system produces such catastrophic poverty for fiat poor that their use-values and exchange values for food and fiat money become unbundled—something that should not happen according to the subjective theory of value. Upon introspection, we can understand as fellow human beings that their use-values for food and fiat silver are clearly non-zero, yet their exchange values are zero because fiat poor need both simultaneously to survive and therefore cannot part with either.

Furthermore, a striking immorality is made clear through the lens of the subjective theory of value under a fiat money system: if Peter cannot get through trade, production, or unlawful means (e.g., stealing) the necessary fish *and* Tyrian Shekel to live (his desired end), then he must logically shift his desired end according to the subjective theory of value. He must seek to die or flee the kingdom. Suicide becomes a logical end to seek when the preferred end (living) is frustrated. And so, because suicide is nearly costless in terms of resources, Peter may change his end and choose suicide.

In other words, in a world where some form of fiat money, legal tender, functional currency, and non-fiat money ban system is an all-but-assured reality, the subjective theory of value accepts (or at least does not rule out) suicide, migration, or a life of thievery for fiat poor—usually those closest to raw resources and the land—as economic modes of action.[120] As the fiat poor dies or leaves, someone else takes the place of the fiat poor in the next cascade of fiat money. And then that person should choose suicide or thievery. A fiat-driven world with legal enforcements is a harbinger of a collective suicide and outlaw pact.

Most ethicists do not endorse suicide or thievery as legitimate aims of humans,[121] although some economists who endorse subjective value theory are indifferent to them.[122] The subjective theory of value—where man is the measure of all means' value—admits as a logical conclusion that a fiat poor should commit theft or suicide without any

120. Debbie Weingarten, *Why Are America's Farmers Killing Themselves?*, THE GUARDIAN (Dec. 11, 2018), https://www.theguardian.com/us-news/2017/dec/06/why-are-americas-farmers-killing-themselves-in-record-numbers [https://perma.unl.edu/AM2X-FXS6] (reporting American farmers' suicide rate is the highest of any occupation and concluding that farmers' "rate of self-imposed death rises and falls in accordance with their economic well-being.").

121. *Cf.* MICHAEL HUEMER, ETHICAL INTUITIONISM (2007) (appealing secularly to the idea that certain objective truths about ethics exist and are discernible).

122. LUDWIG VON MISES, HUMAN ACTION: A TREATISE ON ECONOMICS, 95–96 (1998) ("The notions of abnormality and perversity therefore have no place in economics . . . Any examination of [man's] ultimate ends turns out to be purely subjective and therefore arbitrary.").

concern on our parts. We are up against an immoral and incomplete theory of value if taken on its own.

Instead, we might conjecture that the ontology of value is such that people's economic use values (utilities) are at least partly supernatural and objective—established by a god rather than by mankind. Then the fiat poor paradox is resolved if the god, like Jesus in the miraculous coin in the fish's mouth story, can intervene miraculously on behalf of the fiat poor to provide the basic things with *objective* value (in the god's eyes) that they need but cannot exchange for under fiat money systems with legal enforcements. They can then choose life over death and lawfulness over thievery and residence over migration as the ends they subjectively value. Therefore, in any economy with fiat money (and as the coin story shows, the world has long had such economies), it cannot be the case that value is entirely in the hands of men to decide. The god who had an invisible hand on the entire economy when selecting raw silver as money, will inject value as he sees fit, even by supernaturally fulfilling the need of the fiat poor for resources to exchange while still remaining within the laws and economic activity of society. The godless fiat system, by contrast, substitutes finite, top-down human judgment for the god's omniscient judgment, with problematic results.

B. The Fiat Money Thought Experiment, Part 2: From Fiat Silver to Fiat Notes

Imagine now two developments in the economy. First, paper and ink have been invented, becoming new commodities that circulate and are traded. Second, fiat silver has entirely displaced and replaced raw silver as the money of the economy. This in itself takes time, as repeated rounds of fiat silver are issued. But gradually, the privately held stock of raw silver is whittled away as uses of it become nonexistent.

After some period of time, the sovereign decides to issue a *new* fiat currency in place of fiat silver. This currency could be a paper-and-ink note, such as those circulated in China as early as 805AD:

Chinese Tang Dynasty paper note (860–873AD, ca. 1800AD replica)

Source: Tom Chao's Paper Money Gallery[123]

Consequently, there are now six possible commodities in our hypothetical economy (raw silver, fiat silver, barley, fish, paper-and-ink, and fiat paper-and-ink bills). However, as we noted earlier, raw silver already largely disappeared as an exchanged commodity because of the introduction of fiat silver and its attendant laws.

The switch is now from one fiat currency (fiat silver) to another (fiat paper-and-ink), rather than from a divinely mandated or spontaneously evolved money (raw silver) to a fiat money (fiat silver). The sovereign will transfer legal tender and functional currency status to fiat paper-and-ink and remove those powers from fiat silver. In addition, the government will ban holdings of fiat silver (just as it did for raw silver). Thus, by force of law alone, the same powers that fiat silver once held are now bestowed exclusively on fiat paper-and-ink.

A consequence of this shift from fiat silver to fiat paper-and-ink is that the sovereign can exact a new round of debasement delta, above and beyond that already extracted by the transition from silver to fiat silver.[124] Economists often distinguish commodity money (like silver)

123. Tom Chao, *World Banknote Collection*, TOM CHAO'S PAPER MONEY GALLERY, http://tomchao.com/as/as8.html [https://perma.unl.edu/9T68-5MR4]. (last visited Feb. 25, 2019).

124. *See* Norman v. Baltimore & O.R. Co., 294 U.S. 240, 316 (McReynolds, J., dissenting) ("To such counterfeit profits there would be no limit; with each new debasement of the dollar they would expand. Two billions might be ballooned indefinitely—to twenty, thirty, or what you will.").

that can be debased and fiat money, which they claim cannot be debased.[125] This would suggest that the major thrust of this Article—that fiat money and its attendant laws are a form of government-induced debasement—is wrong. But this contention by economists that fiat money is somehow "impervious" to debasement is itself incorrect. *All* fiat money is commodity money. Fiat silver is comprised of silver. Fiat paper-and-ink bills are comprised of paper fibers and ink. And as we shall see in the next section, fiat digital currency is made of electricity and algorithms, among other things.

As this Article has repeatedly stressed, fiat money achieves a "delta" (roughly equivalent conceptually to seignorage achieved via debasement) through the attendant laws that coerce its use. The magnitude of this new delta is determined by the sovereign's effective enforcement of those laws.[126] The magnitude of the new delta is *also* determined by the exchange value of the commodity underlying the new fiat currency *prior to* its use as fiat currency. In our present example, for fiat paper-and-ink to come into existence, paper milling and ink production have to occur first. Thus, the commodities of paper and ink will enter the economy before fiat paper-and-ink bills do.

There are two operative questions, then. First, what was the exchange weight ratio of fiat silver to paper and ink (equivalent to the amounts put into a fiat paper-and-ink bill) *before* paper-and-ink bills became fiat? Second, what was the exchange weight ratio of fiat silver to fiat paper-and-ink *after* paper-and-ink became the fiat currency?

As one way of estimating this, one could ask how much does the inclusion of fake paper-and-ink money in a Monopoly game board set (where the notes are obviously bundled with other items) raise the price to the game's buyer? That price increase is the *commodity* cost of paper-and-ink bills, not the *fiat* value of the bills. If, once the fiat paper-and-ink currency is created, the exchange value of fiat paper-and-ink is higher relative to fiat silver than the commodity exchange value of raw paper-and-ink (e.g., Monopoly play-money paper-and-ink bills),

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125. Lefteris Tsoulfidis, *Debasement*, in THE ENCYCLOPEDIA OF CENTRAL BANKING (Louis-Philippe Rochon & Sergio Rossi, eds.) 135–36 (2015) ("Debasement is a practice easily recognizable in the case of commodity money. However, we cannot say the same thing in the case of a fiduciary or fiat monetary system, which is not directly backed by a commodity: the money in circulation is instituted as such by government. The altering of value in a fiat money system is a much more difficult practice and occurs when the money supply exceeds its demand."). *But see* George Selgin, *Synthetic Commodity Money*, 17 J. FIN. STABILITY 92 (2015) (arguing that some moneys such as Bitcoin and Swiss dinars possess attributes of both commodity and synthetic money).

126. *Cf.* Christopher P. Guzelian, *True and False Speech*, 51 B.C. L. REV. 669, 715 (2010) ("[L]iability must be correctly internalized as an individual's behavioral norm to be effective. Thus, liability is far more than just a monetary penalty or incarceration. Liability is speech intended to signal what behaviors are socially acceptable and unacceptable.").

then we may conclude that a new debasement delta for fiat paper-and-ink exists.

To demonstrate the existence of this debasement delta in modern terms, consider that the Federal Reserve estimates that it costs anywhere from 5.5 cents (for $1 bills) to 14.2 cents (for $100 bills) to print fiat paper-and-ink bills:[127]

U.S. Fiat $100 bill

Source: Pinterest[128]

Fiat cents are fractions of the fiat dollar, a fractional decimal system of currency proposed by Thomas Jefferson.[129] Modern U.S. fiat silver coinage (American Eagle dollars), which are imprinted with a stated value of "1 U.S. dollar," are 99.9% pure silver, and weigh 1 ounce (28.35g).

127. Board of Governors of the Fed. Res. Sys., *How Much Does it Cost to Produce Currency and Coin?* (March 2018) https://www.federalreserve.gov/faqs/currency_12771.htm [https://perma.unl.edu/9JUH-LYZ3].

128. Steven Zitar, Pinterest, https://www.pinterest.com/pin/335588609718100051/ [https://perma.unl.edu/X68U-RUQ6] (last visited Feb. 18, 2019).

129. *See* Nat'l Hist. Publications & Rec. Commission, *Editorial Note: Jefferson's Notes on Coinage* https://founders.archives.gov/documents/Jefferson/01-07-02-0151-0001 [https://perma.unl.edu/64BQ-FUH3] (describing Jefferson's 1784 proposal to create a fractional currency system).

Fiat American Eagle Silver Dollar

Source: Coinnews.net[130]

On November 2, 2018, the exchange rate for an American Eagle was $17.45 in fiat paper currency.[131] Thus, in terms of exchange values, the underlying commodity value of paper-and-ink used to make a modern fiat $1 bill (5.5 cents) and $100 bill (14.2 cents) would amount to $0.960 (i.e., 17.45 x 0.055) and $2.47 (i.e., 17.45 x 0.142) worth of fiat silver, respectively. In other words, a $1 fiat paper-and-ink bill translates to only about $0.96 worth of fiat silver (a debasement delta of 0.04) and a $100 fiat paper-and-ink bill amounts to only $2.47 worth of fiat silver (a staggering debasement delta of 0.975).

The upshot of this analysis is that by substituting a new fiat currency for the existing one and by simultaneously imbuing the new currency with the three attendant laws discussed throughout this Article, the sovereign can iteratively exact a new round of legal seigniorage from the population in the form of new debasement deltas. In turn, those citizens transactionally closest to the king (e.g. paper mill owners and ink producers) receive the fiat paper-and-ink first and can exact their own sequential, new debasement deltas, cascading down until once again fiat poor are affected significantly and adversely, and the environment deteriorates. Simultaneously, the old fiat currency—fiat silver—is gradually or abruptly phased out of the economy, as no rational individual would retain it for general transactional use when its legal, fiat value is so diminished relative to the new paper-and-ink currency. And clever merchants who have caught wind of this shift from the sovereign before it happens shift their resource ownership from silver mining to the paper industry.

130. Darrin Lee Unser, *2018-With Proof American Silver Eagle Release*, (Jan. 4, 2018), http://www.coinnews.net/2018/01/04/w-proof-american-silver-eagle/ [https://perma.unl.edu/8A2B-CCE5].

131. *Silver Coins & Bars*, GOLDDEALER.COM, https://www.golddealer.com/product-category/products-2/bullion/silver-bullion-coins-and-bars/ [https://perma.unl.edu/VA2F-KYYP] (last visited Nov. 2, 2018).

C. The Fiat Money Thought Experiment, Part 3: From Fiat Paper Notes to Fiat Electricity (Digital Currency)

Imagine that the sovereign, perhaps a bit unscrupulous and emboldened by past successes in iterative rounds of fiat money issuance and legal seigniorage (debasement deltas), decides it is time to repeat history with yet another new form of fiat currency. Say there have been two major technical breakthroughs since paper-and-ink became the currency: electricity and computing. In this world, it has become possible to store and send information, including financial transactional information, at light speed worldwide. Recently, electronic ledgers called blockchains have become available that theoretically allow for transparent tracking, auditing, and recording of any commercial transaction.[132]

Some people, urged on by self-held principles of liberty, decided to create a digital asset using blockchains and computing power. This is not a fiat currency. And the digital asset is decidedly not barter. In the sovereign's eyes, the digital asset's widespread adoption may be seen as either: (1) a private end-route run around the less technologically advanced fiat paper-and-ink currency to avoid debasement deltas and perhaps also taxes;[133] or (2) a market signal that the sovereign needs to consider "updating" its own fiat currency.[134]

There would always be a case of adjustment in establishing new exchange values for any new product that comes to the market. But this digital asset is different in that the new "product" is being used as an intermediate, universal good for all other goods in the market. It is, in effect, a new private *money* competing with the fiat currency. What the private digital asset lacks—and what the fiat currency has—is the force of law behind it.

And the force of law will act swiftly to deter this private money, just as happened to raw silver in the beginning of our story. Indeed,

132. *See* Michel Rauchs et al., *Distributed Ledger Technology Systems: A Conceptual Framework*, CAMBRIDGE CTR. FOR ALTERNATIVE FIN. (2018) (establishing conceptual framework for blockchain/DLT technology).

133. Kevin Costelloe, *Bitcoin 'Ought to Be Outlawed,' Nobel Prize Winner Stiglitz Says*, BLOOMBERG (Nov. 29, 2017), https://www.bloomberg.com/news/articles/2017-11-29/bitcoin-ought-to-be-outlawed-nobel-prize-winner-stiglitz-says-jal10hxd [https://perma.unl.edu/5822-Y8UK].

134. Christine Lagarde, *Winds of Change: The Case for New Digital Currency*, Speech at Singapore Fintech Festival (Nov. 14, 2018), https://www.imf.org/en/News/Articles/2018/11/13/sp111418-winds-of-change-the-case-for-new-digital-currency [https://perma.unl.edu/J2SF-DDAC] (advocating adoption of digital currency by governments). *See also* Kenneth Rogoff, *Cryptocurrencies Are Like Lottery Tickets that Might Pay Off in the Future*, THE GUARDIAN (Dec. 10, 2018), https://www.theguardian.com/business/2018/dec/10/cryptocurrencies-bitcoin-kenneth-rogoff [https://perma.unl.edu/U9N2-LJC3] ("[W]hen it comes to new forms of money, the private sector may innovate, but in due time the government regulates and appropriates.").

the sovereign's tax collectors are likely to take immediate issue with the merchants who have begun to transact in this fashion, asking how holders of the digital money expect to pay tax in the functional paper-and-ink currency units expected of them as they acquire the digital asset.[135]

Simultaneously, the sovereign may seize the digital money from some holders and refuse to offer legal support to those who are defrauded in their exchanges for the money because it is not legal tender. In other words, the laws of legal tender, functional currency, and non-fiat money bans will rear their heads to quash this breakout attempt for privatized currency using a new technology not exclusively owned by the sovereign.

The sovereign can quash the digital money, but as the saying goes, imitation is the most sincere form of flattery. The sovereign may instead create its *own* digital currency (call it "Phoenix"[136]), declaring it the new fiat currency that rises from the ashes of the dying paper-and-ink currency.[137]

There may be public advantages over fiat paper-and-ink for a fiat digital currency. For example, organized crime uses the anonymity of paper-and-ink to achieve nefarious goals.[138] No doubt the sovereign will point out such benefits in an effort to persuade citizens not to resist the issuance of the new currency. But the issuance of the new Phoenix currency also offers a nefarious opportunity to the sovereign, if the sovereign so chooses, to exact another round of legal seigniorage (a debasement delta). And, just as was the case for fiat silver and fiat paper-and-ink currencies before it, the Phoenix promises to those merchants who supply the necessary ingredients to fashion a Phoenix—namely algorithms, computing power, information technology, and electricity, as well as those with already existing significant wealth—a monetary proximity to the issuance of the Phoenix such that they will receive it before other members of society, and in turn, exact their own rounds of debasement deltas on later recipients of the

135. *See* IRS Notice, 2014-21, 2014-16 I.R.B. 938 ("In general, the sale or exchange of convertible virtual currency, or the use of convertible virtual currency to pay for goods or services in a real-world economy transaction, has tax consequences that may result in a tax liability.").

136. ECONOMIST NEWSPAPER LIMITED, *Get Ready for the Phoenix*, 306 ECONOMIST 9 (January 1, 1988) (predicting that by 2018, a new international currency would develop).

137. Richard Senner & Didier Sornette, *The Holy Grail of Crypto Currencies: Ready to Replace Fiat Money?*, J. ECON. ISSUES (forthcoming 2019) (arguing that crypto currencies lack stability that fiat paper money offers "because [monetary] quantity adjustments are not a sufficient condition for stable prices . . . [Instead] coordinated wage bargaining appears vital to achieve price stability . . . wages have to grow in line with productivity plus the inflation target.").

138. *See* KENNETH S. ROGOFF, THE CURSE OF CASH (2016).

currency.[139] True to precedent, a new segment of fiat poor will form and the environment will be further damaged.[140]

In this tale of three successive issuances of fiat currency (fiat silver, then fiat paper-and-ink, and then fiat electricity/digital currency), there is a silver lining: if the sovereign does *not* issue the fiat currency with a debasement delta, and if the sovereign distributes the new currency simultaneously to all members of society in exchange for their past fiat currencies, the harmful consequences of debasement deltas are resolved. That is, if the marginal cost of the production of the digital currency is all that the government seeks to recoup in issuing it, then there may be *some* economic and environmental stability to the digital currency.[141] However, the attendant laws that coerce its usage may nevertheless lead to what historically has proven to be nearly unremitting temptation for a sovereign to implicitly tax a population through issuance of each new fiat currency.

D. The Globalization of Fiat: Special Drawing Rights (SDRs)

For the longest period of human civilization, gold and silver served as the most widespread forms of money. These precious metals do not have national character, but rather international character. The metals have flowed freely in trade from region to region, from people to people, and from nation to nation. Simultaneously, silver and gold as money retain a private and individualistic aspect outside of the control of governments that is desirable to the many in society who view centralization and government fiat control of all aspects of money as problematic, for reasons outlined in this Article and beyond.[142] For these reasons, silver and gold have a character that appeals *both* to

139. *See* SELIGMAN, *supra* note 102. *See also* Joseph E. Stiglitz, *Macro-economic Management in an Electronic Credit/Financial System* (Nat'l Bureau of Econ. Res, Working Paper No. 23032, 2017) (proposing credit auctions during the issuance of digital currency). Stiglitz reveals the sovereign favoritism and path dependency that issuance of digital currency would permit as follows:

> The government may still want to delegate responsibility for making credit decisions to private enterprises. Credit auctions provide one way of doing so, while simultaneously addressing the . . . *making [of] it more likely that the government captures a larger share of the rents associated with the value of its credibility and guarantees*) and providing for greater economic stability.
>
> The basic idea is straightforward: the central bank (government) auctions off the rights to issue new credit.

Id. at 15 (emphasis added).

140. *See generally id.*

141. *See* Adam Hayes, *Bitcoin Price and its Marginal Cost of Production: Supporting Evidence*, 5 APP. ECON. LETTERS 1, 1 (2018).

142. *See* O.K.F., *Gold Clauses. Private International Law*., 1 MOD. L. REV. 158, 159 (1937) ("Every decision upholding a gold clause works, therefore, in two directions: it helps maintain an 'international' element in a world of 'nationalized' economics, and it assists individual parties in putting their relationship above and

"globalists" (those who favor central global sovereign authority) and to "individualists" or "nationalists" (those who disdain globalism).

The twentieth century abandoned the gold and silver standards in favor of fiat paper. Thus, during the twentieth and twenty-first centuries to date, paper money has, by and large, had *national* character. True, there have been twentieth century international compacts regarding money, and many currencies have tethered to the dollar in particular, but sovereigns have traditionally been national sovereigns, and their monies traditionally national monies. The international character of money found in gold and silver was lost in the shift to fiat paper.

Concurrent with the growing chorus of voices for a shift from paper currency to digital currency[143] is a subtle but significant demand by globalists to restore the international character of money rather than relying on the U.S. dollar—one *nation's* currency—as a *de facto* "world reserve" currency. Indeed, just as gold and silver offered international trade benefits and more throughout history, so too do globalists believe that a world currency should not be an overextended national-currency-turned-international-money like the dollar, but rather a true international money.

And yet, what is curious is that globalists, by and large, do not advocate a return to gold and silver standards, which offer such an international monetary character. But if not gold or silver, then what can an international money be? The concept for this international currency was outlined in a front cover editorial by *The Economist* magazine in 1988, when the staff projected the idea of an international *fiat* currency:

> Thirty years from now, Americans, Japanese, Europeans, and people in many other rich countries, and some relatively poor ones will probably be paying for their shopping with the same currency. Prices will be quoted not in dollars, yen or D-marks but in, let's say, the phoenix. The phoenix will be favoured by companies and shoppers because it will be more convenient than today's national currencies, which by then will seem a quaint cause of much disruption to economic life in the last twentieth century.
>
> . . . .
>
> The phoenix zone would impose tight constraints on national governments. There would be no such thing, for instance, as a national monetary policy. The world phoenix supply would be fixed by a new central bank, descended perhaps from the IMF. The world inflation rate—and hence, within narrow margins, each national inflation rate—would be in its charge. Each country could use taxes and public spending to offset temporary falls in demand, but it would have to borrow rather than print money to finance its budget deficit.
>
> . . . .
>
> This means a big loss of economic sovereignty, but the trends that make the phoenix so appealing are taking that sovereignty away in any case. Even

outside 'planning' on the part of government authorities. The gold clause has an international and, at the same time, an individualistic aspect.").

143. *See supra* section II.C.

> in a world of more-or-less floating exchange rates, individual governments have seen their policy independence checked by an unfriendly outside world.
> . . . .
> As the next century approaches, the natural forces that are pushing the world towards economic integration will offer governments a broad choice. They can go with the flow, or they can build barricades. Preparing the way for the phoenix will mean fewer pretended agreements on policy and more real ones. It will mean allowing and then actively promoting the private-sector use of an international money alongside existing national monies. That would let people vote with their wallets for the eventual move to full currency union. The phoenix would probably start as a cocktail of national currencies, just as the [International Monetary Fund's] Special Drawing Right is today. In time, though, its value against national currencies would cease to matter, because people would choose it for its convenience and the stability of its purchasing power. . . . Pencil in the phoenix for around 2018, and welcome it when it comes.[144]

There is an implicit assumption about sovereignty in this *Economist* call for an international fiat currency: that monetary sovereignty is ultimately and properly international, not national. Globalists typically have some sense that there should be a global monetary sovereignty vested in a select group of rulers who personally transcend national identities. How these rulers would come to have such monetary power—and whether the citizens of the nation-states that currently exist have any representative voice in selecting such rulers—is not altogether clear or settled.[145]

The other key point to observe from such a proposal is that the "Phoenix" was envisioned as a *fiat* currency. Thus, the global sovereigns—whoever they may be and however they become such—are in largely the same position as national sovereigns with respect to currency: capable of passing attendant laws that ensure the possibility of a debasement delta, resulting in impoverishment of many and further

144. *Get Ready for the Phoenix*, *supra* note 136, at 9–10.

145. As noted in section III.A discussing a hypothetical sovereign, "[h]ow that sovereign is selected, and the legitimacy of that sovereign, are important philosophical considerations for monetary theory, but those questions are left unaddressed for this Article's purposes." *Supra* note 92. *See also* JUVENAL, Satire VI, lines 347–48, SATIRES (1960) ("Quis custodiet ipsos custodies?"). An interesting South Dakota Supreme Court case may offer persuasive authority regarding the issue of whether self-appointed sovereigns—either domestic or international but pointedly without U.S. or state government affiliation—may create and issue their own "credit." State v. Dale, 439 N.W.2d 98, 100–04 (S.D. 1989). Dale, self-appointed, issued his own printed form of "credit" (unrecognized by banks and the South Dakota State Banking Commission) and used the credit to purchase items. When the payees realized that the credit documents were not actual checks, Dale (and his collaborators) were arrested and charged with theft. Dale argued that his credit was valid because the U.S. monetary system was based on illegal fiat money, entitling him to issue his own credit. The trial court and South Dakota Supreme Court ruled Dale's proffered evidence about the U.S. financial system was irrelevant and precluded it from trial. *Id.* at 103. Dale was convicted (and the conviction was affirmed on appeal) of grand theft by deception. *Id.* at 111.

environmental damage.[146] Only in this case, effects would be truly global, not nationally restricted.

The Special Drawing Right (SDR) referenced in the *Economist* article is a monetary unit of credit of the International Monetary Fund (IMF), one of two "central bank of central banks." (The other "central bank of central banks" is the Bank of International Settlements (BIS).) The SDR is a monetary instrument that, as the *Economist* observed, is a "cocktail of national currencies."[147] What the SDR actually "is" is disputed. Officially it is described as an interest-bearing "international reserve asset,"[148] but it already is accepted by the U.S. Treasury in payment of debts.[149] And the SDR could, as the *Economist* article noted, become the *credit* basis of a globalist sovereign's fiat money. Much as national sovereigns can create fiat paper credit (bills) at their pleasure, so too could the global sovereign create SDRs (or an equivalent credit-money).

Indeed, Christine Lagarde, the current IMF Director, in a recent speech endorsed the idea that governments should adopt fiat digital currency in the near future.[150] It is not a far cry to anticipate that the IMF or BIS or both may at some point soon advocate a digital fiat *global* currency, issued at the pleasure and credit of global monetary sovereigns (whomever they may be), to replace both the dollar as a global reserve currency and, in turn, most or all national currencies.

The merits of a one world global digital currency can be debated. One thing is sure: if that one world currency is fiat and has attendant laws like legal tender, non-fiat money bans, and a functional currency mandate, then it runs the same risks of creating widespread poverty and destroying the environment as the dollar has. That the sovereign is global rather than national does not make things better. Indeed, the greater degree of centralization might make things worse.[151]

146. It is therefore little wonder that individualists who admire gold and silver, despite their international character, might despise a globalist fiat currency that likewise has international character, because it centralizes monetary authority and allows for potential economic gains of that central authority and those with privileged access to it.

147. *See Get Ready for the Phoenix*, *supra* note 136 and accompanying text.

148. INT'L MONETARY FUND, *Special Drawing Right (SDR)*, IMF Factsheet (Apr. 19, 2018), https://www.imf.org/en/About/Factsheets/Sheets/2016/08/01/14/51/Special-Drawing-Right-SDR [https://perma.unl.edu/V39Q-D9KH].

149. 12 U.S.C. § 467 (2018) ("The Secretary of the Treasury is authorized and directed to receive deposits of . . . Special Drawing Right certificates with the Treasurer or any designated depositary of the United States when tendered by any Federal Reserve bank or Federal Reserve agent for credit to its or his account with the Board of Governors of the Federal Reserve System.").

150. *See* Costelloe, *supra* note 133.

151. *See* FRIEDRICH HAYEK, THE ROAD TO SERFDOM (1944) (warning against tyranny and economic disaster prompted by central economic planning).

IV. CONCLUSION: SOLUTIONS FOR REFORM

The dollar, as currently construed or as may be construed as a digital currency in the near future, assumes the approach of a top-down controlled invention of a sovereign government. Modern monetary policy does not start by assumption that any two products have a "true" valuation, but rather that there is no inherent value of the dollar relative to any other product. To the modern economist, relative values are entirely subjective and in the eyes of the beholder. This stands in stark contrast to ancient historical accounts of money, where, at a minimum, God defined humans and their labor's value by exact, unchanging weight in silver, as he did for essential products that humans created or harvested (e.g. food, namely fish and bread).[152]

As both a normative and factual inquiry, history proves more faithfully correct than the present, purely subjectivist conception of an entirely sovereign-controlled value undergirding the dollar. The normative reason is that the subjectivist approach, taken to its logical end under a regime of fiat money with its attendant laws of legal tender, non-fiat money bans, and functional currency mandates, commutes the infinite values of human life and a healthy environment to just another two of countless things in the marketplace. This has things upside-down. Human life and the environment are indispensable to the marketplace. If they are intentionally sacrificed to promote the selling and buying of other things, then the marketplace has become an ethical sham. Moreover, the dollar will have become an unsustainable factual sham because without an environment and a robust supply of human trading partners, there is no market to be had in the long run.[153]

The problem America now faces is that, at least since 1857, the government moved away from the universal silver standard that stretched back to time immemorial. And since 1971 when Nixon moved the United States off of the gold standard, the government uses only fiat money, sustained only by trust that the U.S. government will continue to function. Multiple rounds of debasement deltas have been exacted over these 161 years. Indeed, as we showed in the previous section, a debasement delta of over 0.98 exists presently in comparing fiat silver and fiat paper-and-ink. Americans' wealth has been steadily devalued by its government via fiat currency.[154]

Prominent academics in recent monetary conferences have claimed that silver and gold have been "surpassed" as trite, ancient forms of

152. *See Exodus* 30:12–13; *Leviticus* 27:1–8; *Matthew* 17:24–27.
153. *See* Guzelian, *supra* note 76.
154. Julliard v. Greenman, 110 U.S. 421, 462–63 (1884) (Field, J., dissenting) ("Money is not only a medium of exchange, but it is a standard of value. Nothing can be such standard which has not intrinsic value, or which is subject to frequent changes in value.").

money. These academics claim that the precious metals have no effective monetary place in a modern society where the velocity of money is required to be much faster and higher than exchange of physical items "permits." In other words, just as religious fervor for God has waned in the United States in the past 161 years,[155] so too, claim these academics, has the public's appetite for His divine currencies. Instead, a more "bourgeois" modern American population prefers paper bills, or better yet, mobile phone digital payments.[156] Silver and gold are relics of bygone, simpler economic times.

On the surface, these academic claims sound appealing to Americans wed to paying for Starbucks by waving their smart phones in front of a scanner. But as this Article has shown, the adverse consequences for the environment and for the poor are immeasurable—and many more have become poor as a result of fiat money and its laws. Those costs are hidden from our day-to-day functioning, but the effects are real. It is also ironic that governments, no doubt quick to dismiss the populace's return to gold and silver usage over existing fiat currencies, are among the greatest hoarders of gold and silver on earth.[157]

It is in this context that I present a cosmic challenge to worldwide governments. If fiat money and fiat digital currencies are truly such a great invention, and if the populace and environment on the whole benefit from them, then let the markets decide that rather than the legal system. Deregulate fiat and digital money.[158] By this, I mean governments—starting with the U.S. government—should amend monetary laws according to the following proposals for legal reform of the U.S. dollar: (1) Repeal and forbid all legal tender laws; (2) Repeal and forbid all non-fiat money bans, except those regulating counterfeiting and fraud; (3) Declare gold and silver in bar or coin form as functional currencies for U.S. tax and tariff purposes; and (4) Declare any asset held by more than 66% of the American adult population and recognized by them as a form of money as a functional currency until that asset's circulation declines beneath the 66% threshold.

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155. ROBERT D. PUTNAM & DAVID E. CAMPBELL, AMERICAN GRACE: HOW RELIGION DIVIDES US AND UNITES US (2012) (finding a general increase in non-religious people in the U.S. population).

156. *See* Shann Turnbull, *How Might Cell Phone Money Change the Financial System?*, 30 J. FIN. TRANS. 33, 34 (2010) (contending that cloud banking and mass cell phone usage requires a rethinking about the nature of legal tender money).

157. STATISTICA, *Gold Reserves of Largest Gold Holding Countries Worldwide as of December 2018 (in metric tons)* (December 2018), https://www.statista.com/statistics/267998/countries-with-the-largest-gold-reserves/ [https://perma.unl.edu/VB6S-NWW4].

158. As dissenting Justice Field said in the last of the legal tender cases, "[s]o it always will be; legislative declaration cannot make the promise of a thing the equivalent of the thing itself." *Juilliard*, 110 U.S. at 452.

Proposals for legal reform of the U.S. Dollar

1) Repeal and forbid all legal tender laws.
2) Repeal and forbid all non-fiat money bans, except those regulating counterfeiting and fraud.
3) Declare gold and silver in bar or coin form as functional currencies for U.S. tax and tariff purposes.
4) Declare any asset held by more than 66% of the American adult population and recognized by them as a form of money as a functional currency until that asset's circulation declines beneath the 66% threshold.

Observe how these four reforms, working together, may restore wealth to the poor and improve the environment—the two major harms of fiat money upheld by force of law. All of these reforms are legal reforms. They do not prohibit the issuance of fiat money by a government. What these reforms do is prohibit the government from *coercing* use of the fiat money to the detriment of spontaneously evolved or divinely given monies.

By removing legal tender laws, no more can a debtor compel a debtor to accept fiat currency in place of an agreed-upon exchange value.[159] By prohibiting non-fiat money bans apart from counterfeiting or fraudulent specie laws, never again can the government seize gold (or silver or other precious monetary assets) in exchange for devalued fiat currency.

Perhaps most importantly, the government should compel the I.R.S. and other taxing authorities to accept gold and silver, or any other item that is widely recognized as money by the American population as functional currency (for example, a currency held by at least 66% of the population and is therefore not just a passing fad). This provision is essential in breaking the compulsion to hold fiat money, as one could always pay in gold and silver, or any financial asset—foreseen or unforeseen—that spontaneously evolves *in the marketplace* as a form of money rather than by design of the sovereign.[160] Rather than the marketplace bending to the fiat will of the sovereign,

159. *Cf.* Lawrence H. White, *Banking Without a Central Bank: Scotland Before 1844 as a 'Free Banking' System*, in UNREGULATED BANKING: CHAOS OR ORDER? 37–62 (F. Capie and G. E. Wood (eds.)) (1990) (discussing the successes of Scotland's economy in the absence of legal tender requirements).

160. FRIEDRICH HAYEK, DENATIONALIZATION OF MONEY: THE ARGUMENT REFINED (1978) (contending that dominant forms of private money will emerge in the marketplace as a form of spontaneous order). *See also* VERA C. SMITH, THE RATIONALE OF CENTRAL BANKING AND THE FREE BANKING ALTERNATIVE (1936) (evaluating relative strengths and weaknesses of central and free banking).

the sovereign tax collector bends to the evolutionary monetary innovations of the market.

Fiat money may still have a place in this world. But after these four reforms, it will not have a legal stranglehold on the world. It will have to compete on the merits without its usual legal seigniorage and debasement deltas awarded to the sovereign and those close to the sovereign. Moreover, by eradicating the legally enforceable opportunities for debasement deltas, the phenomenon of crushing financial burdens for the poor and harms to the environment will be lessened.

One final problem exists that must be addressed in extricating ourselves from the present fiat situation we find ourselves in in the United States: the existing wealth disparity that has been produced through the longstanding practice of fiat money issuance. Since the financial crisis of 2008, many private citizens have recognized that government fiat money has questionable implications, and have stacked physical gold and silver outside of the financial system in the event of further financial crisis in unprecedented amounts.[161] Thus, there has been marketplace preparation to "decouple" from a greatly devalued fiat dollar whose continued solvency is now steadily being called into question.[162]

Some economists have fashioned proposals for how to move back to a gold or silver standard from the present pure fiat standard.[163] This Article takes a different approach—a legal approach. By deregulating the fiat dollar by stripping it of most of its attendant legal powers, the

161. *See* JM BULLION, *Who Owns the Most Silver Bullion Today?*, (2017) https://www.jmbullion.com/investing-guide/pricing-payments/who-owns-most-silver-bullion-today/ [https://perma.unl.edu/ZW2F-P4D9].

162. Ron Paul, *The Dollar Dilemma: Where to From Here?*, MISES WIRE (June 22, 2018) (outlining ongoing problems and opportunities related to stark devaluation of the fiat dollar, and emphasizing possible international abandonment of the dollar standard).

163. *See* JESÚS HUERTA DE SOTO, MONEY, BANK CREDIT, AND ECONOMIC CYCLES 715–803 (Melinda A. Stroup, trans., 3d ed. 2012) (reviewing others' proposals and offering a novel proposal for return to the gold standard); Judy Shelton, *How a Gold-Backed Bond Could Open an Avenue To Monetary Reform*, THE SUN (Sept. 5, 2015) (advocating issuance of a U.S. government debt security that protects against dollar debasement relative to gold); Joseph T. Salerno, *The Gold Standard: An Analysis of Some Recent Proposals*, CATO INST. POL'Y ANALYSIS (1982) (evaluating various methods by which the gold standard could be restored). *But see* FRIEDMAN, CAPITALISM AND FREEDOM at 42 ("My conclusion is that an automatic commodity standard is neither a feasible nor a desirable solution to the problem of establishing monetary arrangements for a free society. It is not desirable because it would involve a large cost in the form of resources used to produce the monetary commodity. It is not feasible because the mythology and beliefs required to make it effective do not exist."); Kenneth W. Dam, *From the Gold Clause Cases to the Gold Commission: A Half Century of American Monetary Law*, 50 U. CHI. L. REV. 504, 532 (1983) ("The case for a gold standard is most appealing when inflation is rampant but, paradoxically, rapid inflation makes a gold standard impracticable.").

demand for fiat money should decline (if not collapse because the dollar is, in modern form, already greatly devalued). But fiat dollars are debt instruments of the sovereign; they are a promise by the sovereign to pay back a "debt owed." But pay back in what?

Silver and gold are held in overwhelming concentrations by banks, a bourgeois financial class, and governments. Thus, if America were to suddenly remove the laws undergirding fiat dollars, people have the legal freedom to use alternate currencies—and specifically gold and silver may be likely to resurface in common usage. But there would be a massive imbalance in exchange values between the relatively worthless fiat money (held by the public) and the suddenly relatively more valuable precious metals (held predominantly by governments, central and major banks, and funds closest to them). Said differently, the monopoly control that governments, banks, and the bourgeois class have over gold and silver mean that the grossly imbalanced financial hierarchy of wealth brought about by the issuance of fiat money is unlikely to change if monopolists could charge virtually whatever price they wish in fiat money to sell their reserves of gold and silver. Indeed, bank manipulation of market prices for gold and silver seems to be ongoing even now.[164]

One possible way to correct for the wealth imbalance and income inequality brought on by fiat money is to legally institute reparations. Admittedly, it is dizzyingly complex to track who over the centuries has benefitted and who has lost because of fiat dollars and their attendant laws. But the general principle could be to effect a general transfer of some of the silver and gold from the government and significant holders of them to the poor at a favorable rate in exchange for their relatively worthless fiat money. Indeed, mechanisms for government reparations already have been proposed for effects of slavery and racial discrimination[165] and for environmental damages.[166] And after the Nazis confiscated Hungarian Jewish gold during the Second World War, the United States was recently compelled to restitute the

164. *See* Wacker v. JP Morgan Chase & Co., 678 Fed. Appx. 27 (2d Cir. 2017) (holding that commodity traders' lawsuit against major bank holder of silver plausibly gives rise to inference of monopolization and anticompetitive conduct by the bank). *See* Dawn Giel, *JP Morgan Faces Potential Class Action Lawsuit After Guilty Pleas by a Former Metals Trader*, CNBC (Dec. 13, 2018), https://www.cnbc.com/2018/12/13/jp-morgan-faces-lawsuits-after-guilty-pleas-by-a-former-metals-trader.html [https://perma.unl.edu/9QD7-T7T8].

165. *See* Alfred L. Brophy, *Reconsidering Reparations*, 81 IND. L.J. 811 (2006) (reviewing history of U.S. government reparations and arguing for a broader conception of the relationship between wrongdoer and payer, and injured and recipient in establishing such legislative reparations).

166. *See* Catherine Millas Kaiman, *Environmental Justice and Community-Based Reparations*, 39 SEATTLE L. REV. 1328 (2016) (arguing for community-led reparations and sustainable development after environmental degradation by outsiders).

kin and descendants of those who lost their physical wealth due to U.S. Army soldiers' plundering of the German loot.[167]

The idea would be for the oligopolistic holders of silver and the (predominantly) government holders of gold[168] to create a legislative peg of the rates of gold and silver to modern fiat dollars at the 15:1 (silver to gold) and 20:1 (gold to fiat dollar) rates established prior to the 1930s confiscation of gold. This would be permitted for anyone below some wealth and income level. While this would certainly lead to market arbitraging, such an action would also empower the poor to exchange fiat money for precious metals at a rate below current market price and lead to a redistributive offset of some of the longstanding inflation effects that holding fiat dollars have had on extremely poor fiat poor (and possibly their forbears).[169]

An alternative to reparations could be a "debt jubilee," in which governments and major holders of wealth forgive debts of those below a certain income and wealth level without any coerced change in the relative social distributions of precious metals. This is in effect a "reset" where the poor do not gain immediate access to silver and gold stashes in place of their fiat money, but at the same time are free from debt obligations in a fashion that permits them to work freely towards their own gains using whatever currency they choose. A debt jubilee has both biblical and modern precedent, albeit not in the amounts necessary to have significant consequence for the poor.[170]

There is no quick answer to overcoming the past and ongoing inequality created by fiat money. Further discussion and research are required. What this preliminary Article has sought to do is to articulate why the U.S. dollar's current legal status harms the poor and damages

167. Rosner v. United States, 231 F. Supp. 2d 1202 (S.D. Fla. 2002) (ruling on this matter). *See also* Charles Tiefer, Jonathan Cuneo & Annie Reiner, *Could This Train Make It Through: The Law and Strategy of the Gold Train Case*, 15 YALE HUM. RIGHTS AND DEV. L.J. 129 (2013) (relating story of the *Rosner* case in which the U.S. government paid reparations for plundering of Hungarian Jewish gold stored in a Nazi train during the Second World War).

168. *This is Who Owns Most of the World's Gold*, MSN MONEY (Jan. 12, 2018), https://www.msn.com/en-us/money/markets/this-is-who-owns-most-of-the-worlds-gold/ss-BBGmtjN [https://perma.unl.edu/2CW7-9C44].

169. *See* Webster, *supra* note 6 ("The precious metals alone . . . are money, and whatever else is to perform the functions of money must be their representative, and capable of being turned into them at will. So long as bank paper retains this quality it is a substitute for money; divested of this, nothing can give it that character.").

170. *See generally Leviticus* 25, 27 (stating requirements for the 50-year debt Jubilee for ancient Israelites). In the 2000s, Live 8 concert series led by U2 bandleader Bono promoted a world debt jubilee that led to the cancelation of $116 billion in the debts of poor nations. *Cf*. Adam Forrest, *Did Live 8 Work? 10 Years On, the Debt Burden Returns*, FORBES (July 13, 2015) (noting a decennial recurrence of debt among countries that received debt forgiveness as a consequence of the Live 8 series).

the environment. The Article also contends that the solution to these two damning harms lies not in improving monetary or banking theory or data analytics to make a better fiat currency. Rather, the solution is one of legal reforms.

It is the province of lawyers, not bankers or economists, to amend the legal supports that prop up the dollar in a form that has caused considerable harms for a century and a half. It is due time that these legal amendments occur. Otherwise, left to its fiat inertia and significant devaluation over the years, the fiat dollar—like other deceased fiat currencies before it—may give way to a centralized global currency whose legal powers will be similar to those of the dollar and whose global reach may only heighten the poverty and environmental destruction this Article addresses.