



Rosa Bumatastas Rios

Breasurer of the United States.

WASHINGTON D



SERIES Secretary of the Treasury.

steve randy waldman ~~ swaldman@mchange.com ~~ https://www.interfluidity.com/ ~~ https://www.sbt-ethereum.io/ ~~ @interfluidity

Introduction

- There's lots to object to about fiat money
- Crypto partisans usually object to the wrong things
 - Fiat money is not (necessarily or usually) unsound
 - It does not typically collapse in 27 years ¹
 - Properly stored (not in a mattress), it often preserves value well without meaningful default risk

¹ https://jpkoning.blogspot.com/2019/09/the-life-and-death-of-internet-monetary.html

Introduction

— Fiat money is powerful.

Introduction

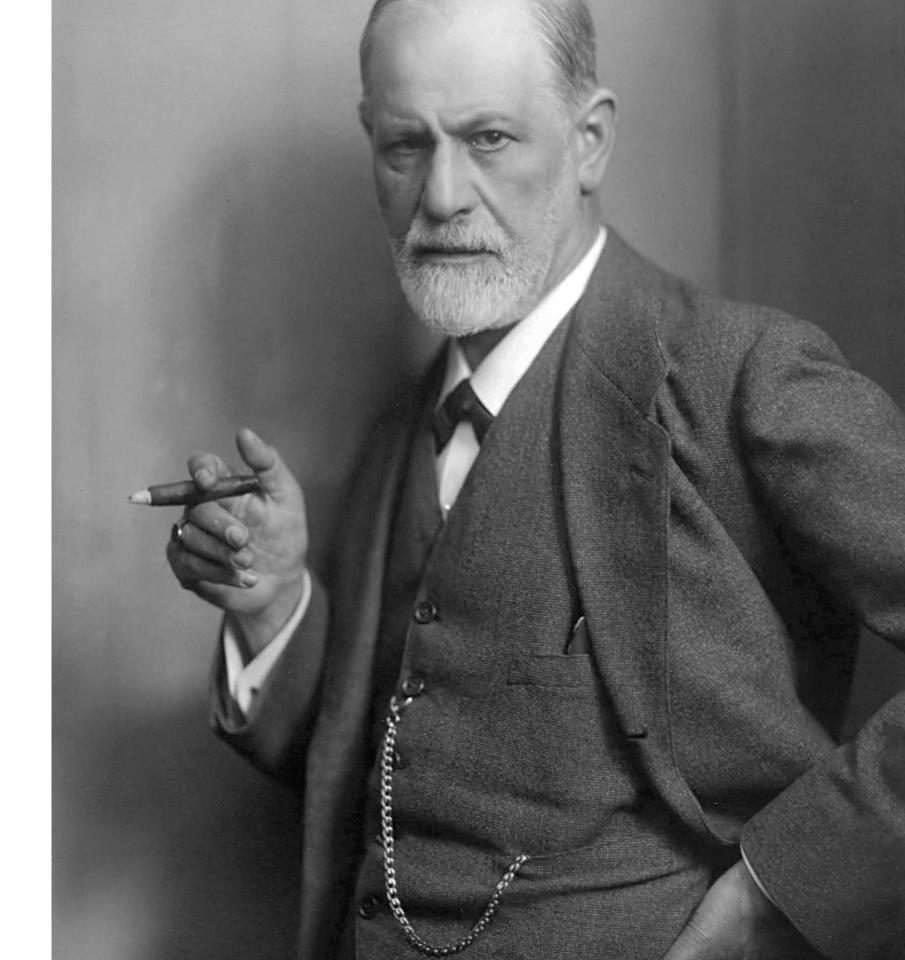
- Fiat money is powerful, if
 - 1. the state that supports the currency remains capable, practially and politically, of taxing citizens
 - 2. the **banking system** that mostly issues the currency remains **adept at encouraging widespread borrowing** of loans usually repaid or serviced
 - 3. the economy the state superintends is productive and diversfied, capable of substituting domestic production for imports if necessary
 - 4. the state and its citizens can and do **borrow mostly in domestic currency**

Introduction

- Fiat money is an instrument of state power
 - power to marshall goods and services from citizens in exchange for "mere scrip"
 - power to defend against foreign attack
- But why, how, does it work?
 - Isn't fiat money "just paper", backed by nothing more than some government's "full faith and credit", whatever that means?

Civilization and its discontents

- "All ships have captains." (Engels, I always thought?)
- Human organization at scale usually requires some degree of hierarchy and stratification
- For some to be devoted to culture and the arts, others must be devoted to growing food for those devoted to culture and the arts
- Specialized, stratified, forms of organization cease to be voluntary once a neighboring tribe has discovered them



Slavery 1.0

- Status as slave or serf attaches to the person
- Command and action are often tightly coupled in time, place, and person
- Hierarchy and coercion are overt, explicit, frequently violent





- Colonial masters sought means of commanding subject populations without the work of directly enslaving subject populations
- Sometimes, the trick was to indirectly enslave, by coopting a local elite and defining a feudalish caste system
- But sometimes, colonists were more clever.

Image Credit: *Arrival of Hernan Cortes in Veracruz*, by Diego Rivera, 1951, Palacio Nacional de Mexico, Mexico City, Mexico



"The problem was that if the subsistence base was capable of supporting the population entirely, colonial subjects would not be compelled to offer their labor-power for sale. Colonial governments thus required alternative means for compelling the population to work for wages. The historical record is clear that one very important method for accomplishing this was to impose a tax and require that the tax obligation be settled in colonial currency. This method had the benefit of not only forcing people to work for wages, but also of creating a value for the colonial currency and monetizing the colony. In addition, this method could be used to force the population to produce cash crops for sale. What the population had to do to obtain the currency was entirely at the discretion of the colonial government, since it was the sole source of the colonial currency." ~Matthew Forstater ²

²https://modernmoneynetwork.org/sites/default/files/biblio/RiPE%20Forstater.pdf



A clever technique!

- Impose a head tax on subjects, payable in colonial scrip
- Threaten severe penalties for those who fail to come up with the tax
- Offer scrip in "voluntary"
 exchange for whatever
 services the colonists want
 rendered



A clever technique!

- No formal hierarchy or need for an explicit subordinate status to attach to any person. Some locals themselves might grow rich in scrip!
- Requires only enforcement of the law, voluntary exchange, and (quietly) stratification in who have scrip to spend and who, perhaps quite desperately, must work for it
- Command and action much more loosely coupled in time, place, and person than under *Slavery 1.0*

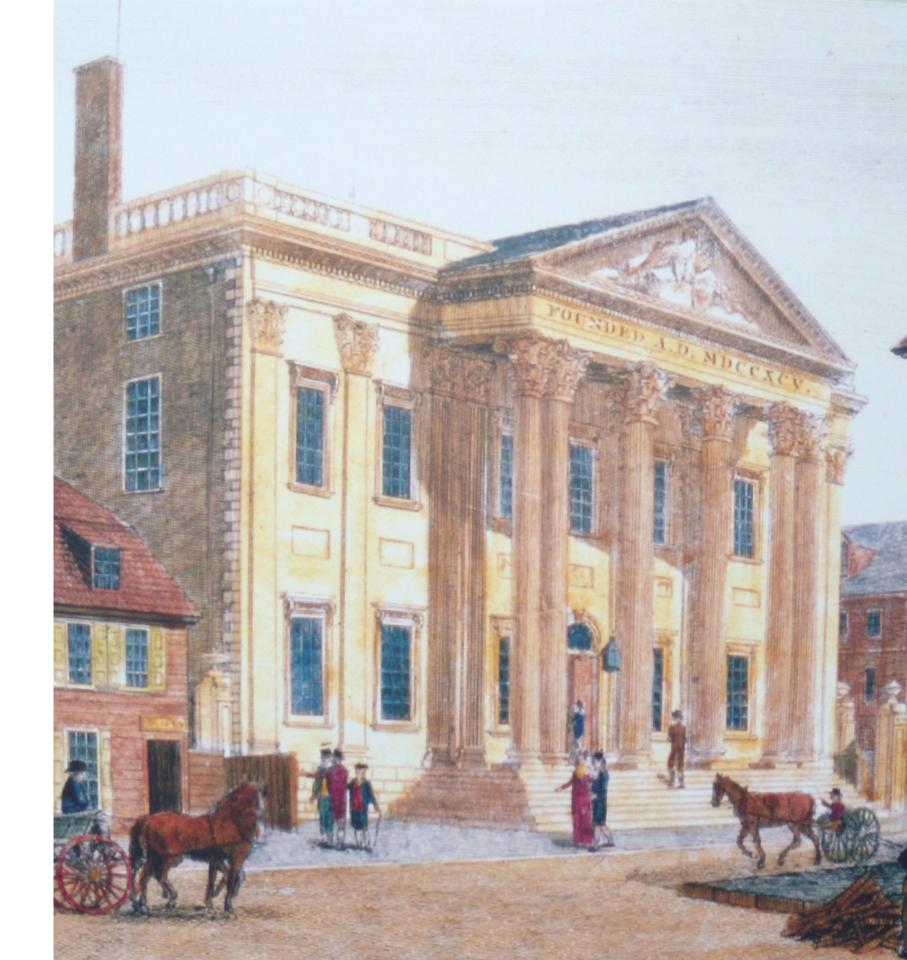


A clever technique!

- Colonial scrip is not unbacked. It is backed by the real assets and labor of those who owe the tax, to the degree they would prefer to work or surrender those assets rather than bear whatever consequences derive from failing to pay the tax
- Nevertheless, the iron fist of the colonial administration is still very visible under this arrangement.
 Subjects might well protest, engage in sabotage, revolt.

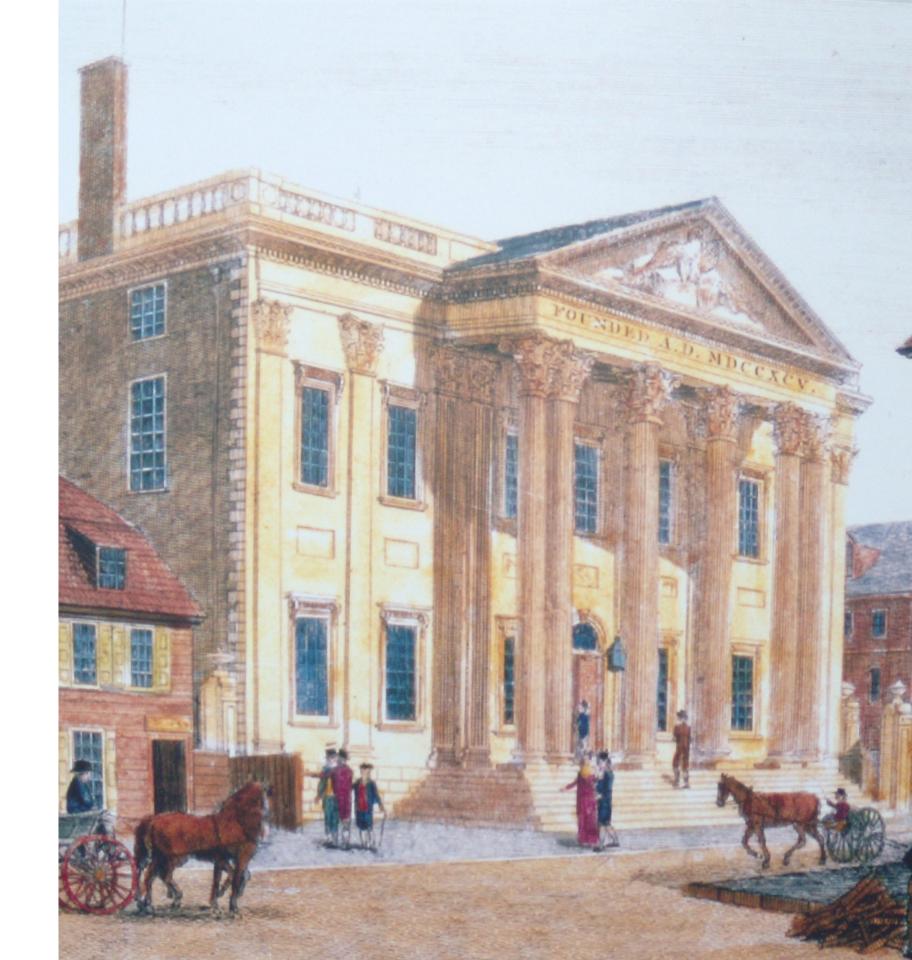
Thought Experiment

— **What if,** rather than the state overtly imposing a head tax on unfortunates, some significant fraction of the population could be persuaded to voluntarily take on obligations to pay "bank loans" denominated in statemanaged scrip?



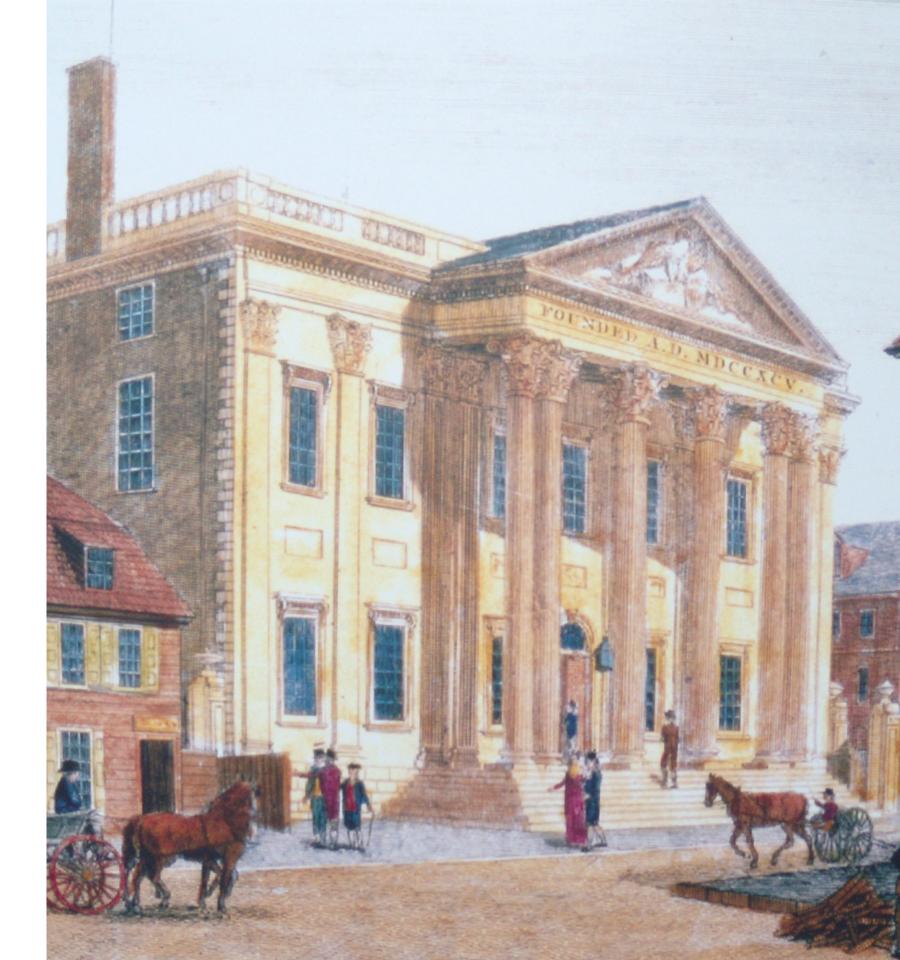
Thought Experiment

- Then, so long as...
 - 1. the subjects of those obligations spend the proceeds of their loans in ways that would be difficult to reverse
 - 2. the state enforces loan obligations, including interest, with unpleasant consequences for nonpayment
 - 3. the private sector recipients of loan proceeds are less eager to spend than borrowers are to repay



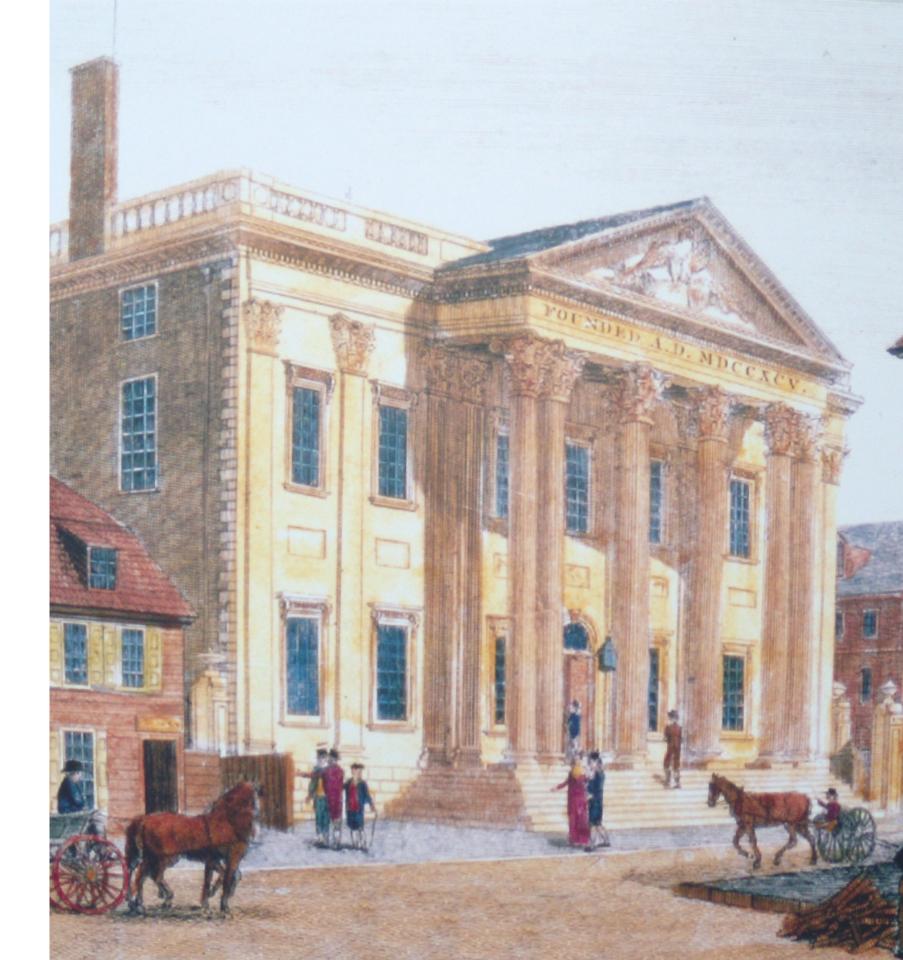
Thought Experiment

- You end up with a scrip very much like the colonial version!
- The scrip is backed by the
 assets and labor of those who
 are in debt, to the degree they
 prefer to work or surrender
 those assets rather than bear the
 consequences that derive from
 failing to meet their obligations!



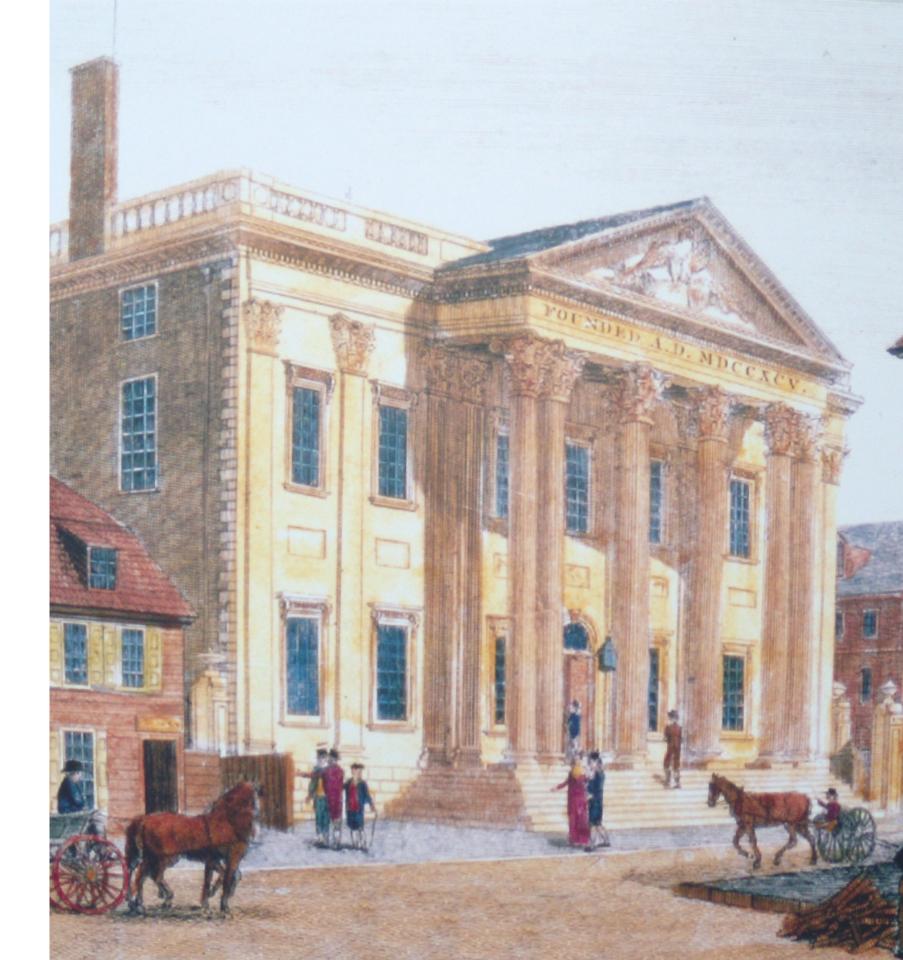
Thought Experiment

- While the state still can impose head taxes and onerous penalties for nonpayment, and may in extremis, it prefers not to.
- The state maximizes the **consent of the governed** by setting up a system under which
 people "voluntarily" get themselves into situations
 where they have scrip-denominated obligations
 they would find unpleasant not to meet
- This mechanism serves the same function as a tax! It puts floor, in terms of labor, goods, and services, under the value of the scrip, enabling the state to issue new scrip in exchange for real goods and services



Inequality is disinflationary ³

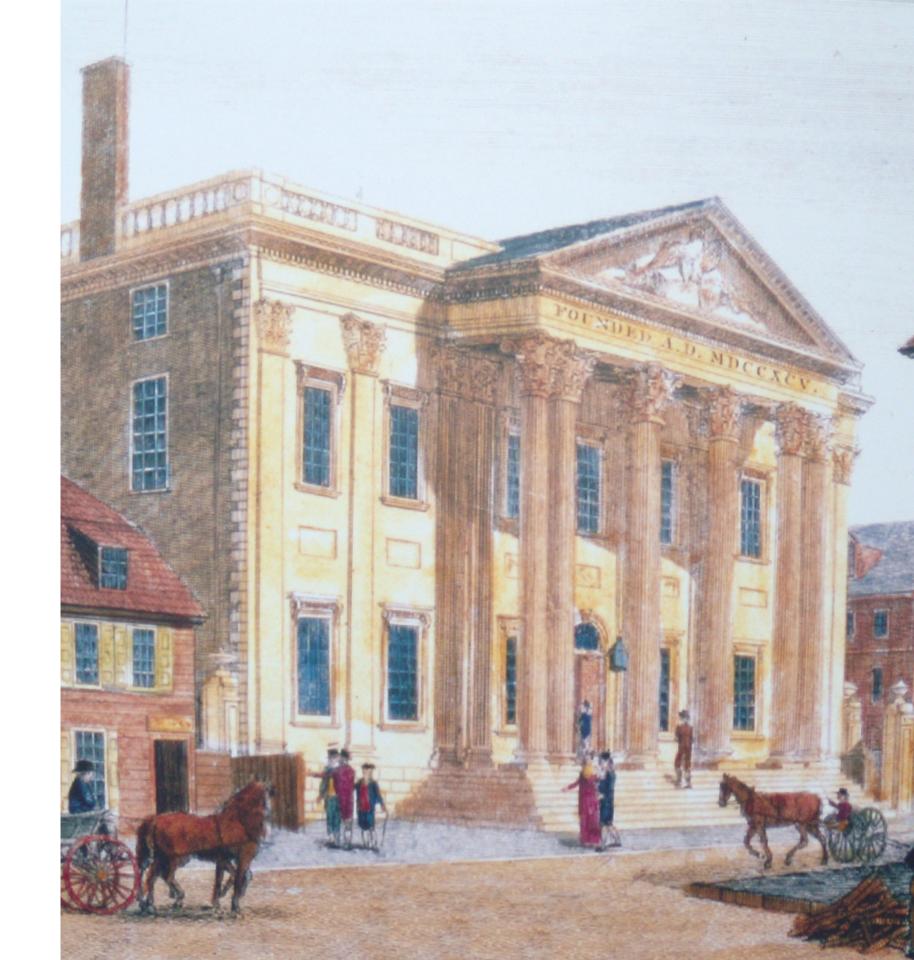
- Loans create obligations, but loan proceeds create expenditures. They are usually quickly spent.
- If recipients of loan proceeds were as eager to spend as debtors were to repay, this scheme wouldn't work
- But business income lands disproportionately in the hand of the wealthy, whose *marginal propensity to consume* is low
- Under inequality, debtors' continuing eagerness to surrender labor and assets for scrip won't be matched by new spenders' eagerness to purchase
- Especially if the state is willing to borrow its own scrip at interest



³ see also *addendum* at end of slides

Taxes continue to play a role

- But they can be much, much more gentle
- Levies like income taxes, which unlike a head tax, do not impose an obligation to earn an income just to pay the tax, may suffice
- However, the *capacity* of the state to unilaterally create tax obligations in support of the currency remains essential
 - Stuff happens: bad bank loans, mass bankruptcies, potentially speculative attacks on the currency
 - The credible capacity to revert to "Slavery
 2.0" if necessary helps a state keep its
 scrip's value anchored



— Fiat money is powerful.

- Fiat money is powerful.
- But is it horrible???
- That's a hard question to answer.

Fiat can be very effective money.

- By adjusting interest rates, taxes, and bank regulations, the state can attentively adjust debtors' desperation to acquire money and creditors' willingness to spend it
- This makes "price stability" possible despite business cycles effects and other shocks, enabling economic calculation and supporting real production
- Although "credit money" unpleasantly depends upon people leveraging themselves into, um, motivation to repay, price stability also protects debtors from deflationary catastrophes
- This constellation of institutions—stable money, a banking system that encourages borrowing and economic activity to repay—is arguably a powerful source of development and growth

- Fiat can be very unethical money.
 - The value of the currency is supported by indebtedness and inequality, both things many of us would rather have less of
 - The state and the "private sector" banking system are joined at the hip, which engenders a great deal of corruption, gaming, and unfair dealing
 - The state's active management of the value of money involves a tremendous choice and discretion, creating winners and losers, also inviting corruption

- It would be great if we could come up with more ethical, equally effective forms of money!
- But that's a hard problem
 - For a money to be strong, there must be people who desperately want it, who are eager to trade labor and real assets to acquire it
 - It's hard to reconcile such eagerness to trade for money with the egalitarian affluence I'd prefer

- Perhaps not impossible, though.
- Robots may help.
- Get to work.

Thanks!

Addendum 31-Oct-2019

Since giving the talk yesterday, I've made some light edits. But I have substantially modified the slide subtitled *Inequality is disinflationary*, which I think is very important, but was poorly put in the original version.

Originally, I emphasized the inequality between debtors and creditors, writing, *Every payment in service of a private sector obligation is matched by some private party's income*. That sounds unassailable, but it's wrong in this context, under ordinary accounting definitions. When a bank loan is repaid, only the interest part is income to stakeholders of the bank. The principal repayment literally disappears, like matter annihilating antimatter. Money, in the form of the deposit base of the banking system, simply goes poof. So one shouldn't worry so much that income to *creditors* would counteract the disinflationary effect of debtor obligations.

The more serious concern is that while bank loans create obligations to raise and make payments in scrip, which should be disinflationary, they also inject new scrip into the economy, which could be inflationary. What determines the net effect? *(continued)*

Addendum 31-Oct-2019 (cont'd)

Here is where inequality is crucial. In a society where nearly all parties respect their income, perhaps bank loans would be net inflationary. But when business income lands predominently in the hands of the wealthy who save rather than spend their marginal income, often in financial vehicles that do not result in real-economy investment spending, then the inflationary effect of new expenditures is blunted while the disinflationary obligation remains strong.

Bank loans might well be inflationary, in the short run and of the goods directly purchased. But they leave a long, broad, disinflationary tail. Continued price support for goods purchased with leverage requires continuing new lending. Home prices and college tuitions are good examples. They *are* supported by continuing new lending, and their prices have risen faster than general inflation. But the growth of lending in these categories on which loan proceeds are spent directly has not contributed to a general inflation. On the contrary, while these categories have grown, we have been mired in an unusually disinflationary period. *(continued)*

Addendum 31-Oct-2019 (cont'd)

In more equal society, new bank money would continually recirculate, so the inflationary effect would be felt far afield from goods directly purchased with loans. In a very unequal society, new bank money quickly "leaks" into the hands of financial savers, leaving only the obligations active in the economy, compelling people to exchange real goods and services for scrip. \blacksquare