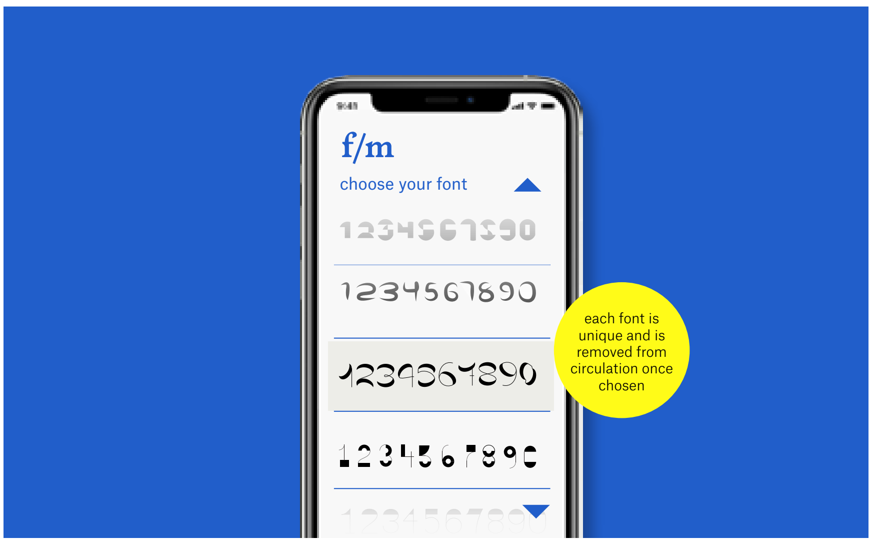
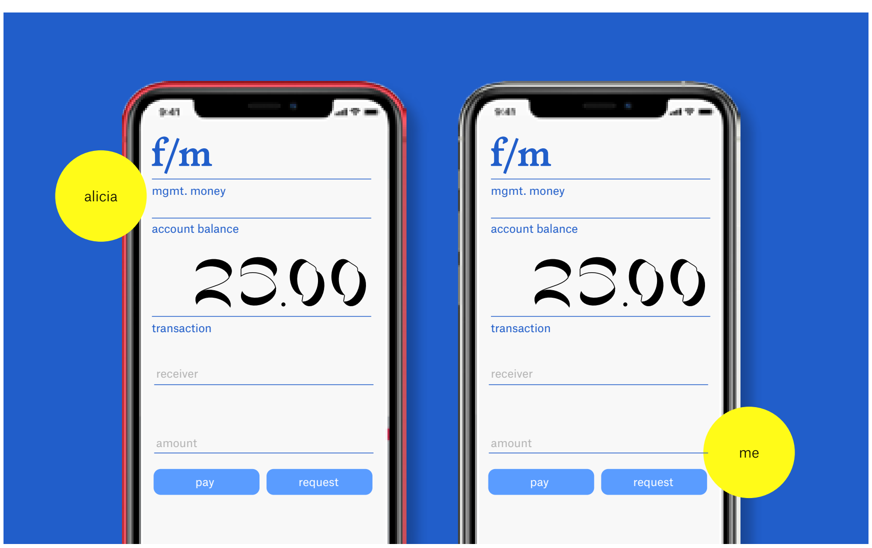
Fonts as Money, or Money as Fonts

1. Fonts as Money
What if there was a way to use fonts to solve financial inequality?

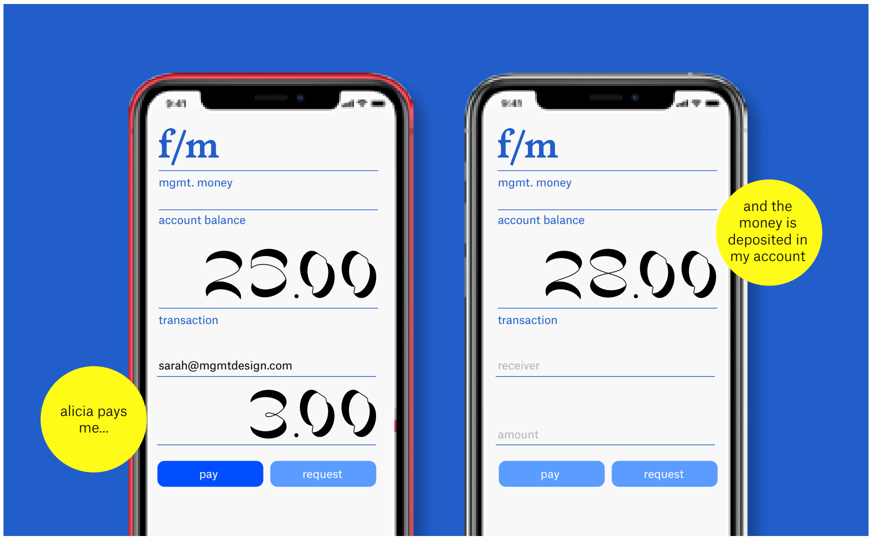
Lets imagine a future world where...
Alicia, my business partner, and I have been helping each other out for a while now: I'll water her plants and she bakes me a cake, she feeds my cat and I take out the trash. But we've tired of keeping tally of the gifts and bartering so we decide to form our own currency exchange using the new *Fonts as Money* app. We each download the app on our phones and as part of the set up we are offered a range of fonts—each font is a unique set of numbers with a specific identifying code.



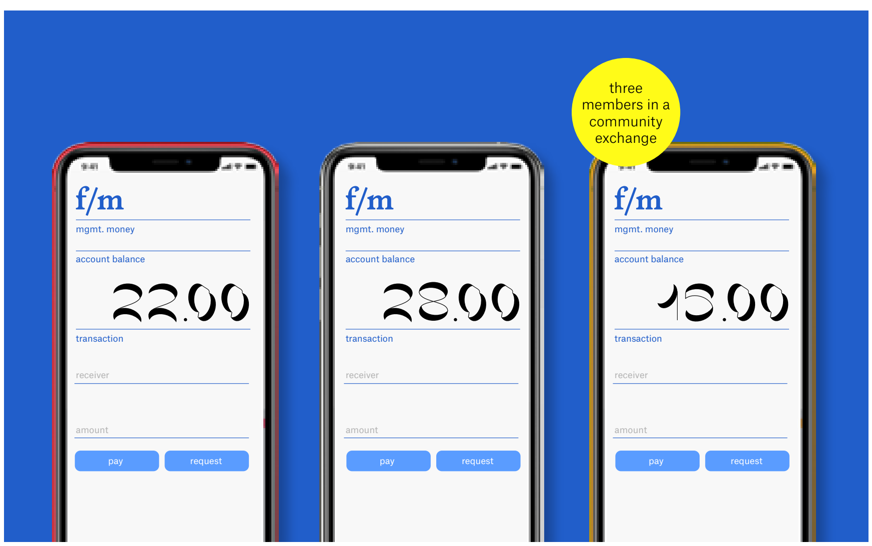
Alicia and I select a font (once a font is chosen, it is removed from the list of options) and then determine a value—it can be pegged to an existing currency or set independently—as well as a name for our currency. We agree on a opening balance for each of us, and our microeconomy is born.



And the next time I do the dishes, Alicia uses her phone to credit me three “mgmt dollars.” Using the code embedded in the font, the app keeps track of all transactions between members in that exchange.



One day, Greg comes to our office and decides to join our exchange. He downloads the app and we share our font with him (we gift him a starting value in his account).



The app is brand new but spreads quickly. The Dumbo Exchange is established to encourage residents to frequent local businesses and restaurants. Members buy into the exchange with US dollars and it is traded at a 1:1 exchange, but is sold back at a lower rate, adding an incentive to use the currency locally.

Suddenly the NYC economy tanks and almost everyone is out of work and financially struggling. Rather than wait for the divided Congress to pass a bail-out, New Yorkers band together and form a NYC exchange. Workers are paid with the NYC currency which they then use at the local grocery store which pays the baker down the street, who pays their landlord who lives upstairs.

What holds these concurrent monetary systems together? A shared belief in their value. The fonts are not physical units, but they give a visual form to the exchanges which allows the community to collectively trust the system.

And now back to reality...

This speculative proposal came out of a very real and very sobering project we were working on for the National Building Museum. The exhibition was about eviction, featuring author Matthew Desmond's work on poverty and inequality. As part of our research we collected eviction notices that are provided on-line for free to landlords. In the throes of our research, I received my mortgage bill from a new company, "Mr. Cooper," that had recently bought up the debt. The letter that came along with the bill, could not have been more friendly and inviting: cute figures and a friendly rounded sans serif font explained my mortgage to me and helpfully offered to sell me more. The comparison of visual styles between the black and white, ALL CAPS, Times New Roman eviction notices was obvious and still startling.

EVICTION NOTICE

(Notice to Quit)

Date:
Tenant:
Address:

Pay Rent Immediately To:
Address:
Phone:

Landlord Signature

Free eviction notice available on-line

Friendly mortgage website

While it's not appropriate to design the eviction notices to be happy and bright, it brought up a question: What if the notices were designed for the tenants perspective rather than the landlords? What if they provided information about tenant rights and resources? What if they were designed to be calming rather than confusing and alarmist?

With these questions in mind and motivated by the harsh realities highlighted in the Evicted exhibition, the studio decided to start a group design/research project on the topic of financial inequality.

Just looking at some of the facts—

> Americans in the top 1 percent average over 39 times more income than the bottom 90 percent (https://inequality.org/facts/income-inequality/#ceo-worker-pay-gaps)
>
> Around 30% of American workers make less than $10.10 per hour. That creates an income below the federal poverty level. (https://www.thebalance.com/income-inequality-in-america-3306190)
>
> The Federal Reserve estimated there are 55 million unbanked or underbanked adult Americans in 2018, which account for 22 percent of U.S. households (https://en.wikipedia.org/wiki/Unbanked)

We were challenged by the complexity and enormity of the subject. Knowing that we are not going to design a solution for inequality in America, maybe we could at least shine a light on some aspect of the problem, question ingrained systems, open up a discussion, or simply prod ourselves to think more broadly about the activist possibilities of design.

As I started my individual work on the project, I wondered: if designers could use their messaging and persuasion talents to transform a $2 bar of soap into something a consumer would spend $20 to own, couldn't we do something about financial inequality? To unpack this, I realized I needed look at the more fundamental questions of what money is and how value is created.

Soap or $oap

2. Money as Design

(apologies to all numismatists out there for this simplistic account of the history of money).

At its most basic, money acts as a medium of exchange. It can be anything—sticks, stones, shells, metals, paper, numbers on a ledger — as long as members of a community believe in the money, it will have value. Looking at the form of money, there are two main categories: **commodity money** and **token money**. To be a successful commodity money, the material generally needs to be limited in supply, durable, and high in intrinsic value—commodity money can be both traded and used. Generally seen as closer to the barter systems of the distant past, contemporary examples of commodity money are cigarettes and ramen used in prison economies.

Commodity money
as cowrie shells

Commodity money
as ramen

Metal is the most successful and lasting of commodity currency. Relatively rare, malleable, and portable, it can be formed into shapes, chopped up, and reformed. The first known metal coins were developed separately in the 7th century BC in China, India, and around the Aegean Sea. The oldest coins from the Aegean area appear to have been used as religious tokens as they are of inconsistent weight and compositional purity. They are stamped with symbolic emblem of a roaring lion. The same type of imagery is found on the first gold coins believed to be used as currency due to their standardized purity and weight.

(http://zenakruzick.com/oceanic-tribal-art/oceanic_art_cowrie_shell_currency-png3292.htm)

The earliest known coins were found in western Turkey, in what used to be the Iron Age kingdom of Lydia.

Gold Croeseid, minted by King Croesus circa 561–546 BCE

The earliest known coin stamped with a portrait rather than a religious icon or god showed the head of Alexander the Great. It was issued after his death, around 320 BCE with an image of him as conquerer of India wearing an elephant skin (with tusks) on his head. Once it was deemed okay for a mortal to be stamped on a coin, Alexander's successors had no trouble putting their portraits on coins while they were still alive.

Alexander the Great
(looking like a lion)

architectural-review.com

economistmk.blogspot.com

moneymuseum.com

The first Roman to put his head on a coin was Julius Caesar in 44 BCE. The coin is inscribed “Caesar, dictator for life.” He was killed just days after the coin was minted but this didn’t stop subsequent Roman emperors from following in his footsteps by issuing coins emblazoned with their portraits. Even today, Queen Elizabeth’s head is on British coins and US coins are stamped with our share of leaders.

Julius Caesar

Elizabeth

Washington
(facing back at England)

The politics of who is depicted on our currency still matters—Harriet Tubman was expected to replace Andrew Jackson on the $20 bill in 2020 to coincide with the 100th anniversary of the 19th amendment. But under president Trump, the change has been delayed.

Harriet Tubman on the proposed
$20 bill

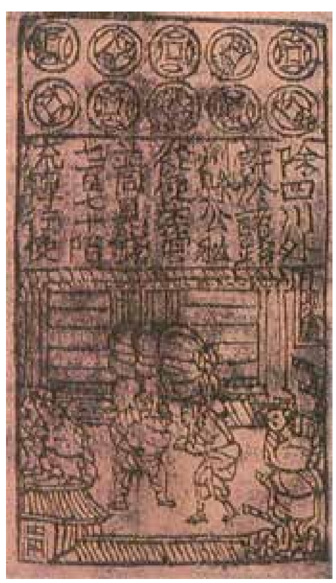
moneymuseum.com

newyorktimes.com

Without any intrinsic value, token money relies on the faith of the community for its value. The *fei* stones used as currency in the Yap islands of the western pacific were huge—impossible to carry around (ranging in size from a foot to twelve feet) they had been brought to the island at some point in the distant past from an island 300 miles away. While the value was based partly on the size and fineness of the grain of the stone, there is no specific use for the stones. It was not necessarily to move them as they changed owners, as long as the community acknowledged the settlement of the debt.

fei stone

Paper money was first introduced in China in the 10th century. It developed out of receipts of deposit as merchants discovered it was easier to issue credit notes rather than keep carrying heavy bags of coins. Imagery on the Chinese *Jiaozi*, shows two merchants carrying big bags of grain, at the top are shown ten coins and text stating the value and provinces where it could be exchanged.



planet money

Earliest banknote from China during the Song Dynasty which is known as "Jiaozi"

wiki commons

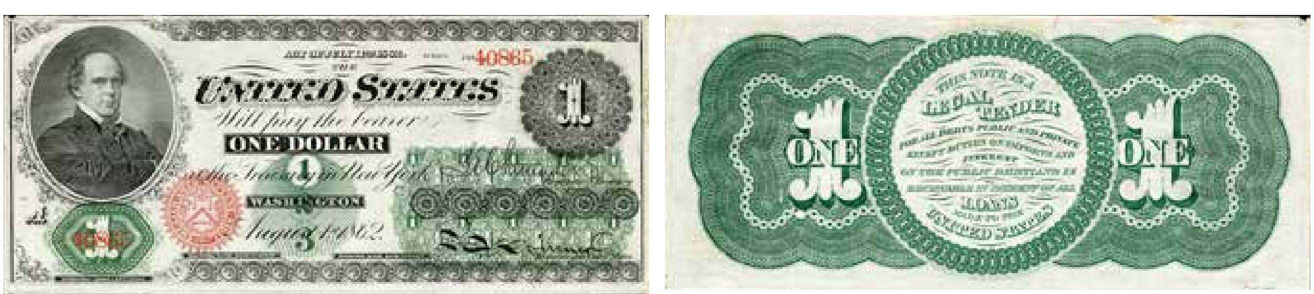
Wood was introduced by the English as a form of currency in the 12th century in the form of tally sticks. An amount of debit was notched into pieces of wood that were then split in half—the debtor would keep one half (called the “foil”) while the creditor would hold on to the other (called the “stock”). Because the wood has a specific grain pattern the two halves would uniquely match—physically representing the contract between parties. The “stock” could then be traded freely—with the faith that it could be exchanged for gold by the original debtor. As people became more literate and paper less expensive, tally sticks were gradually replaced by paper IOUs.

Tally sticks

Similar to the introduction of paper currency in China, merchants were the first to use paper notes as part of their trading practice in Europe. But paper as money was further developed in England the in the 17th century, when the goldsmiths began giving out paper receipts to the wealthy who stored gold with them. Because the paper was a lot easier than metal to carry around, people realized they could use the receipts for buying and selling, leaving the gold with the goldsmiths. Rather than simply exchange notes for storing gold, the goldsmiths realized that they could start giving out loans in the form of paper claim checks. At first the claim checks were handwritten for specific amounts of loan or deposit, but gradually developed into standardized amounts. As long as everyone didn’t decided to hand in their paper claim for gold at the same time, more claim checks could be in circulation than there was actual gold in storage. Of course sometimes they did, causing fiscal instability and loss of faith in paper currency. In 1694, the Bank of England was formed, combining the loaning capabilities of the private banks with the trust people had in the power of the sovereign.

Just a few of the US bills from private banks

For awhile in the United States, any private bank could distribute its own banknotes. Before the Civil War there were over 8,000 different kinds of paper money in circulation. Any town, city, crossroads—anywhere there were enough people to support a bank—had their own form of currency. These private banknotes were phased out in the 1860s when the government started issuing national notes to help fund the war. The National Bank Act of 1863, created a single national currency, established a nationalized bank chartering system and set limits on the quantity of notes national banks were allowed to issue. The Act also placed a tax on notes issued by private banks, incentivizing the use of the government "greenbacks." Variety and independence were replaced with standardization.



Greenback

source

National Numismatic Collection, National Museum of American History.

Regardless of who is issuing the banknotes, one of the biggest challenges to paper currency is forgery—what is to prevent someone from simply printing their own bills? During the colonial period, Benjamin Franklin devised multiple ways of preventing counterfeiting, including purposeful misspellings, using fonts that were not widely available, and printing leafs on the currency. Other colonial printers further experimented with various forms of typographic trickery such as replacing a d with an upside down p, off-setting the dot of an i, using a zero for an o. (Tobias Frere-Jones talk “In Letters We Trust”)

Colonial bill (1/6th of a dollar) that uses unnecessary commas in the roman numerals of the date in an attempt to foil counterfeiters

Contemporary challenges involved with designing coins and banknotes are very much the same as in the past. The design needs to address the very tangible issues of clarity and security as well as the more ambiguous aspirations of national pride and community-building. The Euro which first circulated in 2002 was designed by Robert Kalina from Austria after winning a competition. In an attempt to visually unite the countries adopting the currency, the iconography on the bills shows stylized illustrations of bridges, windows, and doorways—no specific monument is shown. While understandably optimistic in its multinational and multicultural approach, the results are rather underwhelming—revealing more about the challenges of designing by committee than the intentions of the united currency.

Representing everyone and nothing

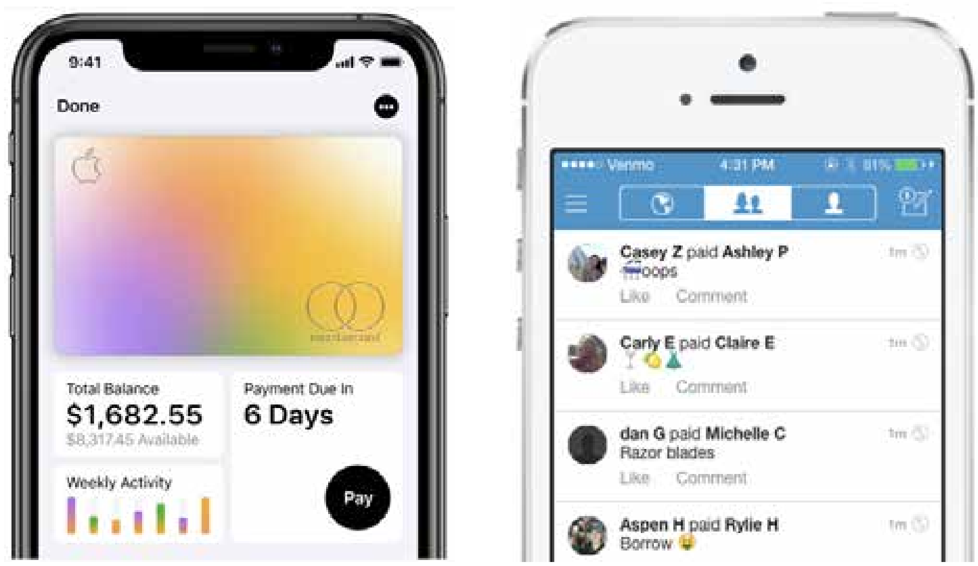
Compare this to Swiss banknote design which is hyper-specific and nationalistic. With portraits of Swiss artists like Alberto Giacometti, and Sophie Taeuber-Arp, and Architect Le Corbusier, the bills highlight people, achievements, and ideals that construct the national identity. They are beautifully intricate advertisements for Switzerland.

Proud to be Swiss

The reality, however, is that the design of banknotes may not matter soon as we are turning into an increasingly cashless society. In addition to credit cards, digital payment options are proliferating—Apple Pay, GooglePay, PayPal, Square cash, Facebook Messenger, Alipay, Zelle, and Venmo are among the biggest and most widely known. Which seems fine at first: I'm happy not carrying around wads of cash and scrounging through my coin purse to make an exact payment. Its fast and convenient and trackable so I can easily see where I'm spending. But I'm not the only one tracking my purchases, each purchase is data for the big companies that offer these payment services. And cashless payments exclude the vast number of people who are unbanked. It takes money

platform.keesingtechnologies.com/the-new-swiss-banknotes/

to open bank accounts and have credit cards. I wonder too how this change is affecting how we ‘**see**’ our money. A Benjamin used to have a certain feel as it sat in my wallet, the way I spent it had gravitas. I don’t see anything exchanged as I pay with my phone. What I do see when I pay with Venmo are a string of emojis—bills are replaced with rainbows, martini glasses, and coffee cups.



Rainbow and martini money

Of course the way that money looks doesn’t matter when you don’t have any. In 2020, the poverty guideline for an individual was $12,760 (aspe.hhs.gov) with the highest poverty rates found among Native Americans (25.4%), Blacks have the second highest (20.8%), and Hispanics (of any race) having the third highest poverty rate (17.6%) (https://www.povertyusa.org/facts). According to Thomas Piketty, a leading economist on inequality, the current rise in fiscal inequality is rooted in “a system of world domination and of colonial domination and colonial appropriation... I insist on the importance of slave societies and post-slavery colonial societies in the formation of modern inequality.” (https://news.harvard.edu/gazette/story/2020/03/pikettys-new-book-explores-how-economic-inequality-is-perpetuated/) Governments have moved away from establishing systems of income redistribution, and capitalism paired with systemic racism has let inequality rise. Piketty argues that “When the rate of return on capital significantly exceeds the growth rate of the economy..., then it logically follows that inherited wealth grows faster than output and income.” (Thomas Piketty, *Capital in the Twenty-First Century*)

3. Design as Money

Rather than wait for the government to fix monetary policy, some groups have decided to try to fix it themselves. For these communities, designing money is a form of civil disobedience, resiliency, or necessity in the face of economic meltdown. Local currencies or alternative currencies do just that: they are a way of circumnavigating the national currency; a way of keeping money in a local economy and stimulating local exchange over big corporations; and a way of fostering local pride. Unsurprisingly, many alternative currencies are started in times of national financial duress when unemployment is high and social services are cut. In 2002 when Argentina defaulted on its debts after years of recession, a limit was put on the amount of pesos that depositors could withdraw. The public responded quickly by forming their own currencies—provinces, cities, and stores issued private IOUs that could also circulate as money. At one point during the crisis, nearly one in ten Argentines were using the *Credito*—a mutual credit money issued by local exchange clubs on its own, independent standard. (Felix Martin, *Money*)

Argentine Trueque

https://www.iss.nl/sites/corporate/files/Marcelo_Gryckiewicz_-_Miguel_Puertas.pdf

The TEM (the acronym for *topiki enallaktiki monada* which translates to "alternative local currency" in Greek) was founded in 2010 at the start of Greece's debit crisis in the town of Volos. The value was pegged to the euro, but with strict limits on saving and borrowing. Haggling and bartering were encouraged, but with a community-sanctioned medium for exchange, people could continue to work and pay for goods. According to a blogpost from Princeton University, at its height, it was used by approximately 1,000 town residents. The TEM was not alone: other Greek towns had their own currencies as well.

The Berkshires region in western Massachusetts was not facing a financial disaster when BerkShares were established in 2006. Instead, the motive behind this currency was community empowerment and self-reliance inspired by the decentralized local banknotes of the 1800s. Berkshires residents can buy BerkShares at the exchange value of 95 cents per BerkShare dollar but spend these at face value at participating businesses thus encouraging users to keep the money local. Since its launch, over 10 million BerkShares have been issued from participating banks and are accepted at around 400 businesses in the Berkshire area. The design of the currency honors local historic figures, shows images of the landscape and features art by local painters, reflecting the hyper-local culture and values of the community.

BerkShares showing the regional landscape, produce, and a portrait of Robyn Van En, one of the originators of Community Supported Agriculture (CSA)

https://www.changemakers.com/Revelation/entries/berkshares-local-currency-berkshire-region

Another well-known local currency is the Brixton pound, started in response to the 2008 financial crisis with goals of strengthening the community and keeping money local.

Brixton pound with local hero
(now selling for £16.70)

While these currencies are in many ways radical, it is interesting how many still closely reflect the physical design of traditional paper currencies. Images of local events and figures replace the national images, or the work of local artists is featured, yet the general form and overall look is that of government-backed banknotes. Most likely this is a conscious decision to create value based on existing conventions, but I wonder if there isn't there a way communities can rethink a method of exchange outside of established mechanisms?

One alternative way of designing how money functions is not new but more structurally radical—stamp script was originally proposed in 1862 in Argentina by Silvio Gesell. His idea was for a system of paper money that had an expiration date—over time it lost value. To avoid expiration, the bills would periodically need to be stamped for a fee. This encouragement to recirculate currency didn't go over well with the moneyed elite and needless to say was not adopted. The idea proved useful, however, in post-war Europe where there was skyrocketing inflation. In 1932, the town of Wörgl, Austria, ran an experiment with stamp script that was extremely successful, dubbed the "Miracle of Wörgl." When people were encouraged to use money quickly, employment rose while inflation was kept in check.

Stamp script from Wörgl

Other alternate currencies that propose a different value structure are time banks. Perhaps the most equal of all currencies—the unit of account is the person-hour so one hour of one person's time is worth the same as another's. Often used as service exchanges, time bank money can also be exchanged for goods as well. Like stamp script, the idea is not new—time-based currencies date back to the 19th century. But its value as a community builder has more recently come into play. While no longer in use, Ithaca Hours were created in 1991 in upstate New York and was one of the longest running alternative currencies. The value of one Ithaca Hour was set to $10.00 (the average hourly wages in Tompkins County). The Hours were then spent locally at over 300 businesses. Over the course of its use, the Hours were used by thousands of residents.

Labour Note from the National Labour Exchange
founded by Robert Owen in England, 1833

The benefit of time-banks-as-currency is that time spent working in often overlooked and unpaid work can be acknowledged and equitably rewarded. In the United Kingdom, Time Credits can be earned by volunteering at local services. People can then 'spend' Time Credits to access events, training and leisure activities provided by public, community and private organizations, or to thank others in turn. Started in Wales in 2009, Time Credits now are found in 6 regions across the UK.

holtesthoughts.blogspot.com

blog.chronobank.io

Time Credit

Perhaps the most profoundly radical structures for alternative currencies are cryptocurrencies. Bitcoin, released in 2009, is the first decentralized digital currency. Like the previously described alternative currencies, Bitcoin relies on a community *outside* of centralized banking systems—it works on a peer-to-peer network of decentralized ledgers. Value is created by the trust in the system of secure crypotography required to make any change in the ledger. By mining (validating the transactions), miners earn new cryptocurrency as a reward.

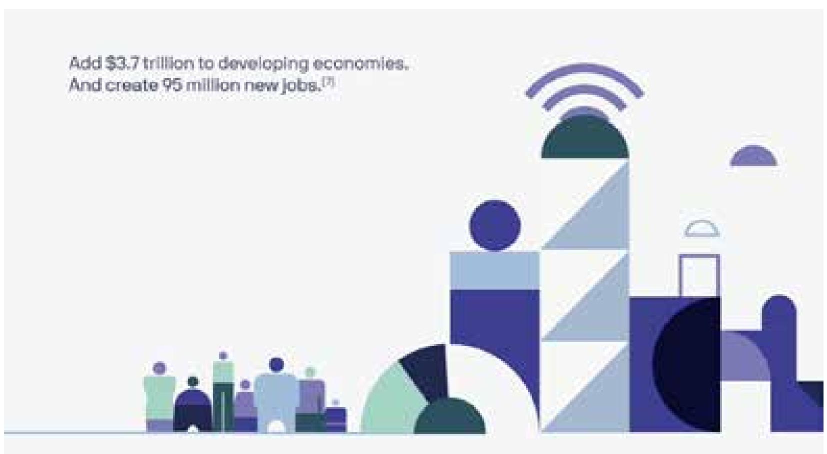
Developed possibly in reaction to the government bailout of banks in the wake of the 2008 global financial crisis, proponents of Bitcoin claim it could have huge societal benefits. One thought is that decentralized currencies could be helpful in countries with unstable governments or for easy transfer of money between countries. Other ideas circulate around the fact that with approximately 1.7 billion unbanked people in the world and in regions where it is easier to find a phone than a bank, a cryptocurrency could be useful. But for now, cryptocurrencies are more opaque and their values more volatile than most national currencies. They are a speculative investment available primarily to the über wealthy and a way to avoid governmental oversight and control (there are reasons why it is favored by libertarians and the dark web). Bitcoin also uses an incredible amount of energy in mining—consuming the equivalent number of gigawatts in energy in one year as the whole country of Switzerland in 2019.

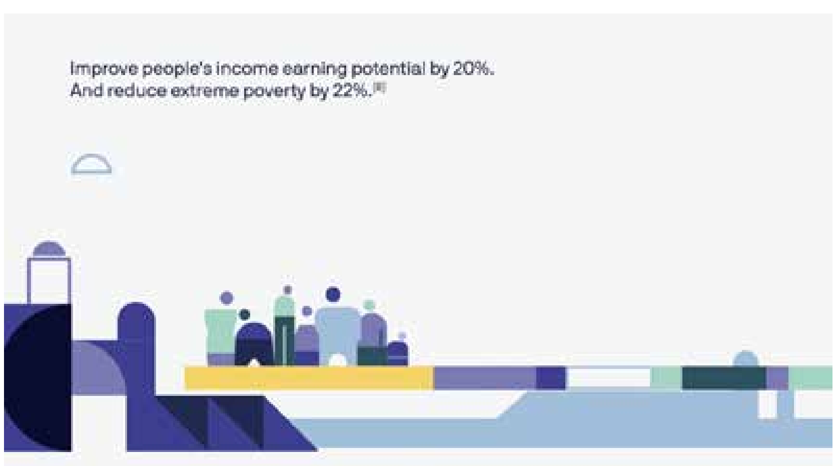
Image of a Bitcoin
(in reality it doesn't really look like
anything. Except maybe a Maserati...)

http://www.cornwallvsf.org/cornwall-time-credits/

However, the success of Bitcoin to seemingly create money out of thin air has inspired the development of thousands of similar systems. According to CoinMarketCap, the total number of cryptocurrencies is 6,088 with a total market cap of $337.28 billion (as of August 5, 2020). (How Many Cryptocurrencies Are There In 2020? - E-Crypto News)

Interestingly (suspiciously...) Facebook is attempting to set up its own cryptocurrency, the Libra. In it's advertising, it promises to do all the beneficial things possible with crypto—make money transfers easier and cheaper, provide financial opportunities to the unbanked, solve poverty... the list goes on. Given Facebook's track record with security and privacy, it is unsurprising that the company has faced severe political and regulatory push-back and is currently delaying the launch and changing the scope to include government-backed currencies.





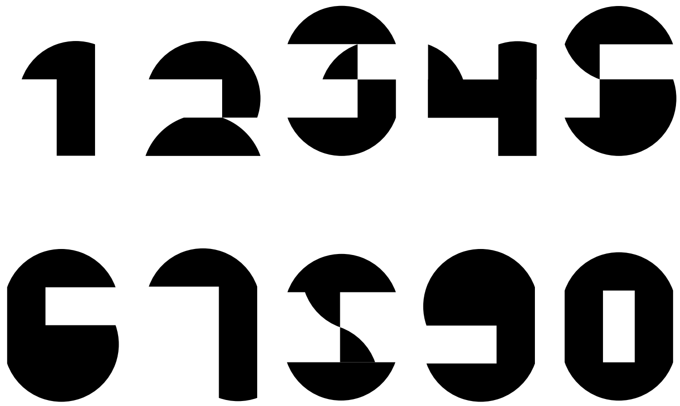
Facebook promising to solve the world's problems

If the value of cryptocurrencies seem primarily based in community belief, Initiative Q takes that one step farther with their private currency scheme launched in 2018. Not based in cryptocurrency, it claims to be a payment network—but with a completely new, fabricated currency called "Q." The company is giving away initial stakes in Q to the first people who join. The idea is that as more people sign up, the currency gains in value. The trick is, you need to be invited to join via social media—the earlier you sign up and the more folks you invite to join, the more your stakes will be worth. After an initial burst of publicity, however, sign-ups have slowed, and the proud ticker on the website announcing the value of the currency is slowly going down. Which brings us back to the first definition of money—as long as members of a community believe in the money, it will have value—if they don't believe, you have, quite literally, nothing.

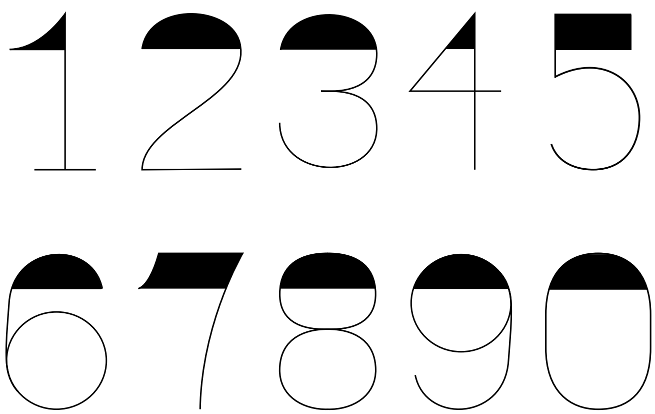
4. Money as Fonts

As I meandered through my research, I kept thinking about what skill set designers could bring to the inequality problem. At the most fundamental, we deal in form, color, grids, and... type. With a healthy dose of creative thinking, fonts could be seen as behaving like cryptocurrency—they are bits of code which both sender and receiver need to have installed on their computers in order to see the fonts live, and they have a shared value to those users. What if you combined the motives inherent in local currencies with the technology of cryptocurrency, the mechanics of digital payments, and visual form of fonts? You might get a new system for local digital currencies that allows communities to set up their own network for exchange, where value is expressed both **in numbers** and **in the form of the numbers**. By creating a platform for a flexible system, different communities could build economic empowerment and self-reliance (similar to BerkShares and the Bristol pound) or develop a platform to exchange goods and services that are outside of formal markets (similar to the Spice network in the UK). Establishing the currency and its value would be in the hands of the individual groups using it rather than big global data hungry corporations. And similar to the Swiss franc, the visualization of the money can reflect community identity.

Using a different font for the numbers in each currency, means that the money for each community group is unique: the community gets to choose what their exchange looks like and their currency looks different from the next community. Money doesn't have to look the same for everyone and for every purpose. Digital balances can have meaning besides just the number displayed: a value of 10 between office mates will look different from 10 exchanged at the local market; a heavy font could be selected for something important, a playful font for exchanging with friends. And Harriet Tubman can finally get her own currency.



Numbers with a secure bunker-like feel



Numbers for the trickle-down economy
(it doesn’t)

Numbers for Harriet Tubman money

What money will look like when
everyone can choose their own font

People have long thought of money in different ways—money in a savings account is treated differently than a Holiday bonus, credit card debit is thought of differently than a loan to a friend—font money would allow people to see it differently too.

Recently, I find myself drawing a lot of 2s. It seems infinite how many variations you can make while still being legible. Of course, as people start to form exchange communities and choose their own font, people will choose what has value to *them*.

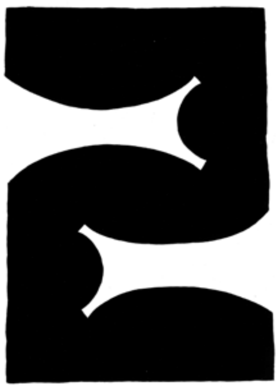
Does this solve financial inequality? Hardly. But I can't help but think if there was a consistent yet flexible system for people to set up local exchanges we would inspire more community industry, pay people for work that is often unpaid, be less dependent on big corporations, be able to loan money to neighbors, and be able to see our exchanges as relationships between people rather than between banks. If we can actively participate in creating currency, will that help us *see* money differently? And would that affect our how we value objects, time, and our fellow human beings?


US highway money


Vegetarian restaurant money


Seed money


Italian autostrada money


Pillow money

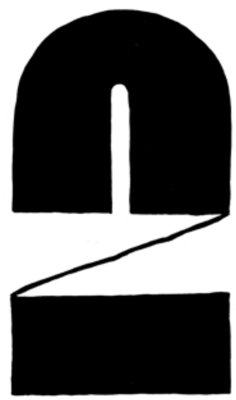

Toy block money

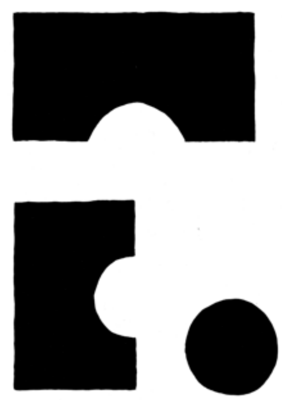

Hilma af Klint money


Electric bill money


Sesame Street money


Parking meter money


Magnet money


Architectural money


Summer vacation money


Grocery store money


Museum of modern art money


Tokin’ money