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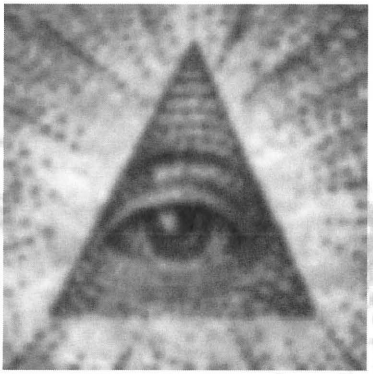
Money!

A special issue

Sharon Poggenpohl

guest editor



Between Visual and Digital Tokens

A Look at the Abstraction of Money

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While a cashless society has been predicted, it has not occurred. This article examines money's rivals in terms of their benefits and deficits in relation to paper currency. The impending redesign of American currency, driven by a need to improve its security function, is contrasted with the lasting iconography of the money, which was originally designed in the mid-nineteenth century. A limited edition book from 1932, by American type designer W.A. Dwiggins, in which the typographer criticizes the currency design, serves to focus the discussion of national representation for this ubiquitous vehicle. The author finds that Dwiggins' critique remains viable today, and that along with improved security measures, American money should be reconceived in order to better represent a nearly twenty-first century democracy.

What is remarkable about money is the social contract it represents, the exchange of goods or services worth a certain amount exchanged for pieces of printed paper. This abstract token and the technology for making and printing paper originated in the East. The introduction of paper as we know it today has been placed at 200 AD in China.[1] Paper moved westward, reaching the Arabs in Samarkand by the eighth century. Much later, the Arabs taught the first Europeans (Spaniards and Italians) how to make paper. Papermaking was introduced in Venice in 1276.[2] Authentic bank notes are mentioned in the time of Emperor Hsien Tsung (c 800 AD), while the best account of the Mongol issue is the familiar one given by Marco Polo concerning the paper money of Kublai Khan.[3]

1 Munsell, *Chronology of the Origin and Progress of Paper and Paper-making.*

2 Carter, *The Invention of Printing and its Spread Westward,* 3.

3 1899. "A Monetary Chronology," 3.

The exchange of value and its artifacts are ubiquitous, so much so that we take the activity and its objects for granted. Paper currency is but one of a long list of value tokens including such expected ones as salt or gold, as well as more exotic ones like olive shells, flying fox jaws and the scalps of red-headed woodpeckers. Clearly paper is lighter, foldable, more portable and easier to hide on one's person. This notion of value and trade is deeply ingrained in us as social beings. It is useful to scrutinize currency as the physical representation of a transaction of considerable abstraction and consensus. As it turns out, currency is more robust than expected — it is holding its own against the even more abstract digital tide of information transfer.

Figure 1 A printed paper banknote from the fourteenth century during the reign of Hung Wu, 1368-1399.

Money's rivals

Since the 1970s, with the advent of electronic payment systems and the widespread use of credit cards, people have been predicting a cashless society. It has not happened and some question whether it is ever likely to happen. It would seem that technological advances have not completely won us over. Paradoxically the trend toward automated banking, which was expected to result in a cashless society, has created a new and easier demand for cash twenty-four-hours-a-day from the automatic teller machine. It is reasonable to ask why cash has increased in popularity. Convenience is not the entire answer. Cash is an anonymous and untraceable commodity. With it we can avoid taxes, perform illegal transactions such as money laundering and generally escape bureaucratic notice. (Economists track cash transaction patterns as a method to measure the size of the underground economy. Internal Revenue Service researchers estimate that this economy accounts for between ten and twenty-eight percent of the gross national product.[4]) In an age when privacy is eroding at a quickening pace, when our personal data can be easily captured and traded, anonymity is no small advantage. Because we are identified by our social security number across many bureaucracies — taxes, bank accounts, medical histories, education and credit institutions, to name only

4 Warwick, "The Cash-Free Society."

some, this number becomes the key with which to assemble a single dossier on someone's life. What is bought, where and when one travels, who one's friends are — can be abstracted from such databases. Citizens are increasingly waking up to the uncomfortable realization that bureaucracies have access to too much information that they would prefer to keep private. What is at issue is nothing less than individual liberties. Cash remains a significant hedge against leaking personal information.

Advocates of electronic payment systems and credit cards are quick to point out the risks of carrying currency. But even credit cards and electronic transfers of money have become targets of opportunity for the technologically sophisticated scam artist. Bank vaults have decreasing interest for the criminal. Wire transfers move money worldwide and represent staggering sums of money — and they are nothing but digital abstractions. Because they have been seen as a weak link in bank security, new technologies have been developed for increased protection. Biometric technologies, which identify individuals by biological means, such as fingerprints or retinal eye prints, have been instituted. Encryption devices have become increasingly important, primarily as a means to prevent interception of public transmissions. Besides the really big money movement,[5] there is an equally important day-to-day threat in the form of credit card fraud. In 1987, Mastercard International banks sustained a $98.9 million

5 The Union Bank of Switzerland stopped a $32 million wire fraud attempt, in which money was wired from the London branch to a numbered Swiss bank account in 1988. Baris, "Stealing Millions With Push-Button Ease."

loss.[6] News of such events do not inspire confidence, so cash lives on. In order for currency to lose its appeal, smart cards[7] need to perform two seemingly contradictory functions: provide transactional security for the purchaser, i.e., no one else has access to their money, together with providing transactional security for the recipient of the payment, i.e., the purchaser is who they claim to be and has the resources for the purchase; while at the same time the purchaser is protected from disclosure of their privacy. A recent innovation at the Dutch Center for Mathematics and Computer Science may provide such a breakthrough. A blind signature, a cryptographic invention, permits numbers to serve as electronic cash and to replace conventional identification. In essence, it creates a digital pseudonym that restores privacy to its user. The resulting smart card has two discrete but interactive microprocessors: the "representative" (the smart card as a personal agent) and its separate internal "observer" (which stores information unavailable to the representative). The observer functions like a guardian angel who protects privacy at the same time it verifies identity.[8]

Ironically as our transactions become more virtual we save money. But the money saved is invisible; it too is nothing but a cipher. There has been a movement to eliminate stock certificates, thereby saving the cost of printing them, distributing or collecting them upon a sale, or storing them as

6 Baris, "High-Tech Heists and Credit Card Capers."

7 Smart cards have microcircuitry embedded in them to provide memory and certain functions to their user.

8 Chaum, "Achieving Electronic Privacy," 96-101.

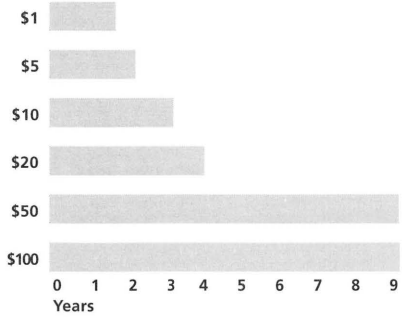
physical entities at brokerage houses. But a resistant twenty-five percent of all investors want, even demand, a physical representation of their holdings.[9] Human behavior is conservative, perhaps particularly where it comes to money.

9 Lin, "Stock: Who Needs a Piece of Paper Anyway."

Our need for physical tokens of wealth has a very real downside. Imagine landfills containing shredded currency — a multi-billion dollar dump of confetti. Annually, that has been the final resting place for 7,000 tons of worn-out money. This is three percent of the value of currency in circulation, or 715 million bills with a value of almost ten billion.[10] Our currency is short-lived (*table 1*). The Federal Reserve has recently launched a serious recycling effort as landfills become less available and at greater distances from the shredding sites. The recycling effort includes use of old money in roof tiles, fuel pellets, packing material, particle board and artwork. The paper is a fine, but tough, one hundred percent cotton product made from textile industry cuttings and cotton straight from the plant. Crane & Company, the paper mill which produces all of the paper used for printing the United States money, is now recycling too, creating a stationery product appropriately called "Old Money." Clearly all this making, distributing, collecting, shredding, trucking, landfilling or recycling costs us money.

10 Sims, "Greenback Recycling: Old Money, New Value."

Table 1: How Long Bills Last
(Redrawn from data presented in *The New York Times*, May 22, 1994, p. 12.)



Money itself

Recent technologies such as the computer and high quality color copiers now make counterfeiting easier for individuals without special expertise. There are now so-called counterfeiting hobbyists and the one-hundred dollar bill is a particular favorite with them. For years the Federal Reserve Bank has known that American money is easy to fake: it is a single color, all bills are the same size and there is no watermark. But the Fed realized that Americans loved the look and feel of their money and so was reluctant to make any changes. About one-half of one percent of United States currency is counterfeit with most of the fakes circulating in foreign countries. Three hundred billion in American currency is currently circulating worldwide. The work of casual counterfeiters "accounted for only $6 million to $8 million in 1992. But such growth [from 1989 data] would mean bills with a total value of $1.6 billion to $2 billion could be infused into the economy during the year 2000."[12] Such an increase in counterfeit currency would overwhelm the Secret Service, the agency charged with apprehending counterfeiters. They currently remove $25 to $70 million annually before it even circulates.

11 1994. "Making Money." *Scientific American*, March, 102.

The design has not been changed since 1929. Now, however, some changes are being instituted to foil the fakes. These include: special ink; microprinting ("The United States of America" is printed repeatedly around the sides of the portrait), which is so small no copier can reproduce it with

fidelity; inclusion of a watermark, which is undetectable by a copier; and small iridescent disks. Special red and blue fibers in the paper for all denominations, except the one dollar bill, prevents counterfeiters from bleaching the one in order to reprint it in higher denominations. The design is also being modified: the portrait will be increased fifty percent in size and moved to the left to make room for the new watermark. All portraits will be reinterpreted (but it seems safe to say that George Washington and other founding fathers will not receive the facelift or stylistic updating that advertising icons such as Aunt Jemima or Betty Crocker routinely receive). By the year 2000, all bills will be printed in the new style. The cost for the redesign is estimated to be between seven and ten million dollars. Clearly our penchant for cash is costing us even more money.

Greenback aesthetics

For millions of dollars in design and production costs we get more of the same tired old imagery, but with greater security. An American typographic designer, W.A. Dwiggins commented profoundly and sarcastically on the design of American money in a 1932 limited edition book (*figure 2*) titled *Towards a Reform of the Paper Currency particularly in point of its Design*.[12] His critique remains timely and accurate more than sixty years later. The stimulus for writing this book was receipt of the Antipodes (*figure 3*) paper currency and stamps from a friend. Dwiggins begins his critique by observing how "unseen" American currency is by its native users. He goes on to question why the currency style adopted between 1840 and 1850 lasted one hundred years. He answers this question by developing a theory that appears to be painfully true even in 1995. The theory is the unchanging nature of a government bureau.

12 Dwiggins, *Towards a Reform of the Paper Currency particularly in point of its Design.*

"The secret of a bureau's eternal life is its rigidity. When a bureau is organized all the details of its work are strapped into position and nailed down — every precaution is taken that no detail shall ever shift or slip out of place. In other words the bureau is organized and then goes into a kind of trance. Each federal bureau is a little Sleeping Beauty's Palace . . . As the [Treasury] Bureau froze it enclosed within its substance — like rubbish in a glacier — all the misapprehensions about art that were prevalent around 1845.

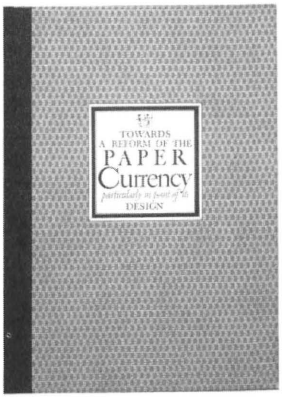
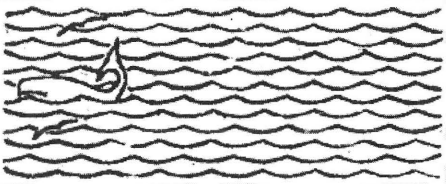
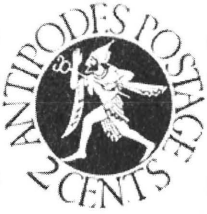
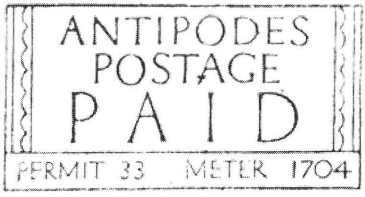


Figure 2 Cover of W.A. Dwiggins limited edition book, *Toward a Reform of the Paper Currency particularly in point of its Design*. (Courtesy of the Wing Collection, Newberry Library, Chicago.)



Antipodes cancellation marks.





Unless you have paid particular attention to art history you can't possible understand what an unlucky chance that was — I mean, for the Bureau to congeal at just that time — during the fat years of that outrageous mongrel style that appeared to have been bred in the stables of the Citizen King."[13] Timeliness and the referential aspects of what paper money represents are key elements in Dwiggins' critique. He observes that it is the most widely distributed insignia of state imaginable and that it is a utilitarian token of obligation and exchange.

"It would be a good, sound, practical, businesslike move for us to push our own federal issues up to a more distinguished level. The time has come, it seems to me, for the American Commonwealth to scrap its present postage stamps, currency bills, and other printed official forms; and to fit itself out with a new equipment more in keeping with the nation's status in the world of affairs."[14]

13 Dwiggins, *Towards a Reform of the Paper Currency...*, 9, 10.

14 Dwiggins, *Towards a Reform of the Paper Currency...*, 6.

Figure 3 The Antipodes paper currency and stamps which fueled Dwiggins' critical examination of American currency. (Courtesy of the Wing Collection, Newberry Library, Chicago.)

The front and back
of a Five Crown bill.

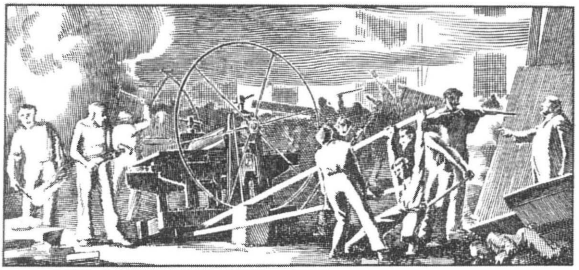
Dwiggins asks exactly the right question: what style of currency is appropriate for a huge modern commercial democracy? This very question has been pondered by many governments as they have come to understand the importance of communicating their particular mission and ideals to their citizens and visitors alike. Defining form or style is necessarily time related. Form is influenced by ideas relating to philosophy and physical culture. Regarding timeliness and its relation to style, Dwiggins is conservative.

"For one thing, I shouldn't want my 'new model' to be too faithful a reflection of this particular moment (1932) of decorative art. I am warned off that mistake by the design which the country suffers from now. It began its career as a reflection of a decorative fashion of a particular moment . . . It doesn't do to salt down a passing fancy in that way. It may turn out later to be something that you would pay a lot to be rid of. The extreme fashion of any particular moment is too narrow a base for such things as official design."[15]

15 Dwiggins, *Towards a Reform of the Paper Currency . . .*, 9.

He cites Goya as a model of an artist who rises above fashion yet is steeped in the essence of his time (1800) and place (Spain). He goes on to say that Goya is as "modern" now as he was in 1800. Further, Goya would show us who and what

we are — "an enormous accretion of mechanicalized energy struggling to preserve a democratic form." (Dwiggins cannot dampen his caustic comments, but expands them with the inclusion of two drawings, figures 4 and 5, which play out his sarcasm visually and reference Goya's social criticism.)



Infuriated Artists demolishing the Bureau of Engraving and Printing at Washington. Morning of the 6th of July, 1951. First phase of the Communist Revolution. N.M. XLVIII

Figures 4 and 5 Drawings from D.W. Dwiggins, *Toward a Reform of the Paper Currency particularly in point of its Design*. (Courtesy of the Wing Collection, Newberry Library, Chicago.)

Assassination of the Director of the Bureau, and Massacre of Federal Art Experts, during the assault on the Bureau of Engraving and Printing — night of July 5, 1951. N.M. XLVIII

Dwiggins wants a design that transcends fashion, i.e., not the modernism of 1932, but a modernism that is representative of the first half of the century. "It would tell of speed, and of enormous electrical potentials, of the air as a new highway, of

a universe suddenly swollen to appalling size — it would tell about these things, but not in picture — by implication and through 'atmosphere'... Such is the simple scheme, and I think it could be worked out — in Antipodes."[16]

16 Dwiggins, *Towards a Reform of the Paper Currency...*, 10.

Having looked at the big picture, the context of government bureaucracy, having examined important communication issues such as timeliness, mission and the character of representation, he goes on to perform a detailed critique of a five dollar bill, which he encourages his reader to take out and examine closely, in case the reader really doesn't *see* the problem. First he attacks the decorative border: "The ornament-mill got out of control for a time," because a border is usually subordinate to other elements, while here it is the major theme. Then he observes that the shapes are ugly: the curves lack vigor, use of the third dimension is a bit of fakery, and the scale of things is inappropriate — the seal is too small and the guarantor signatures are "Lilliputian." As a type designer, Dwiggins can't resist going after a key

typographic element on the bill, the numeral five. He compares the design to other characters designed by reputable type designers who can create legible and graceful forms (*figure 6).*

Figure 6 A comparison of typographic renditions for the numeral 5 from W.A. Dwiggins' book. On the far left is the one used on American currency, A is Fournier, B is Caslon, C is Baskerville, D is Bodoni, E is by F.W. Goudy, F is by Bruce Rogers and G is by George W. Jones.

From his perspective, the bill is unimpressive in formal visual terms, with regard to the ideas it represents visually such as Greek revival bureaucratic architecture, engravings of famous Americans, and very dated and uncoordinated typography.

And yet the mid-90's redesign of American currency addresses only security and legibility problems — problems of function rather than aesthetics. The iconography of the design — the references to ideals — remains as before and it speaks of a time long past. Even Dwiggins' ideas of speed, electricity, flight and an enlarging universe seem to be pale notions of American life, achievement and will at the close of the twentieth century. The ideals on which the country imperfectly runs — democracy, free enterprise and equal rights — are visually (and sometimes actually) elusive. The historical engraving portraying the signing of the Declaration of Independence (on the two dollar bill which circulates mainly at race tracks) seems quaint and antique rather than serving as a forceful reminder of this historic document

(*figure 7*). What truly reflects this time? Profound events such as the moon landing, the splitting of the atom and recognition of our existence as a multicultural nation of immigrants. What do we create and export — technology and entertainment. At the end of the twentieth century and after nearly 220 years of existence, what Americans can celebrate needs to be explored.

Why do we maintain such an old and odd design? Despite superpower status, we remain upstarts with a short history and an uncertain sense of culture — particularly visual culture. When the original paper money was designed in 1840 or 1850, we had existed as a nation for only sixty or so years. As a young nation, we desired to look stable, even historic. Our culture was a hybrid of many European nations and a Greek democratic ideal. Our leaders and the creation of a new government were important icons to represent on our currency. The currency convinced us of our reality as a nation. It made a heroic statement, but now references to founding fathers and old buildings seem nostalgic. It is time to move on to *ideas* that we developed and that have shaped the modern world.

Figure 7 The reverse side of a two dollar bill, demonstrates the nostalgia and quaint representational style still in use at the close of the twentieth century.

An example of such a statement is the Swedish one-hundred kronor bill with its engraving of Linnaeus and a classic garden with the life cycle of a plant on one side and plant pollination on the other (*figure 8*). This is a beautifully detailed engraving in which the elements are harmonious by virtue of a clear hierarchy, elegant color shifts and rhythmic integrations in the juxtaposition of various objects in the engraving. The character of the engraving is classic, while the images are clearly representational and recognizable. The use of space with its shifting viewpoint and attention to detail is contemporary, as is the use of color. The visual control of technique, representation, composition and color present an *idea* that seems to transcend fashion.

American bills focus on people and things — perhaps this is a reflection of our pragmatism and materialism. But it would be more compelling to use this ubiquitous vehicle to communicate our contributions to the world of ideas. In a formal visual sense, the symmetry of the American bill is a straight jacket reminiscent of cheap playing cards. In this era of computer generated seamless imagery and dynamic time shifts, where we capture and replay both historic and personal events in our lives, the symmetry seems out of place. What once seemed classic and stable, now is incongruous and forced. The design of the currency and the tenor of American life in the very late twentieth century are completely disjoint.

Figure 8 The Swedish 100 kroner bill is a model of a specific cultural celebration of an idea that shaped the modern world.

Visible Language's money issue

This special issue on Money explores its topic from the standpoint of money's physicality and transactional nature.

Curiously, money seems to be a hot topic at this time. *Granta* recently focused on it, but from a literary point of view.[17] Perhaps the geographical and political shifts that have given rise to new countries (Bosnia, Croatia, etc.) or the restoration of old ones (Latvia, Estonia, etc.) along with their need for new currency sensitizes us to a consideration or at least a heightened awareness of this important cultural symbol. The contributors to this issue examine money from several points of view: security, transaction and money substitutes.

17 Money. *Granta*, volume, 49.

Security in paper, printing and design

Dawn Barrett in her article, "Flying Money," briefly traces the early history of paper money and then launches on her main thesis: the visual significance of money has less to do with its iconography than it has to do with the design and innovation of security issues. In her second article, Barrett investigates the formative period of American history (1609-1778) in which settlement, independence and currency was taking shape. During that time, wampum, cylindrical beads made from shells by the North American Indians, was the local currency in New England (1634). By 1649, the Court of Massachusetts recognized wampum as legal tender for debts up to forty shillings. It is worth noting that paper currency was not introduced in Europe until the mid-seventeenth century, when the Royal Bank of Sweden was established, thus the idea of

paper money was actively being formulated during colonial times.[18] Barrett continues her thesis that two factors are responsible for the overall appearance of paper money: acceptance and safety. Nearly every physical, visual or symbolic element of paper money can be catalogued according to their usefulness in fulfilling one of these two functions. Cultural issues also play an important role in determining the national character of specific manifestations of acceptance and safety. She maintains that it is the small, idiosyncratic details that make our bills look "American." These ideas are developed in the context of colonial history and the introduction of paper currency in the new world.

18 1899. "A Monetary Chronology," VI:3.

Money as "transactional" art

Artists have become interested in money, not necessarily as a result of the commodification of art, but in money as transaction — as performance. "Arte-Reembolso/Art Rebate," carried out by Elizabeth Sisco, Louis Hock and David Avalos, involved handing out crisp new ten dollar bills to illegal aliens just north of the Mexican border. The project received funding from the Museum of Contemporary Art in San Diego as part of its exhibition "La Frontera/The Border." "The Border" is part of a project called "Dos Cuidades/Two Cities" which received a quarter million dollars from the National Endowment of the Arts (NEA) to be matched by three-quarters of a million from the State of California, City of San Diego and the Rockefeller Foundation. Not surprisingly, the NEA backed away from funding a donation to illegal aliens.

> "The artists say it [the money give-away] is intended to demonstrate that these immigrants, who are coming increasingly under political attack as a burden on the economy, do, in fact, contribute through their labor and through sales tax. The project also shows, the artists say, that the immigrants are linked through a chain of dollars with the rest of the economy."[19]

19 Mydans, 1993. "$10 Bill Give-Away to Migrant Workers Loses a U.S. Subsidy."

If a function of art is to create public awareness and dialogue about the issues of the day, then this was a successful event in raising local and national awareness over the controversy surrounding services to and the rights of illegal aliens. The giving of money is a common routine, from the scale of interpersonal gifts to disaster funds, but the *making* of money is exclusively reserved by the state.

Another artist, who is under continuous scrutiny by the Secret Service and the Treasury Department, is J.S.G. Boggs. Boggs draws likenesses of American paper money as — art. He, too, is interested in the transactional nature of his art. He doesn't sell his drawings; he "spends" them as a performance in which he gets a waiter or a ticket agent to receive the art as payment for a service. "He insists on receiving ceipt and change — real money — for the bills he draws. The change and receipts go to collectors who track d... the people who have the drawings in order to purchase them and complete the transaction.

20 Weschler, "Money Changes Everything," *38-41.*

Boggs uses colored ink and pencils to draw his bills and a color copying machine to reproduce them. While the bills are the size and green of American currency, they carry messages real bills don't have such as "The Unit of the State of Bohemia." The Secret Service is not amused. They have confiscated his work, calling it counterfeit. Meanwhile, both Britain and Australia consider his work art. Both countries brought Boggs to trial under a counterfeiting charge for drawing pound notes and Australian dollars respectively. He was acquitted in both cases and Australia awarded him $20,000 in damages. Boggs has observed that the Secret Service "doesn't understand the difference between art and crime." He estimates that he has made "transactions" totaling more than a quarter million dollars.

In this issue, the transactional art of J.G.S. Boggs is put into historic perspective by Sandra Smith. In her article, "J.S.G. Boggs Life Size & In Colour," the accidental beginnings of Boggs' bills in the mid-80's is followed chronologically by the close scrutiny of the Secret Service, successful court cases and those confined to a legal limbo. The legal issues involve such semantic ambiguities as what constitutes likeness and similitude and even considerations of the artist's intention. Smith argues that Boggs speaks *visually* and that the United States government is illiterate in visual language.

Another, more intimate, perspective on Boggs and his ideas is found in Manuel Gonzalez's article "A Conversation with J.S.G. Boggs." The artist is both wary of media distortion and candid in his remarks. The conversation reveals tactics of intimidation and the problem of acknowledging "art" in legal matters. Media and issues of representation confound the situation. The perversity and stubbornness of Bogg's character and his singular pursuit of transactional art come across clearly in this conversation.

Continuing the exploration of exchange value, Marc Shell's article, "Paper, Gold and Art — as Representation and Exchange," compares paper money, gold and art. Again representation is at the heart of the matter. According to Shell, the introduction of paper money created "a cultural disturbance that extended beyond money per se to include the artistic enterprise." Satirical cartoons, politics, literature, art and philosophy all figure into his discussion of what is real and what is imitation — what is mandated and what is accepted in practical action. Authenticity or the signature value of art becomes a fundamental issue in exchange value.

Money substitutes for special occasions

Chris Nemeth explores "Funny Money," or money substitutes such as coupons, scrip, stamps or chips. While barter is an exchange of actual goods or services, funny money is representational, designating that it will provide cash, a service or a product when it is redeemed. Nemeth examines the design characteristics of these tokens and asks in what ways they are similar to or different from currency. He demonstrates the repetition of certain functional themes as he presents visual examples of these ubiquitous and robust money substitutes.

From barter to promissory notes to privately issued paper money to governmental issue of paper money to credit cards and electronic payments to smart cards, we have abstracted the process of exchanging value. Running along this progression are the alchemists, scam artists, counterfeiters, white-collar criminals and computer hackers who threaten the credibility of whatever financial token is in the accendancy. We may long for simpler times or a more aesthetically pleasing currency — we may desire to protect our privacy and resist the digital revolution, but we cannot escape participation in the economy. In this special issue both the past and the future have been examined. Some cautionary statements have come to the foreground. And surprisingly, the problems of the past — security and the social contract — have not disappeared, but have been joined with an increasing desire for privacy, which complicates the future — of money.

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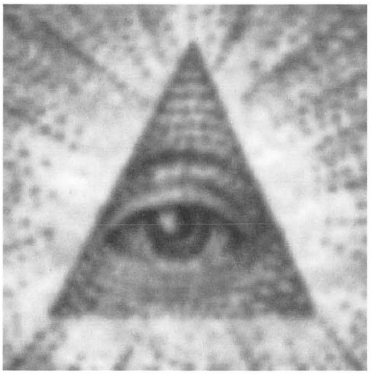

Dawn Barrett

"Flying money," R.D.E. Oxenaar, 1995. Paper money of eighth century China was called flying money (fei-ch'ien). Benjamin Franklin coined the phrase "time is money" — perhaps both time and money can be said to fly.

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Dawn Barrett, a native of Massachusetts, lives in The Hague and works as an independent designer and design strategist. She was assistant concept advisor for the 1989 exhibition: Vorm van Geld (Form of Money) for the Stedelijk Museum, Amsterdam. She also produced an audio visual program on the design of Dutch paper currency. A visiting faculty member of the Graphic Design Department at the Rhode Island School of Design, Barrett is currently writing a book on the use of photography in the design of postage stamps.

While it has become fashionable to entertain new designs for American currency within the design community, this author takes such shallow iconographic doodlings to task for their complete lack of concern for the essential practical requirements a currency design must fulfill. In order to develop this argument, Barrett examines money as a financial instrument that requires trust and acceptance from its users. Counterfeiting undermines public trust and it is this practice that the practical design and manufacture of money must guard against with security measures embedded in both the design, paper substrate and printing processes. The historical development of money is briefly touched upon with particular attention paid to American money.

Good money

It is commonly said that "money is the root of all evil," but this doesn't help clarify what money is or how it works. Since money has been made of every conceivable substance and material (e.g., shells, salt, coral, fur, tobacco and nails), describing the physical properties or the visual appearance of money is an equally inadequate means of defining it. Common expressions about money are usually judgments about its use or acquisition. (The full quotation is "the love of money is the root of all evil.") Money is only a go-between and can't be made responsible for the abuses of its employ.

When economists talk about "good" and "bad" money, they are not making moralistic commentaries about its manner of acquisition or use, but refer instead to its capacity as a monetary instrument. Anything can function as money so long as it is commonly accepted for the payment of goods, services and debts. Good money has been defined as that which is: acceptable, stable in value, portable, uniform or homogeneous, durable, divisible, recognizable and sufficient in quantity.[1]

1 Horace White

As a symbolic representation of value, money is a medium of exchange and acts as a store of wealth, measure of value and standard of deferred payment. In a barter system, commodities and labor are traded directly for one another requiring a double coincidence of barter. Money is a representative stand-in for the value of the commodities or labor.[2] When buying can be separated from selling, the transfer of products and services is facilitated by using a common, indirect medium of exchange that, whatever its form or substance, is called money. As local trading can benefit from the use of money, long distance trading demands its use. This is one reason why the development of money occurs primarily in locations where long distance trading formed an important part of the local economy.

2 If you raise tobacco and want a horse in trade, you've got to find a horse breeder interested in acquiring tobacco. The tobacco itself doesn't need to be brought in when a bag of money will do the job.

Fei-ch'ien (flying money) calligraphy, Celine Wang, 1995

Scarcity and value

For it to be valuable as a medium of exchange, the quantity of money in circulation must be limited by some factor. Scarcity is assured when money is made of rare materials, but when it is made of more common ones, a different means of control must be sought. Money mustn't be allowed to grow on trees, therefore its creation is most often regulated by the state. The value of gold or silver is derived from a supposition of its rarity combined with the belief that it can be readily exchanged for that which is inherently useful, needed or desirable. Money works in a similar fashion, relying upon a commonly shared recognition of its worth.

The use of money is woven together by social customs and governmental rules, which are, in turn, inextricably tied into economic networks that link international trade and exchange. A discussion of money is necessarily a complex one, where the end of one strand of thought cannot be neatly pulled out for inspection without bringing a tangle of other threads and issues with it. No one aspect of money can be examined in isolation from the rest. An analysis of its visual form, without reference to its use, is a hollow exercise in aesthetic conjecture.

Flying money

Currency is the money known to "pass current" between people. We are currently passing these little printed pieces of paper back and forth to buy groceries. We all recognize our own paper currency when we see it, and we know just what to do with it. The circulation of money may be fast or slow, but there is always movement. Currency appears to move of its own accord. Its value seems to hurl it forward with no possibility of rest. It cannot lie still, because it is too damn useful to sit there. Since it can be traded for something more interesting than itself, it has to go.

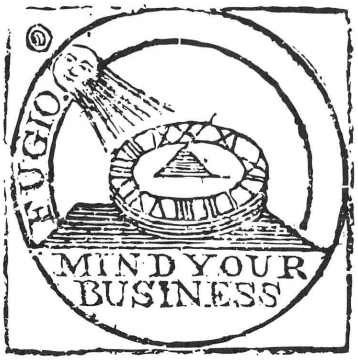
Economists measure the circulation of money as velocity, which is a measure of its movement over time. To facilitate the transfer of funds to distant locations, Chinese of the T'ang period invented a form of paper money, called "fei-ch'ien" (flying money), certainly because the paper was lighter than coin, but perhaps also because the paper moved more easily and seemed to fly between the hands of the people distanced by both space and time. When you want to spread a message, the flying vehicle of money is a useful broadcast medium. In order to extend the range of their influence, Hellenistic rulers used their own portraits on the design of circulating coins, to distribute their name and image throughout their expanded territories. Paper currency issued in America during the revolution was used to spread patriotic and propagandistic messages and imagery in support of the struggle for political independence.

Paper money

In contrast to coins (which were originally composed of precious metals), paper money has no inherent value. Melting it down will give you nothing but the ashes of a promise. If it has no inherent value, how does a piece of paper possess enough authority to pass between users like a chunk of gold? Paper money functions on the basis of what it says, how convincingly it communicates this message and how well it is believed by bearer and receiver alike. It is a text-based document grown out of the notational systems of *boekgeld* (book money) receipts and other instruments of credit that extend a promise of payment over time.

The first use of paper money is credited to the Chinese, the inventors of paper itself, who purportedly used paper money in the form of "credit exchanges" as early as the eighth century AD during the T'ang period. In 811 AD, the government prohibited the private issue of this paper money and adapted the system as a means of forwarding taxes to the capital from the outlying regions. True paper currency, called "exchange medium" (*chiao-tzu*), was issued in the early part of the eleventh century in Szechwan. A variety of

Detail of rebus designed by Benjamin Franklin and appearing on the front of all fractional continental currency (resolution date: February 17, 1776) and also used on the coin "fugio cent."



different forms of paper money were employed during the T'ang and Sung periods (eighth to thirteenth centuries AD), including redeemable notes, vouchers and checks issued from private monetary agencies as well as from the government. Over-issue of government notes (to pay for military expenditures) ultimately caused inflation and devaluation of paper so severe that in the early part of the thirteenth century paper money was abandoned and the economy shifted to a silver currency.[3]

3 Yang, *Money and Credit in China*, 51-61

In the West, instruments of credit were rediscovered in the thirteenth century, but freely circulating paper money was not in use until the end of the seventeenth century. Credit notes (*kreditivsedlar*) were first issued in Sweden by the Stockholm Bank in 1661, followed shortly thereafter by the Bank of England, which issued private bank notes in 1695.[4] The first publicly authorized paper money in the West was issued in British colonial America, in the Colony of Massachusetts Bay in 1690. In the subsequent hundred years, nearly every country in the West produced some form of public or private paper money (most of which was fiduciary money, whose worth was based on a promise to pay specified amounts in gold and silver). By 1800, the experimentation and use of paper money was so widespread that the eighteenth century was dubbed "the paper century."[5]

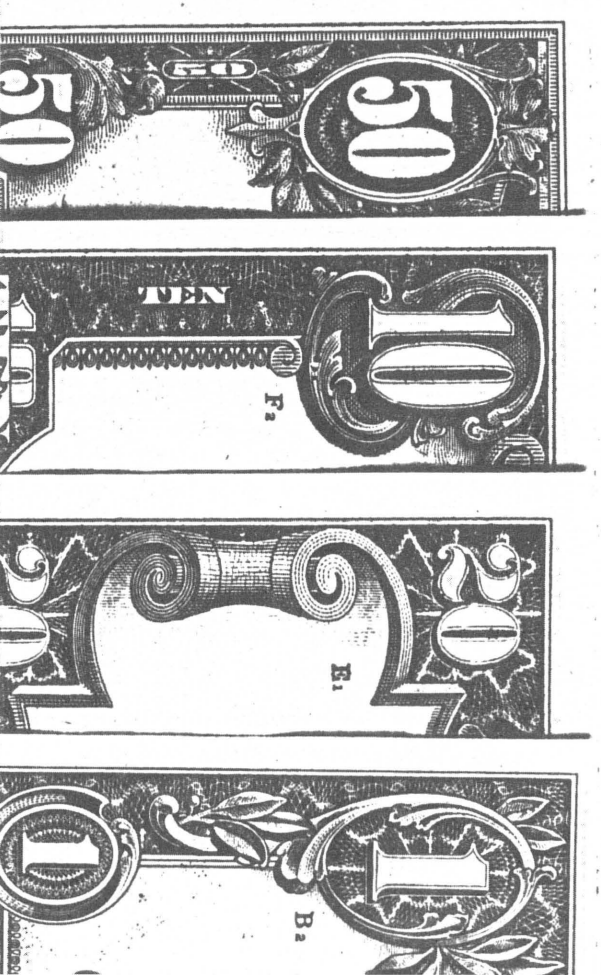
4 Angus, *Paper Money*, 6-11.

5 "Das papierenne jahrhundert" quoted from the German economist Johann G. Büsch. McCusker, "Colonial Paper Money," 94.

Paper money has it origins in what is called "imaginary money" (as opposed to "real money" like coin). Imaginary money is more comprehensibly understood as "money of account," where value is stored in tangible items like property and land, that is accounted for in registers and account books kept by careful fellows with sharp pencils and stiff quills. It is upon the value of real property that trust can be drawn, transfers of accounts made and business conducted using written records and notations. Monies of account allow the

pieces of paper containing account information to be used to conduct financial transactions, rather than transferring the property itself. In such a system, value is transferred and transported by the mechanism of words. Paper currency was developed from the textual traditions of accounts and notations.

To develop from "money of account" — a well administered and controlled form of money existing since the Middle Ages — to the unwieldiness of a freely circulating paper currency is an evolutionary leap in monetary thinking and practice. But it was a step that took time for development, including time for experimentation and failure. Early paper currency suffered colossal failures (for instance in the American Colonial continental currency, and the eighteenth century French assignat).



Comparison of four United States denominations showing the similarity of form.

A functional instrument

Paper currency is not an ordinary piece of printed matter. It is a medium of exchange whose form is governed chiefly by the peculiarities of its monetary function. As common and familiar as a newspaper, paper currency is handled daily by nearly everyone. Unlike a newspaper, it circulates through a succession of owners, all of whom are eager to get it and reluctant to part with it. Passed hand-to-hand, used by numbers of people, paper currency

must be durable enough to sustain years of rough handling. Even though it is produced in very large quantities, paper money must be uniquely marked and individually accounted for.[6]

Because it is not a product to be sold, currency needs no added value to attract a buyer, nor does it need visual charm or aesthetic appeal to help sell it. The effectiveness and worth of paper currency do not depend on visual persuasion or rhetoric. Unlike advertisements or posters, paper money has no overt need to delight, amuse or convince its audience. If it does so, it is for other reasons. It is only counterfeit, and unstable or valueless money that relies on persuasive visual means to appear convincing and be successfully deceptive.

Security

Currency passes between the hands of strangers and passes on yet again, to more unknown persons. Since it carries no evidence of its path, it moves anonymously. Paper currency is difficult to trace and is potentially dangerous stuff — vulnerable to falsification and subject to general misuse. It is inherently more vulnerable to counterfeiting than coin, because it can be produced with cheaper materials.

Counterfeiting takes two forms: alterations to the surface to increase the stated value, and outright counterfeits which are manufactured from scratch. Alterations are more commonly found in amateur operations and during the early development of paper currency, when designs had fewer means to help the public visually distinguish one denomination from another.[7] Counterfeiting can undermine the belief system that supports the use of paper money. By issuing a false representation (of what is already a representative token), counterfeiting introduces an element of doubt into the mind of the user, making value questionable and replacing an existing trust with suspicion. Extensive counterfeiting can contribute to the depreciation of a currency and can ultimately cause a destabilization of the economy.

6 Dwiggins, an American type designer, having complained about the ugliness of the American currency was asked to suggest new designs. After submitting many unworkable proposals, he finally admitted defeat, claiming that the greatest obstacle in producing an improved design was the technical demands of the numbering machine used to print serial numbers upon the bills. Dwiggins, "Introduction" xxi-xxiv.

7 The recognition of denominations relates to overall design philosophy regarding security. In the U.S., the denominations are intentionally hard to distinguish to force the public to closely examine their money. In the Netherlands denomination recognition is made obvious with large numerals, strong color and size changes.

For this reason, counterfeiting currency has also been used as a weapon of economic warfare. The British effort to ruin the American economy during the revolution was the earliest documented case, but not the last. The plan to produce and distribute counterfeit currency in the colonies was consciously chosen as one of the strategies used to undermine the Colonial economy and weaken the colonists resolve to fight for independence.[8] So bold was the undertaking that the ready availability of counterfeit bills was openly advertised in British-occupied New York: "Persons going to other Colonies may be supplied with any Number of counterfeit Congress-Notes, for the Price of the Paper per Ream. They are so neatly and exactly executed that there is no Risque in getting them off."[9]

8 Newman, "Counterfeit Continental Currency Goes to War," 1, 6.

9 *New York Gazette*, April 14, 1777.

In a piece criticizing British actions, Benjamin Franklin wrote: "Paper money was in those times our universal currency. But, it being the instrument with which we combatted our enemies, they resolved to deprive us of its use by depreciating it; and the most effectual means they could contrive was to counterfeit it . . . This operated considerably in depreciating the whole mass, first by the vast additional quantity, and next by uncertainty in distinguishing the true from the false; and the depreciation was a loss to all and the ruin of many."[10]

10 Franklin, "The Retort Courteous," 1127.

Counterfeiters at work

To profit from their work, counterfeiters must cross two hurdles. They must manufacture imitations and then they must successfully pass them off as genuine. Fake money only needs to give the impression of authenticity — convincing enough to deceive an unsuspecting recipient. Additionally, a currency counterfeiter need only pass a bill once in order to profit significantly from his work. The anonymity of previous ownership also serves his advantage. If he is accused of passing a counterfeit bill, he can always claim that he, like his victim, received it unknowingly and passed it on in complete ignorance.

The task of counterfeiting currency is a different one from forging other kinds of valuable items. In order to successfully pass off a fake painting, a forger must be skillful enough to deceive a knowledgeable buyer, trained in appraising visual detail and already suspicious of a painting with dubious provenance. Counterfeit currency, by contrast, need only be convincing enough to fool the nearsighted tavern owner. In the same way that an art dealer or museum has empirical means to test the genuineness of an attribution (by the dating of its materials, etc.) the issuing body responsible for currency emissions also possesses sophisticated methods of checking the authenticity of paper currency. But since these technical means are not commonly available, reliable security checks are needed for the general public that are discernable to the human eye and do not require special equipment.

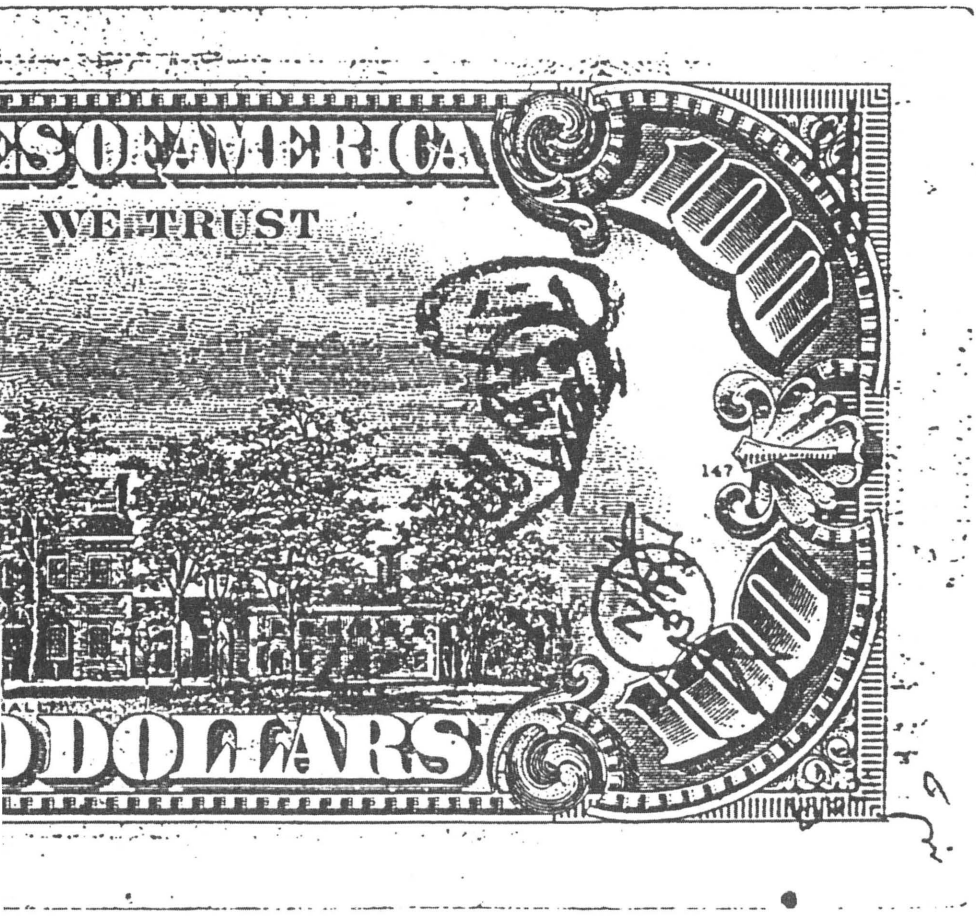
In the early days of paper money, when printing methods were relatively unsophisticated and there were fewer security features worked into the designs, passing counterfeits was considerably more difficult than creating them. A case in eighteenth-century America shows that counterfeiters were willing to share as much as fifty percent of their profits with an accomplice willing to take the responsibility and potential risk for passing them.

Thirty-six year old Mary Peck Butterworth, of Rehoboth, Massachusetts, counterfeited over a thousand pounds worth of Connecticutt and Massachusetts bills over a period of seven years (in the mid 1720's) and escaped any punishment for it. She sold her work at half of the stated value and never passed any bills herself. Her technique was to iron a damp piece of muslin over a bill, in order to pick up the inked impression and then iron the muslin onto a new sheet of paper to transfer the print. A fine quill pen could then be used to fill in the faint impression with fresh ink.[11]

11 Franklin, "The Retort Courteous," 1127.

Detail of an American one hundred dollar bill showing many added validation stamps which are needed for cashiers to distinguish genuine bills from the many counterfeit ones in circulation. (This predates the security strip which was recently added to American currency.)

To create an acceptable counterfeit, it is not necessary to duplicate the work of the authorized printer, and it is certainly not imperative to reach the same level of printing production. Because a counterfeiter need only produce a small number of bills to make a sizeable profit, he can use entirely different printing methods, so long as the finished product is convincing. While a security printer must produce hundreds of thousands of an item, each identical to the one before it, a counterfeiter need only make one or two.



For this reason, photocopiers, especially the color ones, are a significant threat in contemporary counterfeiting. The research and development costs for the printing is borne by the manufacturer of the printing mechanism and the counterfeiter pays only for its product. Favorable conditions for counterfeiters are those in which the genuine paper currency have few safety features embedded in the design, or when the appearance of the genuine bill is less familiar to the general public. Counterfeits are often uttered in

Back of Dutch fifty guilder note showing large figure denominations, bee watermark and triangular tactile symbol for the blind. Design: 1982 R.D.E. Oxenaar.

areas outside the normal region of circulation in order to exploit the relative unfamiliarity of the original. The condition of the genuine currency is also relevant for detection, since inconsistent print quality permits a greater range of acceptability. If an abundance of soiled and torn bills are in circulation, a counterfeiter can more easily blur the appearance of his fake with dirt and intentional aging effects.

Security printing

To deter, thwart or detect counterfeits, security features can be added to the design and production of paper currency. It is not possible to make paper money totally secure from counterfeiting, but the goal of any security printer is to continuously raise the level of difficulty and challenge that counterfeiters must meet. Some of the most interesting and ingenious aspects of paper money design exist as the result of efforts to make paper currency less vulnerable to falsification.

To be effective, security features must be ingeniously devised and consistently renewed. Security printing requires on-going experimentation and inventiveness of technique, which in turn can produce general advancements in overall print technology. For this reason many print technologies were originally discovered as part of the research and development involved in security printing.

Most characteristic visual features of paper money are security devices that were created in direct response to known methods of falsification. From counterfeits successfully passed into circulation, security printers learn what measures must be taken to protect the authenticity of the genuine article. The intricate engraved patterns, now seen as synonymous with paper money, are the product (or second generation offspring) of the guilloche machine, a nineteenth century invention whose sole purpose was to deter counterfeiting. Security is also furthered when printers predict the effect of emerging technologies upon the capacities of future counterfeiters.

Although security can have a stimulating effect on technical advancements, the rigors of security printing can have a conservative effect upon printing practices generally. Since knowledge used to print paper money can just as easily be turned to counterfeiting, the activities of a security printer must be carefully monitored and controlled. Currency printing can be entrusted only to the most reliable and dependable of private printing firms willing to work under the scrutiny of the issuing authority. Another way of securing the secrets of the trade is to use only government printers. But with either the well trusted printing firm or the governmental one, the situation is one that produces a conservative environment for the development of form.

Conversely, the demands of security printing can also have beneficial effects on quality concerns. If print consistency is seen as an important precondition for public recognition of genuineness, both the printer and commissioner have an equal stake in maintaining

high standards for production. When printing standards and design innovation are seen as valuable elements in the fight against counterfeiting, a more positive attitude towards quality is created for both. In such an atmosphere designs can be produced with the highest level of craftsmanship, and there is increased opportunity for innovative design solutions to be sought and recognized when they are found.

Obviously this positive effect will only be seen in countries which allow renewal and change in the overall form of their currency, and it will not occur in currency which is not allowed to change its design. This difference in attitude is a question of issuing policy. For example, The Dutch National Bank, responsible for the emission of currency in The Netherlands, has maintained a progressive policy that advocates change in design, and has consistently introduced new designs for Dutch currency approximately every thirty years. This approach allows for the possibility that new designs can influence and be influenced by emerging technologies. The basis of this policy is the belief that new visual form designs will also keep the public more alert about the appearance of their

banknotes, which in turn, is thought to make them more capable of detecting falsifications.[12] In contrast, the United States practices a more conservative approach to currency design, where a change of the overall form in the design of the currency is considered undesirable because it is thought to pose a threat for public recognition and acceptance.

12 Scott. *Counterfeiting in Colonial America*, 64.

Trust and acceptance

Because paper money is only representative of value, public acceptance is the cornerstone of its usefulness. The difference between trust and acceptance in paper currency is that trust is a part of the collective belief system and evolves from experience, while acceptance is something that can be forced upon a population. Acceptance, which is initially forced, can later turn to trust.

Currency forced upon an occupied country, or scrip used within private companies, is an example of the way people are forced to use a medium of exchange, not because of a belief system, but because there is no alternative medium of exchange. Because of its utility, even script will eventually come to represent the value of the commodities they purchase. One dollar of script will eventually come to represent the value of a bag of flour in the mind of the user, but this occurs only because of the associative experience and not from any abiding belief in its intrinsic beauty, value or rarity in the form of the money.

Paper currency works on a representative system, and in the case of fiduciary money, it promises an exchange for precious metals as its backing. When the American dollar was removed from the gold standard in 1971, it no longer promised redemption in gold. From that time on, its value was declared only by the fiat of the state, which was legally empowered to establish its use as legal tender.

Fiat money is money declared by the government to have value. The public is forced to accept it for the lack of an alternative. Over time, if it functions as a ready medium of exchange and passes at full value, then it will eventually acquire a trusted representative value. A government can declare the value of money and demand its acceptance as legal tender, but it is the public that either accepts or rejects its stated value.

Money talks and empirical experience speaks loudest

It is the empirical rather than the aesthetic experience of money that establishes and maintains public trust. If paper money is readily accepted at face value, then it is trusted as a good or useful representation of value. If it works, then it is trustworthy (and later may be said to look the part). If it doesn't work, then trust in it will quickly disappear without appreciable delay or much visual analysis. If a currency has failed, its visual appearance (whatever that might be) will carry negative associations of fraud and worthlessness from that time on. The visual appearance of failed money acquires negative, after-the-fact associations through no fault of its form or design, but because the instrument itself has become dysfunctional.

Negative associations of this kind occurred with paper money issues of the American Continental Congress. When depreciation (caused by over issue and extensive counterfeiting) resulted in a zero valuation for the continental dollars, the design of subsequent paper money (issued from private banks) was made to look as different as possible from the precursors. This difference in form resulted not only because the issuing body, circumstance and backing for this currency was different, but because the new money needed to visually disassociate itself from the previous bills, whose miserable failure was notorious enough to spawn the colloquial expression "not worth a Continental."

Historical precedent: donning the trappings of respectability

Assuming that form is important in first establishing an appearance of value, and provided that the issuing body does want to produce a product that looks both valuable and trustworthy,

what are the possibilities to create paper money that looks valuable? To look like something of value, paper must look like money — but how should money look? It is easy to say how paper money already looks, in one country or another, but if one is asked to design it, one must ask how can or should paper money look.[13]

13 R.D.E. Oxenaar, the designer of the Dutch bank notes (c. 1966-1985), recalls that his briefing by the Dutch Central Bank included fulfilling an enormous number of special requirements and a mandate that his banknote designs must "look like money," otherwise the public would reject them.

Most paper money designs have been made to resemble the money that preceded it. In most instances it is a simple case of visual precedent and tradition, reinforced by the cumulative, collective experience of using money which is safe, does not fail and is therefore considered trustworthy. In an attempt to make it look the part, the design of paper money must follow certain traditions (or at least it should not break too many of them all at once). In the history of paper currency, radical visual innovations are rare and tend to take place initially in the arena of technical and security concerns, rather than in the arena of aesthetics. It takes unusual circumstance and a particularly inventive person responsible for design to effect radical change in the appearance of paper currency. Of equal importance, the situation must be one in which the issuing body has complete autonomy in their decision making policy about design as well as having an established confidence in the visual experience, technical knowledge and security solutions of the design innovator.

Although it is done, it is unfair to compare the design of Dutch and American paper currency purely on the basis of appearance. The conditions and history of their issue are different enough that one must weigh the role of circumstantial factors before coming up with blanket judgments about their resulting form. In order to change the design of American currency, approval must be obtained from Congress and it is this elected political body that has been the strongest opponent of change. In the Netherlands, the Dutch Central Bank is responsible for the issue of paper currency and has full authority to devise their own policy regarding change, design, security features, etc. Since new designs do not have to be approved by Parliment, the policy decisions regarding design

are ones that are driven from a concern with practical economic factors rather than those of a political nature.

The design of new products tend to echo the forms they replace. Rather than being an exception to this assertion, paper money may well be the quintessential example to prove it. When examining the history of paper money design, it is easy to follow the thread of derivation, mimicry and imitation. Conspicuous breaks in the visual line of development are relatively few and tend to occur as a result of extraneous circumstances (such as the ousting of a government, the total destablization of the economy or the introduction of a new technology in security printing). If the currency of a country has failed, the design is usually overhauled in an effort to dissociate itself from the devalued currency.

Reliance on the associative value of tradition and historical precedent helps explain the fossilization of certain anachronistic forms in currency design. Yesterday's effective security feature can become a standard element today, not because it remains viable, but because it is seen as a necessary part of the traditional vocabulary and is thought to be imperative for communicating value, authority, genuineness, etc.

Signatures are a good example of this. Having served a useful function in seventeenth century promissory notes (which were indeed written between individuals and signed), signatures have been used continuously for nearly three centuries in money design, regardless of the fact that eighteenth century critics already complained that they served no useful purpose in the detection or prevention of counterfeiting.[14] What else could their purpose be but as anachronistic references to a promise, sworn between individuals and sealed with the signing of their names? Signatures have always been there and remain a part of the unquestioned canon of how a piece of paper money should look.

14 Newman, *The Early Paper Money of America*, 55.

Not just a pretty face

A general ignorance about the complexity of issues effecting currency design might cause one to conclude that the design of money is primarily an interplay of form, imagery and iconographic symbolism that is read in a purely social or cultural context. When *Design Quarterly* commissioned Richard Haas to devise a new American bill in 1992, the editor stated that the only precondition given was that the result should be the same dimensions as the existing United States dollar.[15] Given the rigorous requirements of currency design, it is ironic, if not absurd, that a quarterly that concerns itself with design made no other bow to pragmatism or practicality than to give a limitation of size! (Of all the multifarious requirements demanded of currency design, size specifications must surely be the very last item to have any relevance.)[16]

15 Haas, "A More Current Currency," 10-13.

16 Except when difference in sizes are used for denomination recognition.

Haas' approach to the problem was formal and iconographic, which may be partially attributed to the fact that he is an artist, not a designer. His design proposals offer imagery that celebrates a diversified selection of cultural heros. Had his design proposals investigated any of the difficult problems required in actual currency design, or if his use of patterns or colors offered any kind of solution or insight regarding the problems that concern the United States Treasury Department or the Federal Bureau of Printing and Engraving, then perhaps his choice of imagery and his well intentioned multiculturalism might have stood a chance of being regarded with some degree of seriousness.

There are real and pressing needs that a redesign of American currency could address, but they are not necessarily ones of form or thematic content. Approximately eighty-five percent of all counterfeits in world circulation are American dollars.[17] Surely a design innovation that sought to improve security features (with an accompanying change of form) would be a welcome sight for any official proponent of change. By ignoring the substantive demands of currency design in the formulation of their commission, *Design Quarterly* shows no confidence that a designer (or an artist) might ever have an

17 Interview with H.A.M. de Heij and A.G. Groothoff, De Nederlandsche Bank, Amsterdam, March 4, 1993.

opportunity to improve the existing American currency design apart from tinkering with the imagery. While ignorance of practical demands and the requirement of currency design might be excusable in other fields, it's a pity that it is fostered within the design community as matter of conscious choice.

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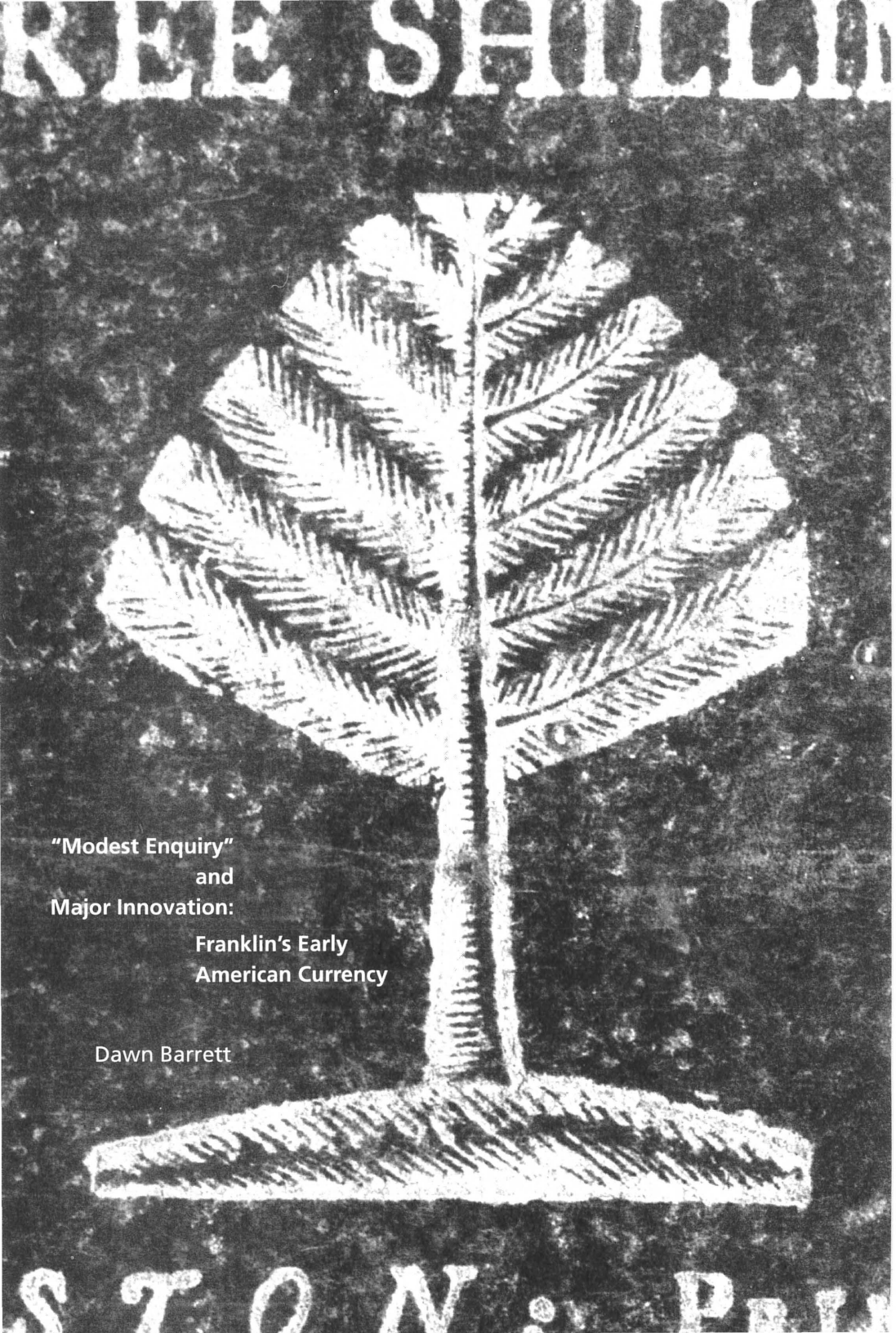
REE SHILLI
"Modest Enquiry"
and
Major Innovation:
Franklin's Early
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American colonial paper money is put in the context of its historical economic situation. The author examines paper currency with regard to paper, printing and design and scrutinizes the function of text elements with regard to security and authenticity. Benjamin Franklin's innovations for security paper and adapting nature printing for use in currency production are also discussed. The imagery of paper currency is examined with regard to ideological motives in the creation of a new and independent nation.

The title is a reference to a pamphlet written and printed by Benjamin Franklin in 1729 entitled: "A Modest Enquiry into the Nature and Necessity of a Paper Currency," which argued the economic benefit of issuing paper currency in Pennsylvania. Franklin later remarked in his autobiography that: "Our debates possess'd me so fully of the subject, that I wrote and printed an anonymous pamphlet on it. . . It was well receiv'd by the common people in general; but the rich men dislike'd it, for it increas'd and strengthen'd the clamor for more money, and they happening to have no writers among them that were able to answer it, their opposition slacken'd and the point was carried by a majority in the House. My friends there, who conceiv'd I had been of some service, thought fit to reward me by employing me in printing the money; a very profitable job and a great help to me. This was another advantage gain'd by my being able to write."

Background

The three hundred year history of American paper currency is a complex one, with many changes occurring in the regulation and occasion of its issue. The chronology can be simplistically divided into four general periods: early American paper money: 1690-1800; private bank notes: 1800-1865; federally issued Civil War currency: 1861-1865; modern federal issues: 1865-present.[1]

1 Doty, *World of Paper Money,* 117.

The four forms of paper money used in colonial America were: receipts for commodities called commodity notes; bills of credit based on tax receipts; colonial loan-office notes, and bills of exchange.[2]

2 McCusker, "Colonial Paper Money," 95-96.

In the sixteenth and seventeenth century, inland trade in colonial America was chiefly conducted according to the ancient custom of bartering, where one commodity was exchanged for another. Although the quantity of the goods could be rated and legally set as a standard scale of exchange (i.e., ten pounds of pork = one beaver skin in season), having no established method for controlling the quality of the goods meant that inferior quality goods were the ones most frequently offered for the payment of debts (especially those offered for the payment of taxes).[3] Native Americans were an important part of the local economy and it was often the commodities they controlled, like beaver pelts and wampum, that set the standard for the exchange of other forms of local commodity money. Commodity notes were developed as a way of standardizing the grading of produce. Tobacco was made the official currency of Virginia in 1619, but its perishable and bulky nature made it an inconvenient major currency. Tobacco notes were issued as warehouse receipts as early as 1669 in Antigua and circulated as a kind of paper money there. Although the practice was abolished in Antigua in 1675, tobacco receipts were declared legal currency in 1727 in Virginia. These were one of the most trustworthy and useful currencies for many decades.[4]

3 Massey, "Early Money Substitutes," 15-18. The exchange rate "ten pounds of pork = one beaver skin in season" is from a reproduction of a 1703 price list illustrated in Taxay, *Money of the American Indians*, and reproduced in Massey's article.

4 Massey, "Early Money Substitutes," 20.

Bills of credit were issued by colonial legislative authority usually during wartime when insufficient funds were available in the treasury. Bills of credit functioned as a credit promise for the later payment of taxes. Unlike commodity money, bills of credit were declared legal tender and circulated freely within the issuing colony as well as neighboring ones. The issue of loan office notes were secured on the basis of collateral offered. The most common of these were the loans made on land

security. Land-office notes were first issued in Barbados in 1706, and were used on the continent later, as a recourse against the depreciating value of bills of credit. Land-office notes allowed individuals to borrow money at a specified interest rate and pay it back over a period of time. Strictly speaking a bill of exchange is a negotiable instrument rather than a form of paper money, but it can also be counted among the four forms of colonial paper currency, because it also circulated in lieu of other media of exchange.[5]

5 McCusker, "Colonial Paper Money," 100-101.

The inventiveness of colonial American monetary experimentation can be attributed to a cultural predisposition to take risks, but it is more truthful to cite the pragmatic aspects of the colonial situation as the main impetus for the progressiveness of the local administrators. The conditions leading up to the use of paper money in the British American colonies can be summarized in three categories: the effects of imperial monetary regulations; on-going problems with coin and money substitutes; and emergency military situations.

The British crown forbade the exportation of specie to the colonies in North America.[6] As a consequence, colonial commerce was forced to rely upon coin of other countries, money of account, barter system and the use of money substitutes like nails, powder and shot. There was a great variety of coin in circulation in European and American trade (including Central and South America). A partial listing includes the Danish rigsdaler and krone; the Dutch rijksdaalder and leeuwendaalder; the German reichstaler and thaler; the English crown, shilling and guinea; Portuguese dobra de quatro escudos and peça (Johannes); the Spanish peso de plata, piastra ('piece of eight') and pistola (gold

6 Sosin, "Imperial Regulation of Colonial Paper Money, 1764-1773," 4:198.

doblon); and the French ecu, or louis d'or ('French guinea'). The most abundant coin in America was the Spanish peso or piastr. The peso was called 'piece of eight,' because of it's divisible nature. This coin was later referred to as the Spanish dollar, which was declared as the basic unit of the monetary system of the United States by the Continental Congress of 1775. The complexity of having so many different currencies operating in the same arena meant that people were accustomed to figuring value in exchange rates, and dealing with money of account.[7]

As no substitutes to coin were accepted in trade by the British merchants, specie was hoarded to use for payment. The shortage of circulating coin was additionally aggravated by an unfavorable balance of trade for the colonies. The trading situation varied greatly between individual colonies and differed from region to region according to the available local resources. In New England the value of imports consistently exceeded that of exports, which meant that the little specie that did circulate was constantly being drained away to pay for goods imported from the mother country. It is therefore not surprising that it was the New England colonies (chronically short of specie and more desperate for a circulating medium) that were the first to issue publicly authorized paper currency.[8] British regulations also forbade the sponsorship of banks in the colonies, so bank notes were not a means to remedy the local shortage of money.

7 McCusker, *Money and Exchange in Europe and America, 1600-1775. A Handbook*, 7.

8 The southern rice producing colonies, and the mid-Atlantic tobacco producing colonies had a more consistent market for their goods in England, and therefore did not suffer the same trade imbalance as found in the north, where products (like lumber and fish) were less easily traded with England.

Because foreign coins did not bear indication of their value in colonial currency, their value was always debatable.[9] An advantage of paper money, over coin, was the explicitness of its value. In an effort to keep the specie circulating in the local economy, colonies gave a higher value for the coin. Although overvaluation served a short term goal of increasing the quantity of circulating coins, it made the use of coin problematic between colonies, and had an adverse effect on value and prices.[10]

It took conditions of emergency and necessity to initiate the widespread acceptance of paper currency. When left with no alternative, paper currency was accepted as 'better than nothing,' but it was most often conditions of crisis (brought about by military campaigns) that spawned the first use of paper currency. Colonial British America was the new world site of the first issue of publicly authorized paper money. Bills of credit were first issued in Massachusetts Bay Colony in 1690 when the Massachusetts colonial treasury lacked funds to pay soldiers returning from a campaign against the French in Quebec. The officials had counted on the spoils of a successful campaign to provide revenue necessary for the payroll. When it appeared that the soldiers would mutiny for lack of pay, the decision was taken to issue paper money which would be honored in the payment of debts such as taxes.[11] One can only imagine the frustration of the soldiers when told that a printed piece of paper was a fair exchange for their services. Soldiers typically received only a fourth of the stated value. A year later, in an effort to sweeten the deal, a discount incentive was offered. Those wishing to use bills of credit for

9 McCusker, "Colonial Paper Money," 99-100.

10 Debased coinage was a problem for centuries. Clipping (removing the edges of coins to obtain small amounts of their precious metals) and sweating (leaching out metals with heat) were common ways of obtaining precious metals from coins. The result was a coin no longer as heavy or valuable as the amount stamped upon it. Paper had the advantage of being impervious to debasement.

11 Brock, *Currency of the American Colonies 1700-1764: A Study in Colonial Finance and Imperial Relations.*

the payment of taxes would receive a discount making these bills even better than money. At that point their value and use began to gain some acceptance in the eyes of the general public *(figure 2)*.

The financial strategy for issuing bills of credit worked like this: bills were printed to pay debts incurred by the state for services like soldiering. The colonial treasury could replace the funds paid out in paper money by allocating a percentage of the next tax collection to pay for the redemption of the bills. In the 1690 Massachusetts issue, the bills of credit were based upon money that was expected, rather than on funds already held. This was a workable system, so long as those tax revenues were actually received, and the earmarked funds really used for the retirement of the paper bills. But it did not always work according to plan. Tax collection was never complete or timely, and money collected was often diverted to other urgent causes, which not atypically were also military ones. When other new and equally urgent needs arose, the decision was often taken to print more money, without having first retired the old, and so it went. Despite good intentions to balance the amounts issued in paper currency with hard monies or land to back it, most colonies fell prey, at least occasionally, to the temptation to print money as the need arose, while they neglected to balance the accounts in their treasuries.

Printing colonial and continental currency

Paper's utility as a counterfeit deterrent is almost equal to its importance as the substrate for the printing. The most secure currency paper is made from a formula of secret ingredients that also contains specially devised watermarks or other unique materials. To enhance security, watermarked and specially manufactured papers were used in the production of early American paper currency. Like most paper used in American colonial printing, the paper employed for the earliest currency issues was imported from Europe.[12] Paper mills in New England were not established until 1728, almost thirty years after the introduction of paper currency in that region. Mills operating before this time in America were all located in the middle colonies, which did not issue paper currency until later in the century.

12 The earliest paper mill in America was built by William Rittenhouse and his sons in 1690 (coincidentally the same year as paper currency was first issued in Massachusetts).

Security features found in American-made currency paper of the mid-eighteenth century include the addition of mica, colored silk threads and other fibrous materials. Colored threads first appear in the paper of currency printed by Benjamin Franklin during the 1730s. (Crane paper company, the manufacturer of contemporary American currency paper, also uses colored threads. The idea for doing this appears to have been invented by Franklin and is over 200 years old.) The first use of mica for currency printing occurs in Pennsylvania, Delaware and New Jersey issues printed by Franklin, during 1740s.[13] Franklin, who characteristically sought inventive design solutions for commonly vexing problems, experimented with paper formulas that included the addition of mica and asbestos.[14] Experimentation with recipes for paper manufacture was just one among several ways that Franklin helped stimulate the growth of the Philadelphia area paper industry. Chronically at a loss for

13 The first colored threads I've observed are in Franklin's Pennsylvania currency issue of August 1739. Green threads are found in 10 shilling bills, red and blue fibres are seen in the 15 and 20 shilling. The earliest occurrence of mica I've seen is Franklin's August 1746 Pennsylvania currency.

14 Eddy, *Account Books Kept by Benjamin Franklin*, 2:19.

reasonably priced, reliable sources of paper, it served his own interests as a printer and retailer, to encourage the development of local paper-mills.[15] Later in his life Franklin boasted that he had been responsible for the development of eighteen different paper mills in the Philadelphia region. His cooperation with paper mills was both experimental and entrepreneurial in nature. He collected rags that he then sold to paper-makers. In addition to buying paper from local paper mills to use at his own press, he conducted a vigorous wholesale trade as paper supplier to other printers and ran a stationery store at his press that sold small qualities of paper at retail prices. Franklin's ledgers indicate that he sold about two thirds of the paper that he bought.

Accounts with local paper makers first appear in Franklin's ledgers in 1735, and mark the first phase of the increased paper production in the Province of Pennsylvania.[16] Entries in Franklin's 1742 account ledger show sums being paid out to Anthony Newhouse, for which there is no receivable product. It is possible that these expenses were incurred by Franklin as research and development costs for the creation of currency paper with mica, and that these payments were purposely omitted from the ledger as a way of protecting the secrecy of those operations with Newhouse. The first specific mention of "money paper" occurs in Franklin's ledgers of July 27, 1743/44 recording "4 reams and 14 quires for paper money" purchased from Anthony Newhouse.[17] Starting in the following year, Newhouse furnished most of the paper Franklin used to print currency during the 1740s.[18]

15 Eddy, *Account Books Kept by Benjamin Franklin*, 2:30-31.

16 Franklin bibliographer, C. William Miller, suggests that Franklin was experimenting with paper concoctions with papermaker Anthony Newhouse in the 1740s. Miller, C. William. 1974. *Benjamin Franklin's Philadelphia Printing 1728-1766: A Descriptive Bibliography*. Philadelphia: American Philosophical Society, xli.

17 Eddy, *Account Books Kept by Benjamin Franklin*, 2:26-28.

18 Mica has not been used in American currency since colonial times, but the use of metallic flecks in currency was introduced in the 1994 Dutch hundred guilder, designed by Jaap Drupsteen.

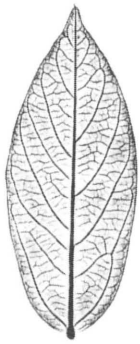


Figure 1 A sample mono leaf print printed by Joseph Breintnall of Philadelphia (circa 1731-44). This nature printing process was adapted by Benjamin Franklin in the late 1730s as a security device for paper currency printing. Reproduction, courtesy of the Library Company of Philadelphia.

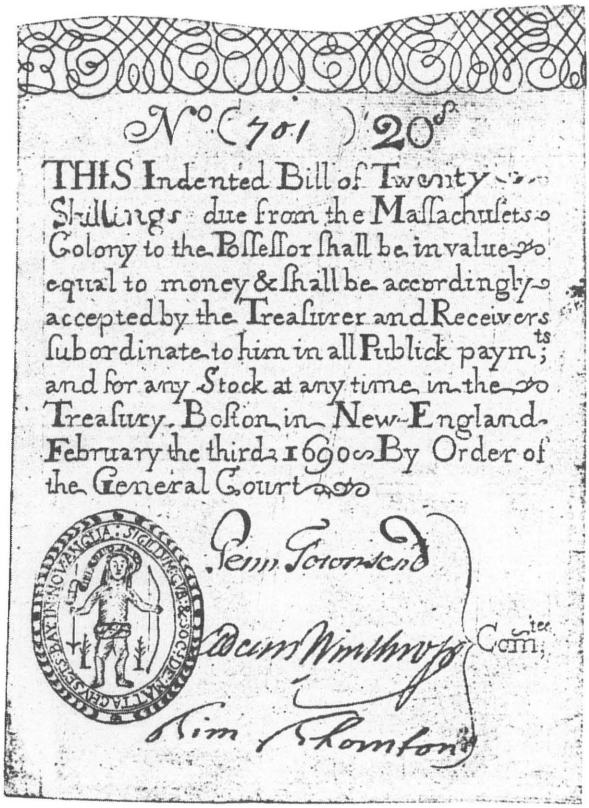
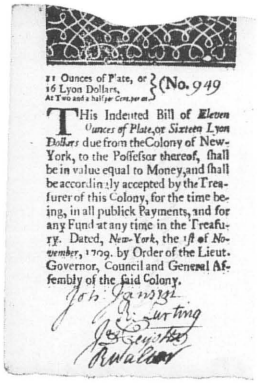


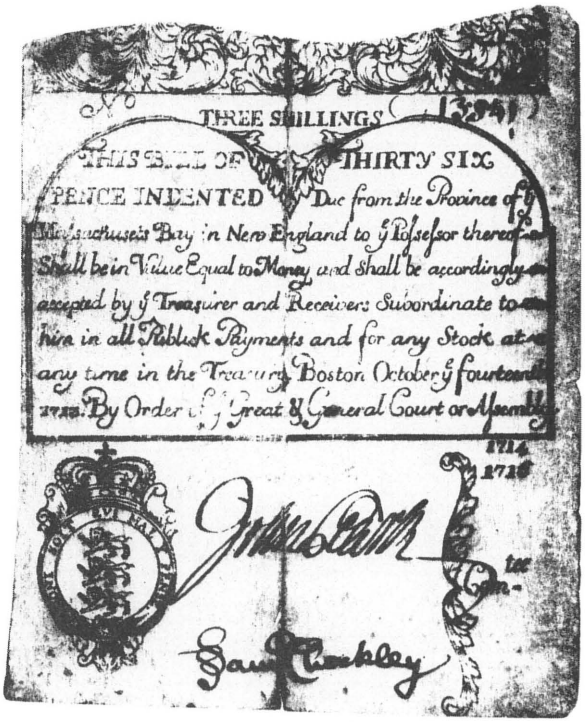
Figure 2 This 1691 indented bill of credit was issued by the Colony of Massachusetts Bay according to a February 3, 1690/91 resolution and was printed from an engraved copperplate. This was the second issue of paper money in Massachusetts, and was receivable by the Treasurer for taxes at a five percent premium. The Massachusetts' colony seal shows an Indian with a speech banner reading (in reverse) "COME OVER AND HELP US." The bill was fraudulently altered to raise the denomination from two shillings and six pence to twenty shillings. Reproduction courtesy of Eric P. Newman Numismatic Education Society.


11 Ounces of Plate, or 16 Lyon Dollars. At Two and a half per Cent. per an.

(No. 949

THis Indented Bill of *Eleven Ounces of Plate, or Sixteen Lyon Dollars* due from the Colony of New-York, to the Poſſeſſor thereof, ſhall be in value equal to Money, and ſhall be accordingly accepted by the Treaſurer of this Colony, for the time being, in all publick Payments, and for any Fund at any time in the Treaſury. Dated, *New-York*, the 1ſt of *November*, 1709. by Order of the Lieut. Governor, Council and General Aſſembly of the ſaid Colony.

Figure 3 This New York silver issue, indented bill of credit with currency stated in "Lyon Dollars" (referring to the "leeuwendaalder," the Dutch "lion dollar" coin with royal heraldry depicting two facing lions) was issued in 1790. Initially issued as receivable for taxes at two and one-half percentage interest, the premium was later revoked. Printed by William Bradford with woodcut engraving and typeset text. Reproduction, courtesy of Eric P. Newman Numismatic Education Society.


THREE SHILLINGS

THIRTY SIX

PENCE INDENTED

Due from the Province of

Shall be in Value Equal to Money and shall be accordingly

accepted by ye Treasurer and Receivers Subordinate to

hire in all Publick Payments and for any Stock at

any time in the Treasury Boston October ye fourteenth

1713. By Order of ye Great & General Court or Assembly

1714

1716

Figure 4 This 1713 Massachusetts indented bill was redated and reissued in 1716. The shape surrounding the text was distinctive for that denomination and was intended to protect the bill from alterations. This copperplate engraving was reused with later dates added for at least eighteen subsequent issues from 1716 to 1740. Royal arms contain the motto "HONI SOIT QVI MAL Y PENSE" (Evil to him who evil thinks). Reproduction, courtesy of Eric P. Newman Numismatic Education society.

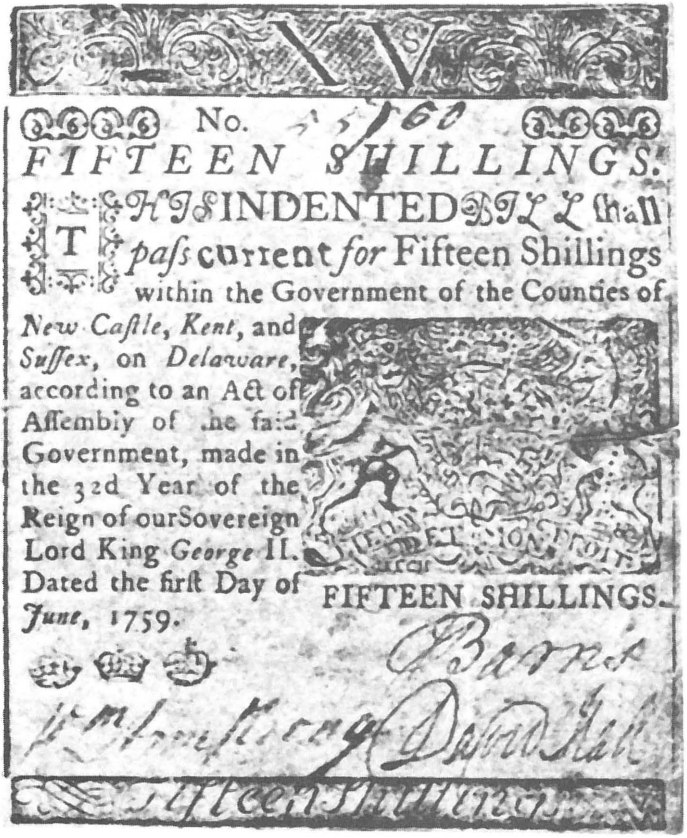


Figure 5a Front. This Delaware 1759 legal tender bill of credit was printed by Benjamin Franklin and David Hall, employing partly engraved blocks and partly set type. The Arms contain the motto "DIEU ET MON DROIT" (God and my right). Reproduction, courtesy of Eric P. Newman Numismatic Education Society.

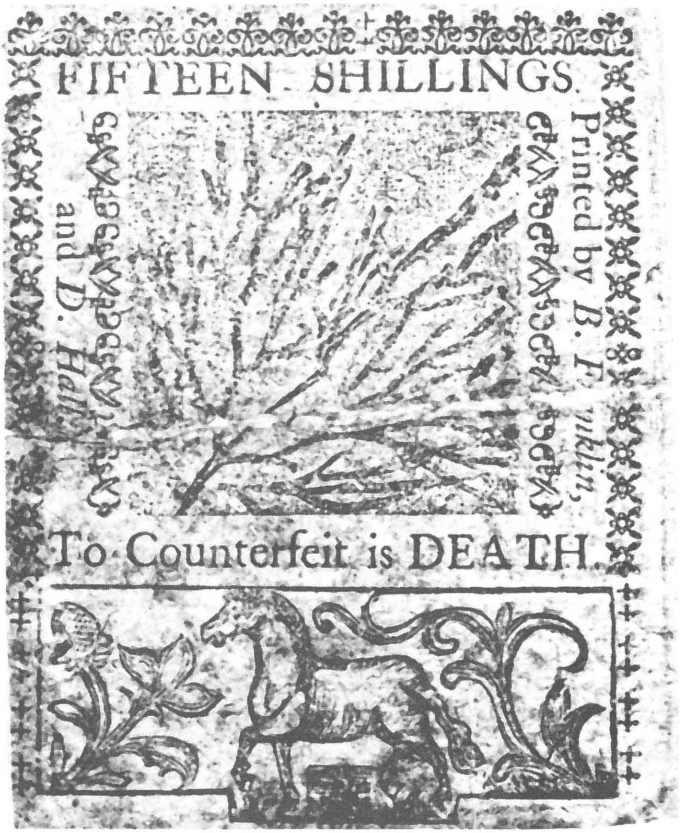
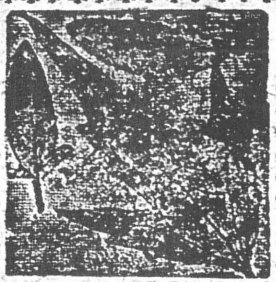


Figure 5b Back (of 5a). This shows Franklin's 1739 security invention, the metal cast "nature print." New nature prints were produced for this issue by David Hall after Franklin was no longer fully active in daily printing production. The accompanying animal engraving by Leech was first introduced by Franklin as an indented design on the front of the 1734 Delaware issue, and was moved to the back to serve as a recognizable figurative image keyed to the denomination. Reproduc-tion, courtesy of Eric P. Newman Numismatic Education Society.

Figure 6 Here is a page of leaf prints by Joseph Breintnall produced during the years 1731-44. Plant identifications include: "Pidgeon Pea, French Mallow, Wormwood, Snakeroot, Sage, Raspberry, Tansey, Mulberry, etc." Breintnall used the nature printing process to document local botanical species some of which he sent to British botanists interested in indigenous American plants. His enthusiasm for the activity lead him to also make portfolios of nature prints for sale. Two albums of Breintnall's prints were given by his widow to the Library Company of Philadelphia. Reproduction, courtesy of The Library Company of Philadelphia.

Figure 7 Back. This 1779 continental currency demonstrates a nature print made with two willow leaves on cloth. The paper contains mica (left side, near edge of square) and colored threads (visible in upper segment of the first leaf) and bears the watermark "CONFEDERATION" for this and higher denominations and "UNITED STATES" for lower denominations. A new set of nature prints was made for this and other newly added denominations. Punctuation marks were included in the border design. Before the issue was complete, the exchange rate had slipped to $40 in bills for $1 in specie. Reproduction, courtesy of the Print Department of Boston Public Library.

† ONE DOLLAR. †



PHILADELPHIA:
Printed by HALL and SELLERS. 1776.

¶ TWO DOLLARS. ¶

PHILADELPHIA:
Printed by HALL *and* SELLERS. 1776.

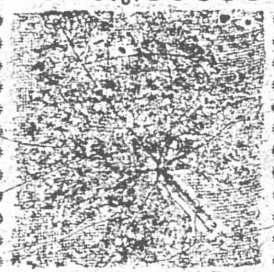
THREE

Philadelphia:
Hall & Se

EIGHT DOLLARS.

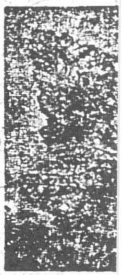
PHILADELPHIA:
PRINTED BY HALL & SELLERS. 1776.

† SEVEN DOLLARS. †



PHILADELPHIA:
Printed by HALL *and* SELLERS. 1776.

§ SIX D



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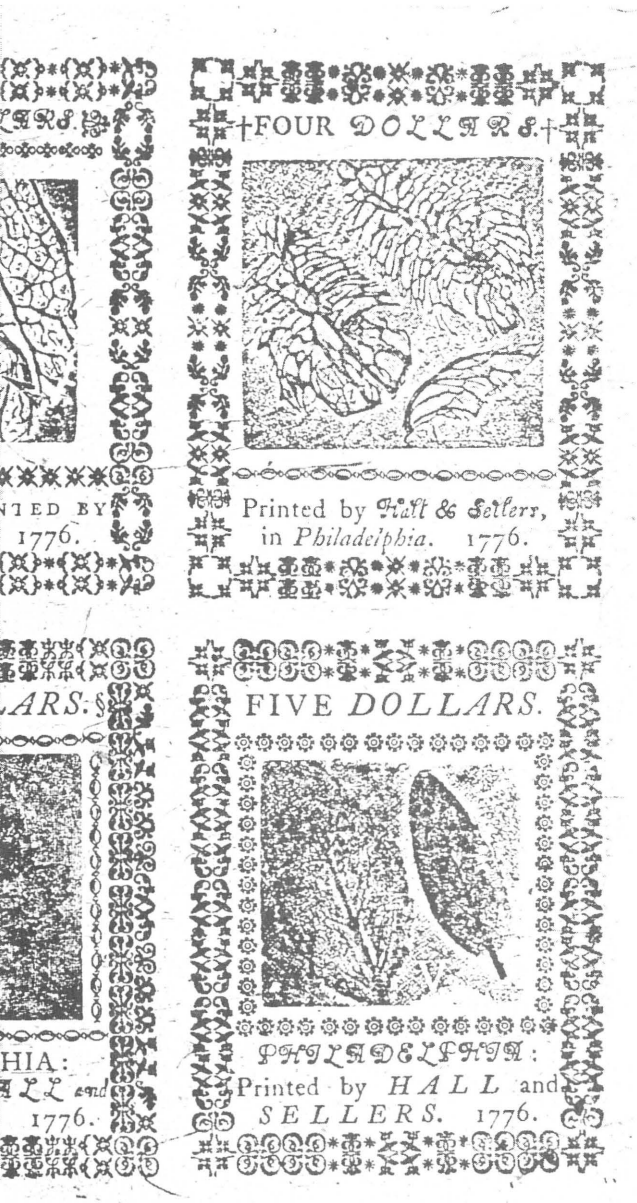
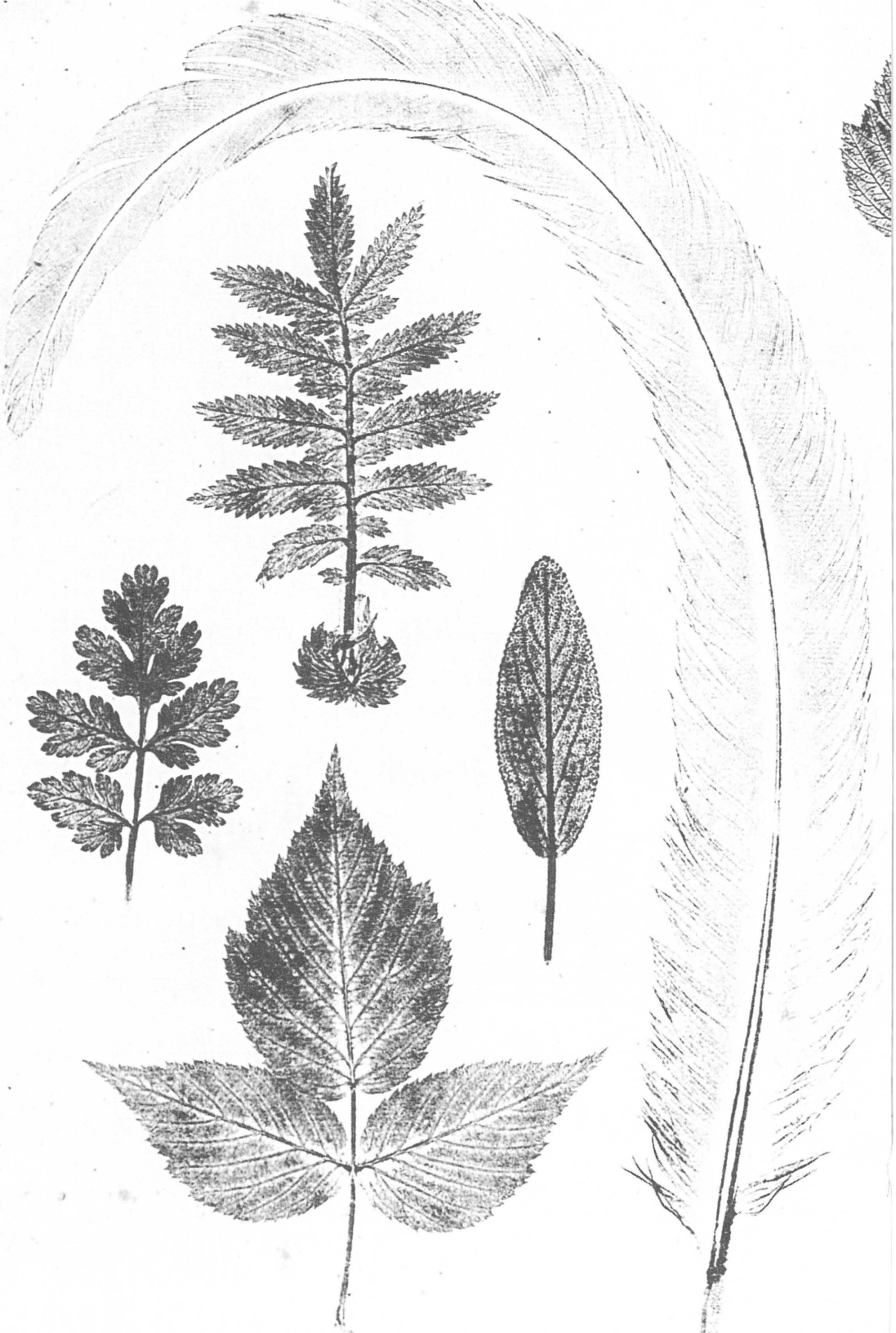


Figure 8 Back. This 1776 continental currency shows detail of an uncut sheet showing the back of 1, 2, 7, and 8 dollar denominations. (The front of this print is figure 15.) The nature prints on $2 and $8 were used on previous Pennsylvania issues. Colored silk threads are visible on denominations above $8. These were printed by Hall and Sellers of Philadelphia, the subsequent owners of the Franklin and Hall printing firm, with paper produced by Ivy Mills of Chester County, Pennsylvania. Reproduction, courtesy of the Print Department of Boston Public Library.

Figure 9 (Next page) Here is a full page of nature prints by Joseph Breintnall, made by inking both sides of the specimen, placing it on the inside of a folded sheet and applying pressure. The leaf in the center must have been printed separately. In addition to leaves, Breintnall also printed cloth and feathers. Although feathers are never used in currency printing, cloth features prominently as the background in the cast metal nature prints *(see figure 7)*. Reproduction, courtesy of The Library Company of Philadelphia.



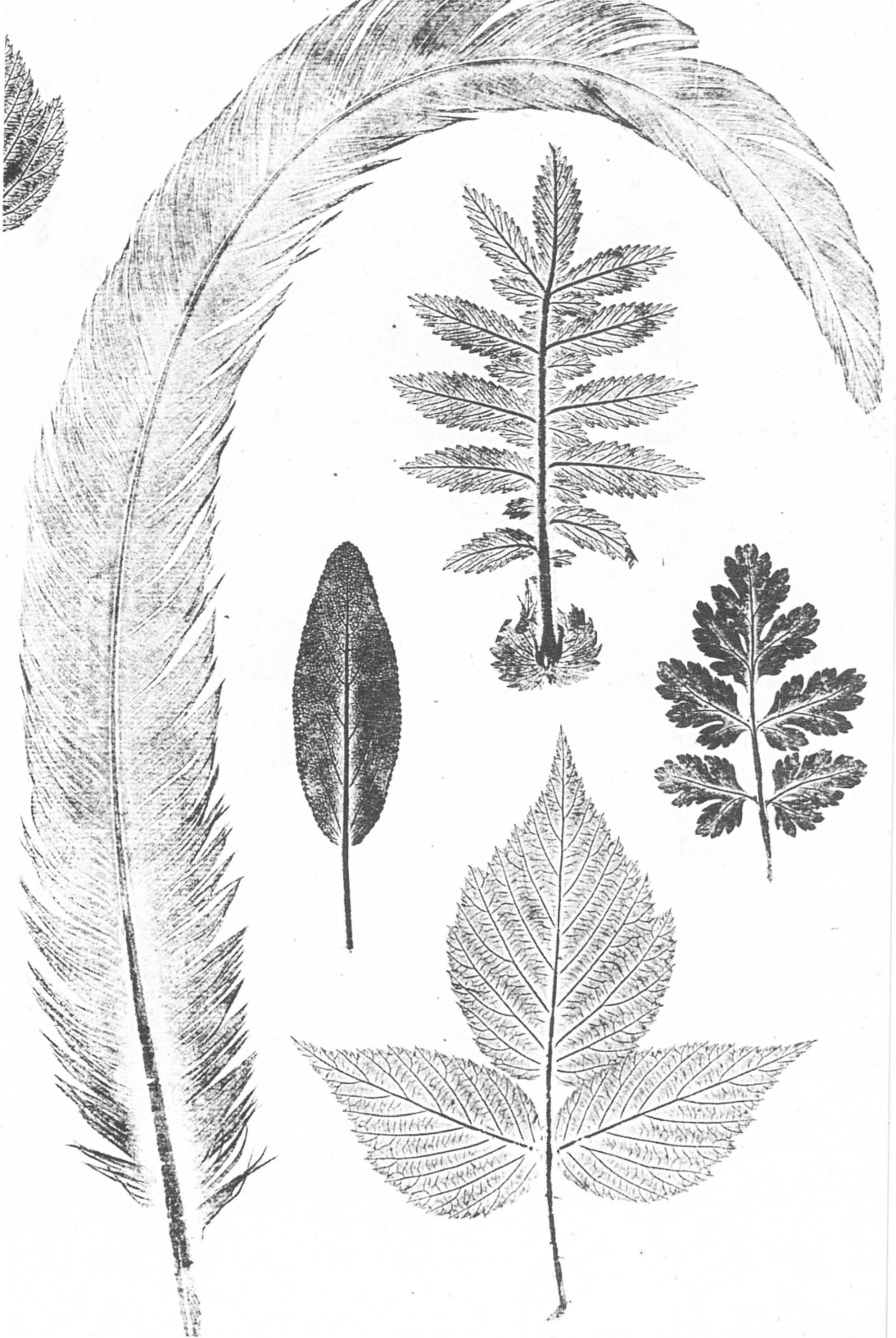


Figure 10 Back. This is the 1776 Massachusetts "pine tree shilling." Because paper money was argued and justified as a needed stimulus to trade, vignettes portraying local economy and commerce were not uncommon subject matter for pictorial representation. Nonheraldic imagery for New England currency includes ships or shipyards as well as representation of local resources and export commodities like cod and pine trees. The front of this bill was engraved and printed by Paul Revere. Reproduction, courtesy of the Print Department of Boston Public Library.

Figure 11 Front. This 1775 Maryland bill was issued to promote the manufacture of gunpowder and contained a propagandistic woodcut by Thomas Sparrow. Reproduction, courtesy of Eric P. Newman Numismatic Education Society.

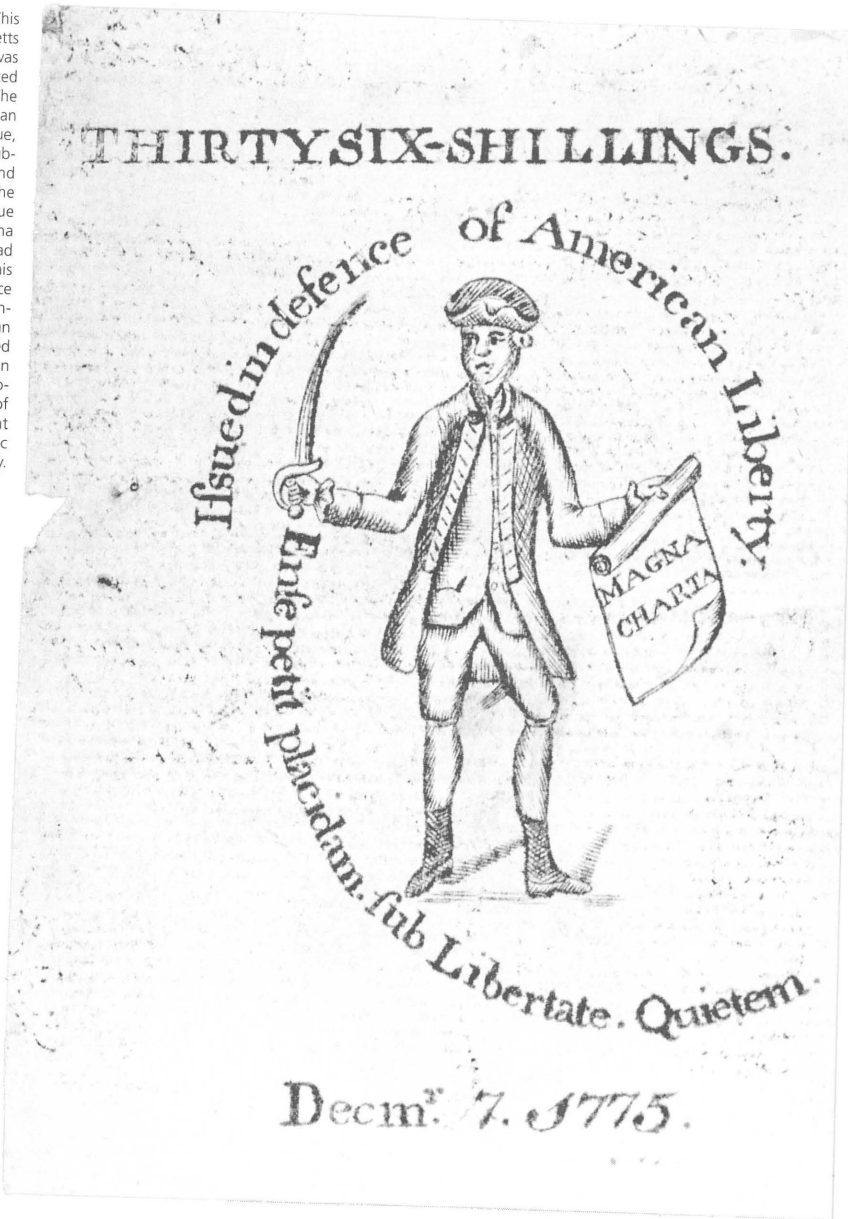


Figure 12 Back. This 1775 Massachusetts legal tender bill was engraved and printed by Paul Revere. The plate, first used for an earlier August issue, was reused in subsequent issues and modified for the November 1776 issue by changing "Magna Carta" to read "Independence." This is a rare instance where a non-allegorical human figure was depicted on early American currency. Reproduction, courtesy of the Print Department of the Boston Public Library.

Figure 13 Back. This 1779 South Carolina bill of credit showed an image of Prometheus bound and attacked. It was engraved and signed by Thomas Coram of Charleston. Reproduction, courtesy of Eric P. Newman Numismatic Education Society.

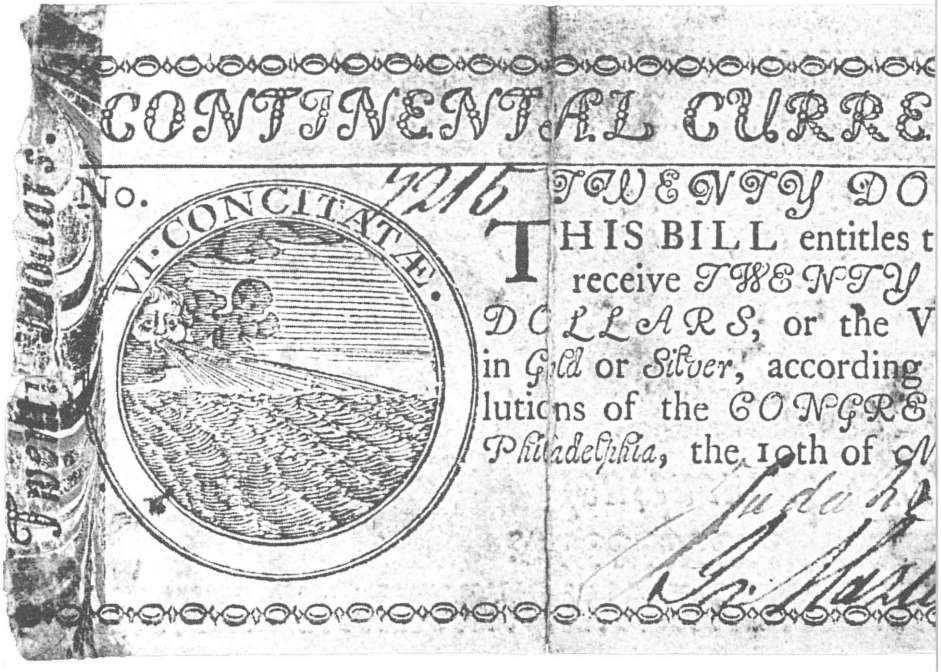


Figure 14 Front. For the printing of the $20 denomination of the 1775 continental currency, Benjamin Franklin supplied a paper with a polychrome, marbled edge as a deterrent for counterfeiting. (There are no known counterfeits of this issue in existence.) The printed emblem shows a strong wind making waves. It was created by Franklin and included the motto, "VI. CONCITATAE" which he translated as "raised by force." An article signed "Clericus," but attributed to Franklin, described the symbolic meaning: ". . . in figurative language great waters have signified the people, and waves an insurrection. The people of themselves are supposed as naturally inclined to be still. . . Their rising here appears not to be from any internal cause, but from an external power. . . The black cloud perhaps designates the British Parliament, and the waves the colonies." Reproduction, courtesy of the Print Department of Boston Public Library.

The United Colonies

ONE DOLLAR. No. 56791

THIS Bill entitles the Bearer to receive ONE Spanish MILLED DOLLAR, or the Value thereof in Gold or Silver, according to a Resolution of CONGRESS, passed at PHILADELPHIA February 17, 1776.

Wm. Coats

Jn. Williams

DEPRESSA RESURGIT

ONE DOLLAR.

The United Colonies

EIGHT DOLLARS

No. 56791 EIGHT DOLLARS

THIS Bill entitles the Bearer to receive EIGHT Spanish milled DOLLARS, or the Value thereof in Gold or Silver, according to a Resolution of CONGRESS, passed at Philadelphia February 17, 1776.

Wm. Coats

Jn. Williams

MAJORA MINORIBUS CONSONA

EIGHT DOLLARS.

The United Colonies

TWO DOLLARS

TWO DOLLARS. No. 56791

THIS Bill entitles the Bearer to receive TWO SPANISH MILLED DOLLARS, or the Value thereof in GOLD or SILVER, according to a Resolution of CONGRESS, passed at Philadelphia February 17, 1776.

Wm. Coats

Jn. Williams

TRIBULATIO DITAT

TWO DOLLARS.

The United Colonies

SEVEN DOLLARS

No. 56791 SEVEN DOLLARS

THIS Bill entitles the Bearer to receive SEVEN Spanish milled DOLLARS, or the Value thereof in Gold or Silver, according to a Resolution of CONGRESS, passed at Philadelphia February 17, 1776.

Wm. Coats

Jn. Williams

SERENABIT

SEVEN DOLLARS.

The United Colonies

THREE DOLLARS

THREE DOLLARS. No. 56791

THIS Bill entitles the Bearer to receive Three Spanish milled DOLLARS, or the Value thereof in Gold or Silver, according to a Resolution of CONGRESS, passed at Philadelphia February 17, 1776.

Wm. Coats

Jn. Williams

EXITUS IN DUBIO EST

THREE DOLLARS.

The United Colonies

SIX DOLLARS

No. 56791 SIX DOLLARS

THIS Bill entitles the Bearer to receive SIX Spanish milled DOLLARS, or the Value thereof in GOLD or SILVER, according to a Resolution of CONGRESS, passed at Philadelphia February 17, 1776.

Wm. Coats

Jn. Williams

PERSEVERANDO

SIX DOLLARS.

The United Colonies

FOUR DOLLARS

FOUR DOLLARS. No. 56791

THIS Bill entitles the Bearer to receive Four Spanish milled Dollars, or the Value thereof in Gold or Silver, according to a Resolution of CONGRESS, passed at Philadelphia February 17, 1776.

Wm. Coats

Jn. Williams

AUT MORS AUT VITA DECORA

FOUR DOLLARS.

The United Colonies

FIVE DOLLARS

No. 56791 FIVE DOLLARS

THIS Bill entitles the Bearer to receive FIVE Spanish milled DOLLARS, or the Value thereof in GOLD or SILVER, according to a Resolution of CONGRESS, passed at PHILADELPHIA FEBRUARY 17, 1776.

Wm. Coats

Jn. Williams

SUSTINE VEL ABSTINE

FIVE DOLLARS.

Figure 15 Front. This uncut sheet of signed 1776 continental currency (see back of figure 8) contains emblems including: an acanthus plant with motto DEPRESSA RESURGIT (though oppressed it rises) taken from Camerarius and used for $1 bill; some grain being threshed with motto "TRIBULATIO DITAT" (affliction improves it) on the $2 bill; a harp with thirteen strings with motto: "MAJORA MINORIBUS CONSONANT" (large and small in harmony) on $8 bill. Describing the harp emblem Franklin wrote: "I conceive that the frame may be intended to represent our new government by a Continental Congress; and the strings of different lengths and substance, either the several colonies of different weight and force, or the various ranks of people in all of them, who are now united by that government in the most perfect harmony." Reproduction, courtesy of the Print Department of Boston Public Library.

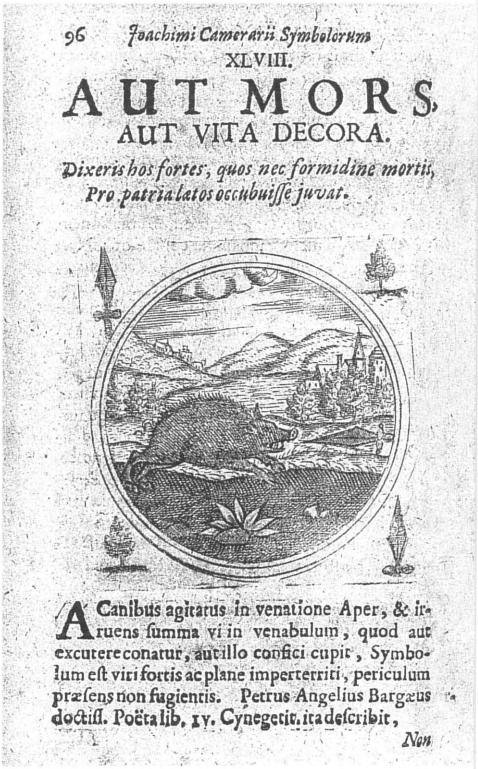


Figure 16 Volume 2, page 96 of the 1702 edition of the motto book *Symbolorum ac Emblematus Ethico-Politicorum* by Joachim Camerarius was in Benjamin Franklin's library. The emblem was one that was chosen by Franklin to appear, with its existing motto, on the four dollar denomination of the continental currency of 1775. (See figure 17.) The motto "AUT MORS, AUT VITA DECORA" (translated by Franklin as "Death or liberty") is the classical antecedent for Patrick Henry's famous phrase "give me liberty or give me death." Reproduction, courtesy of The Library Company of Philadelphia.

Figure 17 The emblem appearing on the front of the 1775 $4 continental currency used an image and motto from a seventeenth century motto book (figure 16). Concerning this emblem Franklin wrote: "On another bill is impressed a wild boar of the forest rushing on the spear of the hunter. . . with this motto AUT MORS, AUT VITA DECORA, which may be translated — Death or liberty. The wild boar is an animal of great strength and courage, armed with long and sharp tusks, which he well knows how to use in his defence. He is inoffensive while suffered to enjoy his freedom, but when roused and wounded by the hunter, often turns and makes him pay dearly for his injustice and temerity." *Pennsylvania Gazette*, September 20, 1775, Number 2439. Reproduction, courtesy of the Print Department of Boston Public Library.

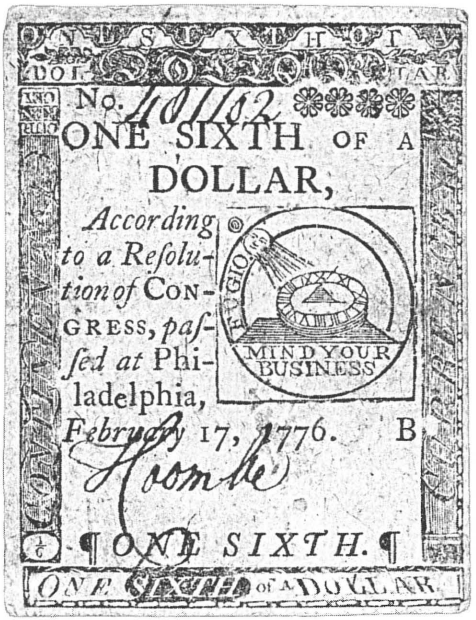


Figure 18 Front. This 1776 fractional continental currency shows Franklin's design of a rebus containing a sun, a sun dial and the Latin word "FUGIO." Under this design is the English text "MIND YOUR BUSINESS." The combination suggests that because time (the sun) is flying, pay attention to your business or get to work. In the wording is also the unmistakable suggestion "mind your (own) business" that is not unlike other Franklin proverbs such as "time is money." "FUGIO" is also a reference to the older and familiar tempus fugit (time flies) motif that frequently appeared in religious contexts such as gravestones, but in this design Franklin has secularized the meaning. Reproduction, courtesy of the Print Department of the Boston Public Library.

Figure 19 Back. This 1776 fractional continental currency shows Franklin's chain design of the united colonies. This design was reused and widely adopted for many other patriotic uses, including the fugio cent of 1787 and the liberty cent of 1793. Franklin's sketches and final drawings for this device are in the collection of Franklin papers, housed in the American Philosophical Society. Reproduction, courtesy of the Print Department of the Boston Public Library.

Franklin later served as an advisor to the committee of the Continental Congress responsible for the design and printing of the currency, so it is not surprising to also find mica and silk threads featured in Continental Currency paper *(figures 7-8, 15)*. Paper for this currency was manufactured at Ivy Mills, a Pennsylvania paper mill owned by Thomas Wilcox, who knew Franklin and supplied him with all kinds of paper.[19] The use of mica in the currency paper was so well established by the end of the eighteenth century that it was also regularly included in counterfeits. Paper made with "silk and isinglass in it &c." was found among other counterfeiting equipment seized on a captured British ship en route to British-occupied New York in 1779.[20]

19 Wilcox, "The Wilcox Paper Mill (Ivy Mills) 1729-1866," 7:1, 28-34.

20 Newman, "Counterfeit Continental Currency Goes to War," 70:10.

Printing

Early American paper money was printed by two methods: intaglio engravings on metal plates *(figures 2, 4, 12, 13)*; and relief printing with cast type combined with cast ornaments *(figures 5, 7, 14, 15)*, or with type combined with engraved "cuts" in either wood or metal *(figures 3, 11)*. Combinations were also employed, most typically with plate printing for the front and relief printing for the back. As a matter of course, all printed currency also included handwritten portions, for the serial numbering and signatures.

Nature printing

Perhaps the most ingenious invention in all of early American paper money printing is Franklin's use of nature prints on paper currency. Nature printing was a common eighteenth century technique used for recording and conveying information about the form and structure of

plants. The practice of mono-printing botanical specimens dates as early as the Renaissance, but nature printing techniques had never been translated into mechanical print processes until Franklin invented a way to print a leaf in a 1737 edition of Poor Richard's Almanac.[21] The leaf was used as an illustration for an article on the plant's medicinal value as a snake bite remedy. By casting a leaf in what is thought to have been a plaster and asbestos mixture, Franklin created a lead stereotype that could be nailed to a wooden block and printed in relief along with other cast elements and type.[22] Two years later, Franklin used this process to create leaf images on Pennsylvania paper currency. In order to make a consistent print impression (for up to 34,000 identical prints), Franklin must have developed a method to cast these leaf and cloth impressions in metal, using a soft, intermediate mold.[23] The uniqueness and delicacy of a natural object made a cast impression that could never be adequately rendered by counterfeiters, as long as the process remained a secret.

21 Leonardo da Vinci. (Codex Atlanticus 1490-1505, Folio 72.) Milan. Cave, *Typographia Naturalis.*

22 Newman, "Nature printing on Colonial and Continental Currency," 77:2-5, 147-623.

23 Franklin's first printing commission for Pennsylvania currency is a 1731 issue which was extensively counterfeited.

Franklin was acquainted with the (mono) nature printing process as it was currently practised by botanists and natural historians of the time. The botanist John Bartram, and the scrivener Joseph Breintnall made nature prints *(figures 1, 6, 9)* for many years before Franklin adapted the process.[24] Joseph Breintnall, a friend of Franklin, was the presumed author of the Poor Richard "Rattle-Snake Herb" text. While working as a printer in London early in this career, Franklin had learned the rudiments of typecasting and refers in his autobiography to making replacement type when working in Keimer's print shop later in Philadelphia. With only a rudimentary knowledge of typecasting and without the help of any type foundry in the colonies (the first type foundry in America was not established until twenty years later), Franklin was able to devise a means

24 Labaree, *The Papers of Benjamin Franklin,* 164.

of casting botanical specimens as a security device.[25] Franklin passed along this secret security feature to his partner David Hall, as well as to other currency printers he sponsored without ever allowing the knowledge to become public (*figures 5b, 7, 8*).

What is most remarkable about this invention is that it remained a complete secret (to historians of printing as well as numismatists), until the mid-twentieth century when research was conducted on the leaf illustrations contained on early Pennsylvania currency included in an exhibition of botanical illustrations at the Philadelphia Museum of Art in the year 1963.[26] Franklin's invention also predated, by about fifty years, the use of stereotyping, which was later developed in Paris as a currency printing innovation useful for producing the French assignats.

25 Numismatist Eric Newman has shown how the same plaster cast of the original leaf had been reused to make more than one lead casting. This allowed multiple printing of the exact same leaf. Newman, "Nature printing on Colonial and Continental Currency," 77:2-5, 147-623.

26 "A World of Flowers," 236-240.

Design

Like most paper money, early American currency is comprised of standard elements deemed necessary for its proper functioning as a monetary instrument. The distinguishing visual components of early American paper money are: text, borders and certain kinds of symbolic or figurative imagery. Each of these elements help perform one or more of the following functions: defining the use, conditions and worth of the financial instrument; establishing authority and trust in the representative value; working as a security device, to deter or detect counterfeiting and alterations; and identifying the issuing body, region or political purpose underpinning the emission.

Text

That eighteenth-century American paper money is text heavy is not surprising given the fact that its antecedents are composed only of words. Text was used to establish and explain the financial functions of the paper in the following message elements:

Denomination Value was indicated in an established currency. Early American paper money was mostly issued in British Sterling (shillings and pence), but measures of gold and silver are also referenced. In 1775 the Continental Congress decided on using what was called "Spanish Milled Dollars" as the currency standard. Denominations are chiefly indicated by words rather than figures.

Classification This identified the paper with an official or unofficial name. (e.g., "this bill"; "this lawful money"; "proclamation money"; etc.). During eighteenth century America many kinds of money were produced, using different methods of financial backing, with different rules for circulation and redemption. Words used on the bill itself do not always spell out the basis of the money's issue.

Terms This explained the conditions and rules for its use to both bearer and receiver: e.g., "shall be equal in value equal to Money and shall be accordingly accepted by the Treasurer . . . in all publick payments for any stock at any time" (*figure 2*) — "this indented bill shall pass current. . ." (*figure 5b*).

Authorization Here the body responsible for issue was named, citing the location and date of the authorizing act or resolution, e.g., "By Order of the Great and General Court or Assembly" or "according to an Act of Assembly of the said Province . . ." It is primarily by resolution date, rather than the date of the printing or actual issue, that currency of this period is identified.

Deliberate misspellings This and other secret marks were sometimes made in the text as a security check. Since counterfeiters tended to faithfully reproduce the original, including its misspellings, this was not effective against outright counterfeiting. A different misspelling of the same word assigned to each denomination, however, did serve as a secret check for detecting alterations made to raise the value.

Manufacture information The printer, engraver and date was often included on the back of typeset bills (*figures 5b, 7, 10*).

Warning to counterfeiters The standard line: "Tis DEATH to Counterfeit" or "To Counterfeit is DEATH" was included on the back of most typeset bills. A counterfeit warning appears frequently, despite the fact that a death penalty was not consistently enforced (*figure 5b*).

Signatures To help control security and authorization, as few as one, and as many as four persons signed each bill. Not infrequently, a contrasting color of ink was used for signatures as a partial deterrent to counterfeiting. The presence of signatures harkens back to earlier forms of paper money, recording the transfer of monies of account between individuals.

Serial number Each bill was given a unique number for that denomination and date of issue. Numbers were handwritten in a specific location. Pre-printed indicators varied from the prompt word 'No.' (*figure 3, 5b*) to the use of brackets (*figures 2, 4*). More specific indicators, like a defined box or rules, helped standardize the visual consistency of larger emissions.

Borders

At first impression, the border designs on early American paper money seem to be an ornamental device. While it was true that their form follows the aesthetic traditions of the applied and decorative arts of the period, border designs on paper currency served a utilitarian security function that was developed over time, in a direct response to successful counterfeiting practices.

Indented border design This provided validation and verification for the redemption of bills. Indented borders were complex designs that spanned the area where the bill was connected to the stub receipt retained by the authorities. The indented design was irregularly cut through, often in a curved or wave-like motion. When brought for redemption, the bill was matched to the issue number of the stub and checked for genuineness by aligning the design of the indented portion with the remainder. Genuine bills should fit like a puzzle piece. Although the design helped check the genuineness at the time of redemption, it was a useless security check when the bill could not be compared to its stub (*figures 2-4)*.

Abstract designs The complexity and detail of these designs created a general deterrent to counterfeiting. Ornament provided an occasion to include detailed line work that was difficult to reproduce. The abstract, non-pictorial nature of borders also provided a place to combine unusual printing techniques. Cast type was combined with cast ornaments and engraved "cuts," which together produced a tangle of printing techniques that counterfeiters would have to replicate (*figure 5a*).

Characteristic border shapes These helped tag denominations with a distinct visual code that separated each from the other and gave the public an easy way to detect alterations (*figure 4*).

Organizational tool Definition of the outer perimeter of the bill helped to increase standardization of form and cutting. Improved consistency and regularity was a positive factor for public recognition and thus a benefit for security (*figures 7, 8, 10*).

Hierarchy designator Borders define a secondary level of information for the placement of secret marks, security checks and engraver's initials. Having a secondary position allowed text to be used for the uniqueness of its form rather than for its usual meaning. Punctuation marks and dingbats of all kinds, as well as Hebrew and Greek letters were included in the border to foil counterfeiters. The peculiarity of their shape, and their rarity of occurrence in the colonial printers' stock of type was enough to make their use a beneficial security device (*figures 5b, 7, 8*).

Alterations deterrent A tight retaining border surrounding the text limits the space available to make alterations to the value. The word "four" cannot be altered to make "fourteen" unless the extra space can be used from the margin area. Alterations squeezed within the tightly defined available space became more obvious to the viewer (*figure 4*).

Denomination alteration deterrent Borders provided a place to embed denomination values. When the number or word of the denomination is repeatedly tangled within a web of ornament, it was harder to raise it to a larger number (*figures 5a, 15, 18*).

Imagery

The imagery found on early American paper money varies considerably over its hundred year history. Paper money design has never been the testing site for pictorial novelty or formal experimentation. In the eighteenth century, currency designs most often are seen to mimic the imagery found on antecedent monetary forms. As a new invention, the publicly authorized paper money of colonial America needed to acquire the same respect and authority that its antecedent forms already commanded. By mimicking the form of private exchange notes, it was perhaps thought possible that a visual similarity would transfer some of the trustworthiness and authority of the earlier instrument. This is one explanation, but another equally probable one is that the silversmith-engravers asked to make plates for printing money (in what were typically emergency conditions) simply copied the appearance of the

nearest comparable item as a pragmatic way of generating an appropriate visual form. Bills of exchange were veritable templates for the copperplate engravings of early eighteenth-century money in the northern colonies.

Broadly speaking, imagery was used for three diverse but overlapping functions: as a deterrent to assist in security objectives; in the definition and establishment of monetary function; and as a means of expressing self identity.

Differences in the use of imagery depend mainly upon the circumstances of time and location. The imagery found on the money of the colonial period (1690-1774) can be characterized as: derivative; more emblematic than pictorial; chiefly pragmatic in nature, with images serving primarily functional capacities (depicting commerce and finance rather than allegorical figures); secular rather than religious in nature; and only gradually an embodiment of regional identity late in this period (*figures 2, 4, 5, 10*).

During the early colonial period paper money contained only a nominal use of imagery. Apart from the inventive use of nature printing, imagery was limited to symbols that identified the issuing authority. Heraldry, coats-of-arms and colony seals derived from other sources had a standard application, much like the use of a logo that needed no visual reinterpretation. Already known by the public, these signs signified authority and authenticity and helped to convey an impression of trustworthiness to the user (*figures 2, 4, 5a*). Expressions of regional identity, where they did exist, were depictions of regional commerce or

local commodities (i.e., the cod fish and pine tree of Massachusetts — *figure 10*). In mid-century, pictorial imagery was more frequently used to make a memorable, visual distinction between denominations. When a figurative image, like a particular animal, was visually associated with a single denomination, it helped secure the value by deterring alterations (*figure 5b*). Obvious visual distinction between denominations is something that has since become a standard, familiar feature of most currency design, but it was one which was introduced in the middle part of the eighteenth century as a direct response to successfully passed alterations. The use of imagery was also occasionally considered as a means of dissuading counterfeiters. In reaction to the activities of Owen Sullivan who counterfeited 24,000 pounds of Rhode Island and New Hampshire bills (in addition to large quantities of New York bills), a proposal was made to the New York Assembly in 1773 that the bills also bear the representation of "an eye in a cloud, a cart and coffins, three felons on a gallows, a weeping father and mother, with several small children, a burning pit, human figures being forced into it by fiends and a label with the words "let the name of a Money Maker rot."[27] This imagery was not adopted and warnings against counterfeiting remained textual.

27 Scott. *Counterfeiting in Colonial America,* 11.

In the last quarter of the eighteenth century, the amount of imagery on colonial currency became more reflective of specifically American circumstance and attitudes. During the revolutionary period (1775-1780) the imagery found on paper money can be characterized as more original; more propagandistic in nature; more moralistic in tone (although still not overtly religious); and less reliant on established symbols of power. During the years following 1775, currency bore imagery that

increasingly served both ideological motives and expressions of self identity. Imagery was also used in a propagandistic way, to help promote the rebellious and patriotic sentiments needed to unify popular opinion and bolster the fight for political independence.

It was during the American Revolution that paper money was first blatantly used as a tool of political propaganda. As a circulating medium of exchange, money had the inherent power of locomotion, and could act like an advertisement that need not be posted or delivered to actively promote a chosen message. During the revolutionary war, the message contained on the American paper money can be summarized as: perceive the English crown as your enemy who will not grant your entitled rights; unite with other colonies to fight against Britain; suffer the necessary hardships; and sustain hope and faith in the struggle as the only possible means to attain the desired goal of independence and nationhood.

By illustrating ideas of injustice and moral certitude, colonial patriot printers and artisans visually reinforced the political arguments for the liberties that all Englishmen, since the Glorious Revolution of 1688, had come to believe were their natural rights. Paul Revere's engraving of the "sword in hand" figure on the back of the Massachusetts currency issues from 1775 shows a man with a sword in one hand, the Magna Carta in the other with a surrounding text that reads "Issued in defence of American Liberty" and "Ense petit placidam, sub Libertate Quietem" (By arms he seeks peace with freedom — *figure 12*). In 1776, the document in his hand was changed from Magna Carta to a declaration of Independence. Bills authorized by the August 14th 1775 Resolve of

the Maryland Convention were issued to promote the manufacture of gunpowder. In a suitably incendiary fashion, the woodcut image depicted Britannia receiving a petition of the Continental Congress, while King George III stands upon the text of the "M. Charta" and applies a fire torch to an American city which is under attack by a British fleet (*figure 11*). Without political representation in the British Parliament, American colonists felt their rights had been violated sufficiently to liken their situation to servitude, slavery and victimization. Manifestations of this political rhetoric were applied directly to visual representation. On verso plates of a 1779 issue of South Carolina bills of credit, the engraver, Thomas Coram, depicts Prometheus bound and attacked by a vulture (*figure 13*).

Continental currency

There is a distinct difference in the design and tone of the imagery found on paper money produced under the direction of the Continental Congress and those of the same period that were issued by the individual colonies. In 1775, Franklin had been appointed to serve on the committee "to get proper plates engraved, to provide paper and to agree with the printers" for the first issue of the Continental paper currency. Owing largely to Franklin's previous experience as a currency printer, the continental dollars were designed and produced in a way that assured visual consistency and unity in the overall appearance of the various denominations and all subsequent issues. In fact, the visual design and manufacture was better attended to than its economic underpinnings. The printing was done by the firm of Hall and Sellers who were successors to the Franklin Hall printing firm and had abundant

experience with Franklin's security inventions for currency printing and paper. Continental currency contains mica and colored silk thread in its paper, and all the versos are decorated with nature prints, some newly made and others reused from earlier Pennsylvania currency issues (*figures 7-8, 15*).

The first and all subsequent issues of continental currency were designed with a consistent repeating format, with each denomination bearing a different emblematic seal. The emblems consist of an image surrounded by an accompanying motto written in Latin (*figures 15, 17*). The use of emblems as symbolic devices was a convention inherited from Europe, but was adapted for use in the currency design in a particularly American way. There were three approaches: appropriating emblems found in older sources in their same form; adapting extant emblems but modifying them to a more specific use; and creating new emblems specifically addressing the concerns of the time.

Franklin seems responsible for the choice and creation of most of the emblems. Ones taken from existing sources are contained in books previously held in his private library, while sketches exist in Franklin's papers for two of the three newly invented ones, e.g. linked chain of colonies (*figure 19*); the "time flies so mind your own business" rebus for the fractional currency issued in 1776 (*figure 18*); and the wind upon the ocean emblem on the twenty dollar bill (*figure 14*). Franklin was adept at the use of visual imagery and relied on emblem books for other well known visual devices (including the 1754 cut-snake, "join, or die" cartoon.)[28] Seven of the emblems found on the continental currency are taken from Joachim Camerarius Symbolorum ac Emblematus Ethico

28 Lemay, "The American Aesthetic of Franklin's Visual Creations," 476-479.

Politicorum. The 1702 Mainz, Germany edition of this work was a part of Franklin's personal library, and is extant in the collection of The Library Company of Philadelphia (*figure 16*). To assist the public's interpretation of these symbols, Franklin also wrote an anonymous article which speculatively explains the meanings and reinforces the politically rhetorical nature of these images.[29] Emblems created for the larger denominations of later issues are attributed to Francis Hopkinson, and it is notable that they are executed in a style made to match that of the earlier issues.[30]

29 An article on the front page of the September 20, 1775 *Pennsylvania Gazette*, signed Clericus, is attributed to Benjamin Franklin.

30 Newman, "Sources of emblems and mottoes. Continental currency and the Fugio cent," 79:1587-98.

The final irony for design

By the late eighteenth century Americans had learned how to make a consistent, well designed paper money that was secured against counterfeiting by many ingenious and effective methods. The final irony was that the more secure, better designed and more consistently printed the money was, the less inherently valuable it became (*figures 7-8 14-15, 18-19*). Owing to hyper-inflation caused by over issuing, it was precisely at the time that the physical form of paper money had reached its apogee of technical innovation and aesthetic refinement, that it suffered its most ignoble decline, slipping below every conceivable threshold until it eventually obtained zero valuation. The paper money that followed the continental currency was produced by different means, with different financial backing. It appears that the anti-aesthetic philosophy used to produce these subsequent bank notes was guided solely by the principle that it should not look like preceding currency which was notoriously known to be "not worth a continental."

Importance of paper money

Because much of eighteenth century American paper money suffered hyper-inflation caused by overissuing, paper currency of the colonial and revolutionary period have generally had a bad reputation as unstable and poorly developed monetary forms. But this bad reputation is far worse than it deserves and is due mainly to the predominantly conservative character of economic theory that has prevailed among late nineteenth- and early twentieth-century economists. More recent economic historians insist that for the colonial period, the behavior of individual colonies cannot be judged as a single entity. In order to grasp the history of paper currency use, each colony must be considered individually. Whereas some colonies over-issued paper money to the eventual detriment of its value (e.g., Massachusetts and Rhode Island), other colonies (in the mid-Atlantic region) were more conservative in nature and kept the quantity of issues well within a range of acceptability. [31] In the course of the eighteenth century, the need for a more abundant circulating currency was great enough in all of the colonies that they each eventually issued paper money in some form and it was neither irresponsible or economically unwise for them to do so.

31 Brock, *Currency of the American Colonies 1700-1764*.

Although trade with Britain was conducted in bills of exchange and specie, the development of inland trade required a more available means of exchange. Paper money provided an available circulating currency that made the expansion of inland trade increasingly possible and profitable. In this way, paper money was a significant factor that effected the growth and development of the colonial economies. Since the ready availability of paper money threatened the complete dominance that the gentry and aristocracy had previously held over lending and capital

investments, it was members of this class that were the most adamantly opposed to its introduction and use.[32] An increased circulating medium meant that members of the merchant and agricultural classes could more easily obtain loans, which in turn increased their potential for amassing wealth based on labor and trade. (Benjamin Franklin is an example of how a tradesman could earn enough to retire at an early age, and live off the earnings of the financial investments and loans he later made to other printers and tradesmen.) The ability to gain financial power by mercantilism and industry, rather than from proprietary wealth, was a fundamental change in the financial, social and political organization of eighteenth-century colonial America. When the common man had access to the means of acquiring wealth through agriculture and trade rather than only from inheritance, a threatening challenge was posed to the previous social order dominated by the gentry and aristocratic classes. Insofar as paper money helped to create this potential, it can also be held partially responsible for the changing nature of economic conditions and ideological sentiments that sparked political revolt in the revolutionary struggle for independence from Britain.[33]

32 The subject of money (i.e., taxes and tariffs) was the basis of much of the arguments and inflamed sentiments of the colonists during the mid part of the century (e.g., the stamp act, tea tax, etc.).

33 Wood, *The Radicalism of the American Revolution*, 65-66, 140-141.

If paper money has such an important place in the formation of the United States, why is it that it doesn't have a more ennobled status in the traditional telling of American history? Despite the fact that it's a great story and that notable patriots were involved in the manufacture, design, and authorization of paper currency, history books are generally silent on the matter. One suggestion is that the generally poor reputation of paper money is a result of economic theory which has held a dim view of the stability of paper currency. Because hyper-inflated colonial

currency and continental dollars provided an obvious example of an overissued and insufficiently backed paper currency, they provide an excellent case to illustrate the potential disaster of any paper currency that is unsupported by metal reserves.

Because paper money can also be seen as the underlying cause and eventual means by which a revolutionary war is fought, it is also suggested by some economists that conservative thinkers perceive the link which has historically existed between the creation of paper money and political revolution.[34] The American Revolution was not the only revolution fought or won on the basis of a paper currency. Paper money also served the rebel causes in both the French and Russian revolutions. Although there is no way to measure the effectiveness of the propagandistic messages contained on paper money during the revolution, it is clear that without paper money, the revolutionary war could never have been fought or won. It was paper money, issued by the Continental Congress and the newly formed states, that paid for the expenditures and sustained the military engagement.

34 Galbraith, *Money. Whence It Came. Where It Went*, 58–67.

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J.S.G. Boggs: LIfe Size and In Colour

Sandra Smith

Just Say Yes
51 Adalia Drive
Tampa, Florida 33606

Visible Language, 29:3/4
Sandra Smith, 364-375
© *Visible Language*, 1995
Rhode Island School of Design
Providence, Rhode Island 02903

The cover of Visible Language represents Boggs' latest artifactual volley in the ongoing saga of his legal conflict with the United States Secret Service. At issue are the slippery definitions of such words as "likeness" and "similitude." This article sets out the humble and unexpected origins of Boggs' transactional art along with a brief chronology of events relating to legal conflicts concerning his art. At issue are the artist's first and fifth amendment rights.

Sandra Smith studied criminal psychology in preparation for a career in law enforcement before an interest in art therapy as a means of crime prevention led her to the serious study of art at Hillsborough Community College, Tampa, Florida.

Ms. Smith is currently collaborating with Manuel Gonzalez on a book project, The Washing (ton) Machine, dealing with the role of education in the formation of ethical behavior as juxtaposed with penal behavioral modification.

J.S.G. Boggs is an artist who has consistently employed the image of money in his art since 1984, when he first accidentally "spent" a drawing of a one-dollar bill.[1] More recently he intentionally printed and "spent" 900 one-dollar Boggs-Bills which he "paid" to the organizer of a coin collectors convention, Florida United Numismatists (F.U.N.) Inc. F.U.N. then "paid" the Boggs-Bills to staff members and to a trade journal, *Bank Note Reporter*, for a full-page advertisement. The madness seems to have been contagious, for *Bank Note Reporter* then started handing them out as "change" to people who then went out and "spent" them in the greater world of the public-at-large.[2]

To fully appreciate the meaning of such gestural performance work, and the seeming public disobedience that followed, it is necessary to review the context and circumstances from which it emanates.

1 There is evidence that Boggs had been drawing "currency" as early as 1969. In a photograph of his bedroom, an image of his interpretation of a United States one-dollar bill floats upon a wall completely covered with drawing and painting. Other photographs reveal that the entire room, all four walls, as well as the ceiling, were covered with pencil, crayon, and paint.

2 The quotes in this paragraph around words ordinarily applied to the transfer of currency indicate that such words do not have the same meaning when they are used to refer to the transfer of Boggs-Bills. Although exchanged in transactions, Boggs-Bills are never offered as the real currency of any country. For readability, such quotes will not be used hereafter.

Boggs is a fine artist working in the realm of interactive-performance art, having come to the genre not by intent, but by happenstance. The series of events, best chronicled by Lawrence Weschler,[3] began in a cafe in Chicago on a May afternoon in 1984, when Boggs absentmindedly drew several loosely rendered visual elements on a napkin with a Bic pen.

3 Weschler, Lawrence, 1988. "Boggs's Bills," in *Shapinsky's Karma,* Boggs's Bills. San Francisco: North Point Press.

At that time, Boggs was working on a series of paintings focusing on numbers, and the grouping of sketches executed on the napkin included four distinctly individual numeral *1*'s, one in each of the four corners. Geometric-abstractions combined with floral patterns formed two horizontal and two vertical bands along each edge, with a slight margin of white remaining. In his mind, Boggs recalls, "The composition became a picture frame in the landscape format. The space in the middle was empty except for a big brown coffee drop in the middle on the right hand side." Boggs remembered a friend's phone number, memorized earlier when no pen was at hand, and jotted it down just above the transparent, splash-rippled edges of the coffee drop.

Boggs recalls having thought of the coffee drop as a dark sun within the landscape format, and toyed with ideas of land formations to place beneath it. But his mind wandered and a different choice was made — a large human face in the middle. All the while he kept twirling the point of the pen

across the surface to remove the glutinous ink and fiber buildup from the pen tip, creating "little hairs all over...and a hairy ball" in the left center space. Seeing the phone number he had jotted, he wrote his friend's name, Maureen, in cursive above the lower left decorative band, and printed part of her address in the thin space above, just beneath the "hairy ball." Having enjoyed the relaxing, free flow of the cursive, he signed his own name above the lower right band.

The entire sketch would probably have been consigned to duty as a book-mark, or perhaps even employed to wipe the coffee and sticky sugars from his lips, whereupon it would have been crumpled and thrown away, had it not been for the intervention of the waitress serving him.

...intervention of the waitress...

The waitress interpreted the randomly composed elements of the drawing as a one-dollar bill, and her admiration of the work lead to a series of linguistic misunderstandings which resulted in a legal barter transaction wherein the drawing was proffered as settlement of the debt of ninety cents for coffee and a doughnut. Still, the unusual exchange would most probably have been recalled later only as an humorous incident, had not the waitress consummated the exact assignment of value by insisting that Boggs take a dime in change, adamantly refusing to accept the differential value as a tip.

What had started as a two-dimensional sketch had grown into a four-dimensional event, which would come to be known as a transaction.

...fascination with assignment and depiction of value...

A lingering fascination with assignment and depiction of value was born, and ultimately, over time, combined with deep concerns regarding the nature of universal and individual visual language. More questions arose than answers, and Boggs continued to explore the natures of both, using images of paper money as a stable reference point of departure.

Boggs returned to England and began making drawings of English pounds for more controlled transactions. Though legal issues were brought up in jest, Boggs dismissed such comedic references as little more than the monetary-art equivalent of pre-adolescent bathroom humor. Ironically, he was not the only one who wasn't laughing.

...arrested for counterfeiting...

Boggs was first arrested for counterfeiting, due to his drawings, in England in 1986. The Bank of England, having learned of his work from newspaper reports, insisted on a full criminal trial even though no complaint from any member of the public had been received. A lengthy five-day trial at the Old Bailey, Britain's most serious criminal court, resulted in Boggs finally being acquitted by a jury in 1987.

Throughout 1988 Boggs traveled extensively, spending drawings throughout Europe and America without official incident. Having studied printmaking under the artist Stephen Holm in Florida, he began employing print techniques to facilitate the transactions. To ensure that this expansion of his work did not create any further misunderstandings with government officials, Boggs went to Washington, D.C., for a meeting with Roy Nedrow, then director of the United States Secret Service Counterfeiting Division, to discuss the changing nature of his art.

...Boggs went to Washington, D.C.

Boggs requested the meeting without fear of misunderstanding. The United States Secret Service had been asked to prosecute co-jointly with the Bank of England in 1986 in regard to seven drawings bearing a likeness to U.S. currency bills confiscated by Scotland Yard. The Secret Service had not only declined, but ordered the drawings returned to the artist.

It is important to remember these seven U.S. currency drawings, as shall be seen.

The meeting went much as he had expected, with concerns on both sides discussed openly and intelligently. The Secret Service, finding no immediate danger from either the drawings or the limited edition multiples, appraised Boggs of the swift retribution he would receive were he to succumb to the seduction of genuine counterfeiting, and assured him nonintervention as long as he resisted the ill-gotten gains of crime.

...arrested again...

Boggs continued his work vigorously, exercising due care, but without thought of further misunderstanding, only to be arrested again in Australia in 1989. Though the Australian Dollar Boggs-Bills being spent there were predominantly printed, lawyers on three continents quickly brought the case to a close, proving for a second time that Boggs was neither a criminal, nor a con-artist. Boggs left Australia feeling that the issue of his intent had been settled once and for all. But now, exhausted from endless court appearances, he began to wonder if his faith in commonsense was but wishful thinking.

Though the case was thrown out of court in Australia, with damages awarded, the United States Secret Service began raiding his various U.S. studios, residences and museum exhibitions[4] in 1990 and continued to do so in 1991 and 1992, confiscating over 1,300 paintings, drawings and prints, as well as items of personal property such as address books, matchbooks and (this is not a joke) his boxer shorts.

4 Catalogue. 1990. smart money (HARD CURRENCY). Tampa, Florida: Tampa Museum of Art.

More importantly, and perhaps most revealing of all, on the last raucous visit to his studio in Pittsburgh, in 1992, the Secret Service also confiscated the exact same seven drawings of U.S. currency bills that, in 1986, they had determined to be legal and ordered returned to Boggs in London. And yet the law had not changed.

Visible Language is the title of the publication you are reading, but it is visual language that is the focus of this essay. Boggs is truly speaking visually. In order to understand what is being said, visually, the context of the set of statements expressed must be understood.

The law had not changed.

Thousands of pages of text have been written regarding these works of art and the case in question, and there isn't room here, nor desire, to fill page after page with legalese. The law in question has but one function, to prevent counterfeiting, and the curious wording can be simplified without loss of meaning, with one single clarification.

Sections 474 and 504 of U.S. Code, Title 18 are the relevant passages. Translated into English they state:

It is illegal to make illustrations in the "likeness and similitude"...of U.S. currency...unless they are much larger or much smaller than U.S. currency...and only rendered in "black and white."

...it might appear... they are illegal...

As Boggs-Bills are the same size as the currency they refer to, and they are in color, it might appear, by the letter of the law at least, that they are illegal, no matter how inane that might be. But that excludes both the issue of "likeness and similitude" and the seemingly unmentioned issue of "intent."

What constitutes an illustration might keep academics busy for years to come, but that seems infinitely more approachable than the horrific task of arriving at a precise definition of "likeness and similitude." Thankfully, the law itself has granted a pardon from such a hellish task. As a matter of law, likeness and similitude means: that which is calculated to defraud an honest person of average intelligence and ordinary observation, exercising due care.[5]

5 Black, Henry Campbell, Joseph R. Nolan and Jacqueline M. Nolan-Haley. 1990. *Black's Law Dictionary,* 6th ed. St. Paul, Minnesota: West Publishing Co.

Clearly, recognition of intent is there, as it is throughout almost all western law. It is improbable that one could "calculate" without it. Since Boggs puts both his name and thumbprint on each of his multiple-works, it stretches the imagination beyond even the most unreasonable limits that his intention could be construed to be fraudulent. But who is to decide?

...who is to decide?

Clearly the United States Secret Service made a determination that seven drawings bearing a "likeness" to U.S. currency were legal in 1986, only to find the very same drawings in violation of the law in 1992.

Again, the law itself saves us the aggravation of semantic imprecision. "Whether the printings are sufficiently completed or similar to genuine currency is generally a question of fact to be submitted to the jury."[6]

6 Devitt, Hon. Edward J., Hon. Charles B. Blackmar and Kevin F. O'Malley. 1990. *Federal Jury Practice and Instructions/Criminal,* 4th ed. Vol. 2. St. Paul, Minnesota: West Publishing Co.

That the government has refused to allow Boggs anywhere near a jury is an interesting fact. Among the more than 1,300 items seized from Boggs at his Pittsburgh studio and his office at Carnegie Mellon University were: matchbook covers, a plastic shopping bag, magazines, video tapes, a calculator, postcards, receipts, "real" money and the artist's underwear.

These items were not made by Boggs, but are routinely confiscated by the U.S. Secret Service as a matter of policy. That this practice is illegal would surely come to light if any challenge were brought before a jury.

The law firm of Arnold & Porter, who represents Boggs, has written thousands of pages of legal documents since 1992, at a cost of nearly $500,000, to ensure Boggs will have his voice. The U.S. government has likely spent more than twice that amount since 1990 to still that voice. It is estimated that both amounts will double before this case is resolved, most probably before the Supreme Court.

It is a pity that the government is so illiterate in terms of visual language. Whatever might be said in all the words now written or remaining to be writ on reams of legal-size paper will never speak so eloquently as this single image, expressed and contained on dollar-bill-size paper.

...headed for the Supreme Court...

In 1993, a Federal judge ruled against Boggs' first plea for protection under the first and fifth amendments, and in 1994 allowed government lawyers to delay the ruling of record which would allow Boggs and his lawyers to file an appeal. Unquestionably headed for the Supreme Court, yet stuck in legal limbo, Boggs has responded with — LIFE SIZE & IN COLOUR.

As any lawyer worth salt would explain in legalese, "*res ipsa loquitur*."[7]

7 "The thing speaks for itself."

Interview with J.S.G. Boggs

Manuel Gonzalez

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Visible Language, 29:3
Manuel Gonzalez, 376-393
© *Visible Language*, 1995
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Manuel Gonzalez is a self-taught poet. He is currently traveling throughout America with Sandra Smith in search of subjects for a book, The Washing (ton) Machine, dealing with the role of education in the formation of ethical behavior as juxtaposed with penal behavioral modification.

In January of this year, the artist J.S.G. Boggs printed 900 one-dollar bills, which he then spent to rent a booth at a paper-money collectors convention. The convention organizer then went out and put them into general circulation by passing them on to others who would spend them further all across America.

For some time, I had been interested in Boggs' work and his lengthy disagreement with government officials over his currency series. Upon hearing the news of this mass act of civil disobedience, I could no longer resist satisfying my curiosity. I wanted to meet the man who, depending on whom you speak with, is either mad, a con-artist or both. I found something other in him, and I hope the record of this brief encounter will help reveal the human being who lives this painfully slow-moving legal drama daily.

MG **JSGB**

You were reluctant to give this interview, and I was surprised at that because you seem to be such an accessible and public person.

I used to have an open-door policy, and I did not discriminate. If someone wanted to talk about the work or the circumstances, the door was open, even if it was the press come to ambush me. But **I hate interviews.** I'm much more interested in conversation.

You are referring to the Dan Rather *Eye On America* television show where they portrayed you and your work in the light of color-copy counterfeiting.

Actually I was referring to *Art in America* magazine, but CBS fills the bill.

I assure you I haven't come to ambush you.

Exactly what an ambusher would say, no?

Touche.

Look, I didn't close the door because I was worried about being ambushed. Do your worst. I just got tired of doing interviews that were of little consequence to either party. There is no such thing as a stupid question, but if the question's little more than a thinly veiled fishing expedition to grab a sound bite, and no one is actually listening to the response, then **what is the point?**

I'm listening.

So am I.

(Boggs' reputation for full-frontal confrontation is well deserved.)
You mentioned your previous open-door policy—did that extend to the **police?**

What a **joke.** They did not need a search warrant. I'd invited them to the studio dozens of times. I thought they were O.K. people. The United States Secret Service had been asked to jointly prosecute in England because seven drawings were of American bills. They refused and ordered those works returned to me. I thought they were

awake. So when I moved back to America [Boggs lived ten years abroad, mostly in England] in 1988, I met with agents in every city I worked in, and finally had a meeting with the head of the counterfeiting division [ironically, that is what it is called] in Washington [D.C.]. They never would come to the studio, but **everything seemed cool.**

So when did the trouble in the America start?

Andy Maass [director of the Tampa Museum of Art, in Florida] wanted to do a show. Some other museums wanted the show too, so they designed this really beautiful color catalogue. Then, at the last minute, the Secret Service decided to swoop down on the museum and the printer, threatening **prosecution, confiscation** of work and printing presses and all sorts of **threats.**

So why didn't you stand and fight them right then and there?

Well, we would have. Andy Maass was very ready to take the whole shootin' match all the way to the **Supreme Court,** but the Secret Service had taken some negatives and the printers couldn't, and understandably wouldn't, withstand the financial impact of having their presses confiscated, so they just refused to do the job. The show was just about to open, so the catalogue was redesigned with a protest notice in the front. Maass made it

very clear to the Secret Service that if they touched one single piece of work in the museum, he'd have their guts for garters. So we didn't hear anything more from them, and figured that was the end of it.

So did the touring exhibition continue without further incident?

You mean the **show from hell?**

How do you mean?

The show started at the Tampa Museum of Art, which **fought** to have the exhibition rather than the catalogue, followed by the Carnegie Mellon University Art Gallery, which got **shut down** just after the show and turned into offices. Next stop was the Smith College Museum of Art, but a sudden funding cut caused a **cancellation.** The next stop was the Grand Rapids Museum of Art, which **closed** due to funding cuts before the work even arrived. The final stop was supposed to be Laramie County Community College, which is where I got **raided,** in 1991, by the Secret Service for the second time.

That's where they took the infamous fifteen Boggs-Bills you were trying to get back in the BBC documentary *Money Man*?

Yeah.

And was that the end of the touring exhibition?

No, Andrea Norris at the Spencer Museum in Lawrence, Kansas took the risk and gave the pinheads the finger. She was ready to go to court, and she must have had a good board of trustees ready to back her up. Anyway, she **scared the picture-police** and they took a very low profile.

So the cops have your work, fifteen Boggs-Bills. Were these hand-drawn or printed?

Printed. I made that transition in Australia. All the bills I spent down under were half hand-work and half print-work.

So the precedent for you, never mind Warhol et al, had been set for creating multiples employing the image of money?

Wait a minute. This point gets a little tiresome for me. Though all the Pop artists made images of money, they were so far from the first. . .

(Boggs, though unable to read properly due to dyslexia, owns a small library of books proving that **the artist who has not produced an image of money is the exception** *rather than the rule. From Pollack to Picasso in the twentieth century, leading back to Titian and Marinus Claeszoon Van Reymerswaele in the fourteenth century, the body of work is staggering. I urge you to seek it out, for to include it in appropriate detail here would detract from the urgent point of the moment.)*

Why didn't I know about this?

Good question. Because certain parts of the government do not want you to see this material, and they will go to great lengths to ensure that you don't! As you can see, most of these books are produced in Europe. The ones which are made in America all have these tiny little black-and-white, low resolution images of the paintings and drawings that hardly show the beauty of the work, much less hold your visual interest. And they all have these **ominous** little government **warnings** printed beneath them, so they look like reward posters in a post office rather than art.

(One catalogue alone, from an exhibition in Paris, France, Les Couleurs De L'Argent*, spans the entire history of money art in beautiful full color.)* You mean I can buy this book in Europe, but I can't buy it here in America?

Edward Nygren [director of the Huntington Libraries in Santa Monica, California] and Ned Rifkin [Curator of the High Museum in Atlanta, Georgia] wanted to co-curate an exhibition of money painting here in the good old YOU-ESS-AYE, but I think they finally gave up because of all the **red tape.** Besides, the catalogue would have been a dog's dinner of little black-and-white low-res thumbnails. It would have been an exhibition few institutions could back-up with the legal counsel money needed to even make invitations for the show. Certain elements of the government simply do not want people to see this work and they are glad to see legislators making laws that restrict dissemination due to their own **ignorance** of this work.

Do you mean to say the legislators are not the villains.

Of course not. Any reading of the law regarding the subject reveals a complete **lack of consideration of artistic interest** in the subject matter. If only one senator or representative had had any awareness of this body of work, there would be provisions drafted in the law to accommodate legitimate artistic usage of the image in a fine art context.

Can you tell me what **the law** says. . .
(Boggs recites passages of U.S. penal code, title 18, with particular reference to sections 474, and 504, as a monotone lawyer-android)
. . .in English rather than lawyer-speak?.

This is only a little complicated, but anyone can follow it with just a bit of thought. Supposedly, **you can't make pictures of money unless they are significantly larger or smaller than real money, and only if they are in black-and-white.** But beneath this language, there is an even more basic legal tenant, that it is wrong to make the image with bad intent. That is to say: it must be made with the intention to cheat some poor sap, and a reasonable amount of care must not have been taken to make sure that someone else can't use the work to cheat anyone who is half awake. Sorry about the double negatives.

Are you talking about color, size, or fidelity?

All of the above, plus media and socially redeeming value! None of the three you mention will alone serve the function of counterfeit money, but further you have to consider media and the ever-present unaccountable worthwhileness.
(Boggs points to a color plate in an art book)
Look at this painting, and tell me what is wrong with what I just said.

I see the painting, but I don't know exactly which of what you just said you are referring to.

Say again?

I said, I see the painting. . .

STOP! **You see the painting?**

Yes.

(Boggs rips out the page and holds it up with both hands.)

You see the very painting I am holding in my hands.

Yes.

How much is this painting worth?

Well, I'm not an expert.

Ballpark it.

Two million dollars?

(I laugh.)

Am I close?

You see this painting, right here in front of you, that I hold in my hands, and you guess it is worth **two million dollars.** Well. . .the painting would probably fetch ten times that at auction, but I'll tell you what I'm going to do. I'll sell this painting, right here in front of you, for two hundred dollars. . .right here, this painting *(Boggs places the page in my hands)* that you hold in your hands.

Do you have this painting?

You are holding it in your hands. We have already established that. The very one you say you see before you.

But, this is not the actual painting. It is just a color illustration of the painting torn from an art book.

But, you said you could see the painting.

You are playing semantics. I meant that I could see the painting illustrated in full color printing techniques. I didn't mean to say I actually thought that this was the painting.

So am I to respond to your expression by what you said or what you meant.

Any fool could see what I meant.

Perhaps I am not just any **fool.**

(Now a flame is burning brightly, deep within his eyes, growing rapidly. He gives the impression of a madman, the devil and a nuclear melt-down all at once, and I can feel the heat searing the cheeks of my face. I would flee were it not for the undeniable sense in the fire before me.)

So, if I follow you, you can **violate** the letter of the law in any one of the three criteria without truly violating the spirit of the law. *(I breathe a quiet, imperceptible sigh of relief. I seem to have passed some test, not finding myself caught in some eternal Hell of transgression, and Boggs' fire fades to mere candle-light illumination.)*

I don't believe you will find fidelity mentioned in the legislation, but as you, not being just any fool, can see, **fidelity is inextricably connected to media,** which isn't mentioned in the law either.

But money is printed on paper and so are your works, so how can that even become a significant issue.

I would gladly put my work to the **test of the blind,** and this is a matter of public record — put my work in the hand of a blind person, and they will tell you it is not a U.S. dollar bill of any denomination.

Do you mean to tell me that you pay such strict attention to tactility in all your works? That is a very sculptural interest. So we are really talking about four areas?

Five.

Five? What is the fifth?

Worthwhileness. The unaccountable value often referred to in the courts as socially redeeming value.

It sounds as if you are talking about pornography.

Hey, it's very relevant, and **there are values we have and hold that no accountant in the whole world can find a place for in the ledger book.** What I find most fascinating is that the average person, of average intelligence, giving even the vaguest modicum of consideration can tell the difference, even if they cannot articulate how the hell they even recognize the difference in the first place. Call it cultural intuition, call it common sense, but don't underestimate the ability, or sensibility, of people.

Now you are contradicting P.T. Barnum's axiom that one can never go wrong underestimating the intelligence of the average person.

It wasn't Barnum, it was Mencken who said it. Besides, Barnum knew that **people knew they were being fooled, but they wanted to be** and enjoyed it, even when the jig was up. You have to take into consideration both the satirical sarcasm and the offense taken to condescension by the Jacksonian Democrats of the day. Barnum was a brilliant show-maker who wasted his talents on promoting promoting. I'm seeing the same people he saw, but I see them differently. Where he saw suckers, I see a people **willing to indulge in foolishness and chicanery,** willing to learn, and preferring to do both at the same time. Just look at contemporary tele-education. Bill Nye the Science Guy! God, I wish that show would have been on when I was a kid. I may even have escaped the fate of making art and lived much more comfortably doing research in a field with a bit more social respect.

(My head was spinning, and I very foolishly sought a diversion.) Are you interested in being respected?

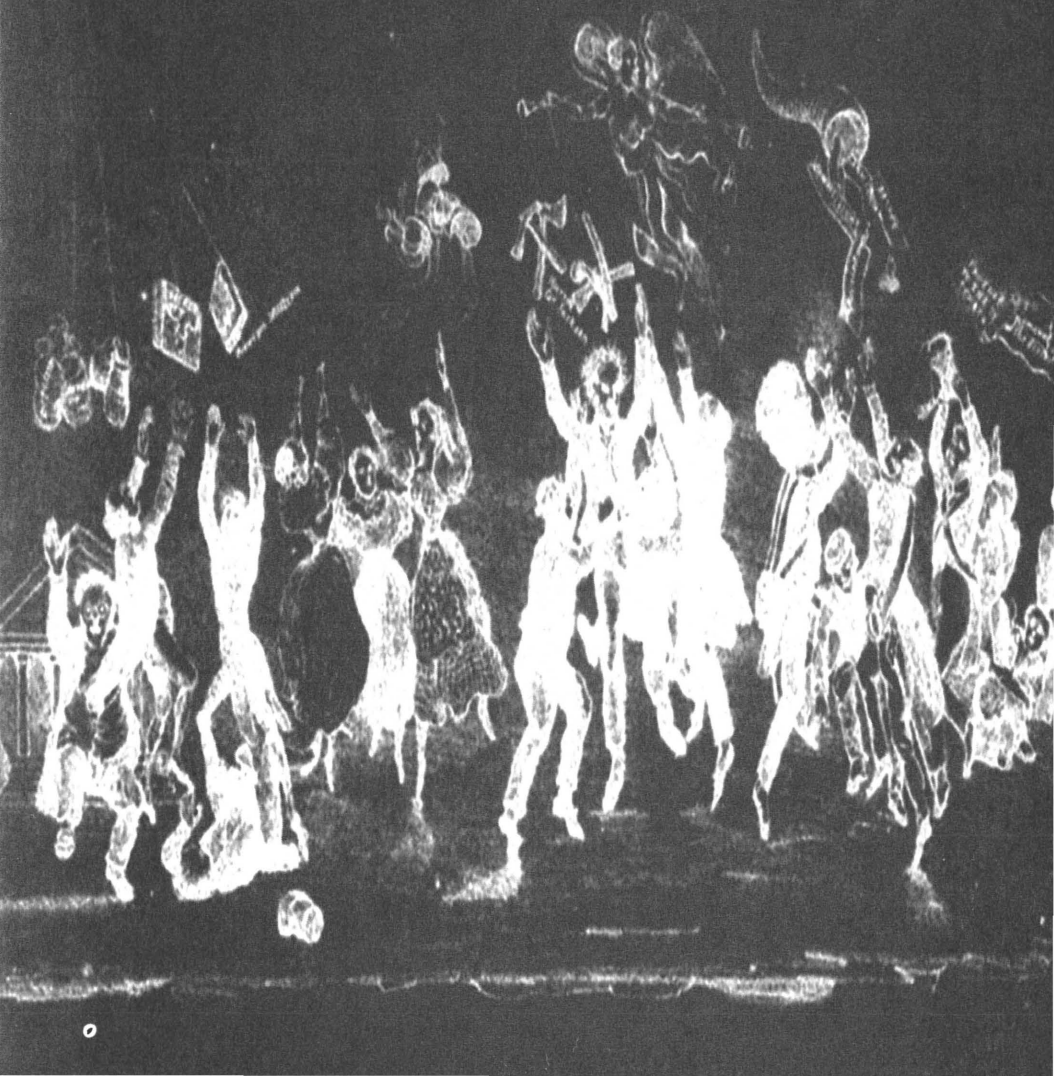
No, I'm interested in not being disrespected. I was happy being a dishwasher at the Holiday Inn, painting and drawing in my spare time each night. But, they wouldn't leave me alone. They made me a cashier and pushed me further into being an accounting major at Miami University, Ohio so they could move me up the corporate ladder, grooming me for upper management and stealing all the time I had for making art. Not art made for the market, but real art. . .**true art.**

So now we are coming to the very heart of your work. You refuse to **sell** the life-sized works depicting existing currencies, preferring only to **spend** them, and that has ultimately lead to the current project, **Life Size and In Colour**. Explain this project to me.

Hey, I'm just washing the dishes.

Marc Shell

Paper, Gold and Art
as Representation and Exchange



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Visible Language, 29:3/4
Marc Shell, 394-415
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The author, Marc Shell, draws from his recent book, *Art & Money*, to discuss the American gold standard and more abstract paper money issues. He considers thus the link between economic and visual representation and exchange. Representation — what is represented and what it stands for — is at the heart of money. Or so it appears. Representation easily slides over into issues of authenticity and the character of the unique or genuine as portrayed by the artist's signature and the sovereign's sign — potentially conflicting makers of aesthetic and political authority that taken together suggest an always precarious conflict.

Marc Shell, a John D. and Catherine P. MacArthur Fellow, is professor of Comparative Literature and of English and American Language at Harvard University. Professor Shell writes for *The Review of the Federal Reserve Bank* and the *Revenue d'Économie Financiere* and is director of the Center for the Study of Money and Culture. His recent books include *Children of the Earth* (1993), *Elizabeth's Glass* (1993), and *Art & Money* (1995).

The United States, the first place in the Western world where paper money was widely used,[1] is an interesting locale for the study of representation and exchange in art. This is not only because the United States sometimes presents itself as a "secular"— hence supposedly non-Christian — state. It is also because in nineteenth-century America there raged an extensive debate about paper money that, like the discussion of coinage in "religious" Byzantium, has aesthetic as well as political implications.

1 Paper money had circulated in Europe at earlier times, as discussed by Adam Smith in *Wealth of Nations*. But historians generally distinguish the popular, long-term use of paper money in America from its restricted use by merchants and bankers in eleventh-century Italy, for example, or from its short-term use by the French during the paper money experiments of the 1720s. Historians also

Detail of figure 1

Detail of figure 1

Paper money & gold bugs

In the American debate, which blended the self-interested struggle between "hard money" creditors and "soft money" debtors with various disputes about the issue of representation, "paper money men" (as advocates of paper money were called) were set against "gold bugs" (advocates of gold).[2] It was shadowy art against golden substance. The zealous backers of solid specie associated gold with the substance of value and disparaged all paper as the "insubstantial" sign. A piece of paper counted for relatively little as a commodity and thus, they said, was "insensitive" in the system of economic exchange. Over the first half of the century, paper issued by banks (and supposedly backed by gold) was their primary focus. During the Civil War, controversy swirled over the government-issued "greenbacks"— monetary paper backed by no metal at all. Monometallists, at the end of the century, grew alarmed when some politicians wanted the government to declare silver to be money and to issue bank notes on this augmented monetary base.

distinguish the common use of scriptural money from fiduciary money, which began its widespread, long-lived use in America. Benjamin Franklin, that all-American, was already printing paper money for colonial governments in 1728. (See Wagenführ, *Der goldene Kompass,* 73–76; Braudel, *Capitalism and Material Life,* 357–372; and Newman, *Early Paper Money of America.*)

2 Peacock, *Paper Money Lyrics, 137th.* Peacock uses the term "paper money men." St. Armand writes that "at the end of the nineteenth century the term 'gold bug' was [also] applied in America to scheming capitalists like Jay Gould ['gold'], who tried to corner the gold market, or to fanatical advocates of a gold standard over a silver standard."

Figure 1
Office Hunters for the year 1834, 1834. Anthony Imbert, publisher. Andrew Jackson, here the Americanized money devil, holds strings from which dangle horns of plenty and money bags. (Courtesy of the Houghton Library.)

Credit, or belief, involves the ground of aesthetic experience, and the same medium that confers belief in fiduciary money (bank notes) and in scriptural money (accounting records and money of account, created by the process of bookkeeping) also seems to confer it in art. So the "interplay of money and mere [drawing or writing] to a point where," as Braudel says, "the two be[come] confused" involved the tendency of paper money to play upon the everyday understanding of the relation between symbols and things.[3] The sign of the monetary *diabolus*, which Americans said was like the sign impressed in Cain's forehead,[4] became the principal icon of America (*see figure 1*).

3 Braudel, *Capitalism and Material Life*, 357–358. On credit and belief, see Shell, "Les lis des champs."

4 "You sent these notes out into the world stamped with irredeemability. You put on them the mark of Cain, and, like Cain, they will go forth to be vagabonds and fugitives on the earth." Congressman George Pendleton (Ohio) thus opposed the issuance of legal tender on 29 January 1862. See *Congressional Globe*, 37th Congress, 2nd session, lines 549 ff.

The American debates, viewed historically, were a plank in a cultural bridge to the contemporary world of electronic credits and transfers and government money unbacked by metal or other material substance. As we have considered, the shift from substance to inscription in the monetary sphere began early with the first appearance of coins. Coins, as such, were fiduciary ingots that passed for the values inscribed — values to which the metallic purity and weight of coins themselves might be inadequate — thanks to a general forbearance and acceptance of the issuing authority on the part of buyers and sellers. Whether or not this workaday tolerance of political authority came on the heels of traders customarily overlooking the clips and wear and tear in old-fashioned ingots, the first appearance of coins precipitated a quandary over the relation between face value and substantial value, between, as it were, intellectual currency and material currency. As early as Heraclitus and Plato, idealist thinkers had wondered about the link of monetary hypothesizing with logical hypothesizing, or monetary change making with dialectical division. But awareness of the specific difference between inscription and thing exploded with the introduction of paper money. For Americans the value of paper — the material substance on which monetary engravings were now printed — clearly had next to nothing to do with a

Details of figure 1

paper note's value as money. Bank notes were backed by land; or gold in a vault somewhere; or by silver; or by loans; or perhaps by actual or potential government power. (*Exitus in dubio est*, "the issue is in doubt," read the "continental" notes of the American revolution.) But, the precise connection between gold and paper seemed the stuff of mystery. Paper money thus regenerated a cultural disturbance that extended beyond money per se to include the artistic enterprise.

In Edgar Allen Poe's famous story "The Gold-Bug" the treasure-hunting protagonist cashes in a devilishly "ideal" cryptographic drawing for "real" gold. The link between the economic and aesthetic realms that drives Poe's protagonist, with his golden bug and his bug for gold, is expressed inadvertently in *Gold Humbug*, H. R. Robinson's "joke" note depicting a devilish treasure hunt for the gold that "real notes" are supposed to represent ("gold humbug," figure 2). He and Napoleon Sarony represented themselves as sellers of artful joke notes in much the same way they represented bankers and legislators as sellers of genuine or counterfeit notes.[5] (Likewise, Johnston, in his joke note *Great Locofoco Juggernaut*, made the usual association of gold deposits, which back up paper money, with fecal deposits, which issue from the backside — *see figure 3*.)[6] These American cartoonists worked within a tradition that includes France in the 1790s and Germany in the 1920s. "Bombardio" of eighteenth-century Europe, who is named on the idealist Don Quixote's saddles in cartoons from the John Law paper money fiasco, became the gold humburg of nineteenth century America.

5 Robinson also made maps of the "gold regions" of the United States "embracing all the new towns and the dry and wet diggins." (See Robinson, *Correct Map;* see also the collection of Robinson's caricatures at the Bancroft Library, University of California, Berkeley.) On the relationship of Robinson's "Gold Humbug" to Poe's story, see Shell, *Money, Language and Thought*, 13.

6 Johnson's caricature of a shinplaster (1837) thus expresses visually the same link between the bug for gold and money grubbing that motivates Poe's story and that later in the century informed much psychologizing about money and feces. Many money devil cartoons, indeed, show the money devil defecating ducats – a psychoanalytic interpreter's delight. A few focus on the devil's much talked about tail. See my discussion of Poe's *Dukatenscheisser* and of medieval illuminations of hybrid creatures defecating into bowls held by apelike money devils (Shell, *Money, Language and Thought*, 11-12, 18), and my summary history of the "money complex" in psychoanalysis since the publication of Freud's essay "Character and Anal Erotism" (Shell, *Money, Language and Thought*, app.3,199). For an illustration of Johnston's work (and historical bankground), see Johnston, *Great Loco Foco Juggernaut*.

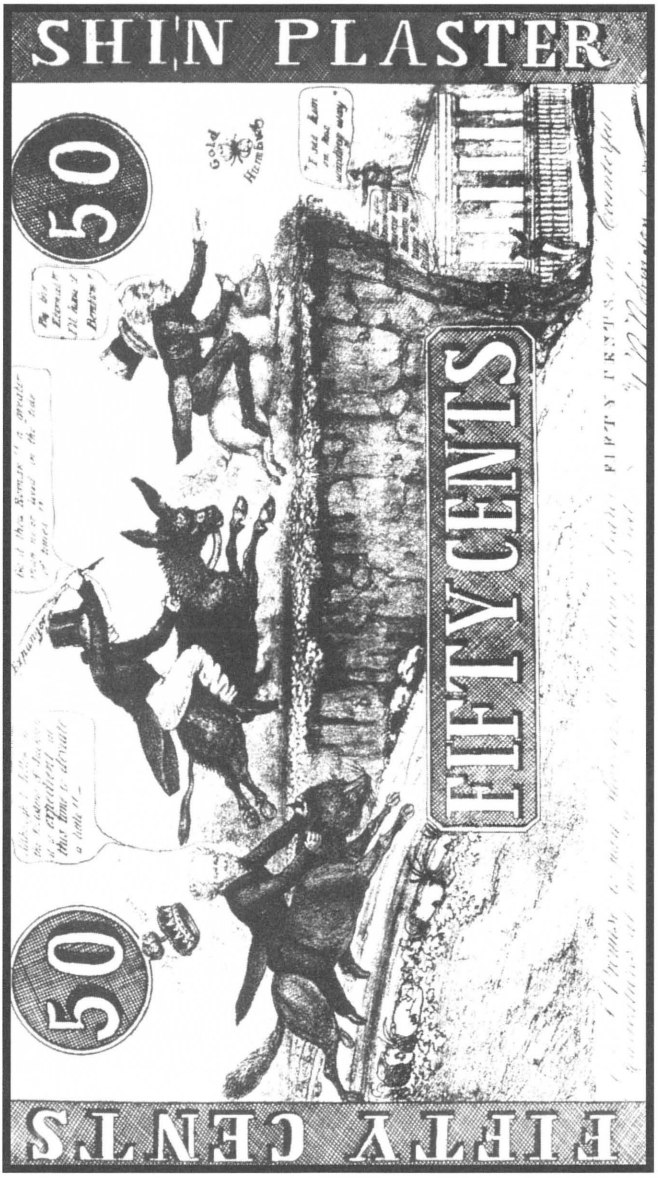

Figure 2 H.R. Robinson, *Gold Humbug*, caricature of a shinplaster, United States, 1837. At the right, Andrew Jackson chases the "gold humbug." (Courtesy of the American Antiquarian Society.)

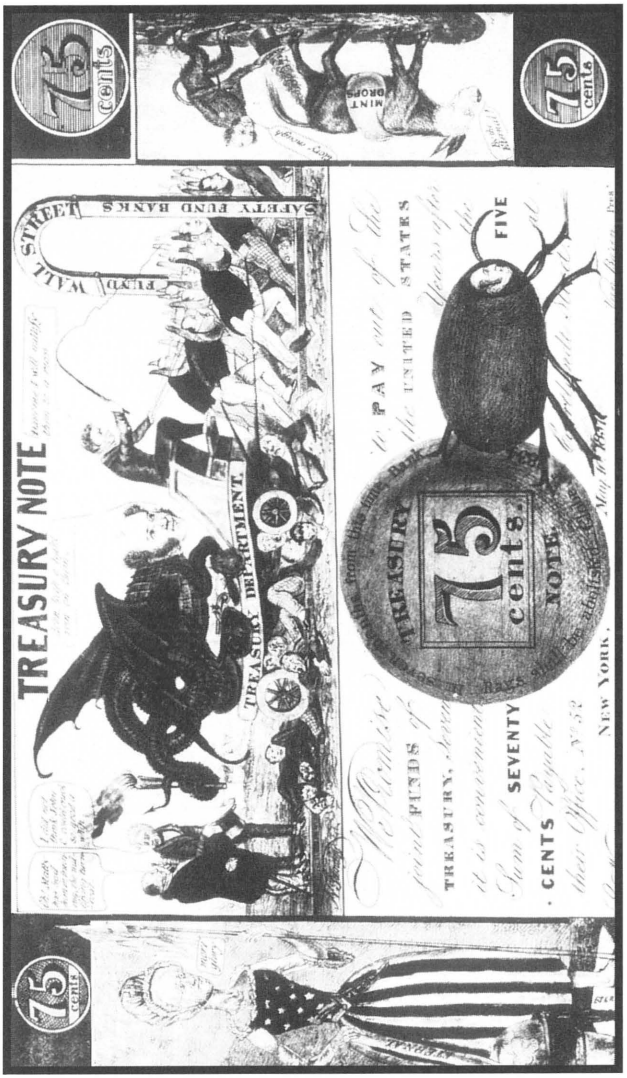

Figure 3 Napoleon Sarony. Treasury Note. Caricature of shinplaster. United States, 1837. (Courtesy of the American Antiquarian Society.)

Representation

Thomas Nast's cartoon *A Shadow Is Not a Substance*, which appears in Wells' *Robinson Crusoe's Money* (1876), depicts the relation between reality and idealist appearance as both monetary and aesthetic; and it helps to explain many American artists' and economists' association of paper money with spiritualness or ghostliness,[7] and their understanding of how an artistic appearance is taken for the real thing by a devilish suspension of disbelief. Congress, it was said, could turn paper into gold by an "Act of Congress," like the devilish *Tat* (deed) at issue in the paper money scene orchestrated by Mephistopheles in Goethe's *Faust*. Why could not a Faustian artist turn paper with a design or story on it into gold? Thus Nast's cartoon *Milk-Tickets for Babies, In Place of Milk* (*figure 4*), also from Wells' book, shows one paper bearing the design of a milk cow and the inscription "This is a cow by the act of the artist" and another paper that read, "This is money by the act of Congress"; his *Ideal Money* has similar inscriptions reading "Soft-Soap / by an / Act of Congress / This is Money" and "By an Act of Congress this Dipper Full is $10,000." Some German emergency money, or *Notgeld*, of the 1920s quotes *Faust* and includes the inscription: "One liter of milk for 550 billion German marks" (*figure 5*). Other German emergency bank notes ironically quote passages from *Faust* like "Such currency... bears its value on its face."

The American debate about paper money was concerned with symbolization in general, hence with both money and aesthetics. Symbolization in this context concerns the relation between the substantial thing and its sign. Solid gold was conventionally associated with the substance of value. Whether or not one

7 In Goethe's *Faust*, the bank note *(Geldschein)* as ghost is a major theme; and in Karl Marx's works, paper money is frequently associated with the "shadow" of Peter Schlemiel. On this meaning of "ghost" (cf.German *geist*, meaning "spirit"), see Shell, *Money, Language and Thought*, 21, 84-130 passim; and for the American context, see William Charles' *The Ghost of a Dollar, or The Banker's Surprise* (ca. 1810, a cartoon in the collection of the American Antiquarian Society; in Murrel, *American Graphic Humor*, no.74)

regarded paper as an inappropriate and downright misleading "sign," that sign was "insubstantial" insofar as the paper counted for nothing as a commodity and was thus "insensible" in the economic system of exchange. (The French symbolist poet Stéphane Mallarmé, who was much interested in the international Panama financial scandal during the decade of the 1890s when Americans were focusing on the Cross of Gold presidential campaigns, wrote in this context that "everything is taken up in Aesthetics and in Political Economy.")[8]

8 *"Tout se résume dans l'Esthétique et l'Economie politique"* (Mallarmé, *Oeuvres*, 656; see *National Observer*, 25 February 1893). Cf. Derrida, "Double séance," 292. French fiction writers – including Paul Claudel, Alphonse de Lamartine, Guy de Maupassant and others – have long written for financial journals; much of this writing remains unstudied, but some is now being edited by Jean-Marie Thiveaud, see "Claudel" in list of works. On the Panama scandal, see Bonin, *L'argent en France*, 225-239 and 249-251.

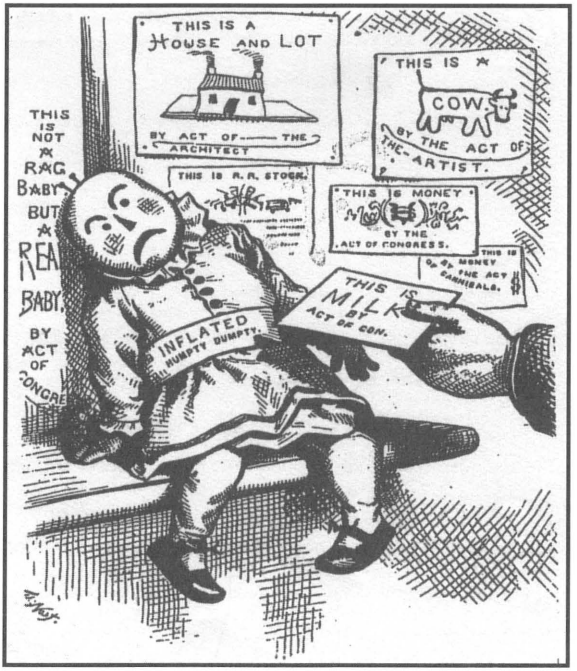

Figure 4 Thomas Nast, *Milk-Tickets for Babies, in Place of Milk*, 1876. Wells, *Robinson Crusoe's Money*. (Courtesy of the Harvard College Library, Cambridge, Massachusetts.)

Details of figure 4

American debate about aesthetics and economics connected the study of the essence of money with the philosophy and iconology of art. Joseph G. Baldwin thus explored how paper money asserts the spiritual over the material;[9] and Albert Brisbane, in his midcentury *Philosophy of Money* provided an "ontology," as he called it, for the study of monetary signs. Clinton Roosevelt, a prominent member of the Locofocos (a political party of the period), argued in his *Paradox of Political Economy* in 1859, when the "gold bug" Van Buren had lost the presidency, that the American Association for the Advancement of Science should establish an "ontological department for the discussion and establishment of general principals of political economy."[10] Such a discussion already existed in Germany in the shape of a far-ranging debate between the proponents of idealism and

9 Baldwin's *Flush Times of Alabama and Mississippi* concerns "that halcyon period, ranging from the year of Grace, 1835, to 1837... that golden era, when shinplasters were the sole currency ... and credit was a franchise" (1). Baldwin's narrator tells the story of a man who "bought goods... like other men; but he got them under a state of poetic illusion, and paid for them in an imaginary way"(4). "How well [he] asserted the *Spiritual* over the *Material!*" exclaims the storyteller (5). (See Schmitz, "Tall Tale, Tall Talk," 473-477.)

10 Roosevelt, "Paradox of Political Economy." (See Dorfman, *Economic Mind*, 2, 660-661.)

the proponents of realism. It was this debate that Thomas Nast brought to American newspaper and book readers in the second half of the century in such Germanic cartoons as his devilish *Ideal Money.* For Nast and his collaborator Wells — as for many Americans living during the heyday of paper money controversies and trompe l'oeil art — paper could no more be money than a "shadow could be the substance, or the picture of a horse a horse."[11]

The problem, from the viewpoint of aesthetics, involves representation as *exchange*. A painting of grapes, a painting of a pipe or a monetary inscription generally stands for something else — it makes the implicit claim: "I am edible grapes," "I am a pipe," or "I am ten coins." Sometimes observers are trumped into taking the imitation for the real. For example, birds are said to have pecked themselves to death on the grapes painted by the ancient Greek artist Zeuxis. (He was the first artist known to become very rich.)[12] People who read the inscription under Magritte's trompe l'oeil pipe may never roll up the canvas and smoke it like a cigar,[13] but Magritte here plays with our "common sense" suspension of disbelief when we approach an artistic representation. We take the painting for a pipe on some level. But pipes and grapes, however much they are representable by artwork, are also more or less "original" objects.[14] Money, on the other hand, is not. A piece of paper money is almost always a representation, a symbol that claims to stand for something else or to be something else.

11 Wells, *Robinson Crusoe's Money,* 57; cited by Michaels, *Gold Standard,* 146.

12 The story of Zeuxis trimming his robe with gold is also relevant. (See Bann, "Zeuxis and Parrhasius".) The business of exchanging images involves visual puns as well as linguistic ones. Félix Labisse's exchange of image for thing is the typical punning gesture in the modern period. One of his works, which depicts a hand, has the inscription, "Mon amour, vous m'avez demandé ma main, je vous la donne" (My love, you have asked me for my hand, I give it to you); Harten, *Museum des Geldes,* 2, 67.

13 Cf. Foucault's *This Is Not a Pipe.*

14 Nevertheless, it is worth remarking again the old argument that, as Mitchell puts it, "when a duck responds to a decoy, or when the birds peck at the grapes in the legendary paintings of Zeuxis, they are not seeing images, they are seeing other ducks, or real grapes — the things themselves, not images" (*Iconology,* 17, cf.90).

It is not that paper depicts and represents coins, but that paper, coins and money, generally, all stand in the place of something else. Just as bank notes sometimes visually suggest that they represent or are coins and as various Chinese bills depict rolls of coins, so postage stamps often depict monetary tokens and issuing postal authorities frequently claim the banker's prerogative to issue regular currency.[15] Similarly, some playing cards suggest visually that they represent or are coins, much as the coins they represent suggest specie. Playing cards as such are linked with the historical beginnings of paper money, and even in the modern era, playing-card money has been issued during periods of financial crisis.[16] In gambling card games, moreover, the relation between what is played with and what is played for — the playing card as numeric marker and as money — is like that in such coin games as "head or tails" (*croix et piles*). Blaise Pascal used this game to help explain why it is best to bet on the existence of God and the true cross; and probability theorists and econometricians generally have used this game to explain the link between likelihood and likeness — the likelihood that a perfectly weighted coin will land either heads or tails, for example, and the likeness, bordering on infinitesimally close identity, between coins of the same denomination.[17]

15 In France the Musée de la Poste held its exhibition titled *Les couleurs de l'argent* in early 1992 just as the national postal service attempted, unsuccessfully, as it turned out, to take over one of the traditional moneylending roles of regular banking institutions.

16 Paper money made from playing cards was used in Canada in the seventeenth century, in France during the revolution and in Germany and Austria during World War II. The history of playing card paper money, which is loosely connected with that of gambling as a type of early capitalism, is not well known. Chinese money playing cards may have inspired playing cards in Central Asia and Mamluk Egypt — and from there in Italy and the rest of Europe. The round form of other Indian playing cards, with gold foil used as decoration, is linked with their being made in the shape of coins (Prunner, *Ostasiatische Spielkarten*.)

17 See "Likeness and Likelihood," in Shell, *Money, Language and Thought*.

Representation as exchange

Nast's cartoon *Milk-Tickets for Babies, In Place of Milk* (*figure 4*) displays most clearly the gold bug's characteristic thinking about representation as exchange. It illustrates quite literally the tendency to confound artistic confidence with political or economic credit to the point where money becomes art and art becomes money. One of the cartoon's bank notes reads, "This is a cow by the act of the artist," where the word "cow" appears inside the picture of a milk cow. Another paper, "This is milk by the act of congress" suggests the *con*gressional *con*fidence game by which Americans are *con*ned and recalls for us Calvin's remark about lactary relics that "had Mary been a cow all her life she could not have produced such a quantity."[18] "This is money by the act of cannibals" recalls similarly the association of coins with communion tokens and the Eucharist. Still another bank note reads, "This is not a rag baby but a REAL BABY by Act of Congress."[19] Carlyle wrote about such "rags" in his *French Revolution*: "Bank paper, wherewith you can still buy when there is no gold left; Book-paper, splendent with Theories, Philosophies, Sensibilities,— beautiful art, not only of revealing Thought, but also of so beautifully hiding from us the want of Thought! Paper is made from the rags of things that did once exist; there are endless excellencies in Paper."[20] (*See figure 6.*) More important, the paper money inscription "This is money by the act of congress,"

18 Calvin, *Treatise on Relics;* cited by Eliade, *Encyclopedia,* 278.

19 On the "bodiless and homeless Rag baby of fiat money," see Thomas Nast St. Hill's brief remarks in Nast, *Cartoons and Illustrations,* 96.

20 Carlyle, *French Revolution,* 1, 25-25, my emphasis.

appearing as the work of an artist, suggests an identity, indeed rivalry, between the authority of the artist and that of the banker or statesman. Both artist and politician seem able to take an apparently valueless piece of paper and, by virtue of words or drawings, make it as valuable as an exchange note or the valuable "original" for which the note is purportedly exchangeable.

Figure 5 Emergency money (*Notgeld*), bank note, *Eine Billion Mk.* (American, one trillion German marks; British, one billion German marks), Stadt Vohwinkel, November 1923. Quoting Goethe's *Faust*, 2802-4: "For gold contend,/On gold depends/everything. All things and men . . . Poor us!" In right border, beginning at the top: "550 Milliarden, ein Liter Milch" (one liter of milk for 550 billion German marks). Sammlung Albert Pick, Hypobank, Munich. (Courtesy of the Museum des Deutschen Bundesbank, Frankfurt, Germany.)

The tension is that between political nation and individual imagination, as suggested in Paul Cotton's joke note drawn on "the Bank of the Imagi-Nation." Latin American artists of the modern period, working in postcolonial contexts rife with political tyranny and monetary inflation, similarly consider money as fiction and fiction as money: in Jac Leirner's *Os cem* (1986-87), for example, "the bank note is," as Leirner herself says, "almost an absence." (The pun on *cem* and *sem* —"hundred" and "sign"— is crucial to her title.)[21]

21 In the same punning vein are such works as Cildo Meireles' *Zero Cruzeiro* (1970s) and Waltercio Caldas' *Dinheiro para Treinamento* (1977).

Signature values

Can the artist, in a regime of paper money, manufacture money as if he or she were a bank? Some artists would have it that way. Many artists in the twentieth century thus draw, or draw on, checks as a conceptual jest. Marcel Duchamp, for example, paid his dentist, Daniel Tzanck, with a hand-drawn check that presumably enabled the bearer to draw on funds at "The Teeth's Trust Company"; the artist later repurchased the check for more than he had drawn it for.[22] Duchamp hints at the same exchangeability of paper for money in his reworking of a label for photographic paper; he cut the label so that it reads "papier au..d'argent," or "silver paper."[23] Instances where monetary value is similarly linked to an original signature include the artist Daniel Spoerri's opening his checkbook one day, writing out a series of checks payable to cash at ten deutsche marks each, and selling them as art for twenty deutsche marks apiece. "In exchanging art for money," Spoerri explained, "we exchange one abstraction for another."[24] Likewise, Donald Judd paid a bill to the fortuitously named art collector Henry Geldzähler with a photocopied five-dollar bill.

In such gestures the combination of representation and value derives from the imprimatur or signature of the artist, not the state. It is the artist who certifies, who suggests — from *sur-gere*, "to carry over," as in a metaphorical conveyance. Hence the signature is fetishized — as hinted in Carl Reuterswärd's *The Great Fetish*, which reproduces Picasso's signature as a cult object.[25] A signature is like a thumbprint guaranteeing the

22 "J'ai racheté ce cheque, vingt ans après, beaucoup plus cher que ce qui était marqué dessus," said Duchamp to Pierre Cabanne. (See Duchamp, *Complete Works*, no.368.)

23 There is a pun on *au*. First the French *eau* (meaning both "water" and "perfume") suggests that paper money is the perfume of silver. Second, *au* (as the English *owe*) suggests a relation to a credit economy dependent on checks. Compare the association with silver nitrate. (Cf. Lyotard, *Duchamp's TRANS/formers*.)

24 Weschler, "Onward and Upward with the Arts," 44.

25 For an example of the thematic of the signature as fetish, see Reuterswärd's *The Great Fetish: Picasso's Signature, a Sleeping Partner* (no. 2/2 1974-77, a steel and bronze sculpture, 172x482x90 cm). Reuterswand's *L'art pur l'or* depicts the sign of an investment firm in Leichtenstein that sells artists's signatures. His question is *"wie ware es, wenn wir uns auf den wichtisten Teil des Kunstwerks konzentrieren, DIE SIGNATURE?"* (An der Schlur/Oberbayen, 27 March, 1975; in Harten, *Museum des Geldes*, 2, 177-79.)

Details of figure 6

aura of the authentic, as Galton says in his nineteenth-century American work on detection and fingerprinting. Edward Kienholz's *Watercolors*, described in *Life Magazine*'s "Paper Money Made into Art You Can Bank On," are each signed with his thumbprint. *Watercolors* sold for the amount of money stamped on the face — ranging from one dollar to ten thousand dollars. Kienholz wrote in an exhibition essay, "What I have done is, in effect, to issue a kind of currency which is not dependable [sic] on the normal monetary system."[26]

"The fetish of the art market," says Walter Benjamin in his 1937 study of Eduard Fuchs and the mass cult of the leader, is "the old master's name."[27]

26 The quotation is from the artist's essay in the Finnish catalogue *Kienholz*. Kienholz's *Watercolors* were exhibited at the Eugenia Butler Gallery in Los Angeles in 1969.

27 Benjamin, Walter. "Eduard Fuchs," 384 and 386.

Figure 6 D.C. Johnstone. *Great Locofoco Juggernaut*. Caricature of a shinplaster. United States, 1837. (Courtesy of the American Antiquarian Society.)

Knots of belief

Bewilderment about fetishment in the aesthetic and political realms often urges return to elementary Judaeo-Christian debates about religious iconology. Many Europeans and Americans, after all, used to claim that fetishes were idols "worshipped in (their) own character, not as the image(s), symbol(s) or occasional residence[s] of a deity."[28] Missionaries and anthropologists often used to say likewise that savages, so called, invested their own powers in external objects; then the savages forgot the signal "origin" of these powers and began to worship the objects as magical or divine. Protestants leveled the same charge of fetishism against Catholics just as Catholics leveled it against pagans.[29] From the mid-nineteenth century onwards, however, cultural critics both in Europe and America began to challenge the once comfortable distinction between false and true religions as that between religious and secular realms. Karl Marx, for example, remarked that the real "magic" in European Christendom's notion of the fetish was its denial that there was anything magic about it. Marx employed an ironically theological analysis to argue, in good Protestant fashion, that "soon after its birth, modern society (European Christendom) pulled Plutus by the hair of his head from the bowels of the earth and greeted gold as its Holy Grail."[30] In his *Jewish Question* Marx – himself a convert to Christianity – called the fetishistic quality of economic exchange in Christendom characteristically "Jewish" just as the Jewish Moses Hess, in his *Essence of Money*, examined the cultural history of spiritual money *(geistiges Geld)* and called the fetishistic quality of capitalist exchange typically "Christian."[31]

28. Cf. de Brosses' *Culte des Dieux Fétiches* and other items discussed in my *Art & Money*.

29. Cf. Mitchell, *Iconology*, esp. 188, 193, 197.

30. Marx, *Capital*, 1:132-33.

31. See Hess, "Geldwesen," in *Schriften*, 346. "In German thought," writes Hess, "God is merely idealized capital, and heaven the theorized merchant" (also Marx, 337).

Artful theories of fetishism, whether in iconoclast or iconodule posture, typically encourage a bipolar view: that of sacred artifact as against economic artifact, for example, or of "pure" artwork as against the commodity-of-commodities that is money. It is this bipolar notion that links the numismatic Christian understanding of the connection between ideal and real with an apparently secular economics of art.[32] Amidst the consequent instabilities of the categories of "art" and "money" some art critics seek to provide a basis for diagnosing "crossovers" between aesthetics and politics. In most of their efforts, art- and money-objects that seem to mediate between art and money help map out various relationships of monetary tokens that are wholly works of art (Duchamp's fungible *Tzanck Cheque*, for example) to artworks that are wholly monetary processes or monetary tokens (works of investment art, for example, or the trompe l'oeil monies in Otis Kaye's *Dutch Treat).*[33]

Some contemporary artworks put into general focus traditional misunderstandings of art as money as art. Others present monetary tokens as symbols within a process of general exchange. However, whether art itself is up to the task of enlightening us about – hence loosening – the various knots of aesthetic, political and economic belief is hardly an open question. Nor will there be what Meyer Schapiro calls a "*Kapital* on art,"[34] no matter the presence of myriad "cultural histories" of money with titles like *Art as Capital Investment* and artworks with titles like *Art = Capital*.[35] In ways not generally understood, art and money are both at odds with each other and at one. If the vexed relation between aesthetic and economic disbelief and credit is to be better understood, the first step will be to resist, where art and money are concerned, coming to easy terms.

32. The Christian understanding of ideal and real is the principal subject of chapter 2 of my *Art & Money;* the economics of secular art is the main theme of chapter 3.

33. For *Dutch Treat,* see: the back cover of this issue of *Visible Language;* and my forthcoming book, *Handel With Book.*

34. Ashton, *New York School,* 56, reports that Moses Soyer overheard Schapiro saying these words.

35. For examples of such titles, see my *Art & Money,* 137.

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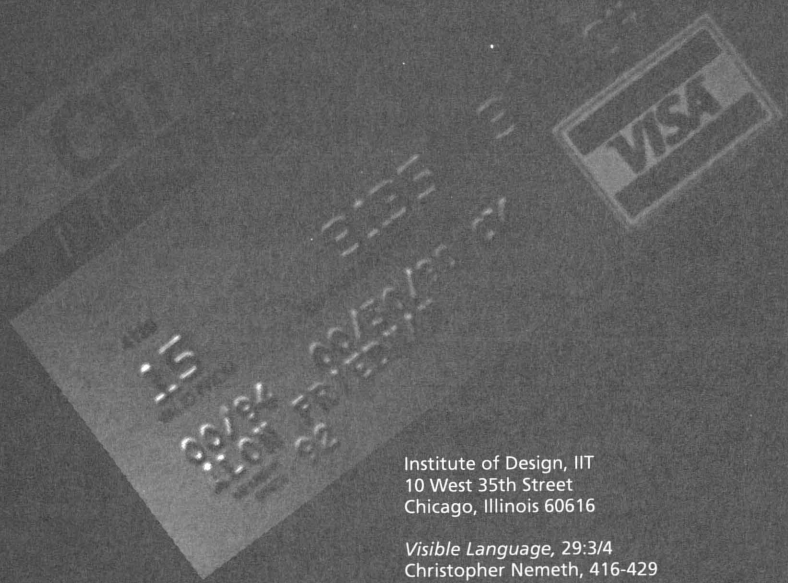
Funny Money

Coupons, Scrip, Chips and Other Quasi-Official Media of Exchange

Christopher Nemeth



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Media of exchange exist in many forms throughout the world. While money is official, many other forms serve as quasi-official means of exchanging value. These serve various purposes money does not, such as convenience, security, promotion and social control. The article examines and interprets the visual design and meaning of this unusual — and valuable — class of "funny money."

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There is an endless slang for it: *"moolah, bucks, scratch, bread, mazuma . . ."* It *"makes the world go 'round,'"* says one of the many songs we sing about it. That *"clinking, clanking stuff (you never get enough)"* is the cold cash of daily life: money.

Money, whether currency or coin, is something which is accepted as a medium of exchange. As an artifact, societies create it, circulate it and accept that it represents value. Barter, by contrast, is the exchange of actual goods or services. It found favor before official currency ever existed, when times were hard and as a tactic to skirt taxes. While "money" normally calls to mind government-sanctioned bills and coins, there are other media which fill a similar role but are not the stuff of everyday cash. This article explores how this alternate medium is similar to and different from currency, and how that affects its design.

Currency

Sanctioned currency benefits a citizenry by providing a method of transferring wealth which has the following characteristics.

Controllable The supply is managed by a single authority, and can be increased or decreased. It is difficult to copy.

Universal It is accepted for use by the society of origin, and other societies.

Interchangeable It can be exchanged for similar items of varying denominations.

Convenient It is suitable for transactions, as it is easily carried and handled.

Communicative It conveys information which can be recognized and understood.

As a medium of exchange, it can be anything which is generally accepted as representing a standard of value and is exchangeable for goods or services. Most often, that medium is money: gold, silver or other metal stamped in convenient pieces or paper and demand deposit notes issued by public authority.

A single official currency has not always prevailed in the United States. Similar evolutions of currency systems have occurred elsewhere in the world. Through history, organizations developed and circulated a variety of currencies outside of the control of their central government. In the United States, small denomination private paper money and coinage flourished until quashed by the 1862 federal law which created a single national currency. Nineteenth century conflicts occurred over the standardization of money until Congress declared all U.S. coins and currencies legal tender as recently as 1933.

Despite the standardization of American currency, which many believed would develop into a universal, rational system of value, society continued to serve its need for variety and specificity by elaborating on money in different ways. "People adopt especially elaborate controls over money and establish differential earmarks when and where they are engaged in delicate and difficult social interactions."[1] Societies "earmark" currency according to either its source or destination. Monies are earmarked for certain social interactions. Token currencies in penal institutions are strong attempts to control others. Fees, gifts or donations at weddings mark a rite of passage. Societies continue to develop means to exchange value among its members which go beyond sanctioned currency. People repeatedly do three things to create social monies: convert selected objects into the equivalent of currencies, as in the case of cigarettes, postage stamps, subway tokens, poker chips or baseball cards; create physically distinct markers, such as gift certificates or food stamps; and adapt government-issued currencies so vigorously that it seems reasonable to call these variations monies. [2] It is the first two classes which offer insight into a worldwide unofficial (and sometimes entirely official, restricted-use) class of currency.

1 Zeliger, The Social Meaning of Money, 25.

2 Zeliger, *The Social Meaning of Money*. The author argues that utilitarian, universal monetary exchange, devoid of social implication, has not occurred despite the predictions of Karl Marx. Running alongside the seemingly transparent, economics-only monetary transactions is a subtle network of social meanings attached to money. These qualitative meanings constrain user behavior.

Funny Money

Take a trip across town, or across the globe. Send a letter the same distance. In these and many other instances, currency is nowhere to be found. Instead, items which look like currency are handled, exchanged, validated, recorded and stored. What's going on here?

Sanctioned currency does not always meet the needs which individuals, groups or societies have to exchange value in the way they need or prefer. Instead, they create a parallel medium to fill that need. The result is a unique class of currency, which continually evolves to meet changing needs, "funny money."

Why "funny?" Each instance is different from government-issued currency; it is unique and distinctive in obvious and sometimes subtle ways. It is frequently odd, unusual, intriguing — funny. This irregularity makes funny money as problematic as it is interesting. While currency follows stringently applied government-proscribed standards, funny money is developed, issued, circulated and redeemed by an endless number of organizations. Without standards, users must figure out what each item is and how to use it. Ambiguous or misleading design can engender confusion and, in some cases, loss. Invalidation of an irreplaceable ticket or high value coupon is no laughing matter.

Organizations create their own medium of exchange for the same reasons a government issues currency, and for a few more reasons as well. Funny money is similar in many ways to currency.

Medium of exchange Its value relates to some other item or service of value which it represents. As money is the normative measure for commercial value, funny money tends to mimic its appearance in order to imply value.

Recognition It relies on public perception that it is, in fact, a medium of exchange.

Belgian lottery ticket Presto — you lost! Lottery tickets hold the promise of value in two ways. This "instant" 50F Belgian lottery ticket revealed zero value when the obscuring coating was scratched away. Tickets for drawings can quickly change in potential value when the number it bears is, or is not, drawn. (Actual size: 2 3/8" x 4".)

Sanctioned It is backed by an agent who assigns a value to it.

Purposeful It is used in certain locations, for an expected length of time and is handled in certain ways.

There are also a number of ways in which it differs from currency. Many are based on the need to exchange value in a manner currency cannot fulfill.

Similitude By law, no other item may resemble money to the extent that it can be mistaken for it.

Validity It must be used in the way its agent proscribes, otherwise it can be rendered useless, forfeiting cash value or, in some instances, incurring a fine.

Incentive It is often created to invite prospective and current customers to develop new behaviors which will produce new or increased business. Even if it does not provide an immediate financial benefit, such as a cash discount, funny money rarely passes up an opportunity for promotion. For example, even the stub of a Belgian rail tour ticket, which bears the motto, "Taking the train is a little like travelling," is part of a National Federation of Public Transport campaign suggesting that train travel is almost the best part of one's vacation.

Convenience It spares the customer from having to deal with a cash transaction. Many recent developments are intended to simplify the steps a user is required to perform, reducing the difficulty involved in making a purchase.
Personalization This identifies the individual who performs the transaction. While a cash transaction can be anonymous, many funny money transactions have means to capture information about the individual who makes it, thereby increasing information about customers in the originator's data base.
Security Carrying large amounts of money makes the user vulnerable to potential loss. Providing a means of authentication personalizes items such as traveler's checks, making them less versatile, but safer, than money.
Entertainment Scratching away a coating, detaching and affixing tear-off tabs and other manipulations, add to user involvement and attention.

As a medium of exchange, the design of funny money may incorporate a variety of elements to ensure that it is recognized.
Symbology The imagery distinguishes it from other similar printed material. (Governments usually portray esteemed historical figures and institutions, often in neoclassical style. Commercial organizations may use visual puns for entertainment and humor, such as using the format of formal currency and adding the firm's founder or mascot where a distinguished former American president's portrait would normally appear.)
Representation The mark of the sanctioning agent (logotype, insignia) is present.
Value The numerical or verbal representation of the face value of goods or services which the "money" represents is given in many cases as a currency equivalent.
Terms Use requirements, set by the sanctioning agent (expiration date, location for redemption, coincidental purchase such as "two for one") are listed.
Control Some means of identifying the item as a unique entity is presented. Serial numbers are often used to lessen the likelihood of duplication, enforce the notion of scarcity or improve security.

Types of funny money vary as widely as the needs for their use. The "Funny Money Map" *(figure 1)* compares a number of examples on the basis of value (low to high) as compared with formality (low to high). Just like money, funny money has limits placed on its use. The more constraints which are placed on an item's use, the more formal it is; the fewer constraints, the less formal it is. Less formal items also seem to have the greatest potential for variance. An IOU, for example, can be spoken, written onto the back of an envelope, typed in explicit promissory note style and even attested to and signed by a

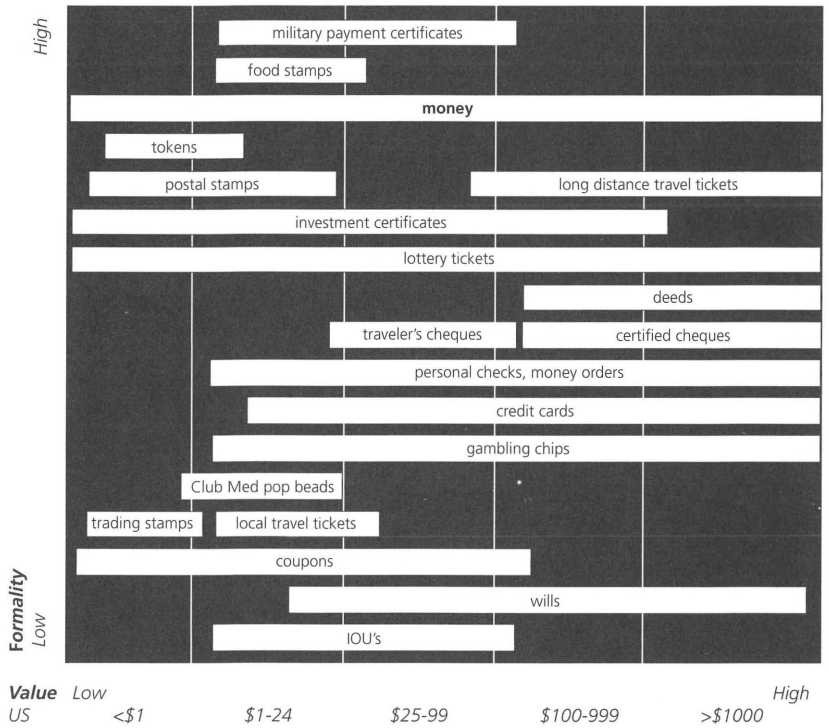
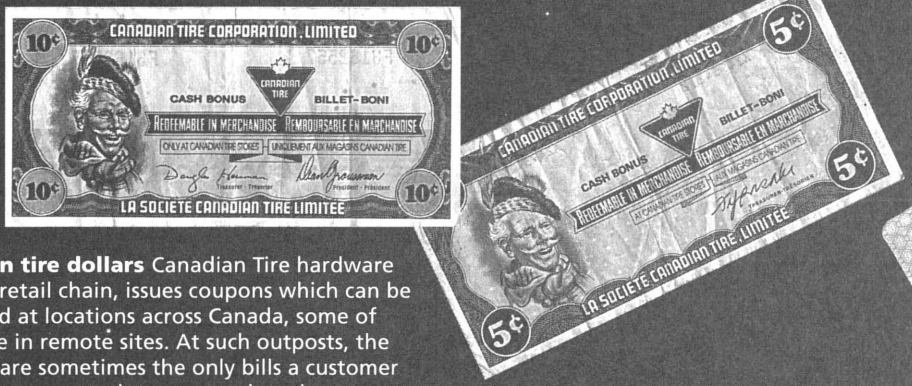
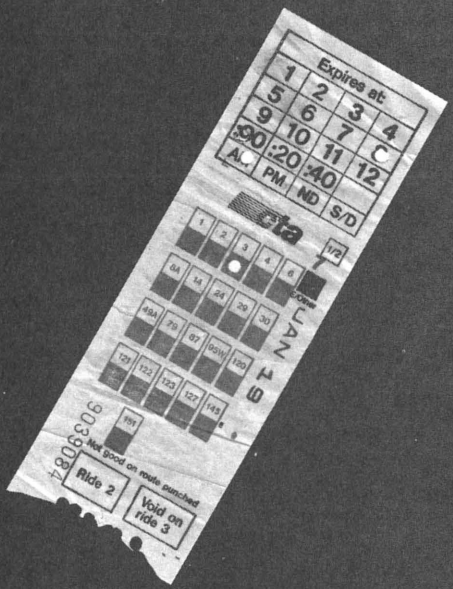
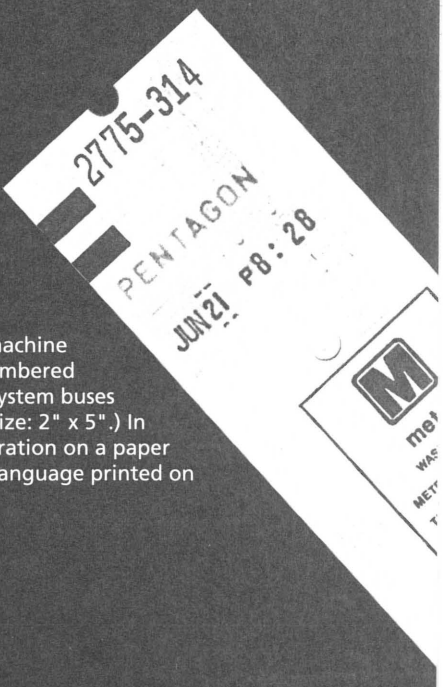


Figure 1 Funny money map. Items of currency which are not money, yet are used as a medium of exchange, can be compared in terms of value and formality, the degree and type of constraint on its use.

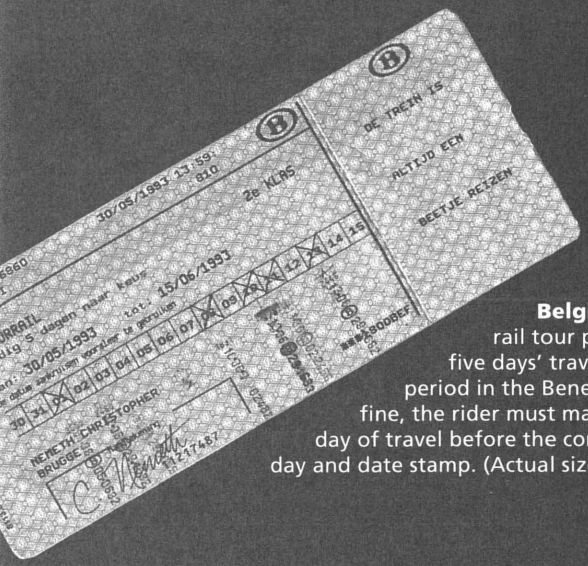


Canadian tire dollars Canadian Tire hardware stores, a retail chain, issues coupons which can be redeemed at locations across Canada, some of which are in remote sites. At such outposts, the coupons are sometimes the only bills a customer has and are accepted as currency by other stores.

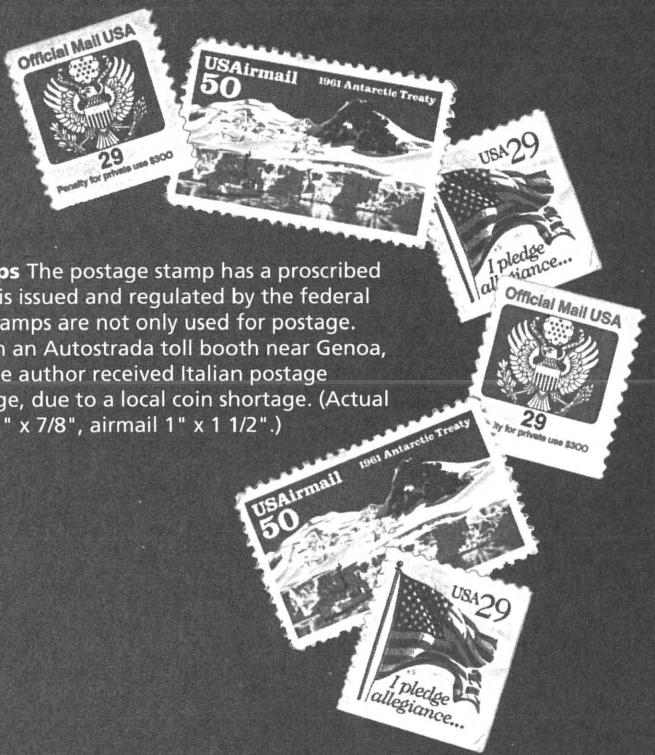




Mass transportation transfers An automatic vending machine stamps the station, date and time of issue on this serial-numbered card which enables a rider to use Washington, DC transit system buses within a time limit. But what time does it expire? (Actual size: 2" x 5".) In Chicago, an attendant punches the route and time of expiration on a paper slip. (Actual size: 2 1/4" x 6 3/8".) In both cases, elaborate language printed on the obverse side directs their use.



Belgian rail tour ticket This rail tour pass can be purchased for five days' travel within a seventeen-day period in the Benelux countries. Under risk of fine, the rider must mark the correct box on the day of travel before the con-ductor validates it with a day and date stamp. (Actual size: 3 1/4" x 8".)



Postage stamps The postage stamp has a proscribed cash value and is issued and regulated by the federal government. Stamps are not only used for postage. Passing through an Autostrada toll booth near Genoa, Italy in 1975, the author received Italian postage stamps as change, due to a local coin shortage. (Actual size: first class 1" x 7/8", airmail 1" x 1 1/2".)

U.S. Government military payment certificate The author used these "military certificates" while stationed in DaNang Viet Nam in 1972. Used for on-base purchases while troops are assigned to a foreign country, they have equal value to U.S. currency. Though having no value outside of the base, they operate as a parallel medium of exchange to protect the host country economy from a heavy influx of U.S. currency. (Actual size: 4 3/8" x 3 5/8".)

third party. Food stamps, on the other hand, have strict limits on who can possess them and how they can be redeemed. Variance outside certain use constraints is subject to prosecution. The following constraints influence formality.

Proscriptions This limits access to specific users or for use in specific locations. Government regulations on who can have them and where they can be used make food stamps and military payment certificates more formal than money.

Duration This indicates an item is valid for a specified length of time, after which it expires. Coupons for frequent flyer miles are valid through a specified end date, after which their value plummets from fifty or so dollars to zero.

Regulation The number of regulations which govern an item's use tend to vary directly with the size of its sanctioning authority. An individual tends to impose the fewest formal guides and expends the least time managing its exchange (e.g., "Pay me back next week"). Organizations, and certainly governments, develop more elaborate controls as they manage the exchange of items among a broader audience, often for items of greater value.

Interpretation The nature and use of the item can be changed by the way it is perceived or used. While it is easier to challenge the meaning of an informal will or IOU, the broadly-accepted behaviors of more formal media, such as airline tickets, are less open to interpretation.

Food stamps and military payment certificates receive the same protection as money. They are highly formal: proscribed for use by a limited population, expected to be used often over a long period of time, they are issued and regulated by the federal government and have a set value which is not open to interpretation. At the opposite end of formality are individual promissory notes, or IOU's. Often a handwritten memo, an IOU identifies the amount, to whom it is owed, who owes it and may describe terms of repayment. As an informal agreement between two people, it is not reserved for special use, can extend to any length on which the two agree, is regulated by no one else and can be executed in a variety of ways.

New Media

Credit cards and tickets now bear data storage elements, such as magnetic strips and miniature electronic circuitry. These new developments in technology both benefit and pose problems for money and funny money alike.

Convenience

Money is costly to guard and difficult to handle. To avoid such difficulties, organizations such as municipal transit authorities are increasingly converting to electronic fare collection. Value-added cards are coming into widespread use in the United States. The credit card-size fare cards, with a magnetic strip to add and debit cash value, provide transit authorities with a number of benefits. Security is increased for bus and train drivers with no cash to attract thieves. The flexibility which fare collection software provides enables rates to be varied, to encourage different uses (e.g., charging convenience riders a reduced rate during off-peak hours to ease rush hour traffic).

Advertising on farecards can generate incremental revenue. Cards save the cost of handling coins and tokens.

Loss

In spite of their convenience, losing a value-added card is the same as losing cash. Losing credit cards, money orders and traveler's checks compromises their convenience. The Chief of the Financial Institutional Fraud Unit at the United States Federal Bureau of Investigation notes "The number one crime problem for financial institutions is counterfeit negotiable instruments, such as check fraud and money order fraud."[3] Commercial and trade organizations are developing and implementing new security features to help stem losses.

3 Guttman, "High Tech Counterfeiting," 73-82.

Copying

The advent of sophisticated computer software, color copiers, printers and scanners enable counterfeiters to accurately mimic currency, as well as more valuable funny money (e.g., credit cards, personal and payroll checks, tickets and stamps). Some governments have already taken steps to counter the threat. Britain has already incorporated a number of security measures into its ten pound Britannia stamp (roughly equivalent to $14 US), including elliptical perforations, embossed Braille dots and metallic and color inks.

Personalization

Digital money may compromise the anonymity which currency has traditionally afforded. Exchanged via electronic systems, its origin and destination are traceable. Tracing transactions identifies spender and recipient in the same manner as most funny money transactions have for years. "Hard cash is, of course, anonymous — you can spend your printed bills with the assurance that no-one can trace your expenditures or compile a dossier on your lifetime spending records. But electronic cash has no such assurances. Its computer mediated nature makes traceability the course of least resistance."[4]

4 Levy, "-Money (That's What I Want)," 174-219.

Regardless of technology, societies will continue to seek a broad variety of ways to handle transactions to meet their needs. Whether physical or digital, funny money will continue to evolve as a means to exchange value in varying degrees of formality which currency cannot fulfill.

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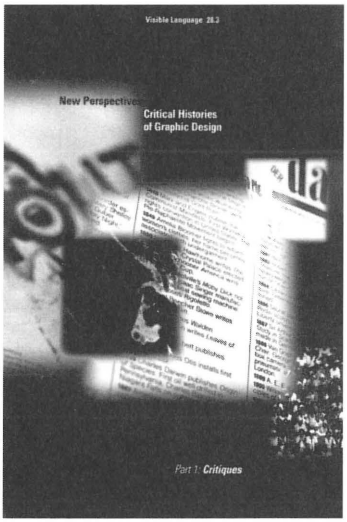

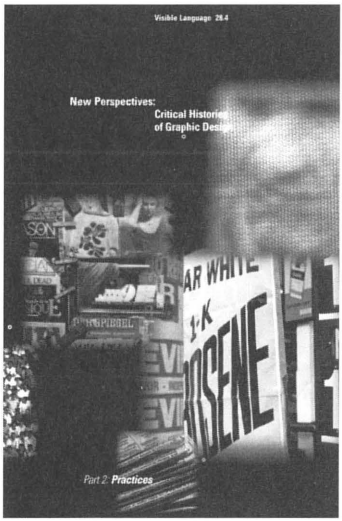

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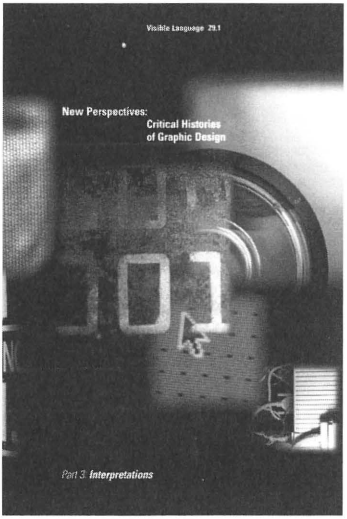

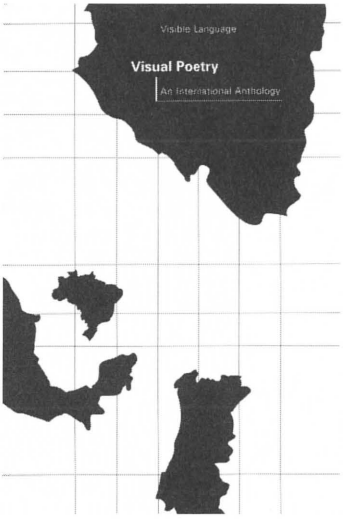

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Index to *Visible Language* Volume 29

Volume 29, number one contains pages 1-112 and is a special issue titled New Perspectives: Critical Histories of Graphic Design, Part 3: Interpretations; number two contains pages 113-260 and is a special issue titled The Luminous Object: Video Art and Video Theory; and number three/four contains pages 261-436 and is a special issue titled Money!

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