TOWARD A GENEALOGY OF CERTIFICATION

Andrew Hurle

For about 25 years now, I've been researching the shape, style and function of graphic signs connected with the production and reproduction of printed money. The research grew out of my visual arts practice and despite being consolidated as a university doctorate, it has mostly been pursued outside or across established academic disciplines, never having found easy accommodation in any one of them. Among other things this has resulted in a hybrid terminology defining its aims and scope. What began as an etymology of monetary signification (an early attempt to tie it to the field of linguistics and semiotics) now seems better expressed as a genealogy of certification, which represents a much broader field of investigation and reduces the risk of it being seen as a strictly numismatic study. The following paper summarises this genealogy and describes how monetary designs are adapted for different purposes and contexts, while showing some examples of their foundation in experimental and creative invention. I should firstly mention that the designs themselves communicate all kinds of meanings beyond the monetary: not just claims of authority and authenticity usually associated with banknotes, but also declarations of contractual certainty, social obligation, affection, prestige, satire, accreditation and so on. Even so, printed money remains at the heart of this research as an exemplary graphic statement articulated from within the nexus of mechanisation, global economics and modernist abstraction.

WRITTEN CERTIFICATION

A genealogy covering not just the extent but also the historical depth of certification might begin with the arts of writing and graphic inscription— with the notarial marks, monograms, and other graphic signs from the early Middle Ages and the ornamental knots and strikings that were refined by early modern calligraphy and engraving. It should as well consider the types of writing used specifically for the conferral of authority and the recording of debt, ranging from the engrossing

styles used for legal and ceremonial certification, to the penmanship taught in American business colleges and applied in financial accounting. Even the passive-aggressive neutrality of the typewriter's font has a place within the spectrum of scriptorial devices dedicated to the visual expression of certainty and value. The ornamental cartouches of European penmanship are historically prominent amongst these devices— visible in places where the calligrapher follows an impulse that exceeds the task of embellishing letters to create discrete entities that are neither word nor image. I'd suggest that such ornamental cartouches are prototypes for the certifying signs appearing later on paper securities such as banknotes, which from the mid-18th century
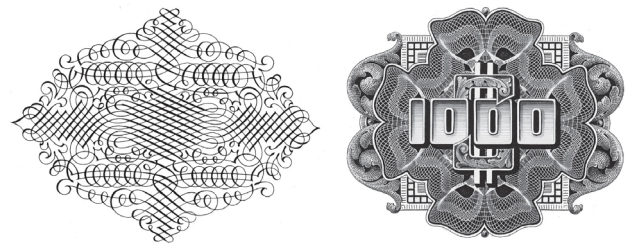

Figure 1

Figure 2 & 3

Figure Titles and Information

Figure 1: (left) Engraved flourishing by Johann Georg Schwandner from Calligraphia latina 1756, [Dover Publications, 1958] (right) Ornamented numeral engraved by William Grant. c. late 19th/early 20th century [author's collection]
Figure 2: (left) Three-rouble banknote. USSR 1937 [author's collection]
Figure 3: (right) Stylised reconstruction of a 10000 Tengov banknote. Bukhara Emirate 1918, [artwork by author]

were increasingly subject to anonymous exchange. Unlike a cheque or promissory IOU, which are both underwritten by an individual's signature and linked to a personal account, the banknote's nominal exchange value is considered by law to be the property of whoever holds the paper. This embodiment of value makes it a bearer-instrument, a document whose defining characteristic is 'self-proof', or (to phrase it as a kind of tautology) one that can confirm its own authenticity. A statement to this effect is engrossed on English pound notes as a promise to pay an unidentified bearer, but written declarations are just one of the many ways that banknotes visually guarantee their intrinsic worth. Ornamental flourishing, as it was refined in copperplate by the competitive showmanship of baroque calligraphy, combined the surety of technical prowess and the prestige of literacy to create a self-evident impression of value.

Any printed paper document given this degree of autonomy will naturally become the target of imitation, but that's hardly a fatal point. Even if a bearer instrument is revealed to be an unauthorised reproduction, the fact presents a circumstantial difficulty, not an existential one. What is arguably more important is the document's ability to effect change by virtue of its appearance alone and banknotes, for the reasons given above, provide good examples of this. Fake or genuine, they can be exchanged for real things. College diplomas are actually great examples of bearer-instrument efficacy (and should be distinguished from transcripts, which appear less fancy but can be checked against university records). Resplendent with flourishes, signatures, engrossing scripts and seals; diploma certificates bearing the titles of real and fictional universities have long been used to boost the careers of politicians, academics and public figures.

What gives a bearer instrument such power is our willingness to engage with a graphic vocabulary dedicated to the demand that it be taken seriously. My work as a visual researcher is to understand how this vocabulary has evolved, socially as much as technologically, from the environment of monetary production. One giant step in this evolution was the invention of two machines in the early 19th century that produced the mechanical equivalent of ornamental pen-work. The first, called a geometric lathe, became famous for producing engraved designs of inimitable linear complexity. The second machine, a transfer press, was less lauded and tasked simply with embossing the geometric lathe's configurations into hardened steel, thereby enabling their rearrangement and unlimited reproduction. Despite these somewhat contradictory objectives, both machines worked in tandem to revolutionise the mass production of currency and in the process propagated a stylistic repertoire that quickly began to lend credibility to other types of printed securities. All along the American frontier their collaged mechanical embellishments helped give printed money an extraordinary degree of autonomy. The grandiose and spurious styles that proliferated during the era of wild-cat banking showed what chaos could ensue when the actual value of a banknote depended on how it presented itself through a magnifying

Figure 4

Figure 5

Figure 6

Figure Titles and Information

Figure 4: Please refer to notes at end of paper
Figure 5: Collection of motifs taken from various websites c.2012
Figure 6: Artwork by author based on reconstruction of page from a scrap book of the American engraver, C.W. Dickinson, late 19th century

glass underneath a good light. Rather than having a discrediting effect however, the unregulated monetary designs helped socialise and thus normalise mechanical engraving as an accepted and expected sign of credibility. Its ascent continued after the Civil War, with the imprimatur of the newly established Bureau of Engraving and Printing helping elevate such designs into a modular design lexicon, underwriting their integrity even as they were applied more widely in the areas of commercial advertising and public administration.

MIGRATION

I think of this as a semiotic migration occurring along horizontal and vertical axes—which has been a useful way to examine how its functionality spread to include documents that weren't strictly money. Horizontal migration refers to the use of graphic certification on other sorts of banknotes which was often, but not always, the result of large printing firms selling their services to foreign states with less technical resources. Even in those countries that had the means, the promotional advantage of using established monetary designs was obvious. The stylistic affectation of a specimen from pre-war Soviet Russia [fig. 2] for instance, demonstrates how quickly (and artlessly) graphic conventions indigenous to capitalism prevailed over the visual rhetoric of communist ideology.

A second banknote [fig. 3], produced around 1918 in Bukhara (now part of Uzbekistan), shows a design which emerged from a dispute between local merchants, who wanted money that looked modern and machine printed, and the Muslim clergy who argued that mechanical production would be haram. The compromise was to make woodblock carvings that were inked and printed by hand like stamps. It is interesting that the relatively crude hand-carved patterns clearly imitate the abstract configurations of Western European money, giving the designs a machined credibility despite their lack of regularity and precision.

These are just a couple of examples where money's certifying styles manage to negotiate geographic, religious and technological divides while still retaining graphic currency (so to speak). They also suggest a diabolical circularity inherent in the promotion of printable value: money appears credible by imitating other money, with any single banknote being just one in a succession of sanctioned, self-referential 'counterfeits'.

It's not surprising that monetary motifs are borrowed, copied and recycled 'horizontally'. As much as its job is to distinguish banknotes from other securities, currency design represents an opportunity to exhibit national prestige. The ideal monetary object is one that demonstrates the 'muscularity' of economic security, while circulating freely, anonymously and with a regulated velocity within domestic and international markets. This is one reason that the design of national currency tends to follow established graphic conventions. What is more interesting (for a visual artist at least) is the 'vertical'
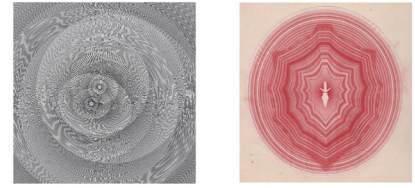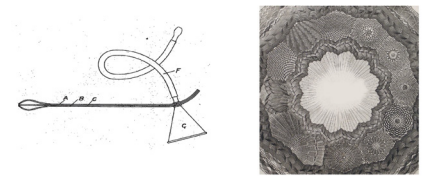

Figure 7 & 8

Figure 9 & 10

trajectory that monetary design takes when used to communicate status in demotic and commercial forms. Transformations in this direction owe much to the fact that its ornaments are both abstract and legible. If one discounts the specific, regional signifiers such as portraits and vignettes, then what remains can work just as well on the tokens, coupons and labels that belong to commercial and 'lower' social classes of ephemera, as it does on 'higher-level' documents such licences, credentials and financial securities. For this reason, non-representational certifying constructions easily detach themselves from the hierarchy of authoritative origin and circulate within the vernacular.

Studying this 'vertical' migration between different classes of ephemera risks being distracted by the popular notion that monetary ornament is not so much a promotional mechanism as it is a protective one (typically expressed in the trope of 'waging war against the counterfeiter'). There's an obvious truth here, but its persistent emphasis tends to obscure the irresistible downward and outward pull on monetary signage toward documents that have lesser prestige, but a far greater variety of social currency. A related error is to dismiss this vertical migration as simply representing a debasement of signifying value. Since at least the early 18th century, iconography originally intended for the mass-production of currency has been put to enthusiastic and fruitful use in commercial and vernacular pastiches and appropriations. One of the early applications of mechanised ornament was to support the 'authenticity' of patent-medicines against claims of imitation, and in fact these decorative, self-important labels are a good place to begin figuring out how the enduring and complex relationship between security, counterfeit and origination really works. This nuanced economy of signification is yet another area with potential for further visual research.

TRANSFORMATION

Where the reproducible signs of value are appropriated, they are also adapted to suit new purposes and transactional contexts. These adaptations and revisions can occur over long periods of time and often resemble skeuomorphic chains along which a symbolic current is transmitted. In its usual sense skeuomorphy refers to the atrophy of functional design features into ornamental ones. In the case of monetary design, however, we're already dealing with ornament as a functional entity, and so here the transformation might be better characterised as a movement away from the material and toward the graphic. It's a process of disembodiment that brings to mind the evolution of money away from the solidity of metal coin towards the ethereal cryptocurrencies, but it can be extrapolated from more mundane examples. Clipping a coupon from a magazine page, for instance, might feel like an act of no great significance, but if its design is placed in a specific historical context then some implicit contractual mechanisms become apparent.

In marketing terminology, the coupon is known as an 'action' device. It invites a prospective customer to make a minor physical alteration

and thereby places upon them an almost imperceptible obligation to resolve the exchange potential of the token they've removed. It's a simple sales manoeuvre, but one that situates the coupon within a lineage of bipartite contractual 'action' devices that have over centuries evolved into less tangible forms. The chain can be illustrated by a series of details beginning with an indented cut [a] running through the script of a medieval chirograph. On an exchequer bill from 1720 [b] this cut edge is inscribed with pen-flourishing, which by the early 19th century has been stylised as a repeatable typographic unit [c] and used on a banknote's counterfoil. Decades later it appears printed over the mechanical perforation [d] on a bill of goods. By the late 20th century the perforation has been flattened into a lithographic line [e] symbolising the contractual seam. The skeuomorphic progression doesn't stop there however, but morphs from paper to screen where it remains legible (but obviously un-actionable) as an arrangement of pixels [f]. And here in the digital universe one finds an improbable variety of graphic expressions [fig. 5] which, despite their lack of material substance, still clamour to be taken seriously as objects.

ART & EXPERIMENT

One aspect of this topic that has a special connection to my visual arts practice is the development of monetary certification as a succession of experimental technologies. Although still a relatively obscure field, its potential for exploration quickly becomes evident when trawling through the scrapbooks and specimens belonging to machine operators who worked in the secluded and competitive environment of the security printing industry, where methods were often provisional and unattributed. Someone researching in this area may, for instance, discover more printed proofs made by inventors like Richard Williamson, who in 1820 (just five years after Napoleon's defeat at Waterloo) produced mechanical engravings [fig. 7] in perfect alignment with the principles of a modernist, geometric abstraction, that was to arrive nearly a century later. They might then find it interesting to compare Richardson's aesthetic sensibility against that of the introverted and inventive Cyrus Durand [fig. 8], whose younger brother and partner, Asher, was a pictorial engraver in the banknote industry as well as a founding member of the Hudson River School of painting.

Trawling through the many patents devoted to the topic of monetary security would undoubtably reveal more ideas tangential to the technology of printed self-certification, such as the obscure cross-media concepts of English inventor Alfred Bawtree [fig. 9] who proposed a means by which banknotes could audibly confirm themselves by 'voicing' their denomination from the paper's deckle edge: in much the same way a stylus produces music from the irregular groove of a vinyl record.

The prospect of creating something exceeding the power of anyone else to imitate became a quixotic lure for many eccentric hobbyists

of the early 19th century, when the Society of Arts invited public submissions for inventions that could thwart the perceived threat that forgery posed to copperplate-printed currency. The premise of the competition was in many ways an illusion—monetary circulation thrives on confidence in a regulated multiplicity, not on a single inimitable design—but the concept was still plausible enough to ensure a flood of ambitious schemes ranging from the impractical to the insane. Many, if not most of these held fast to the vision of an almost necromantic entanglement of lines within which the legitimacy of money's value could be secreted [fig. 10]. Perhaps it wouldn't be such a long stretch to suggest that artists of the 20th and 21st centuries have been attracted in a similar way to the impenetrable artifice of printed money and its ability to conjure tangible value. And particularly for printmakers, to the mystery of how something that is infinitely reproducible maintains graphic currency. Each artist researches these mysteries as an independent and usually solitary undertaking, in ways which can sometimes be difficult to rationalise— especially to someone who works from within an academic disciplinary framework. But it is nonetheless serious research which, over a lifetime of artistic work, acquires a methodology that is idiosyncratic and intuitive and for all that, no less resolute.

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Born in Australia. Lives and works in Berlin, Germany. I studied traditional printmaking in the 1980s, firstly integrating the photocopier as a creative medium and later working with computers and digital printing. My practice since then has focused on the technology and social implications of non-serial image reproduction— or reprography. My doctoral thesis for the College of Fine Arts, UNSW was titled "Forging Value: an etymology of monetary signification" and comprised 100,000 words + 500 illustrations. The research period included five months with a Smithsonian fellowship in Washington DC, and representation in the 15th Tallinn Print Triennial, Estonia. I now work as an independent researcher in Berlin, Germany.
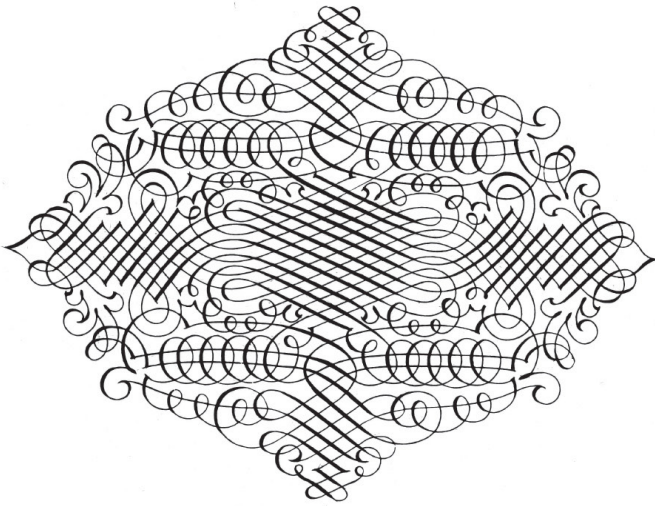
IMAGE GALLERY

Figure 1: (left) Engraved flourishing by Johann Georg Schwandner from Calligraphia latina 1756, [Dover Publications, 1958] (right) Ornamented numeral engraved by William Grant. c. late 19th/early 20th century [author's collection]
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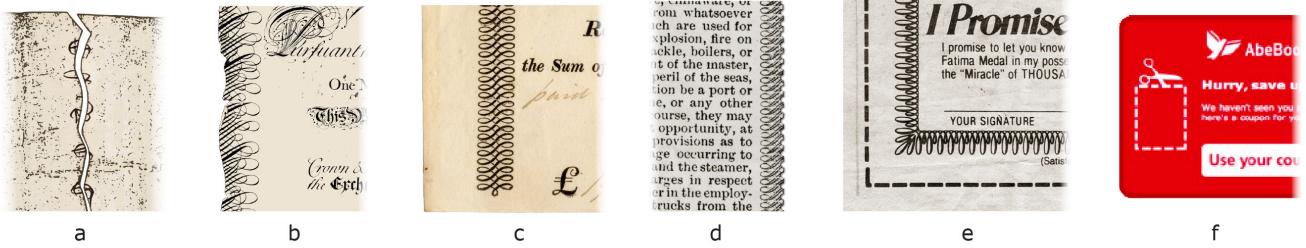Figure 3: (right) Stylised reconstruction of a 10000 Tengov banknote. Bukhara Emirate 1918, [artwork by author]

a   b   c   d   e   f

Figure 4: a) Illustration based on chirograph parchment from early 1300s [artwork by author]. b) Illustration based on exchequer Bill early 1700s [illustration by author]. c) English country banknote 1823 [author's collection]. d) Bill of loading; Adelaide Steamship Company 1889 [author's collection]. e) Coupon advertisement for "Miracle Fatima Medal", World Weekly News 1987 [author's collection]. f) Discount "coupon" from Abebooks.com website c.2012

Figure 5: Collection of motifs taken from various websites c.2012
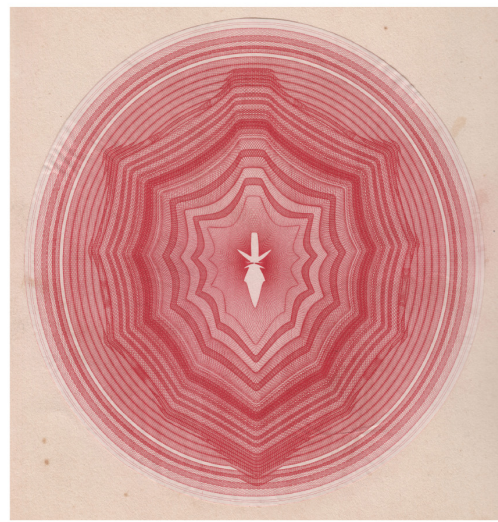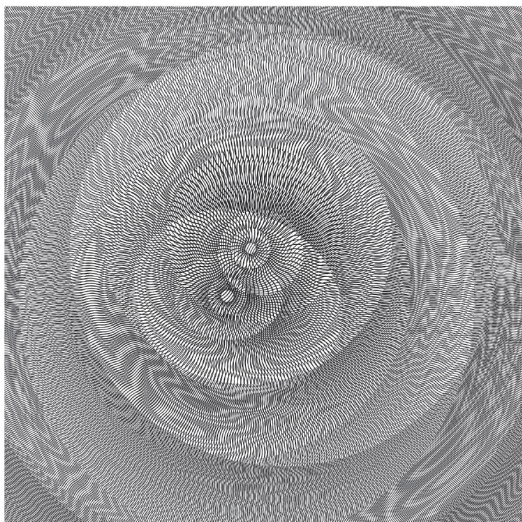
Figure 6: Artwork by author based on reconstruction of page from a scrap book of the American engraver, C.W. Dickinson, late 19th century
Figure 7: (left) Reconstruction from specimen steel engravings by Richard Williamson c.1819 [artwork by author]
Figure 8: (right) Mechanical engraving by Cyrus Durand c.1870 [author's collection]
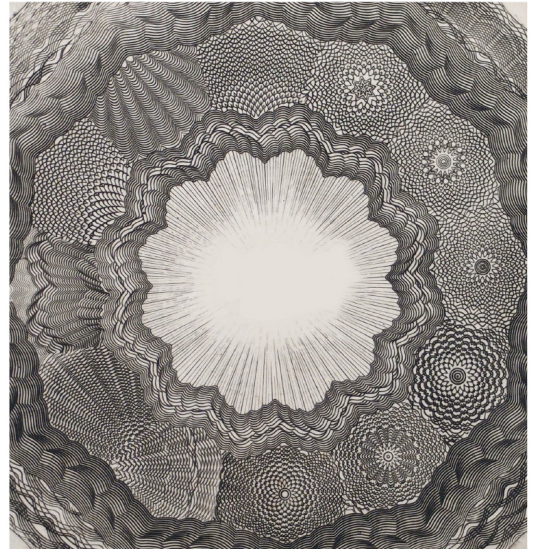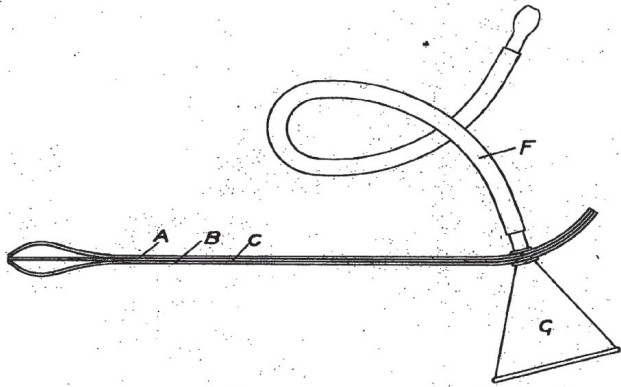
Figure 9: (left) Diagram from Alfred Edwin Bawtree's patent application of 1910: "Improved means for Imparting Security to Bank Notes and other Security Documents and Means for Detecting Attempted Forgeries or the same."
Figure 10: (right) Artwork by author based on a submission to the Society or Arts competition by unknown designer, England c. 1819