7. Trusting the Text

Readers have questioned the validity of written documents since the technology of writing first came on the scene. Compounding this skepticism, texts generated by new technologies are often greeted with mistrust by readers preferring the old, tried and true to the newfangled, unconventional and potentially fraudulent. In an attempt to counteract suspicion, new technologies may mimic the look of older ones in order to gain readers' trust. Sometimes this works: the first printed books resembled illuminated manuscripts, a look that worked in part because their illustrations weren't printed, but added by hand, not by the printers but by artists skilled at manuscript decoration.

Over time, writers and readers have resorted to a variety of authenticators to measure textual reliability. Some of these are internal, found on or within the written document: dates, signatures, and seals, for example, were developed in large part to assure readers that the text was genuine, that its message could be trusted. Other authenticators are external. These may be objective, like the physical analyses of paper, ink, or other materials used to create the document. Most readers can't conduct these scientific tests and rely instead on their own previous reading experience, together with the subjective opinions of experts: scholars, archivists, reviewers, document specialists, or simply other readers whom they've come to trust.

Sometimes, however, as in the "Case of the Bush Memos" discussed below, the internal and external authenticators were either inconclusive or they contradicted one another, and the question of trusting the text turned not on the documents themselves but on a messenger who handled them, among other things, a further demonstration that whatever the technology, the text itself exists not simply on paper, but also in the minds of readers, readers who may disagree wildly on interpretation.

The Bush memos

In September, 2004, as the presidential campaign between George Bush and John Kerry heated up, the CBS News program "60 Minutes" announced that it had received four memos "that show President Bush's National Guard commander believed Mr. Bush at times shirked his duties and used his political influence" (CBS 2004a).

Concerns over the nature of George Bush's 1970s service in the Texas Air National Guard had surfaced earlier, in the 2000 presidential race, and the issue had already been raised in the 2004 campaign as well. So it came as no surprise when the president's supporters immediately challenged the CBS memos as fakes created on a computer, not a Vietnam War-era army typewriter. They pointed to internal inconsistencies in the memos to justify their claim. For example, in the May 4 memo, the phrase "111th F.I.S." contains a superscript *th* in the body of the message, while in the letterhead the squadron's number is written without a superscript as "111th." Democrats, looking for equally-technical evidence to prove the memo genuine, retorted that the IBM typewriters of the 1960s could indeed produce superscripts, and they noted as well that

the superscript in the memo rises above the height of the line, as it would on a typewriter. In contrast, computer-generated superscripts reach only to the top of the line, not above it, as we see here, when 111th is typed on a word processor. If the memo were computer generated, these believers in the memo questioned, wouldn't there be two superscripts? And wouldn't it be more reasonable to expect such stylistic inconsistency from a typewritten document?

The appearance of the type in the memos suggests the irregular shapes and pressures associated with the typewriter rather than the uniformity of the laser printer, but those wrinkles could result from photocopying and faxing as well as typing. The memos were signed or initialed, but since no one had access to the originals, it wasn't possible to tell whether the signatures were true autographs or copies pasted into bogus documents by means of a computer, or even by hand. Finally, the memos show inconsistencies of style and language, but we don't typically expect attention to detail and careful revision from memos, whether typed or keyboarded on computers, because such documents tend to be written hastily and with little concern for posterity, and such inconsistencies didn't prove or disprove authenticity.

Just as it was not possible to tell from internal evidence whether the memos were real or fake, there were also no external validators. The memos weren't notarized, a process used to certify formal documents such as wills, contracts and affidavits, but not memos. And there were no eyewitnesses. CBS couldn't ask the author to verify the memos: Lt. Col. Killian had died in 1984. Living "witnesses" couldn't vouch for the composition or transmission of the memos, they could only offer opinions. Family members insisted that Killian hadn't written the memos, though they weren't really in a position to know one way or the other. Killian's secretary, now elderly, was certain she hadn't typed them, but although she believed that the memos were forgeries, she indicated to reporters that their contents did reflect her boss's thinking. Killian's military colleagues firmly agreed that the memos did, or didn't, sound like his work.

The Bush memos may or may not be fakes, and it's not my goal to determine their authenticity. What's interesting about the memo controversy is that neither internal nor external validators were conclusive, that the memos were ultimately dismissed as fakes not because of their content or appearance, or the opinions of experts, but because both believers in the memos and skeptics alike came to see that a middleman who had handled the documents was a crook.

Defending the memo's authenticity, CBS news anchor Dan Rather reported that the network had consulted a document expert before breaking the story. CBS News even posted on its web site a photo of the document examiner, Marcel Matley, in the act of scrutinizing a piece of paper, ostensibly one of the Bush memos, to encourage confidence in the report. Both Rather and the network defended the memos as genuine for several days, despite the revelation by Matley that he had worked from photocopies, not originals, and had only been asked to look at the signatures, not authenticate the memo's text.

Finally, about ten days after the original story aired, CBS acknowledged that its source, Bill Burkett, had lied about where he got the memos, and that their actual provenance could not be verified (CBS 2004b). Without originals, and without an unbroken chain of possession for the photocopies given to CBS, the memos suddenly became worthless as evidence. CBS then broadcast a television interview in which

Burkett acknowledged lying to the network and showed himself to be both evasive and untrustworthy. Though Burkett still maintained that the memos were genuine, and CBS did not admit that they were forgeries, the network issued a statement regretting their use, and Dan Rather apologized on his evening news broadcast for relying on documents whose origins were murky.

In the end, there was no smoking gun, no actual proof that the documents were faked. But what finally sank the memos was the apparent shiftiness of the man who gave them to CBS. Bill Burkett, it seemed to those who watched him on TV, was someone from whom they wouldn't buy a used car, or a hot memo.

The memo incident put an end to Rather's long career, but while Rather eventually went to court to protest his firing by the network (because of this litigation, the memos may not be reprinted, though they are available on the web), the whole memo issue faded as quickly as it arose and the inexorable cycle of news moved on to other concerns.

Is seeing believing?

Many viewers believed Dan Rather's initial story about the Bush Memos because Rather, like other network news anchors, had established himself as a public figure worthy of trust, a symbol of accurate reporting who came into their living rooms every evening with the day's top stories. Rather's predecessor Walter Cronkite ended each of his broadcasts with the line, "And that's the way it is today . . ." and for viewers everywhere, the evening news as delivered by the broadcast networks or the cable news channels, or even "The Daily Show," has become "the way it is." But when people finally saw Bill Burkett on CBS, they saw him to be a liar. Seeing for ourselves is often a way to determine trustworthiness, whether of a memo or a person. Seeing, after all, is believing. Or is it?

Since its invention in the nineteenth century, the visual technology of photography was often equated with truth and realism: pictures don't lie. But there has always been a parallel strain of suspicion associated with modern visual arts like photography, film or television, which rely on technology not simply to record but to mediate the visual world. These technologies let us recreate the world and also lie about it.

In Sir Arthur Conan Doyle's novel *The Lost World* (1912), the aptly-named Dr. Illingworth expresses the prevailing skepticism that photographic evidence is no evidence at all, that only the naked eye can discern the truth. The story's narrator summarizes Illingworth's objection to pictures proving that dinosaurs had been found living in a remote area of South America:

> The corroboration of these wondrous tales was really of the most slender description. What did it amount to? Some photographs. Was it possible that in this age of ingenious manipulation photographs could be accepted as evidence? What more? . . . It was understood that Lord John Roxton claimed to have the skull of a phororachus. He could only say that he would like to *see* that skull.
>
> [Doyle 1912, 181]

Almost as if to prove Illingworth right, the BBC's television version of "The Lost World" places live actors alongside computer-generated dinosaurs, but it doesn't take a

big operation like Pixar or Industrial Light and Magic to doctor a picture. William J. Mitchell (1994) explained how off-the-shelf software and a run-of-the-mill personal computer can create a photograph (see below) of Marilyn Monroe and Abraham Lincoln that never existed in the original.

Computers allow us to manipulate images in ways that make forgery undetectable. We recognize the picture of Abe and Marilyn as fake because Lincoln's eyes seem focused in an unlikely direction, considering his companion, and because we know that Monroe had a taste for Democratic presidents, not Republicans. It helps to remember, as well, that she and Lincoln lived at different times. But because the seams of this concocted photograph were finished at the level of the individual pixel, no amount of magnification will reveal the editing to a skilled document examiner.

Image 42 The image of Lincoln and Monroe reproduced above, which appeared on the cover of *Scientific American,* was created with an early version of Photoshop and an off-the-shelf personal computer. [Mitchell 1994. Image by Howard Frank; used by permission]

Anecdote: Phony as a three-dollar bill

Mitchell is correct that it's easy enough for an amateur to produce a fraudulent document, even a complex one, on a computer. Although I have only a smattering of knowledge about computer graphics, I created the image below on my own computer, using the same program Mitchell used, a low-end scanner, and an inexpensive digital tablet:

Image 43. Phony as a three-dollar bill. [Graphic by the author]

In contrast to the photo Mitchell produced for his *Scientific American* article, my own attempt to create a three dollar bill by scanning a two dollar bill and retouching the image with elements scanned from a c-note is amateurish, with visible seams and inconsistencies of color and resolution that are easily detected by the naked eye and that jump out at the observer with any degree of magnification.

But despite my clumsy efforts, which probably took all of an hour, when I project the image on a screen during a lecture it gets some double takes from the audience. After all, we have become so confident that the money in our wallets is real that we seldom take the time to examine it closely. We know that counterfeits exist, and we may have read stories about college students caught cranking out bogus twenties on high-end color laser printers in some administrative office. Surely we've noticed tellers or store clerks testing big bills with special pens or passing them under black light. But such precautions just remind us that the U. S. Bureau of Engraving and Printing employs a variety of safeguards to ensure the validity of the currency it prints. Anyone who happens to wind up with a phony bill has to absorb the loss, but because that happens very rarely, the chances of our being left with the hot potato are remote, and other than counting it, we don't pay all that much attention to the money as we put it in our wallets.

My own clumsy attempts at photo manipulation notwithstanding, we're more suspicious of printed text than paper money, despite the fact that the paper money is often worth more, both in real and in symbolic terms. If I stood on a sidewalk and handed out poems, most passers-by would avoid eye contact and refuse my offer. I suspect it would be harder to give away poetry than incriminating memos about presidents, even if I were

standing outside the CBS News building on West 57th Street in Manhattan. But if I were handing out twenty-dollar bills, then I'd have to fight off my new-found friends who can't wait to get their hands on some free dead presidents. Of the few people who actually might take the free verse, most would throw it away in disgust once they saw it wasn't a discount coupon or an ad for adult entertainment. In the present political climate, someone might even alert the Department of Homeland Security and I'd be hauled off to Guantanamo for observation. But so confident are we in the authenticity of the money supply that no one would give the banknotes I was handing out more than a cursory glance before stuffing them away. Perhaps the scenario I've just outlined sounds far fetched, but my point is not: How many of us take the trouble to actually "read" the money we so readily accept from total strangers where we bank and shop every day?

In fact, learning to trust paper money was a slow and difficult process, one in which many people were left holding worthless or devalued notes. As paper money began to circulate in the United States during the nineteenth century, there were few conventions that established the size, appearance, or even the denomination of individual bills. Like many written documents, banknotes employed both graphics and text, including signatures, both to convey information and to serve as authenticating devices. Though today few people scrutinize their money, as David Henkin (1998) has shown, recipients of these early bills examined the text closely to determine their money's genuineness.

The greenback has become a symbol of global capitalism, but that's hardly surprising since the first paper money was an exercise in a kind of textual free enterprise. American banks in the 1800s began printing their own paper currency (hence the term "banknote"). According to Henkin, by the time of the Civil War as many as 1,500 financial institutions, not all of them solvent, were issuing bills, and many forgers were cashing in on a money system that was only marginally stable. Nevertheless, the American economy grew increasingly dependent on banknotes instead of coins for transacting business. Henkin adds that, since far too many of these notes were only as good as the paper they were printed on, merchants and bankers cross-checked the currency they received from customers against frequently-updated lists of worthless or counterfeit money before accepting it. Eventually, in 1863, the federal government stepped in to centralize and regulate the production of a uniform national currency, and Americans finally learned to trust their money more and read it less.

The technology of fraud

But back to the Bush memos. Aside from their role in the dirty trickery of a presidential campaign, one in which Republicans had already produced ads claiming that John Kerry's military service, including his purple heart, was more faked than real, the Bush memos show us that after millennia of dealing with written texts, and despite the essential role that documents play in our daily lives, they can still be problematic, even untrustworthy, unless we know where they came from, or who really wrote them. A text, for us, remains only as good as the paper it's written on, or the person behind it, if that person can be found. The Bush memos were initially suspect because, even though they show some signs of being typed, it was also easy to think of them as computer-generated. It may have taken a long time, but we eventually learned to trust handwriting, print, and

typewriting. The Bush memos are another story. Given the complicity of computers in the juggling of visual images for good or ill, the jury's still out when it comes to our willingness to trust the digitized text, at least when it's deployed in a political campaign.

All new writing technologies bring with them the potential for fraud. In the early days of writing, few people trusted any sort of text. Even though writing had been around for several thousand years, until the Norman Conquest writing in the British Isles consisted mostly of bibles, prayer books, and the occasional poem or saint's life. Some literature was written down, along with some history, and admittedly much of the early written record, which could have included such ephemera as to-do lists and personal notes, has been lost. But day-to-day business in England was still conducted orally, not in writing, and the records of such transactions were preserved in people's memories, not in written ledgers or office filing cabinets.

When the Normans came uninvited to England in 1066 they brought with them not just regime change, but a change in business practice. The Normans wrote everything down, and that was something that the Anglo-Saxons had some difficulty accepting. The historian Michael Clanchy (1993) chronicles the shift in business practices in 11th century England from reliance on the spoken word to written documents, and it is his phrase, "trusting writing," that I have ported to the present discussion of how we respond to digital text.

As Clanchy reminds us, the Anglo-Saxons were used to recording ownership and property transfer by word of mouth: a purchaser might tender a verbal offer for land or goods; a parent might tell the children what part of an estate they would inherit. The Normans had already switched to written documents for recording such gifts and transfers, and since Normans were now in charge, they wanted their English subjects to do the same.

In contrast, Clanchy notes, the Anglo-Saxons were used to verifying property claims orally, by asking questions and listening to whatever individuals who had witnessed a transaction might remember, or if no witnesses survived, what the other members of the community recalled hearing about that transaction second- or third-hand. Even in the absence of the polygraph, spoken assertions could be trusted as an accurate record of the past, though if a witness failed to answer questions well (as in the case of the Bush memos), they could be dismissed as untrustworthy or untruthful. Written documents couldn't answer questions the way living witnesses could. The veracity of witnesses could be tested, their memory of events compared with other people's recollections. Skeptical readers couldn't look a written text in the eye to see if its gaze wavered or it looked guilty. Speech was interactive, while letters on a page – as Socrates told Phaedrus – were unresponsive. They were literally dumb. Who could be trusted more, the skeptics asked, a respected elder of the community or some marks inked on an animal skin?

Adding to the problem posed by documents which challenged the authority of human memory was the fact that, because few of the English could actually read, they had to take someone else's word for what a charter said. And since that someone was usually a Norman, it's not surprising that the English perceived writing as just a nasty Norman trick to steal their lands. In many cases, they were right. But despite initial mistrust and resistance, documents proliferated in twelfth-century England just as paper money spread in the United States in the nineteenth, and as with paper money, not all the

documents were false. Everyone new to the written word has to learn to trust the text. So, like it or not, as they had once learned to test the truth of witnesses, Anglo-Saxon readers and nonreaders alike now had to learn to assess the validity of a piece of writing.

To make that task easier, writers adopted conventions of text production that could encourage acceptance of their documents. Even the illiterate among the Anglo-Saxons, who had been converted to Christianity by missionaries centuries earlier, had seen priests using Bibles and prayer books. As Clanchy observes, some of the new charters were drafted with illuminated initials and red rubrics to resemble these trusted documents. But such ornamentation was an expensive and tedious option, and for their less ceremonial documents writers had to come up with more practical ways of convincing the reader that a text was genuine.

We see two such authenticators, crosses and seals, in the 11th-century Anglo-Norman charter reproduced below from Clanchy's book. The document contains three crosses, each signaling the consent of a participant in the land transfer being recorded. The cross is a Christian symbol used by illiterates in documents of this era to attest authorship. Signing with a cross was tantamount to taking a religious oath.

As Clanchy describes the document, the first cross represents the English king, William Rufus, or William II. He was the second son of William the Conqueror and had inherited England, his father's second most important possession (the most important possession, the Duchy of Normandy, went to Robert, the Conqueror's oldest son). The second cross is that of the donor of the parcel of land in question, Ilbert de Lacy. And the third is that of Ilbert's wife, Hawise.

In addition to the three crosses representing the persons of the King and M/Mme de Lacy, appended to the charter is Ilbert de Lacy's wax seal, identifying him as the principal author of the document. Seals or other symbolic objects such as small knives were attached to documents as authenticators so that readers would recognize them as the property of the author. Clanchy reports that Ilbert's is one of the earliest English knight's seals to survive. The cross and seal say, essentially, "I am Ilbert de Lacy. This message has been approved by me."

De Lacy was, as his name suggests, a Norman, and his carefully authenticated charter, which announces the donation of a manor house in Buckinghamshire to an abbey in Rouen, and which Clanchy tells us may actually have been drafted by a Norman monk, is a fine example of what the English feared most from written documents, the transfer of their wealth to the continent.

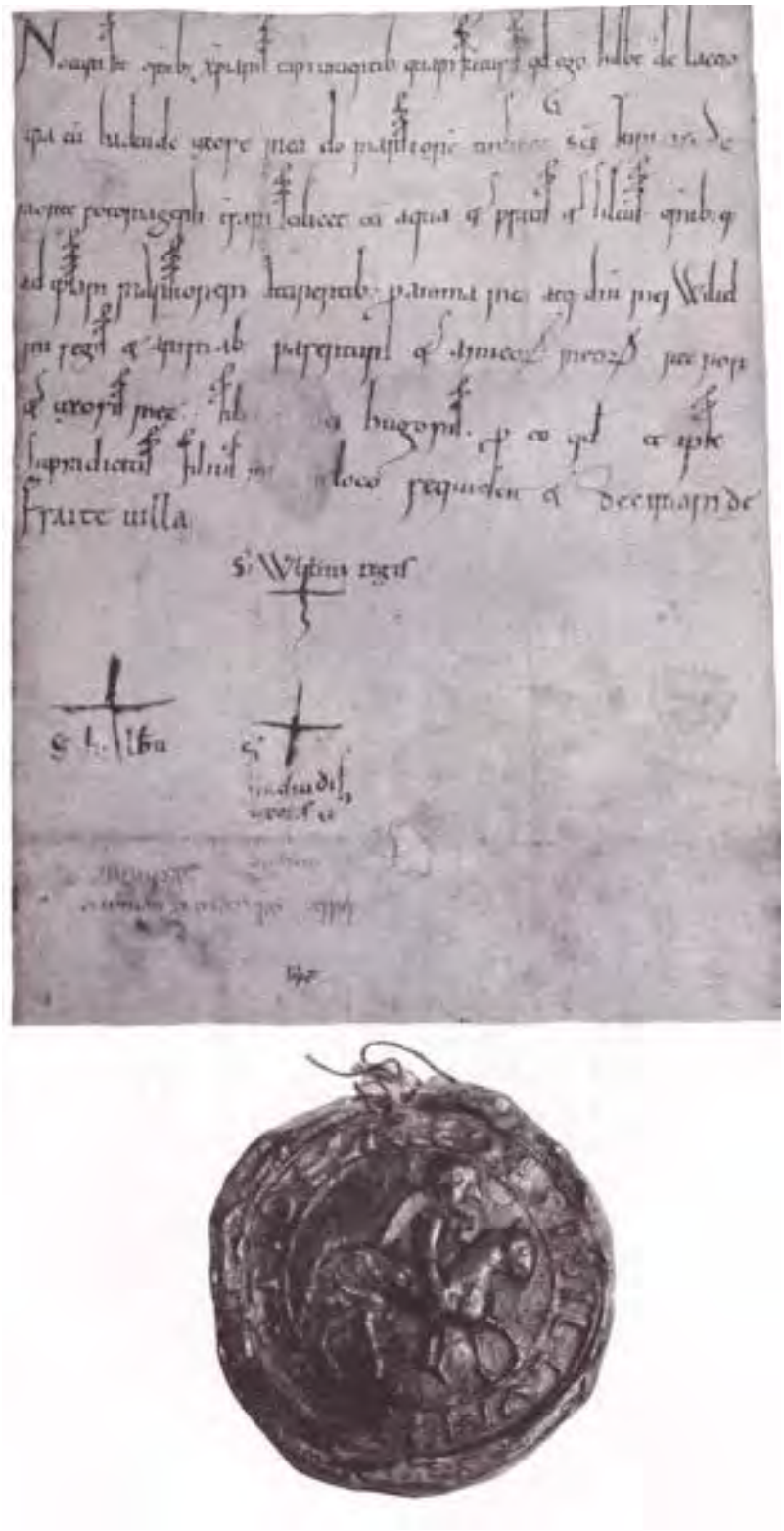

Image 44. Charter and Seal of Ilbert de Lacy. Three annotated crosses and a seal authenticate the document [Clanchy 1993, plate I, p. 346. Used by permission]

It's noteworthy too that both King William and his vassals, the de Lacys, were illiterate – none of them actually signed the charter. It's also not likely that William inked the cross that stands for his name, and according to Clanchy, it's possible that the de Lacys relied on a scribe to make their crosses as well. While the Normans expected written records to accompany important transactions, literacy itself was not widespread in medieval England or in Europe. The Norman aristocracy, like the general public, depended on a small scribal class, typically clerics, to do their writing and reading for them.

In the centuries that have passed since Ilbert de Lacy exported a little bit of England back across the Channel, literacy became the rule, rather than the exception. Today we expect the few illiterates left in our society to certify documents not with a cross, a mark that was trusted in Christian Europe during the Middle Ages because of its religious significance, but with an "x," which masks its own faith-based origins behind a letter of the secular alphabet – the *x* originally stood for *chi,* the first letter in χριστοσ, Greek for Christ. And while most readers today rarely encounter a document signed with an "x," we all know that anyone signing that way will need to have their mark witnessed – and countersigned – by someone who can actually read and write.

Of course, not all of the texts that we produce for ourselves or others need signing: people don't sign their shopping lists or diary entries, and even more formal writing like a book manuscript or news article, while it bears the name of the author, doesn't require that person's signature. But the absence of a signature where one is required, for example on a check or a contract, or on the back of a credit card, can void a transaction or invalidate a document. In most cases, particularly for documents with legal implications, we now expect not a seal or cross but an actual signature, preferably a bold and unique one, to authenticate an author's words for the reader.

Image 45. John Trumbull's 1817 painting of one of the most publicized signings in history, that of the Declaration of Independence, hangs in the Capitol Rotunda and is reproduced on the back of the $2 bill, shown above. Based on sketches drawn from life, Trumbull portrays John Adams, Roger Sherman, Thomas Jefferson (presenting the document), and Benjamin Franklin standing before John Hancock, the President of the Continental Congress.

Image 46. The original Declaration has faded, as we can see from the John Hancock signature reproduced below. [Library of Congress]

In the most famous signing ceremony in American history, John Hancock used his signature to stick a metaphoric finger in a monarch's eye. According to the popular story, the president of the Continental Congress wrote his name large on the Declaration of Independence so that King George could read it without his glasses, or perhaps Hancock simply did it because he was the first to sign. In any case, the other signers wrote in a smaller hand, with the result that Hancock's has become the best-known signature in the United States. In fact, the name "John Hancock" has become an informal synonym in American English for any autograph or signature.

Since Hancock's time we have come to invest a lot of meaning in a signature – it carries the identity and the individuality of the author in ways that an "x" or a seal cannot. While a signature may not be as foolproof as a fingerprint, many people work to perfect their own signatures in the belief that this written token carries part of the writer with it, not just like the DNA we might leave at a crime scene, but something with actual life and personality. Like the little holograph of Princess Leia in Star Wars, a signature is an accurate stand-in or replacement for the person behind the message. As a means of validating a written text like a credit card receipt or a love letter, it's the next best thing to being there.

Barring name change, illness, accident, the reduction of fine motor skills that may come with age, or the deliberate alteration of one's personal trademark, people's signatures remain remarkably consistent over the course of their lives. Because of the individuality and consistency of signatures, we use them to verify typed and printed documents as well as handwritten ones. We sign everything from personal and business letters to checks and applications. Signatures are essential on wills, passports and driver's licenses. Unsigned forms are summarily rejected, and during critical election campaigns, poll watchers scrutinize voter petitions looking for evidence of fraudulent signing.

Signing letters is a way both of finalizing their content and adding the personal touch that means so much to recipients. When letters are produced in bulk, politicians, celebrities, and executives, faced with the problem of signing hundreds or perhaps thousands of these automatically-generated documents, turn to signature machines. Automated Signature Technology, which makes signing machines that use real pen and

ink rather than rubber stamps or computers, assures customers of the effectiveness of the machine-generated personal touch:

> Studies show that personally signed letters will be read more frequently, kept longer and generate substantially more activity than letters signed with digital, scanned, or printed signatures. By decreasing the amount of time a single executive, manager, or VIP signs his [*sic*] name by just 15 minutes a day, a signature machine can pay for itself in just a short time. The written signature gives personal value and meaning to your documents. Organizations that use our equipment understand the power of a personal signature.
>
> [signaturemachine.com/products/products.html]

Thomas Jefferson is said to be the first U. S. president to take advantage of such automated writing technology. He used a machine called a polygraph, a version of the pantograph familiar to draftsmen, that harnessed two pens together and allowed him to copy a letter at the same time that he was writing the original.

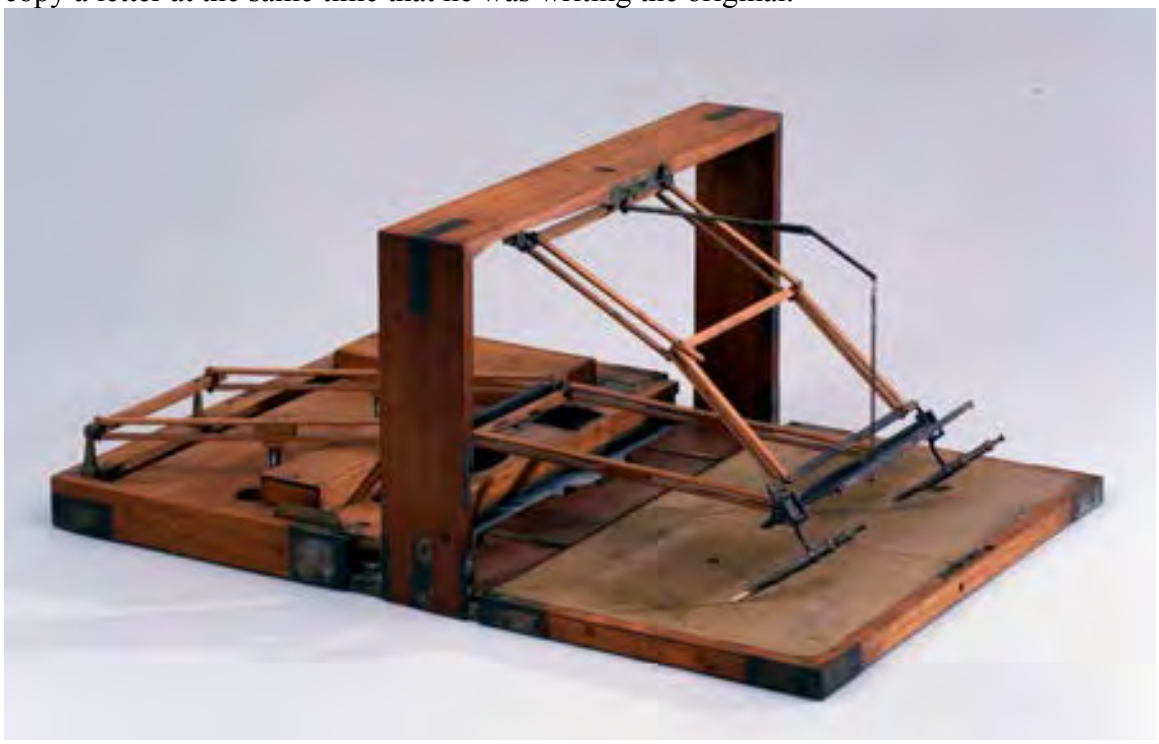

Image 47. The Hawkins & Peale polygraph uses two pens yoked together. A writer grasps one pen to write the original, and the machine's levers manipulate the second pen to create a copy. The polygraph required constant adjustment, and even when the levers worked smoothly, both pens had to be dipped in ink repeatedly. Despite Thomas Jefferson's enthusiasm for the polygraph, the machine's manufacturers lost money on the product. [Special Collections, University of Virginia Library; used by permission]

The polygraph (image 47) which is on display at Jefferson's home at Monticello, is not suitable for making multiple copies, and nineteenth century office documents continued to be copied either by hand or with a device called a copy press until the

perfection of carbon paper. Polygraphs – today we call them autopens – could not produce presidential signatures on a large scale until they became mechanized.

The greeting card shown below, sent to a relative of mine in response to a small campaign contribution, may have been signed by an autopen, which is not all that different in conception from the one that Jefferson experimented with, or it may simply have been printed – it's apparent that the Clintons did not sign such mass-distribution cards personally:

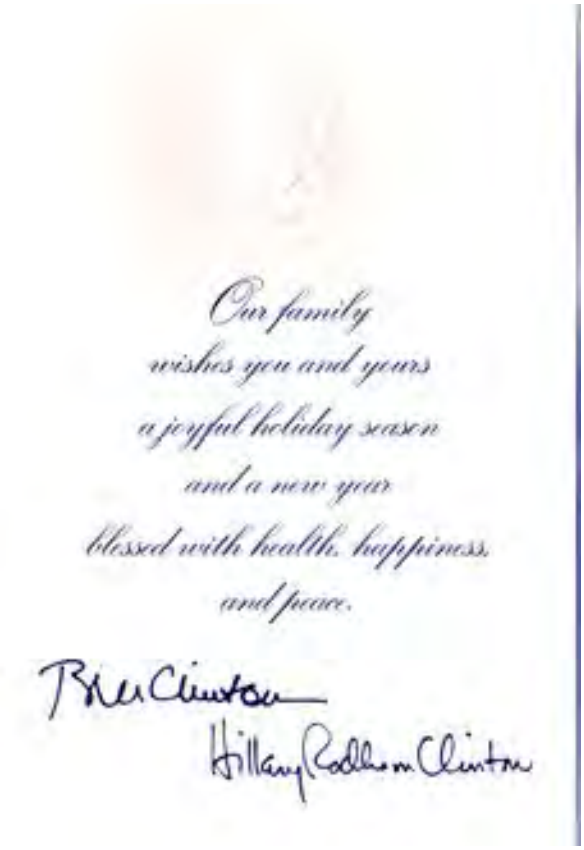

Fig. 48. Greeting card signed by the Clintons, presumably using an automatic signing machine. [Photo by the author]

At least one autograph hound has accepted the fact that the rich and famous aren't likely to sign their own correspondence, and he has turned to collecting less-lucrative but easier-to-obtain autopen signatures, like the following machine-generated version of President Richard Nixon's autograph.

Image 49. An autopen version of Richard M. Nixon's signature [geocities.com/~sbeck/autopens/ap-rn.htm]

A signature can be enabling as well as authenticating: signing, to use the popular "Star Trek" command, can make it so. Presidents may sign greeting cards as a feel-good gesture to constituents, but they sign laws to give those laws force, both legally as well as symbolically. Although there is no record that John Hancock used multiple quills when

he signed the Declaration of Independence, presidents today will sign new bills – in an homage to the days of pre-paper technology, the official copy of every new law is printed on parchment – using a different pen for each letter of their name, then give the pens to key supporters as souvenirs of the occasion.

Signatures themselves can serve as souvenirs. The autographs of the significant or famous can become the objects of adoration and desire. Sports figures sign baseballs, basketballs, and footballs for fans, sometimes for a fee, and reproductions of their signatures decorate collectors cards and athletic paraphernalia, authenticating them for consumers much as Ilbert de Lacy's seal authenticated his charter – "I am Willie Mays. This fielder's glove is approved by me" – and thereby adding to their value.

A quick check shows that today (Sept. 28, 2007) there are over 33,706 autographs for sale on eBay, the internet auction site. Most are the signatures of sports or entertainment figures, some are reprints rather than originals, not all are genuine, and a few are even names I recognize: a Ronald Reagan signed photo was on offer for $5.00; an Eva Peron letter from the 1940s for $200; and an Elvis Presley that the seller admits is printed rather than hand-signed, for the curious sum of $4.60.

On the same day, on their own web sites, professional autograph dealers were hawking the signatures of such historical figures as Gen. George Armstrong Custer ($5,500); Albert Einstein ($9,000); and Martin Luther King ($12,900). A John Wilkes Booth letter was going for $15,500, and an Abraham Lincoln for $22,900. Booth letters are rare. After the actor assassinated Lincoln, most of the people that he had written to destroyed the correspondence, fearing guilt by association. As a result, when Booth letters are offered for sale they may even draw more than a Lincoln signature does, a fact that suggests some collectors may not have their priorities straight. A week after I checked autograph prices, a signed John Wilkes Booth letter sold for a record $68,000 at a Boston auction, topping the previous record for Booth's john hancock by $30,000. In contrast, an original John Hancock, whose value is clearly more symbolic than commercial, had just gone to a happy buyer for only $4,950.

Despite advances in literacy since the middle ages, and the occasionally inflated value we place on autographs and the pens that produce them, we still approach words on paper ambivalently. We trust the familiar handwriting of friends and family, and those whose authority has been established beforehand (a supervisor, a teacher, a physician, a government official), but we can remain skeptical when strangers sign things, and we are downright suspicious when they don't.

A sign in the local post office warns that patrons presenting unsigned credit cards will be asked to provide two additional forms of official identification before their payment will be accepted. Salesclerks check credit card receipts against the signature on the card itself (though many skip this step if they think management isn't looking). And most American merchants require photo identification before accepting personal checks. The signatures on such papers as marriage certificates and wills need to be witnessed or the documents are not considered valid. Deeds, depositions, and some documents that are signed outside the presence of their intended recipients must be notarized, a process whereby a public officer called a notary witnesses the signing and attests to its legitimacy (that's just for the signature; as was the case with the Bush memos, the actual contents of the document may require additional verification).

Sometimes it takes more than a signature to authenticate a document, whether Norman or modern. The following certificate, given to the author in sixth grade, looks much grander than the simple commendation for picking up litter that it is. Its designer invoked a number of features that we have come to associate with charters, diplomas, and other documents suitable for framing in an effort to dazzle the recipient and his parents: Old English type, calligraphic hand lettering, inflated language (I already knew as a sixth grader that picking up crumpled paper and gum wrappers from the school hallway hardly constituted "meritorious services"), a background image of the great seal of the City of New York bearing the Latin legend SIGILLUM CIVITATIS NOVI EBORACI, a gold foil embossed seal of the New York City Department of Sanitation (no Latin on that), and a mix of autograph and printed signatures of city and school officials. Unfortunately, someone at P.S. 144 in New York City forgot to fill in the school's name, considerably lessening the impact of this good-citizen award, not to mention its resale value on eBay.

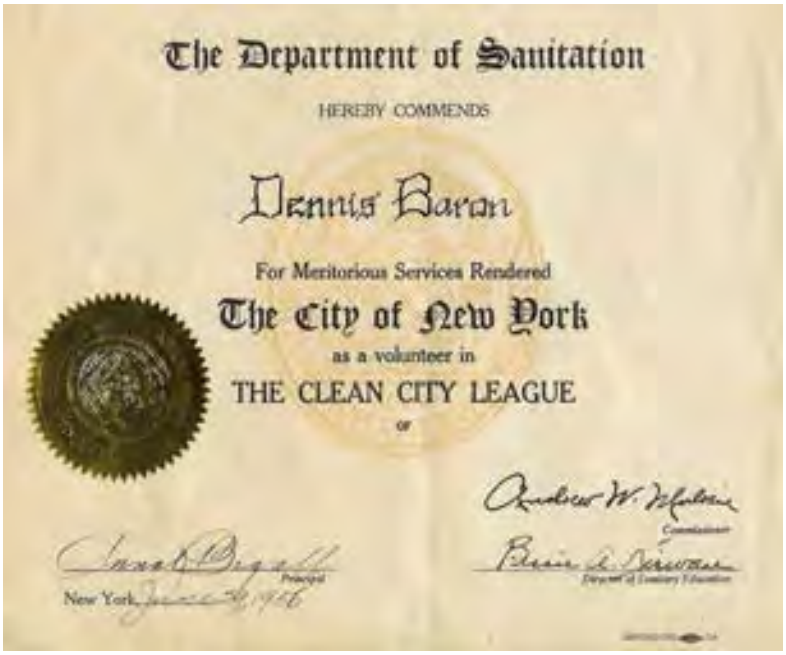

Image 50. A mid-twentieth-century document bearing various kinds of authenticators. [Photograph by the author]

Question authority

Although documents replaced oral tradition as a way of doing business, and despite the many safeguards that we have developed to certify writing as valid, we still run into handwritten texts that may not record the past as it really happened. Even after centuries of dealing with manuscripts, experts were duped by the sixty-two handwritten notebooks of the so-called "Hitler Diaries," forged by Konrad Kujau and sold by his accomplice Gerd Heidemann to the German magazine *Der Stern* for two million dollars. When *Stern* announced the discovery of the diaries, a bidding war ensued as *Newsweek* and other publications sought to get in on the action. In a dramatic gesture, the British publishing magnate Rupert Murdoch hired the historian Hugh Trevor-Roper, who served on the board of a rival newspaper, to authenticate the diaries. Although Trevor-Roper was

fooled, other experts exposed the notebooks as amateurish fakes, crafted from modern paper and ink and full of obvious factual errors, and both Kujau and Heidemann were jailed for their scam.

Signatures and seals, photographs and thumbprints, serial numbers, specially-formulated inks, and perfumed papers serve to authenticate official documents like certificates, licenses, and paper money, or in the case of the Hitler Diaries, to trick experts into declaring such documents genuine. Today's readers look for other indicators to establish the bona fides of the more mundane texts – the books, newspapers, magazines, and reports – that we encounter every day. When we pick our reading material we rely on everything from the cover, to the paper, to the reputation of the author or the recommendation or a reviewer, to tell us what to read or how to read it.

Anglo-Saxon readers managed to get past the deceptive practices of Normans as they learned to put at least some trust in writing, and despite contemporary forgeries like the Hitler Diaries, today we readily value type or printed text over the individually-penned document. Certainly printed fakes like my three dollar bill or the infamous "Protocols of the Elders of Zion" do exist, and some people are taken in by phony money or spurious books. But even though treatises on etiquette remind us that a handwritten note is always preferable, and while a handwritten text is as valid, legally, as anything typed or printed, today we are more likely to accept the writing of strangers if it's machine-generated.

The primacy of print didn't happen overnight. Just as the Anglo-Saxons had trouble negotiating the new document-dependent culture that was imposed on them, Europeans had to learn to trust the printed books that slowly began to circulate in the fifteenth century.

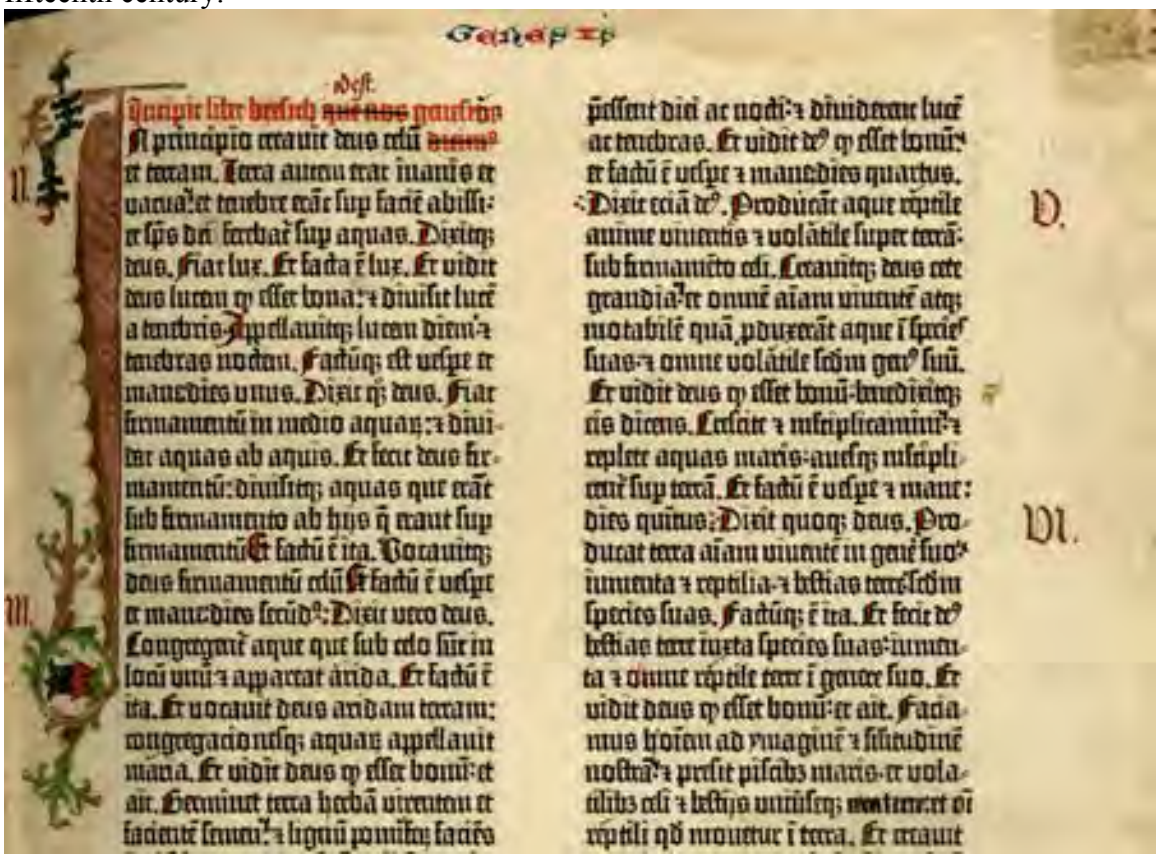

Image 51. The upper portion of a page showing the beginning of the Book of Genesis, in Latin; from a Gutenberg Bible printed in the 1450s. Rubrics, numerals, illuminations, and other decorations were added after printing by scribes and skilled artists, and for more than two centuries it was common practice to illustrate or correct printed books individually, by hand. [Courtesy of the Harry Ransom Center at the Univ. of Texas; used by permission]

It was no accident that the first printed books were bibles and prayer books. Just as some early business documents in England copied the format of religious manuscripts, early printed bibles like the Gutenberg page from Genesis (image 51) were hand-decorated with elaborate initials, rubrics, and numbers, to make them look more like the illuminated manuscript bibles that readers were already used to. Even so, printed books, like manuscripts before them, were greeted with suspicion.

One critic of the new printing press complained that paper wouldn't survive more than a couple of centuries, while parchment lasts 1,000 years, and vellum, made from calfskin, would last twice as long (Clanchy 2007). Just as I knew in 1971 that typed job applications were superior because the type bar actually engraved its image into the paper, while photocopiers essentially sprinkled some toner onto its surface, one medieval critic praised the pen for carving out its message on parchment, like a plow planting wisdom instead of seeds, while the printing press merely painted ink onto the paper's surface:

> Peter the Venerable, abbot of Cluny, had likened the act of writing to work in the fields: "The pages are ploughed by the divine letters and the seed of God's word is planted in the parchment" . . . . The scribe is understood to incise the words of Scripture into the parchment with the point of his quill pen, whereas the abbot of Sponheim criticizes printing as an essentially superficial process which stamps text onto perishable paper.
>
> [Clanchy 2007, 195]

Early printed books were the products of a new and developing technology, and not all of them were produced with the care or expense that accompanied Gutenberg's bibles. More run-of-the-mill printed works – using wood cuts for illustrations rather than hand-painted miniatures – were seldom as attractive as manuscripts. But printed books had some advantages that readers were quick to notice: they were still expensive, to be sure, but much less expensive than manuscripts. And books were literally cranked out by printers more quickly, and in greater numbers, than manuscripts, which meant that more people with means could actually get their hands on one. In the long run, books achieved acceptance – and that meant sales – not by imitating manuscripts, but by trading on the reputation of authors and presses, factors which even today move us to choose or reject a printed work.

Looking back, it's easy to see the printing press initiating a revolution in writing and reading practices. Elizabeth Eisenstein (1980), in her extensive history of printing, establishes the reputation of the press as an agent of change. But the "revolution" caused by printing was actually very slow in coming, and the changes heralded by Eisenstein took several centuries to become firmly established.

Both literacy and printed books began to proliferate in tandem, but their greatest impact occurred not in the 1450's, with the invention of lead type and the building of the first presses, but with the industrial revolution, some 350 years after Gutenberg, when the

market for print really exploded. And even with the huge increases in book, magazine, and newspaper production that took place in the nineteenth century, the daily written work of the factory and the office remained dependent on pencil and pen rather than moveable type until the twentieth century, when the typewriter and adding machine began to revolutionize the business practices of industrialized countries in Europe and North America.

Today we associate manuscripts with error: as we know from personal experience, writers make mistakes when they're creating or copying text, and handwritten copies differ one from another often in significant ways. In contrast, we've come to the think that because books can be reproduced mechanically, all copies of a given title will be identical. Anyone who buys a new car knows that although each vehicle coming off an assembly line looks like the one before it, on closer inspection each one exhibits variations in fit, finish, and even performance. Similarly, as Adrian Johns (1998) has shown, printed texts, particularly early ones, were hardly clones of the first copy that was run off. Even more than cars, early books exhibited a great degree of variation. Paper was expensive, and as Johns reminds us, authors were often expected to pay for the paper that was used to print their books. Time was clearly money even before capitalism came into its own, so print shops wasted as little as possible of either, binding sheets with errors in them into the books even as they reset corrected pages for their next trip through the press:

> The first sheets of a print run would . . . often be checked as the rest were being printed off. In such a case, books would inevitably be made up of sheets in different states of correction. The consequence was that no two final copies out of a given edition would necessarily be the same.
>
> [Johns 1998, 91]

It's true that the eighty-four fourteenth-century manuscripts of Chaucer's *Canterbury Tales* differ significantly from one another, but it's also true, as Johns points out, that no two copies of the 1623 First Folio of Shakespeare's plays are identical (some 228 copies of the First Folio's original print run of about 750 still exist, according to Anthony James West). The state of both Chaucer manuscripts and Shakespeare printed texts makes it difficult if not impossible for scholars to agree on authoritative versions of these authors' work. Even more astonishing to those who think of books as somehow more dependable than manuscripts, there were an estimated twenty-four thousand variations in so standard a text as the King James Bible – also called "the Authorized Version," a name which itself all but guarantees some uniformity – between its initial publication in 1611 and 1830 (Johns 1998, 91). Even today, with production techniques more standardized and efficiency improved, printers silently introduce subtle variations in books between print runs.

Even so, print has come to inspire confidence not just because it can be *relatively* uniform, but also because we've learned that much of what gets published undergoes editorial scrutiny and a winnowing process in which inappropriate or deficient material is rejected, and only the best content makes it to the press (at least that's what's supposed to happen). In addition, once accepted for publication, such text is vetted before it reaches its audience. Someone, a copy editor, publisher, manager or authority of some sort has fact-checked and proofread the document before passing it along to us. As a result, we do

find ourselves judging a book by its cover in that the very fact of the book's existence already places the text somewhere above zero on our personal trust-the-text scale.

Signing off

As soon as computers allowed us to generate digital versions of conventional texts, skeptics began to question the authority of those texts, not just controversial documents like the Bush memos or obvious frauds like the image of the Abe Lincoln-Marilyn Monroe liaison, but the mundane documents of everyday life, the emails that threatened to supplant the telephone call, and the digital orders and receipts traversing the World Wide Web without their customary signatures.

It was just a few years ago that most people considered on-line shopping a reckless endeavor, but today e-commerce is big business and getting bigger. Americans are not just buying from internet versions of familiar stores, but from virtual stores with no bricks-and-mortar presence at all. Most recently, person-to-person on-line shopping has exploded, with individual buyers and sellers trading goods through the mediation of such entrepreneurs as eBay, Amazon, and Craig's list, all actively pumping up the national garage sale mania.

So prevalent is on-line shopping, trading, banking, and bill-paying today that the signature, the long-trusted validator of documents ranging in import from Declarations of Independence to greeting cards and personal checks, and one last survivor of the decline in handwriting, may soon go the way of clay tablets and quill pens. Even such basic identification documents as drivers licenses and passports are moving toward new ways of validating authenticity to back up, and ultimately supplant, the written signature and photo. After all, signatures can be forged, pictures faked – and neither can compete with the latest technological identifiers: the thumbprint reader, which has started to appear in the workplace, as well as the more "scientific" eyeball scan and DNA analysis, all of them mediated by the computer and promising more accuracy than a john hancock ever could.

The impending death of the signature is just one of the new wrinkles that the computer has brought to the process of creating and evaluating the written word, wrinkles that will occupy us for the rest of this book and for many years to come.