Learning From the Past: Verbal and Visual Literacy in Early Modern Rhetoric and Writing Pedagogy

Catherine L. Hobbs
University of Oklahoma

The history of culture is in part the story of a protracted struggle for dominance between pictorial and linguistic signs, each claiming for itself certain proprietary rights on a "nature" to which only it has access. ... Among the most interesting and complex versions of this struggle is what might be called the relationship of subversion, in which language or imagery looks into its own heart and finds lurking there its opposite number.

—Mitchell (1986, p. 43)

Print-imprinted intellectuals, including professors, must relearn the world of the graphic, a word which derives from the Greek graphe and refers both to the written and the pictorial. The humanities/posthumanities/literacies must relinquish semiconscious resistance to pictorial communication and its technologies.

—Welch (1999, p. 208)

Writing teachers today are living through a revolution in literacy brought about by the capability of computers to combine blocks of text—or verbal lexiarchs—with graphic images, sounds, video, and other multimedia (see Landow, 1992, on lexiarchs). We are forced—at times by our failures—to grapple with the potential relationships between the ubiquitous and chaotic new visual and the comfortingly familiar, more linear verbal. Awash in both good and bad examples—on the Web, but also on TV and, lest we not forget, still in traditional print—we are discovering that it is no longer enough to fragment our concepts of literacy, bracket off our traditional
blocks of text, and just stick to what we know. To condone and contribute to visual illiteracy contradicts our purpose of teaching effective and ethical written communication. Yet as we often tell ourselves, we are still trying to figure out how to teach just our traditional, single piece of the puzzle — nothing to sneeze at in its full complexity.

This chapter starts from the premise that our project of rethinking literacy in light of new technological capabilities might be done more easily with some historical context. This is because the translation of visual images into verbal text — and vice versa — has always been a part of writing and speaking instruction. Furthermore, as Mitchell (1986) noted in the epigraph, there have always been conflicts between the two media, as well as subversion of the one by the other. Why does the verbal find the visual lurking and vice versa? Perhaps this is because of the long history of translation of one into the other and the presumed convertibility of one to the other. Yet as with two circles overlapping, not quite congruent, there is, nonetheless, a wild zone each has to itself that has nothing to do with the other.

What interests me in this cultural history is how shifts in this long conflict/subversion affect writing instruction. For example, breakthroughs in the science of optics and vision occurred in the same time frame as interest in the image and imagination intensified in language pedagogy. This was before and during the 17th and 18th centuries, just as modernity coalesced and the Scientific Revolution occurred. Ideas developed at that time provided some of the historical foundation for our 20th-century values, beliefs, and practices in writing instruction. This chapter attempts to show that language arts teachers have always incorporated visual theory of one kind or another in their teaching. Yet verbal–visual relationships keep transforming as technologies change and our understanding of vision grows (see Faigley, 1999, for more on these changes). In the next section, I show that rhetorical arts always incorporated practice in translation from the visual to the verbal. Then, I present some significant developments in optics and vision science, followed by a discussion of how rhetoricians and writers responded to these developments in their pedagogical values and practices.

**VISUALS IN ANCIENT ARTS**

The Greeks systematized the art of rhetoric or public persuasive speaking over the same long historical period as the alphabet and writing developed (8th century B.C.E. for the alphabet). Genres developed linked with the sites of the speaking — the public forum, the courts, the legislatures — and by Plato and Aristotle’s days (at least by 450 B.C.E.), schools were in operation to teach boys (almost always boys) first grammar and literary studies beginning to involve instruction in writing (see Welch, 1990). Boys worked on language arts until they reached the pinnacle of learning — rhetoric, or the public, persuasive oration. From the beginning, vision and description were important to persuasion and were overtly taught, as is made clear in the term from the art of style, ephorasis — delineation, or description used in teaching. There had always been descriptions in Homer and the poets, and later in the early Sophists and pre-Socratics, who attempted to use language to put a magical spell on listeners to transport them and used vivid descriptions in the process.

Aristotle said little about description in the Rhetoric, although his emphasis on metaphor and visualization linked to poetics and description. The more poetic Plato, who banned poets from his Republic, placed a great deal of emphasis on light, vision, and knowledge, in the first realm beyond the sensory and in this world. His banning of the poets from the Republic gives us a glimpse of how powerful the poets were in Greek society. Indeed, in Greek society, poetry vied with rhetoric for pride of place in education, with rhetoric and prose composition building on and growing out of earlier studies of Homer and the poets led by the grammaticos or grammar instructor. Greek writers whose texts reveal the teaching of description include Theon, Hermogenes, Aphthonius, and Libanius, who discussed “bringing before the eyes what is to be shown” in a clear and vivid manner or, in the generic term, *energia* (Lanham, 1991, pp. 64–65).

In his encyclopedic rendering of Roman education, based on the Greeks they emulated, Quintilian mentioned student writing of descriptions only to try to diminish the activity, which must have grown to elaborate proportions. By this time, the teaching of writing and rhetoric had become completely intertwined. In Roman education, the first century before Christ saw a shift to a systematic rhetorical program of (like the Greeks) male education. Quintilian, a master teacher, published the most extensive description of this system in 95 C.E. (see Kennedy, 1980).

Quintilian, who summarized the Greek and Roman arts of rhetoric, believed emotional appeals to be perhaps the most powerful arguments to sway an audience. Visualization is the key to the most powerful means of arousing emotion. “A powerful effect may be created if to the actual facts of the [legal] case we add a plausible picture of what occurred, such as will make our audience feel as if they were actual eyewitnesses to the scene,” he explained (1921, p. 117).

Tracing the experience back to the Greeks, he discussed daydreamlike visions, hallucinations, in which absent experiences are revived in the imagination, a phenomenon common to all. He cited Cicero on the use of this as a rhetorical art. This involves not only a translation from visual scenes to verbal, but also a transformation to visual body language as the orator becomes actor moving the audience with physical depictions of the emotion his words attempt to arouse.
reflection,” and, as historian of Roman education Bonner (1977) explained, would subsequently paraphrase it or transform it in other ways:

[Carrying a piece of meat, the dog was walking beside a river, when he thought he saw another dog beside him, also carrying a piece of meat; the temptation was too great, and in attempting to acquire two pieces of meat, he lost what he had, or in Theon’s version, was drowned. Here was an opportunity to describe the placid stream, the brightness of a sunny day, and the clarity of reflection in the water. All this encouraged the young to use their imaginations and at the same time developed their powers of expression. (p. 255)]

Bonner also told us that poetry and history provided a broader scope for description than rhetoric, especially in the declarations in which descriptions became a stock theme. These later influenced the taste for what Horace called *purple patches* and were linked with transformations of Virgil and Ovid.

**MEDIEVAL AND RENAISSANCE IMAGES**

In his book on literature in the Latin Middle Ages, Curtius (1973) told how *ecphrasis*, popular in late antiquity under the Roman empire, became important in medieval times. The genre of rhetoric called *epideictic*—ceremonial speeches of praise and blame—became more important than deliberative, legislative rhetoric under tyrannical Roman emperors who were often praised. Thus, the Latin curriculum abounded in elaborate delineation of people, places, monuments and buildings, as well as sculpture and painting. From this great archive of descriptions, French writers later developed the romance, whose interest in nature and its creations created a cliche based on word-picture translation: “Nature created a beautiful being as a picture” (Curtius, 1973, pp. 181-182). Descriptions of beautiful men and women in courtly poetry were turned out in accordance with *recipes*, as Curtius wrote.

Landscape description was always important, but became especially so after Virgil had transformed Greek poetry in his Arcadian eclogues. The emphasis on pastoral landscape grew out of the epideictic praise of landscape and the rhetorical topics of *place* and *time*. For example, this pastoral description of Arcadia is filled with description of pleasurable topography (*topoi*) such as springs, hills, and animals:

*Springs bubble out, brook joined with brook runs streaming,\nAlready gorge and slope and mead are green.*
Where the plain heaves into a hundred hillocks,
The woolly sheep in scattered flocks are seen.

Beyond, with step as careful as 'tis certain,
The horn-browed herds toward the cliffsise graze;
There could they shelter every one, for there
The stone is hollowed in a hundred caves.

There Pan protects, there vivifying nymphs
Dwell in the dripping, green-clad crevices—
And there aspire to higher airs forever
The intertangled ranks of branchy trees. (Curtius, 1973, p. 188)

Yet landscape descriptions in genres such as the medieval epic linked with pastoral poetry were soon challenged by the courtly romance, which appears in about 1150. Atmospheric scenery—in particular, the wild forest of chivalric romance—called forth new efforts in the classical topos of "situation" or "description of a place" (Curtius, 1973).

Notions of image and place were central in another medieval art drawn from rhetoric—the art of memory. Yates (1966) first elaborated on this art, pointing out that ancient memory systems were based on the principle that memory could be strengthened by linking it to the emotions through striking images. Architectural "places" in particular became imaginary sites for storing images to remind one of facts or, harder yet, the words of a poem or speech. This is the source of our locution, "in the first place."

This art of memory, first described in the pedagogical text Ad Herennium (long mistakenly attributed to Cicero), was a standard part of ancient rhetoric. The Sophists may have invented memory arts, and these were easily linked to the occult because they could produce such amazing feats of memory. Plato objected to artificial memory arts, but based his philosophy on vision and memory—knowledge became a remembering of archetypal forms visually glimpsed in the realm before birth and innately present in human minds. Overall, in the medieval period, memory arts from classical texts were progressively complicated and made into elaborate puzzles or games. These elaborate, visually based memory arts in the Renaissance became linked with Platonism; for example, Camillo’s Memory Theatre tried to organize memory according to universal archetypes of reality, not trivial memory of speeches and facts. This helped incorporate classical arts of memory into the Hermetic-Cabalist tradition (see Calendrillo, 1995-1996).

In the Renaissance, memory arts became marginalized as they linked with occult thought, although they still had a place in pedagogy. The images produced by the memory systems were more likely to be expressed in print in illustrated emblem books. Here one can see images from classical fables and myths as well as spiritual or pedagogical reminders. The familiar assignment to tell a story from a picture is one that links us closely to writing teachers from the earliest times. More often, however, the process was reversed—illustrations and actual images (e.g., in emblem books)—were fashioned from oral and textual descriptions. For example, an early textbook on the liberal arts, the 3rd- to 4th-century allegory of The Marriage of Philology and Mercury by Capella, spawned many popular emblems (see Moseley, 1989). In the book, seven elaborately described bridesmaids give summaries of their liberal arts to the guests at the wedding. This book also spurred early scientific illustration, such as drawings of the textually described motion of Venus and Mercury centered on the sun—a motion Copernicus cited 1,100 years later to support his own system. Emblem books were used for entertainment, education, spiritual instruction, and memory aids. Words and pictures worked together as equals in many of these books, although they center on the elaborate narrative-bearing emblems. Many editions of Ripa’s Iconologia (1611/1976) appeared or were imitated on the Continent or in Britain in the 16th and 17th centuries. Ripa included the goddess Elocution, helmed and in armor, holding thunderbolts in her right hand and a book in her left. A word picture follows—an explanation that the end of eloquence is persuasion and that her arts, youth, and beauty contribute to that end.

Bacon’s (1970) texts are a significant site on which to examine the various threads of imagery from memory arts to textual imagery because they come together to reveal a fault line—a point of slippage in how images and texts were transforming. Bacon, who knew and used arts of memory well, wanted to reform the art so it would better function for investigation or for ordering and classifying knowledge. Subverting the distinction and calling images emblems, he fully accepted the principle that images were more memorable than words:

Emblems bring down intellectual to sensible things; for what is sensible always strikes the memory stronger, and sooner impresses itself than the intellectual . . . And therefore it is easier to retain the image of a sportsman hunting the hare, of an apothecary ranging his boxes, an orator making a speech, a boy repeating verses, or a player acting his part, than the corresponding notions of invention, disposition, elocution, memory, action. (cited in Yates, 1966, p. 371)

Bacon (1970) also relied on a system of faculties for the mind, originally from Plato’s division of the mind and body into the reason (head), the passions (heart), and the appetites (liver). Bacon’s faculties include: (a) understanding and reason; (b) the will, appetite, and affection; and (c) the imagination, which gets messages from the sense and reason and shuttles them as a messenger among faculties. Because of his emphasis on sense imagery and the central role of the imagination, his definition and goals for
2. LEARNING FROM THE PAST

who stood for a concept (Verene, 1981). Each nation had its Ulysses, its heroic founder figure. The heroic age was the age of visuals, blazonry, crests, shields, images, rebus figures, and human symbols, such as Homer, a metaphor for collective poetry rather than a unique human being. With this elevation of symbolic language came the reverence for acute and witty sayings, language that could strike quickly and emulate the all-at-oneness of an instantaneous picture—what Vico (1996) called sublime rhetoric in his rhetoric manuals. That trend grew from the Renaissance into the eloquent salon language of the French Enlightenment and the wit and erudition of the English coffeehouses of the 18th century.

OCULARISM IN THE ENLIGHTENMENT

Vico sent an early version of his masterwork New Science based on his historical cultural cycle to Isaac Newton, but it is not known whether Newton ever received the book (see Dobbs & Jacob, 1995). Newton (1643–1727) is the figure most people think of when they think of the Enlightenment and the beginnings of modern science as well as the modern study of color and light. As Pope (1954) wrote in an epitaph intended for Newton:

Nature and Nature’s Laws lay hid in Night,
God said, “Let Newton be!” and All was Light. (p. 317)

In 1666, when Newton started thinking about color and light, theories from Descartes described light as a pressure on the eyeball of the aether that filled the universe. Newton rejected this, working with a notion of light as a particle, thus having velocity. Hooke’s Micrographia (1665), which was a collection of illustrations made under the microscope, at that time discussed color as pulses of light. Newton used a prism to determine that white light was a mixture of various colors that were refracted in different angles. This was not published until 1704, but was wildly popular. Later, the Italian professor, Bassi, who in the mid-18th century was the first woman to be offered an official university teaching position in Europe, taught the Opticks at Bologna (Dobbs & Jacob, 1995). Light became a key concept across fields; for example, architects tried to open up buildings to reveal the light of Newton’s Opticks. Investigations into light and vision of all sorts multiplied in the Enlightenment period.

That “construction is the essence of vision” has long been known, Hoffman (1998) argued. The notion first appeared in Ptolemy in the 2nd century A.D., who wrote an Optics. Aristotle, Euclid, and Ptolemy all wrote on light and vision. The Islamic scholar Alhazen (Ibn al-Haytham, ca. 965-ca. 1040) wrote on the constructed nature of vision in his seven-
volume Optics. His work, which refuted weaker Greek theories and synthesized stronger ones, was translated into Latin in the late 12th and early 13th centuries and became influential in vision theory (see Lindberg, 1992). Others mastered both the Greek and Islamic vision theory. The inferences from vision seemed so instantaneous that Malebranche (1638–1715) believed that God produces them (Hoffman, 1998). Molyneux (d. 1698) published the first English text on optics, Dioptrika Nova, and asked the famous question Locke repeated in his Essay: How would a man born blind see if he were suddenly given his sight? Would he recognize on sight the shapes he had heretofore felt? Many speculated on the answer, but Cheselden (1688–1752), the famous physician who cared for Newton in his last illness, published a famous case that began to answer the question. Having performed cataract surgery on a young man born blind, he discovered that the man had to learn to interpret what he saw at first only as colored patches. Berkeley (1685–1753) wrote about the ambiguity of vision and the need for interpretation. As the Cheselden case confirmed, he predicted that one born blind could not recognize shapes. The French encyclopedists led the Continental interest in vision, especially Locke’s admirer Condillac and the better known Diderot, who wrote controversial treatises on the blind and deaf, which also argued that we actively construct what we see.

How does seeing work? Early thinkers based their new theories of vision on what they already knew—aesthetic theories of the imagination and natural philosophies like those of Epicurus. In 1604, Johannes Kepler had a theory of the retinal image that used the analogy of a camera—but the Kodak was as then unknown. However, philosophers played with the new pinhole camera, like the ones we played with as children, which projected an image upside down. This was an exciting development, and they explained it by referring to the mind’s eye and the imagination. The camera obscura image was found in Locke’s Essay (1699–1705) as an explanation of how the mind took in images. The Greek atomists had a longstanding explanation that became deeply intertwined with rhetoric and the teaching of writing.

Kroll’s (1991) history of language revisited the 17th century with its return to classical notions of the Epicureans and their visual theories of the image. During the Scientific Revolution, there was a “neo-Epicurean revival” centering on Lucretius’ (1946) De Rerum Natura (On the Nature of Things). This amazing classical poem, which dramatically and abruptly ended in midstream just as the author visually described the sweep of the plague through Athens, was a staple of the educational canon and had particularly captured the imagination of Renaissance readers. Written in the 1st century before Christ, it is a verse explication for the Roman world of the Greek system of philosophy. It was popular in the early modern pe-

riod despite its antireligious outlook based on a rationalist Epicurean theory of nature, optics, and vision.

Later blended with faculty psychology as in Bacon’s rhetoric, Epicurean theory suggested that using language to present images to the intellect through the imagination (phantasia) is the way to arouse the passions and motivate the will. This is based on the theory of optics in the philosophy of Epicurus, as interpreted through Lucretius’ poem: The atomic and dynamic constitution of bodies causes them continually to throw off microscopically thin representations of themselves (eidos), which almost instantaneously strike the eye or another sense organ, producing a presentation (phantasia). The mind can then take hold of the image by an act (epible). Thus, the entire basis of Epicurus’ mental economy presumes the mediatory function of the phantasia as well as an active construction (Kroll, 1991).

Although the images that we see are true in that they exist, they are not presumed to match the actual nature of things. In the Lucretian version of Epicurean philosophy, mental images are in cognition the equivalent of the atom or minima in physics. They result from the things of the world’s continual throwing off of images that strike our minds whether we are asleep or awake. This was called the intromission theory, in opposition to Plato’s notion that the eyes shoot out rays to see—called the extromission theory. The intromission theory came to dominate in early modern science.

Epicureans believed that, in fact, the mind cannot think without images or ideas (significantly, the Greek word for “to see”). Images, the atoms of thought, were combined to make thoughts the way notes make up music or the alphabet makes up language. Lucretius’ analogy between atoms and letters of the alphabet found its way into nearly every major consideration of natural science at the turn of the 17th-century, found in Bacon and Boyle and extended to rhetorical topics in Vico’s use of topics in scientific inquiries. This image is a familiar one in Gassendi, an atomist whose language theory is Epicurean. For Gassendi, words are ostensive (Kroll, 1991), analogically pointing to things. Utterances partake of symbolic action, pointing to the cognitive image. Locke’s language theory, in touch with Boyle, resonates with the spirit if not the letter of Epicurean thought, as he was steeped in French thought, especially Gassendi. In Locke’s Essay, the notion of “idea” is central, which fed into the growing interest in the faculty of imagination. Locke’s popular abbreviated logic and his educational advice for the son of a friend helped put these ideas into the mainstream of pedagogy.

In part, a return to Augustine (Kroll, 1991) was at the heart of this new emphasis on imagination, converging with notions of the Epicurean image. According to an Augustinian Biblical view, humans once were spiritual creatures, but since the Fall, they must live a predominantly physical
existence. The imagination, the faculty of storing and reviving images, was often thought of as the intermediary between humans' physical and spiritual natures, between the senses and pure thought. It was, significantly, the faculty of representation. The centrality of the imagination as intermediary was held by many throughout the century, and it became key to rhetorical persuasion. It also became central to the rhetorical description, which is of so much value in the modern novel. As such, description became a key pedagogical tool in early modern writing instruction, which more and more exemplified French belles lettres rather than the classical rhetorical canon.

DESCRIPTION IN MODERNITY

During the 18th century, when it became clear that print and writing and associated book literacy were spreading, teachers worked to understand and teach how to translate visual scenes and images into text. One such teacher was a self-proclaimed follower of Locke, the French philosopher Condillac (1714-1799). His work influenced the Scottish Enlightenment rhetoricians, especially Smith, Blair, and Campbell. For many years, Condillac was tutor to the young Prince of Parma and associate of the French encyclopedist Diderot and Rousseau. In his pedagogy, Condillac liked to place his pupil before a window with shutters that were opened to give a brief view of the landscape. As Aarsleff (1982) summarized:

In remembering and talking about this landscape, the young man was forced to analyze the instantaneous unitary tableau into elements he recalled as single units—trees, shrubbery, bushes, fences, groves, and the like. He was forced to think sequentially because discourse is linear. (p. 30)

Condillac explained the differences between the visual and verbal in this way: The visual world is holistic and is seen instantaneously as a picture. Verbal language is linear, occurring sequentially in units over time. Language decomposes holistic reality, allowing writers to convey what is really seen out there in the world into the mind, where we can once again re-compose it to represent the holistic world. It also analyzes that reality by breaking it into bits. For Condillac and others in French belles lettres, the most expressive text is one that tries to re-create this all at once—and this powerful tableau effect of prelinguistic, visual thought. This is because it hearkens back to the original language of gesture, a bodily visual art that was the first human communication. Gesture and body language were the first systems of human communication and analyzed or broke apart the holistic idea. Language, both gestural and verbal, were formed on the basis of analogy to earlier signs in a process of translation. Thus, the keys to the later process of translation from visual imagery to written text were memory and imagination, closely linked. They allowed the language user to recall and visualize past sights and experiences and link them to signs. This theory presumes a split between analytical and expressive language—a split that helps enact a separation of scientific from poetical text in the future. Like Vico’s theories, the earliest language was more expressively poetic and imagistic, whereas language became more analytical, abstract, and philosophical over time.

Later in the 18th century, about the time of the American Declaration of Independence, French theory hybridized with earlier British thought in Scotland to produce what was called the new rhetoric of the Scottish Enlightenment. Key figures are the economist Smith, Blair (the first professor of English), Lord Kames, and Campbell (see Miller, 1997). The Baconian shift to make imagery and imagination central was apparent in the work of all these figures. To illustrate, we can examine Campbell’s discussion of the ends of rhetoric as “to enlighten the understanding, to please the imagination, to move the passions, or to influence the will” (Golden & Corbett, 1968, p. 143). This was a classification system, but also an ascending progression: The intellect feeds the “fancy” or imagination, the fancy transforms and presents materials to affect the passions, then the passions spur the will to act (p. 146). Thereby, the imagination becomes the hinge, catalyst, or fulcrum for persuasion. For Campbell, the imagination is linked to painting:

The imagination is addressed by exhibiting to it a lively and beautiful representation of a suitable object. As in this exhibition, the task of the oratory, in some sort, be said, like that of the painter, to consist in imitation, the merit of the work results entirely from these two sources; dignity, as well in the subject or thing imitated, as in the manner of imitation; and resemblance, in the portrait or performance. (p. 146)

Campbell linked the most perfect discourse to the sublime—“those great and noble images, which, when in suitable colouring presented to the mind, do, as it were, distend the imagination with some vast conception, and quite ravish the soul” (pp. 146–147).

Rhetoricians concerned with style and those building their rhetorics around models of texts also turned to the late Greek rhetorician pseudo-Longinus, whose On the Sublime was translated by into French by Boileau-Despreaux in the 17th century. These stylistic rhetorics also formed the backbone of the Continental belles lettres movement transformed by Scots such as Campbell over the century (see Howell’s [1971] classifications).

The interest in vision and imagination formed the heart of the Enlightenment belles lettres movement, with its paradigm shift in language arts
pedagogy to an aesthetics of taste (see Miller, 1997). This ultimately spread from France to Britain and, from both those countries, quite naturally to the United States. Belles lettres included written forms such as history, essays, and poetry, but also such visual arts as architecture and landscape gardening. The goal of *sublime rhetoric* (Vico’s term) was often not to persuade as much as to transport an audience, and word painting of nature was a key method used. As a result, in British and American composition, textual description became an even more important mode, especially descriptions of landscapes. These were inevitably tied to moral values and were a continuation of the kind of oratory practiced at public ceremonies from classical times, epidictic rhetoric.

The development of the novel in the 18th century made use of these traditions of landscape description, as we can see in Austen’s descriptions in *Pride and Prejudice* (1993) and again in *Emma* (2000). In the first book, when Elizabeth visits Darcy’s Pemberley, Austen sets the reflective mode appropriate not only for landscape, but for consideration of values: “They gradually ascended for half a mile, and then found themselves at the top of a considerable eminence, where the wood ceased, and the eye was instantly caught by Pemberley House, situated on the opposite side of a valley into which the road with such abruptness wound” (p. 156). The passage not only reveals the imbrication of landscape design with its contrived views and picturesque writing, but also provides a tone that suits Elizabeth’s full state of mind on entering the estate of the man whose hand she had rejected. Descriptions of Pemberley’s buildings and grounds not only create a reflective tone, but also help support the ideals of reason, solidity, unity, and permanence of the structure: “It was a large, handsome, stone building, standing well on rising ground, and backed by a ridge of high woody hills; and in front, a stream of some natural importance was swollen into greater, but without any artificial appearance” (p. 156).

After describing Donwell Abbey and environs in a similar style in *Emma*, Austen revealed Emma’s feelings on looking down on Abbey-Mill Farm, “with meadows in front, and the river making a close and handsome curve around it” (p. 236), all suffused with patriotic values and sentiments: “It was a sweet view—sweet to the eye and the mind. English verdure, English culture, English comfort, seen under a sun bright, without being oppressive” (p. 236). The three-part (tricolon) structure harmoniously and reasonably emphasized the values Austen wanted to forward.

Although my analysis stops with the long 18th century in Great Britain, Clark and Halloran (1993) wrote about how such picturesque discourse in 19th-century American writing was a transformation of classical epidictic discourse, carrying the values of Romanticism and also its class hierarchy. In landscape description, harmonious composition makes the writing seem like a painting or actual landscape, but the language also increases adherence to certain values, Halloran explained, similar to what we see in the Austen passages. Such descriptive writing abounds in Emerson, Thoreau, Whittier, Longfellow, and J. Fenimore Cooper, helping form a sense of American identity. An overflow of “mass produced prints and boilerplate prose” poured over the nation as a result of this movement, and books such as *Picturesque America* (1874) combining engravings and essays became popular (Clark & Halloran, 1993, p. 245).

One significant element not examined in this chapter is the effect of technological advances on rendering visual images on writing. Yet it is clear that the invention of mechanical print—the book—and improvements such as the high-speed press in the 19th century all shaped the uses of graphics and affected how students were taught to write or interact with pictures in print. Although there were perhaps fewer pictures and graphic elements when they were more difficult and expensive to print, pictures, engravings, and even simple line drawings have always been cherished by readers to relieve the difficulty of reading.

Written language was always a chief way of translating the visual world. Yet in the 18th century, more and more literature in the vernacular was produced, and education began to shift to the vernacular. Translation as a central educational activity began a slow decline. That century saw the first literary criticism of literature in English and the appointment of the first professor of English literature in Scotland. In another shift involving the Scientific Revolution, some saw written language as a representation of the world rather than a translation into a different system of signs or a transformation of symbols serving as an interface to a mysterious reality. Thus, they feared metaphor and other rhetorical devices as distortions of the objective representation of a visual reality. They insisted on “clear and distinct” prose that would carry the writer’s vision of reality into the reader’s mental structure. This notion of prose as clear as a window that would allow a primarily visual reality to be seen became a dominant strand of writing instruction. It led to pedagogies encouraging good observational skills and clarity in style and structure. The scientific urge also led to the movement to classify and describe types of writing as if writing were a form of natural history.

This urge to taxonomize led to the pedagogy based on the “Four Horsemen,” widely deplored when I was in graduate school, but tenaciously hanging on since. That form-based pedagogy evolved to present students with writing centered not on aims, but on genres or forms of exposition, argument, narrative, and, most important for this analysis, description. This pedagogy has been traced to figures like the 19th-century Scottish Bain’s response to both the discourse of scientific classification, clarity, and belles lettres. The hybridizing of the old belles lettres theories with the
newer scientific models produced the first modern rhetorics. Those first
Scottish rhetorics were also part of the transformation that led to modern
English literary studies (see Miller, 1997, for this history in detail).

How to understand and teach language and literature in an age of tech-
nical transformation that renews the age-old interest in the image is a sig-
nificant issue that connects us to these rhetorical predecessors. We might
also wonder how transformations currently taking place will change the
current English studies model. We may not know how, but we can sur-
mise that English studies in the new century will offer a very different
product from traditional 20th-century print pedagogy (see Stroupe, 2000).
The more we learn about both those elements, the more prepared we will
be to teach our students how to better meaning and communicate in the
new era. The tension between graphic elements and text may not go
away, but it can be a more creative and interminating tension if we
know how to translate between modes (Richards, p. 47). We can do no
better than emulate the Renaissance’s da Vinci, who saw so much and
wrote so well he could carelessly confuse the one with the other in his pro-
liptic notebooks during the Renaissance of learning. We might cajole our
students as he prompted himself:

Write [he reminded himself, for to him writing and drawing are all one],
write the tongue of the woodpecker and the jaw of the crocodile. Write the
flight of the fourth kind of chewing butterflies, and of the flying ants, and
the three chief positions of the wings of birds in descent. . . . Write of the
regions of the air and the formation of clouds, and the cause of snow and hail,
and of the new shapes that snow forms in the air, and of the trees in cold
countries with the new shape of the leaves. Write whether the percussion
made by water upon its object is equal in power to the whole mass of water
supposed suspended in the air or no. (cited in de Santillana, 1956, pp. 67–70)

Such sublime vision as Leonardo’s presents us with the gift of a mo-
ment in which scientific terminology and poetry are one and neither word
nor image is valued as more sacred. If they once were divorced by print
culture, the remarriage of word and image performed by digital technol-
ogy signals the rebirth of literacy in the 21st century, a hybrid literacy in
which we all may hope to share more of the potential of Leonardo.

REFERENCES

Aamleff, H. (1982). From Locke to Saussure: Essays on the study of language and intellectual his-
tory. Minneapolis: University of Minnesota Press.

Bacon, F. (1970). The philosophical works of Francis Bacon: Reprinted from J. Spedding, R. L.
Bonner, S. F. (1977). Education in ancient Rome: From the elder Cato to the younger Pliny. Berke-
ley: University of California Press.
Calendrillo, L. (1995–1996). Mental imagery, psychology, and rhetoric: An examination of re-
3, 74–79.
Clark, G., & Halloran, S. M. (1993). Oratorical culture in nineteenth-century America: Transfor-
Books.
Dobbs, B. J. T., & Jacob, M. C. (1995). Newton and the culture of Newtonianism. Atlantic High-
lands, NJ: Humanities Press.
Fagley, L. (1999). Material literacy and visual design. In J. Selzer & S. Crowley (Eds.), Rhetor-
ical bodies (pp. 171–201). Madison: University of Wisconsin Press.
kalymities: The Roman school declamations and critical pedagogy. Rhetoric Review, 17,
300–319.
Holt.
Hooke, R. Micrographia, or Some physiological descriptions of minute bodies made by magnifying
glasses with observations and inquiries thereupon. London: Printed for James Allestry, 1667.
versity Press.
Lindberg, D. C. (1992). Hypertext: The convergence of contemporary critical theory and technol-
y. Baltimore: Johns Hopkins University Press.
Press.
Lindberg, D. C. (1992). The beginnings of Western science: The European scientific tradition in
philosophical, religious, and institutional contexts, 600 B.C. to A.D. 1450. Chicago: University of
Chicago Press.
Miller, T. P. (1997). The formation of college English: Rhetoric and belles lettres in the British cul-
versity of Chicago Press.
Press.
Quintilian. (1921). The institution oratoria of Quintilian II (H. E. Butler, Trans.). Cambridge, MA:
Harvard University Press.