

Art and Function: The 19th Century Wood Engraving

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Technology and Structure of Records Materials

All forms of engraving, in short, whatever the process employed in their production, divide themselves necessarily and naturally into two kinds, those which are original and those which are not.

Sir Francis Seymore Haden's Paper for the Society of Arts 1883

(Garrett 101)

Demand for illustrations in books and periodicals increased steadily throughout the 19th century. The growing literate public demanded material, and publishers scrambled to jump on the bandwagon and make their fortune in the burgeoning market. Through advances in technique and craftsmanship, wood engraving, an overlooked illustrative process, was rediscovered and filled a niche in the market. Through the work of skilled, though arguably uninspired, artisans, wood engravings could be used to effectively reproduce just about any work of art including impressionist paintings and photographs. Its use for mass reproduction in printing died out with the advent of advanced photomechanical processes. Throughout the 19th century wood engravings were relished for their ease of use in the printing press and commercial flexibility, while being reviled as merely a means of reproduction containing no artistic integrity of their own. Makers of wood engravings were seen as nothing more than highly skilled craftsman, and in many respects that characterization was correct. After the advent of more advanced forms of printing illustration wood engraving again became the realm of artists, but never again would they be such an integral part of the commercial printing process.

In Europe, carving illustrations on wood for the purposes of printing dates to the 1400's. These originally were made for mass production of playing cards or religious icons. Their use in book illustration did not take off until the invention of movable type and the printing press. Manuscripts were often highly decorated and ornate. Printed books strove to reproduce this decorated effect en masse (Chappel 100-1). One of the most notable and beautiful examples of wood engravings in these early printed books is *The Nuremberg Chronicles* with numerous woodcuts expertly carved by Albrecht Durer. The book strives to emulate the look of a medieval manuscript using relief-printing methods.

One of the practical advantages to woodcuts (as well as wood engravings) is its relief printing method. Sharing the same structure as type, woodcuts could be made "type high", the same height as print, and could therefore go through the press at the same time. Metal line engravings are an intaglio printing process, which uses a different press, ink, and paper. They would accompany a book as plates with "directions to the binder" included with the book. It is important to note that there are some metal relief printing methods (Gascoigne 7). They are less common and beyond the scope of this paper.

All the early wood engravings were woodcuts. Woodcuts involve cutting, usually with a knife, on the plank side of the wood (Chappell 101-2). The wood was softer and easier to carve on the plank side, but it did not maintain the integrity of the design after numerous printings in the press. The soft wood easily wore down. Metal, namely copper, engravings were found to be superior in sturdiness. Though the soft copper did not hold up to numerous printings. Sturdiness as well as artistic preferences led to the decline of the woodcut before 1800.

The preference of metal and intaglio processes in general arose in the mid fifteenth century (Gascoigne 5c). Gascoigne suggests that the reason for the rise was artistic. As designs became more complex, artists tired of constantly carving away the white areas of the print. Metal engravings are black line, meaning the line one carves is the line that will be black in the printed page. In this respect, black line engraving, which is all intaglio engraving, is much closer to the process of drawing. In relief engraving, the artist/engraver has to think in reverse of the drawing process. Gascoigne's position is intriguing. Though I am inclined to think engravers were not so lazy as he suggests. All engraving processes are highly labor intensive whether black or white line. The decline of wood engravings may have been more of a decline in illustration at this time, and a changing aesthetic sense in the market. Before the big workshops and illustration boom one printer noted at the end of the eighteenth century that "illustration was so seldom used that the preparation of even a small woodcut was of much moment to all concerned. ...the printer, designer, and engraver talked over the matter with as much deliberation as if about to produce a costly national monument" (De Mare 42). With illustration a rarity, intaglio printing, with all of its practical problems, was preferred because it could yield more detail than wood cuts. Those who wanted illustration could afford to use a more difficult printing method, but that was about to change.

Engraving wood on the end grain does not seem like a great artistic or technological achievement. Like accidentally throwing meat into the fire and discovering it tastes better, it seems that someone would have discovered with mountains of wood lying around, that engraving on the end grain was preferable. However the techniques was not perfected or widely used until the nineteenth century when longer durability

became more important. The end grain or cross section of a tree is much harder than the plank side. All the fibers are vertical, and the carver carves into the ends of the fibers. A harder surface, means that the carver can get greater detail in their drawing, so much detail in fact that this technique can be used to copy photographs. The new technique is called wood engraving and required greater skill than its predecessor, woodcuts. The term “woodcuts” refers only to wood carved on the plank side. Often wood engraving is used as a blanket term for plank side and end grain engraving. Wood engraving is generally seen to be the superior method, and the undisputed father of wood engravings is an Englishman, Thomas Bewick.

Bewick did not actually invent wood engraving. Many credit Jean-Michel Papillon, a French engraver, but most likely the first person to try it is unknown (Garrett 93). However, Bewick is responsible for perfecting and popularizing the technique. He began engraving as an apprentice to a copper engraver, Ralph Beilby, where he rarely worked on wood, but he invented labor saving tools and techniques (Bliss 179). Bewick began to investigate using engraving tools, gravers, on the end grain of wood. He found he could get great detail, and relished working in white line as apposed to the black line of copper engraving. His masterful use of line and his dark sense of humor made his work extremely popular. Bewick was insistent that engravings should consist of white lines. He rarely drew the lines on the wood block before carving or tried to emulate metal engraving (Bliss 181). He strove to produce engravings that were true to the technique, not forcing it to appear like an arguably more elegant art form.

Bewick was a master of technique. He is probably best known for his accurate renditions of animals. He was often sent specimens from all over the country

and beyond. Some of his most famous books are *History of British Birds* and *A General History of Quadrupeds*. They are littered with engravings of animals where Bewick captures in white lines the fine details of feathers and fur. He masterfully captures textures through the use of leveling and overlaying (181). By slightly varying the depth of his cuts he can achieve the detailed round of a bird's belly with delicate variation in tone. Bewick trained his pressmen, and worked closely with them in the printing of his blocks. Often instructing them to wipe off a little ink here, or darken there (182). He took the selection of materials very seriously, allowing his intense practicality and attention to detail to spill over into his personal life. Bliss notes that "he chose his wife...as he chose his boxwood, with an eye to present soundness and capacity for standing time and wear" (192).

Though possibly not the most romantic of men, his lack of sentiment was one of his most appealing factors with the public. Some of his most popular engravings are tiny pastoral scenes that on first inspection appear idyllic. As one examines them more closely, the darker and humorous side of his work reveals itself. He may have drunk vomiting in the back of a country market scene, or a child leading a blind man into danger.

The importance of Bewick to the art form and its development is immeasurable. He trained many wood engravers who would go on to become some of the greatest engravers of the century. However, it is his love and adherence to the beauty of white line engraving for which he is best remembered. He is often deified by many art historians (Ruskin and Bliss), perhaps because of the direction wood engraving would move toward as the century progressed was commercial not artistic. Bliss describes the change as "a

sense of inferiority to the copper plate [that] has all along dogged wood-engraving and rendered it false to its own genius” (195). The ease of printing with text would elevate wood engraving to the commercial illustrative process of choice for many printers, rendering what was for a time an art form into a craft skill. Engravers would strive to reproduce the works of artists as accurately as possible in the medium of wood engraving.

The craft of wood engraving was taught by master to apprentice. Many of the techniques were passed down orally and within a certain shop. However, in 1861 W. A. Chatto wrote *A Treatise on Wood Engraving*. Though primarily a history of the art, designs and artists, Chatto includes a lengthy chapter on what was then modern wood engraving techniques. It is a nuts and bolts explanation of the wood engraving as a image reproducing process. As an introduction to the chapter, Chatto relates rather bitterly that art philosophers are constantly making incorrect assumptions about wood engravings because they do not understand the practical aspects of the art form (561-2). He plans to set the record straight and grind a few axes in the process.

Chatto is very insistent on the correct choice of wood for engraving. “For the purposes of engraving,” he expounds, “no other kind of wood hither to tried is equal to box” (563). English box is preferred for its clear firm grain. Its smaller diameter makes it harder and less likely to split during engraving or printing. However, the smaller pieces mean smaller engravings. Finding a good cross section of box that is near octavo size is nearly impossible. Wood was sometimes cut at an angle, which may make a larger surface, but yields inferior engravings. Particles of wood tend to tear out. The block should also contain no streaks or spots. Chatto describes “white parts” that have a

tendency of retain ink more than the rest of the wood. Producing an uneven color when printing. Perhaps Chatto suggest that when one is examining a wood engraving, variation in tone may be the intent of the engraver or it could be the accident of the wood.

The problem of expansion and contraction of the wood was a consideration of the engraver. Certain types of box expand more than others. Chatto warns of red and white box's reaction to cleaning chemicals like turpentine. They can cause the print to expand if the wood is not seasoned properly, and the effect may be permanent (564). Because of the small diameter of box wood, many blocks are often nailed together. They can expand at different rates and deform as humidity levels change (565). Dry wood also causes a problem. It has a tendency of crumple during engraving. Chatto expounds on the proper method for humidifying blocks (566). The proper care of the wood is necessary to maintain its integrity not just as far as the art, but to survive the beating of repeated pressings. Blocks had to be cleaned off and re-inked repeatedly. The survival of the engraving through the printing process was reliant on the preparations and skills of the engraver. A bad engraver costs printers money.

In matters of artist verses engraver, Chatto plants himself firmly on the side of the engraver. Though he may not be an artist, his proper execution of the design depends greatly on artist providing the proper medium for the engraver. Many engravers may send the appropriate piece of wood to the "designer" where in he throws the wood into a drawer, and pulls out whatever piece he grabs first of the correct size for the drawing (565). The engraver may be stuck engraving a substandard piece of wood. The attitude of the artist to the engraver is often that of an architect to a carpenter, one with a vision the

other championing the practical. However, De Mare suggests that some artists may have been more sympathetic.

The space between designer and engraver was bridged in many such workshops, in that the master engravers took in artists as apprentices who only wanted to learn how to draw on wood in a way to suit the engraver, and did not intend to engrave their own work. (42)

Though differences in affinity with engraving existed. The artist, in these workshops, was not a Bewick, with an innate sense of white line and a desire to produce masterful wood engravings. The artist was drawing and the engraver was reproducing.

How much does the craft of wood engraving for production of prints delve into the artistic is a matter for debate. Chatto's engraver must possess a sense for his work beyond what we may call the Xerox mentality. The engraver cannot "...execute a subject properly, unless he were endowed with that indefinable *feeling* which at once suggest the best means of attaining his end" (586-7). This view is decidedly romantic. Others suggest that the "feeling" may be misdirected, and they desire a return to the true art of wood engraving embraced by Bewick. Bliss describes an engraving done by one of Bewick's pupils as "painful to us who can only think of such enormous labor and skill misdirected in the effort to make wood engravings yield the qualities peculiar to the copper plate" (195).

Though the art historian may have the last word, historically speaking, on the 19th century wood engraving, the business of engraving was booming. The craftsman engraver could hold many different positions in the illustration business. "The status of the wood engraver was thus ambiguous: while his assistants and apprentices might be

regarded as humble artisans, the boss engraver could become an entrepreneur in publishing, a kind of art editor, and a man of wealth and standing” (De Mare 42). Publishing was a thriving business, and few were concerned with maintaining the integrity of the white line engraving. The business was designed for production. Certain engravers were given tasks based on their particular skill. One may specialize in skies, another in faces, another in trees (Bliss 199). Tints, the varying shades of background color produced by laboriously copying lines of equal size and distance, were left to the apprentices (Chatto 581). Through this method, engravings could be produced with great speed by a collection of skilled craftsmen. The Dalziels were wood engraving entrepreneurs in London. Through complaints about ignorant artists and their underappreciated skills, they managed to have a very successful business (Bliss 200).

Demand for photographs increased in the middle of the century. Reproducing photographs for wide publication was not economically feasible or physically practical. Wood engravers were called upon to reproduce photographs for publication. The block would be covered with an emulsion and exposed (Gascoigne 6d). The engraver would then painstakingly carve away to produce detailed tinting reflective of the subtle grey variations of photography. Engravers accurately captured textures with a lifelike quality known only in photographs. American wood engravers were considered the experts at this technique (6d). When looking closely, one can see that these engravings are not photographs, but the untrained eye could be fooled by the skills of these engravers. The technique was popular in periodicals, which could put photos alongside print on the page.

In opposition to the copy stand mentality, a small group of original engravers held out to keep up the “art” of engraving. In 1889 in England there existed the Society of

Painter-Etchers of one hundred original engravers (wood and metal) who met once a year for an exhibition. They were ostracized from the Royal Academy (Garrett 102). The small band chose to continue the tradition of original engravings and art through black or white line. They opposed the commercial copyist mentality of craftsman engravings, which concealed the art of engraving behind the art of photography or impressionistic painting. One opponent to commercial engravings noted that those works are “so lacking in any feeling line that they simply cannot be seriously considered engravings” (Bliss 201).

Then as the century came to a close, photomechanical processes made it possible to use chemicals to etch a metal plate. These plates could be used in new rotary presses, which produced far more than anything a wood block, no matter how sound, could hold up too. It became much simpler to take a photograph of a drawing for printing than to engrave the drawing into wood or metal. As new photomechanical processes began to replace the wood engraving,, wood engraving as art began to resurge. Artists began to take up the medium for its particular effect. Some artists even relished the use of woodcuts and chose to emphasize the grain in their works. Wood engraving lost some of the stigma associated with its commercial value and began to regain some of the artistry of Bewick’s engravings.

Though the art of wood engraving possess a beauty true to the form. One cannot help but be awed by the skill of the craftsman who would cover his own labor in the slavish reproduction of another’s work. Many of these men possessed no interest in art and rarely drew for pleasure (Bliss 200). The prominence of wood engraving was due not to its own beauty as an art form but to the skill of its engravers, the relief printing

method, and its ability to withstand the demands of printing. Bewick's blocks could last 900,000 impressions before showing ware (Bliss 186). The demands of the 19th century publishing could be met by this most sturdy and flexible medium.

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