The word Renaissance means “revival” or “rebirth”... and we know it as a period of history marking the transition between the Medieval and the modern world.

All aspects of book design, from typography to illustration and layout, were refined and rethought by the Italian printers in Venice.

This movement away from the standards of the German Illustrated book occurred during the last 3 decades of the 15th century.

**Graphic Design of the Italian Renaissance**

Venice, center of commerce and Europe’s gateway to the Mediterranean Nations and the Orient, led the way in typographic design.

Johannes de Spira, a goldsmith who was granted a monopoly on printing in Venice, published and designed a new roman face that cast off the last of the Gothic flavor. The book he published with the font, "De Civitate Del" was the first typographic book to use page numbers.

Upon Spira’s death, the monopoly ended, and at this time Nicolas Jensen established Venice’s second press. His new typeface became renowned for it's legibility and represents the full flowering of the roman typeface.

Jensen was exceptionally good at designing the spaces between each letter, which created an even tone and made reading much easier. His fonts aligned better than any other existing printer.

**Graphic: One of man’s oldest symbols, the orb-and-cross motif is found in a chamber of Cheops's pyramid at Giza, where it was hewn into stone as a quarry mark. In Jenson's time it symbolized that “God shall reign over earth.”**

**Graphic: de Rubeis, printer’s mark 1482**

**Graphic: Pere Miguel, printer’s mark 1494. Dozens of printers adopted the orb and cross mark.**

The Renaissance loved floral decoration. Wildflowers and vines were applied to everything... Furniture, architecture and manuscripts.

And the book continued to be a collaboration between the printer and the illuminator who added the initials and decoration.

During this time printing was often referred to as artificial writing.

But in 1476 Erhard Ratdolt took the next logical evolutionary step and created the totally printed book with “Calendarium.”
Calendarium also included 60 diagrams of lunar and solar eclipses... It is indicative of how scientists began to understand natural phenomenon and printers disseminated this knowledge.

Ratdolt began to use 3-sided woodblock carvings for many of his editions and they began to become almost a trademark for him.

The fine-line geometric illustrations represent a technological breakthrough for its time.

Ratdolt was also the first printer to publish a type specimen sheet as a self-promotion.

Ratdolt remained an active printer until age 81 and was ahead of his time as graphic decoration in the printed book didn't really take off until the turn of the century.

The Ars Moriendi (Art of Dying) was a best seller in the 15th century -- over 65 editions were produced... In woodblock books, manuscripts and printed books.

And edition of this, printed in 1478 by Italian printers Giovanni and Alberto Alvise, is believed to the be first time that "printers flowers" were used.

Printer's Flowers being small graphic elements that were punched and cast as type.

Johannes Nicolai de Verone printed a manual on warfare in 1472. The woodblock illustration used in this book is a good example of the fine-line illustration that became popular during the next decades of the 15th century.

It is most interesting because the original manuscript version survives.

Medieval Christianity fostered a belief that the value of human life was primarily its effect on God's judgment after death.

A turning away from this belief, and movement towards a new humanism and concern for man's potential characterized the Renaissance era.

An important humanist and scholar of the Italian Renaissance was Aldus Manutius, who established a press to realize his vision of publishing the major classics from Greek and Roman.

An important member of Manutius’ staff was a brilliant typeface designer -- Francesco Griffo.

At the turn of the century they published “the strife of love in a dream.”
He cut new roman, Greek and Hebrew fonts as well as the first italic faces.

It was a romantic fantasy about a young man searching for his lover although she had vowed to keep her chastity intact. Erotic overtones and explicit illustrations escaped scandal only because of its high cost and limited audience.

In 1501 Manutius realized the need for smaller, more economical books... He published the prototype of the modern pocket book: 3.75” x 6” finish.

This edition of Vergil's Opera works was the first to use Griffo's new italic font -- the smaller width of the italics allowed for a 50% gain in the number of characters per line.

In 1502 Manutius was granted a monopoly of Greek publishing and italic printing by the Venetian government. The collaboration that had been Manutius and Griffo soon dissolved, as Griffo found that could not sell his popular typeface designs to other printers.

Manutius continued to publish editions of classical works -- his logo became famous throughout Europe.

Griffo vanished from historical record after being charged in the murder of his son-in-law who was found bludgeoned to death with an iron bar in 1516.

**Italian Writing Masters**

The inevitable decline in manuscript writing, because of printing, should have put the calligraphers out of work.

But ironically their craft boomed as a side-effect of printing. With the rapid growth of typography, the demand for writing masters to teach the skill grew as well.

The continuing expansion of government and trade commerce added to the demand for this skills.

Master calligrapher, printer and type designer Led Ovico Arrighi to create a small volume that was a course in handwriting skills. This volume, as well as a follow up, became wildly popular and sounded the death knell for the Scriptorium and the privileged who could write.

The Italian Renaissance ended with the sacking for Rome by the combined forces of the Holy Roman Emperor Charles the V and his Spanish allies. Arrighi was a victim of this campaign.

**Innovation Passes to France**

In 1494 the French King Charles VIII started a vain 50 year war in an attempt to conquer Italy.

It failed, but it did result in the importation of the Italian Renaissance to France-- with all of its attendant concepts and humanism.

The 16th century is known as the golden age of French typography... Henri Estiennes was one of the early French scholar-printers who became enthusiastic about the work he saw from Venice, particularly Aldus Manutius' book.

Estiennes emulated the style and published many books until his untimely death. His sons and foreman took over. The firm became well known for publishing fine classical works.
Censorship became an increasing problem, because the printers were all scholars and the purpose of printing was not just reproduction, but the spreading of ideas and knowledge.

Fortunately, this era in French culture saw a great flowering of excellent printing and scholarship.

Two major figures during this time was Geoffrey Tory and Claude Garamond.

Geoffrey Tory had an impressive range of accomplishments: professor, scholar, translator, poet and author, publisher, printer, bookseller, calligrapher, designer, illustrator and engraver.

As a reformer of language, Tory introduced the apostrophe, the accent mark and the cedilla. As a graphic designer he was influential in importing Italian influences and then helped develop a uniquely French style of book design.

Born of humble means, Tory found patrons which allowed him to study at universities in Rome and Bologna. In 1505 he became a lecturer in philosophy in Paris and work with Estienne as a scribe and illustrator.

Tory's lecturing is seen in a manuscript he produced in 1506, “The Hours of Jean Lallemant.”

After a short time in Italy, he returned to France and became a manuscript illuminator and then quickly turned to woodblock carving.

A series of initials designed by Tory captured the imagination of French Printers... They were block squares with meticulous floral designs.

As with most engravers, Tory opened a book-selling shop in Paris on the “Petit Pont” at the sign of the Pot Casse (broken urn).

He illustrated, published and printed books there for several years.

His trademark soon also became a symbol for the new and fresh ideas of the French Renaissance.

In August of 1522 Tory’s 10 year old daughter died... Devastated, Tory wrote and published a poem in her memory. At the end of the work, his trademark first appears.

A broken urn, chained to a locked book and bearing the inscription Non Plus (No More) symbolizes the loss of his daughter.

Tory’s influence gained momentum in 1525 with his “Book Of Hours”. It reflected the new clarity of thought and harmony of elements and became a milestone in graphic design.

He used fine lines and airy illustrations-- gone are the cluttered woodblock patchwork style.

Tory's Champ Fleury was his most influential work, consisting of 3 books.

The first attempted to establish fixed rules of pronunciation for the French language.

The 2nd book discusses the history of Roman letters, and compares their proportions to the human body and face.
The 3rd book offers instructions for the geometric construction of letter forms, as well as Tory's designs for his new alphabets.

Champ Fleury is written in a rambling personal style, yet its message about the Latin alphabet was clear-- and Tory became the most influential graphic designer of the century.

During the 1530’s and 1540, Robert Estienne (son of Henri) achieved a wide reputation as a great printer, renowned for his scholarship and intellectual prowess.

In Biography of Twelve Early Milanese, in 1549, Estienne used Garamond's roman fonts and Geoffrey Tory’s initials in this book. Headings are set in one line of letter spaced capitals and two lines of lowercase.

During the same time, Simon de Colines earned a reputation for elegance and clarity in book design. This dense border design is no longer a schematic for the application of color by hand.

Simon de Colines -- title page for De natura stripium libri tres 1536.

Claude Garamond was the first punch cutter to work independently of printing firms.

Garamond, based on the sheer quality of his fonts, is most likely the single most reason for the total elimination of Gothic fonts over the entity of Europe (except Germany).

Around 1530 Garamond began to sell pre-cast type to printing firms... Which was the first step away from the "scholar-publisher-typefounder-printer-bookseller" all in one.

The influence of writing as a model for type diminished in Garamond's work, and font design was more rooted in the process of making steel punches, casting metal type, and printing.

When Garamond died at age 81 he was desperately poor, and his wife sold all of his punches and matrices... Which contributed to the wide spread use of his fonts.

Oronce Fine was a mathematics professor who became interested in graphic design. He designed ornaments and graphic illustration. His work with printers like Coline are masterpieces.

In the 1540s Robert Estienne was caught up in the turmoil of the reformation and because he was involved in the printing and publishing of the Greek and roman classics (considered pagan) the catholic church suspected him of being a heretic.

The printer Dolet was burned at the stake for publishing books on Latin... And they used those very same books to make the fire. Estienne moved his print shop to Switzerland to avoid this fate.

Basil and Lyon Become Design Centers

Scholarship and book production flourish in many European cities, but a few -- like Nuremberg, Venice and Paris-- emerged as centers for design innovation.

During the 1500’s Basil (in Switzerland) and Lyons (in France) became centers for graphic design.

The two towns, 180 miles apart, enjoyed a lively exchange between their printing companies... Woodblocks, ornaments, fonts, even jobs.
A German, Johann Froben, who came to Basel to study at the university, stayed on to become a printer and eventually became the town's leading printing company.

He then attracted the humanist Desiderius Erasmus to come to the city and the two worked together for over 8 years.

Froben was one of the few Germans who tended to favor the Roman fonts over the heavy Gothic fonts.

28 year old Hans Holbein arrived in Basel in 1519 and was employed by Froben to do illustrations.

He was a prolific illustrator and produced many title pages, end pieces, ornaments and straight-away illustrations.

His greatest work was the illustration of Imagines Mortis (The Dance of Death)... a procession in which skeletons or corpses escort the living to their graves.

As the black Plague swept over Europe, this story was a common theme not only in the visual arts, but in music and literature as well.

After Froben died, Johann Operious became Basel's leading printer. His greatest masterpiece was Construction of the Human Body. This important book was illustrated with full page woodblock illustrations of anatomical figures... Which were made by artists while examining and dissecting corpses while being supervised by the author.

Many of the figures are posed in whimsical fashion, in landscapes and normal everyday life situations.

This book ranks as one of the greatest, for it was copied throughout Europe. In fact Henry VIII ordered an English version from a pirated copy... The Brits duplicated the woodblocks via copperplate engraving... It marks the first successful fully engraved book.

In Lyons the printer Jean de Tournes used Garamond's typefaces but used a local woodblock cutter to design titles and borders that went beyond the Parisian influence.

Graphic: Jean de Tournes. This delicate, open arabesque border is typical of the innovative design style developed by de Tournes and his associates in Lyons.

Another printer in Lyons, Granjon, created a forth typeface in addition to Gothic, Roman and italic... He called it Abracteres de Civilite (characters of civility) which imitated the style of handwriting in vogue with French secretaries at the time. Although elegant, it was difficult to read so it quietly fell out of fashion.

On March 1, 1562, a conflict between French Troops and a reformed church congregation ended in a massacre. This began four decades of religious wars which ended the golden age of French typography. Many printers and artists fled to Switzerland, England and the low countries.

Graphic design innovation then passed to places like Antwerp and Amsterdam.
Plantin, a bookbinder who broke his arm so he couldn’t continue, become one of Antwerp’s leading printers. He had a great business sense and his firm produced a tremendous amount of work. His design style was a weightier adaptation of French design.

Granjon was called to Antwerp for a while as a type designer in residence, and the worked with Plantin on a wide variety of projects.

Plantin also ended up purchasing a variety of type punches and types from the estates of Clines and Garamond.

Under the patronage of King Phillip II of Spain, Plantin published the second of the great polygot bibles... Which almost bankrupted him.

Plantin’s main influence was the move from woodcuts to copperplate engraving. Following his lead, most of Europe began to use engravings as the major technique of illustration for publishing.

**The 17th Century**

After the remarkable progress of the Renaissance period, the 1600’s were a relatively quiet time for graphic design. There were plenty of woodcuts and engravings to be had, so there was little incentive for innovation... It was a period of Business-As-Usual.

Although it is notable that during this century the works of Shakespeare and Cervantes were widely published.

A major step, not in graphic design, but in publishing occurred early in the century... The first Newspaper appeared in the German city of Augsburg. Soon many cities throughout Europe and England had newspapers.

Printing first came to the North American Colonies when a British locksmith and a dissenting clergyman sailed to the new world to establish a printing press in 1638.

The clergyman soon died, and the locksmith, Stephen Daye, set up the first printing company in Cambridge, Mass.

Despite strong censorship and a stamp tax on newspapers and advertising, printing grew steadily in the American colonies.

And by 1775 there were about 50 printing companies. They of course played a major role in the American Revolution.

During the 1600s the craft of copperplate engraving continued to grow and develop.

Copperplate engraving began to produce prints not only for book illustration, but also to be hung as art. This was the democratization of art.

During the 17th Century the prosperous nation of the Netherlands produced another printing dynasty with the designs of Christoffel Van Dyck. These Dutch publishers produced highly consistent books with narrow margins. The size allowed them to expand the book buying market.
Chapter 8. An Epoch of Typographic Genius

After the drought of graphic innovation in the 17th century, the 1700’s saw some spectacular typographic originality.

King Louis XIV in France established a committee to develop a high quality typeface.

The new letters were to be designed by “Scientific Principles”.

Headed by mathematician Nicolas Jaugeon, the committee studied other alphabets and began to construct new roman capitals -- based on a square divided into a grid of 64 units.

Each of these were in turn divided into 36 smaller units.

A total of 2,304 tiny squares.

Italic letters were formed in a similar fashion.

These designs had fewer calligraphic elements and were much more mechanical, yet the final decisions on the design were often based by eye.

The new face was called Romain du Roi.

The master alphabet was created as a large copperplate engraving.

Phillpe Granjean cut the punches... But the minute reductions of the 2,304 tiny squares proved utterly useless for test sized type.

Using the font (with the exception of the king) was a capital offense, punishable by death. But other printers quickly designed type very similar... But with enough difference to keep them from the guillotine.

The first book to use this new font was the Medailles in 1702.

The font and all the imitators are known as “Transitional Roman”... and marks the true end of the calligrapher as a major influence to graphic design.

The old Venetian tradition of “old style” with it's bracketed serifs and relatively even stroke weights would eventually be replaced by “transitional style” with it's contrasting thick and thin types forms... The calligrapher replaced by the engineer.

The Graphic Design of the Rococo Era

Fanciful French art and architecture that flourished between 1720 until about 1770 is called Rococo.

Florid and intricate, composed of S and C curves and scroll-work and plant forms were used.

The expression of the era of King Louis XV found its strongest graphic expression in the work of Peirre Simon Fournier le Jeune.
After apprenticing at another foundry, Fournier established his own type and design company at the age of 24.

18th century type was chaotic -- each foundry had their own sizes and systems. Fournier pioneered standardization.

He took a now obsolete French form of measurement, the “pouce” (slightly longer than an inch) and divided it into 12 lines.

Then each of these lines were divided into six points. His Romain size was equal to 1 line plus 4 points. This is 10 point type.

Fournier also began casting large type (about 84 to 108 pt) with decorative qualities and outlines. Before his 30th birthday he had designed and cut over 4,600 characters. He was the first to initiate type “Families”.

Fournier’s standardized measurement allowed for the intricate floral designs that were indicative of the Rococo period.

Because French law prevented type-founders from printing, Fournier delivered made-up pages to printers.

In the Rococo Era, the wealthy lived lavish lifestyles -- a sensual life lived out in a joyous pastoral fantasy land, oblivious to the poverty stricken masses.

Books about the wealthy, were wildly popular during this era

*Graphic: To adorn a poem about a painter’s romantic interlude with his subject, Barbou used Eisen’s etching of the event, a topical tail-piece by Choffard, and Fournier le Jeune’s ornamented type.*

Fournier planned a massive four volume work about typography but only lived long enough to produce two volumes.

Nevertheless, Fournier made the greatest impact on graphic design of his era.

Even though Fournier and his followers created extravagant designs, they were still limited by the constraints of alignment that metal hot type has inherently...

But those limitations did not apply to the young industry of copperplate engraving: Engravers used a tool called a “graver” which allowed for extremely fine lines and florid curves which were so popular during the rococo period.

*Graphic: Bickham engraved his self-portrait above verses lauding his writing skills.*

As engravers became more skillful, they began to engrave the type as well as the illustrations. Pages then becoming on large engraving... Side-stepping the typographers altogether.

John Pine was a master engraver; his books, including the opera, were sold by subscription, before it was actually published... A list naming each subscriber was engraved in script in the front of the volume.
Caslon and Baskerville

For over 2-1/2 centuries after the invention of movable type, all of the advanced occurred on the continent of Europe.

But because of harsh censorship, religious persecution and civil war, the environment was not good for graphic innovation.

In fact, Charles the II of France demanded that the number of printers be reduced to twenty... “By death or otherwise”. The graphic artists then looked toward England.

An English genius emerged in the person of William Caslon.

Caslon apprenticed to a gun barrel engraver and eventually took up type design and founding with immediate success.

In 1722 he created “Caslon Old Style”... Wildly popular for the next 60 years and practically all English printing used his fonts.

Caslon's fonts spread throughout the world (due to English colonialism) and printer Benjamin Franklin brought the type to the colonies.

Caslon's fonts were not particularly fancy or creative... But by increasing the weight between the thick and thin, it made for vastly improved readability... And easier read for the eye compared to the more drastic fonts of the day.

His foundry was run by his heirs and was in operation until the 1960's.

William Caslon worked in a tradition of old style roman typographic design that had begun over 200 years earlier during the Italian Renaissance.

This tradition was bolstered by John Baskerville, an innovator who broke the prevailing rules of design and printing.

Moving to Birmingham from Worcestershire, Baskerville designed and cast and set type. He conceived and commissioned new papers and designed and published the books he printed.

As a young man, Baskerville was a stone cutter and writing teacher. Then in his 30’s he manufactured frames, boxes, clock-cases, candlesticks and trays. He made a fortune doing so.

And after building his estate, Baskerville began to experiment with printing... He sought graphic perfection... And had the time and money to pursue these goals.

Baskerville's type designs represent the zenith of the transitional style, bridging the gap between old style and modern type design.

His types were wider, the weight contrast between thick and thin is increased and his serifs flow smoother.
In an era of heavy ornamentation and decorated initials, Baskerville opted for pure typographic design. He used wide margins and a liberal amount of space between letters and lines. To maintain his level of typographic quality, he melted and recast his type after every printing.

Baskerville made mechanical improvements on his printing presses... Increasing the perfection of alignment and achieved much more even impressions.

He also developed a “blacker” ink. A mixture using boiled linseed oil, black resin and ground lamp-black.

Baskerville also developed the first smooth glossy type paper... Existing paper (called “laid”) had a texture of lines in the paper formed from the wire mesh during manufacturing.

By creating a woven, and much finer screen for this process, Baskerville virtually eliminated this texture.

All paper is coarse. But in his relentless search for perfection, Baskerville began to hot press the paper to produce a smooth, refined surface.

How he “hot-pressed” his paper is still controversial... During his own time he kept it a closely guarded secret.

One theory is that he created a special smoothing press with heated copper rollers.

Another is that he hired a woman and a little girl to iron the paper... Just like laundry.

Yet another version is that he placed the printed paper between two heated copperplates.

Irregardless of how he did it, he realized the market and developed a thriving stationary business selling his mirror-smooth glossy writing paper.

The net result of his blacker ink, his better type, his glossy smooth paper, was books of dazzling contrast and clarity. And this in turn generated a high degree of jealousy in the trade, with critics claiming they got headaches just from reading his books.

Benjamin Franklin played a trick on a client that was against Baskerville. He tore the name off of a Caslon type specimen sheet and said it was Baskerville’s.... The client then went on about how it gave him a headache and hurt his eyes.

While Baskerville met with much hostility, his work did influence the Italian Bodoni and the French family of Didot... Both who became innovators in their own right.

The Origins of Information Graphics

Information Graphics, first developed and used in 1637 by French philosopher Rene Descartes is based on Analytic Geometry.

Descartes used algebra to solve geometry problems and developed the idea of two numbers that could represent a point in space: x and y Axes. These numbers are called Cartesian Coordinates.

These Cartesian Coordinates were then later used by Scottish author and scientist William Playfair to convert statistical data into graphic symbols.

Playfair was a passionate man with strong opinions about trade and commerce.

He published Commercial and Political Atlas in 1766 where he introduced the first “Line Chart,” the first “Bar Chart” and in a later work, the first “Pie Chart”.

Playfair launched the important category of Information Graphics.
**Imperial Designs of Louis Rene Luce**

Louis Luce was at the top of the imperials printing era... Just before the French Revolution changed politics everywhere...

He achieved wonderfully sharp type designs as well as beginning the new trend away from Rococo and into the more modern style. The last and ultimate designer of imperial (royal) design, he discovered that his work was being used by the revolutionaries.

**The Modern Style**

Giambattists Bodoni was the son of a poor printer in Italy. As a young man he moved to Rome and began work at a large catholic press that printed missionary texts in many languages.

But when his mentor committed suicide, he quit and went to visit his parents. And it was then, at age 28, that he was asked to take over the printing of the Duke of Parma.

His designs and type work began to get international acclaim and in 1790 the Vatican invited him to Rome to establish a new printing firm to do the classics.

The Duke countered the offer, including more freedom and printing for other clients. Bodoni stayed.

At the same time the cultural and political climate was in extreme flux. The French revolution, which overthrew the monarchy, let to a total rejection of the lush, heavily ornate Rococo style of graphic design. Excavations at Pompeii and Herculaneum fueled this rejection of Rococo style.

Bodoni played a leadership role in this evolution.

“Modern” refers to a new category of Roman type... Starting with Foutnier, thru Baskerville and culminating with Bodoni. Sometimes referred to as “neoclassical.”

It's essence is thin straight serifs, contrast between thick and thin; generous use of space, and lighter typographic tone and texture.

Around 1790 Bodoni redesigned roman letter-forms using a more mathematical and geometric system. Straight, hairline serifs created extreme contrast and sharpness.

He designed fonts with combinations of very limited units of space. Precise and exact type fonts of Bodoni foreshadowed the coming industrial revolution.

At the same time Bodoni was creating precise fonts, Elli Whitney was creating firearms with interchangeable parts, foreshadowing the mass-production techniques soon to revolutionize western society.

The severe purity of Bodoni’s later work is very similar to 20th century functional typography. Simple, clean page design, generous leading, wide margins and smaller x-height with longer ascenders and descenders.

Bodoni published over 345 books and his genius was a milestone in graphic design.

A family dynasty of printers, publishers, paper-makers, and typefounders began in 1713 when Francois Didot established a printing and book selling firm in Paris.

His son, Francois-Ambroise introduced a highly finished, smooth paper of wove design modeled after the paper commissioned by Baskerville in England.
Francois-Ambroise revised Fournier’s typographic measurement system in 1785 and made his standard the inch divided into 72 points. This was the pied de roi and was eventually adopted by printers everywhere. Picas and points.

The family’s constant experimentation led to the development of the beginning of Condensed and Extended styles of today.

Sons of Francois-Ambroise continued their experimentation in printing and developed the Stereotyping process. It involves casting a duplicate of a relief printing surface by pressing a molding material (damp paper pulp, plaster or clay) against it to make a matrix. Then pouring molten metal into that matrix to form the duplicate printing plate. It made longer press runs possible.

The Illuminated Printing of William Blake
During the end of the 18th century, a drastic counterpoint to Bodoni and Didot occurred in the person of William Blake.

A poet, printer and mystic, he published books of his poetry. In monochrome first, then hand-painted and hand bound by his wife.

The lyrical fantasy, glowing swirls of color, and imaginative vision that Blake achieved in his poetry and accompanying designs represent an effort to transcend the material of graphic design and printing to achieve a spiritual expression. Called romanticism.

As the century drew to a close, British national pride led to the establishment of the Shakespeare Press in 1786 intended to create beautiful books to rival those being produced in Paris and Parma.

One of Baskerville’s apprentices, William Martin was commissioned to imitate the sharp and fine letters used by the French and Italian typographers.

William Bulmer was the main printer with these books of Shakespeare and later Milton. And he was a close friend of: Thomas Berwick, wood engraver, used a fine white line to achieve finer detail and realism.

Berwick combined white line on black as opposed to black line on white and achieved a much higher tonality. Called “white Line Technique”.

The epoch closes
The 18th century closed with stormy political revolutions in France and the American Colonies. England was the nucleus for the gathering forces of the vast upheavals of the Industrial Revolution. All aspects of the human experience, including visual communications, were transformed by profound and irrevocable changes.