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Graphite Pencil: Game Changer of The Art World

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Abstract:

The graphite pencil may be a simplest piece of engineering which was neglected a lot. Indeed, it's the only piece of asset that we tend to offer to strangers while not hesitation or worry of it being came back. The pencil is just like every day scrap, a technology which is so common that we don't even think about it as technology, however the reality is that an amazing quantity of engineering, imagination, and labor of thousands of individuals has formed into the easy to use and carry wood cased graphite pencil. Such a simple technology that has contend such an awfully necessary role in art, science, arithmetic, astrology and in everyday writing. Each student's learning expertise deserves additional credit than we tend to provides it. In this manner, the investigator has tried to explore the origin, traces of graphite pencil in the art world in different means and method. this attempt is the tribute to the piece of art and engendering who have served the art world as an important tool, and we call it 'Graphite Pencil'. It also regarding researching the invention, craft, engineering, manufacture and business that's conjointly sometimes a history of cultural life of the world.

Keywords:

Pencil, Modern Pencil, Graphite Pencil, Graphite, Black Lead, Lead pencil, Art tool.

INTRODUCTION

"Game-changer is an idiom that has been in use since the late 1980s to early 1990s. The meaning of idiom is a newly introduced element or factor that changes an existing situation or activity in a significant way. Game-changer was added to the Oxford English Dictionary in 2012"

Skill, talent and experience cannot be substituted. Pen and ink would not create any masterpiece without any artist. It is however also true that if Michelangelo Buonarroti used a pen

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or contemporary pencil, then the drawing may show a different value or volume depth. Equally, the selection of materials can be an important part of selecting the right drawing instruments, surfaces and tools to suit the requirements of his creative view. The most important changes are usually starting from the smallest beginnings. One graphite pencil discovery / innovation has changed the world. It was fully dry; as artist did with the quill pen, it made a deep, discernable mark on a sheet and it was erasable too. We didn't have to worry about pouring ink. In the beginning. This product was called the "black plumb pencil," shortened to "lead pencil." Graphite is a natural carbon type, which is produced by earth stress on prehistoric decaying forests. Such layers are weakly connected, giving graphite smoothness[i].

The exploration between traditional and modern styles begins with an ancient Roman writing device known as a "stylus." The scribes used the skinny metal stick that leaves a readable mark on papyrus (old paper). These early styles were made from plum, which is why we still tend to decide pencil cores, but they are made of non-toxic graphite. These were cut into little pieces and sheepskin draped. Some people even use hollow stems and small branches for inserting leads. The first crayons are made of pure graphite, suited for rainforest bodies. The most important and still most valuable graphite ever discovered was this pure graphite that belongs to Borrowdale's famous mine. The pencils led to the form that they could simply and faithfully be cut in a square crosswise direction.

Methodology

In this study researcher takes a biographical approach that is nevertheless sketchy to investigate the role of graphite handles in contemporary art world. Biographical details like how, and where, and who the main people behind it, their relationship to technology, how they travel, who designs them and their lifespan. In the same time researcher has examined the characteristic, cultural markers and how their value changes, and who owns the object over time. All these problems will inevitably lead us into a complex labyrinth of cultural, esthetical and social values that form the graphite as an art object, a symbol, a semi-ionic moment and an object.

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INVENTION OF THE MATERIAL

In the beginning of 1560s, myth says that a large tree might be an old Oak Tree. It fell into a storm in Borrowdale, England. Perhaps a traveler or a shepherd notices blocks of the root hanging black material. Graphite was first thought of as a black lead by locals. It was called black led and plumbago, from the Latin word "*that which acts like lead*."[ii]." English people make pieces of graphite and put it into hollow sticks and used to write. The sticks were wrapped in paper or string and was use to sell out on retail. At the end of the 16th century in Europe, the existence of graphite was known and artists were looking for plumbago for 1610 in London, demanding portable and erasable writing and drawing equipment. Chemical structure of graphite was discovered by K. W. Steele in 1779 and named by that A. G. Werner suggested the name by supernatural substance: carbon, from the Greek graphite, which suggests "to write." Graphite is a carbon form settled between diamond and coal molecularly. For the reason of this unique molecular construction, graphite marks don't react or fade on paper. The thought of inserting black plumage into wood is believed first to have been a craftsman in Keswick, England, in the 1600s. Half a lengthwise, a rectangular wooden stick was removed. One in each half creating an area for a slim graphite stick. The three bits are stuck to the inside with the black lead and the two halves of wood. The result was an oblong tool and the first wooden pencils in the world.

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Figure 1*, The world's oldest known pencil, dating back to the beginning of the 17th century, on display in castle Faber-Castell in Nuremberg. Jonathan Schifman (2016), Popular Mechanics, Retrieved on 9th May 2019 from http://www.pencilrevolution.com/2014/05/evolution-of-the-pencil*

This was the game changer step for art world. Wood was more durable than paper or string, as the black lead went down. The new cedar casing may have been gravening and sharpened with a knife when it shortened the black lead. Thus, the expression was born *"sharpen your pencil."* Black plumage was then found elsewhere in Europe, but English mines produced the world's hardest and darkest black plumage. It was so superior in quality that England was the leading producer of pencil and graphite. The government has been rigorously trying to maintain its supply of black lead by mining for only approximately six weeks every five years to prevent too much precious material being removed.[iii].

THE BIRTH OF THE MODERN GRAPHITE PENCIL

England jumped into war with France in 1793. The French was the main importers of English pencils, England's official imposed the trade ban with France. The shortage of pencils and graphite suddenly struck France. A year after war began, French War Minister Lazare Carnot ordered Nicolas-Jacques Conté, a scientist and military commander. On that time, he was working on the fictional hot air balloon, Conté, was engaged in military. His lost his left eye when an explosion resulted from a balloon experiment. In order to find a new way of building pencils, Conté had to push the project aside. This meant finding or providing a suitable mix of graphite and other substance or substitute for graphite. Conté took only few days to find a solution.

The mixture of Conté had two main ingredients: graphite ground-up and clay. He mixed them both with water so that they could be hardened into a fire in rectangular molds. Conté found that he can measure the quantity of clay used to control the lightness or darkness of the lead. More clay for a more tough pencil lead on the paper with a lighter mark. A smoother lead and a darker mark meant less clay. Conté cut a groove from a whole wooden stick in order to enclose the wood lead instead of the first slicing a stick in half, like the English. The graphite has been

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placed on the groove, and a second wood piece has been placed on the lead. The pencil of Conté was filed in 1795 for a patent. Although pure graphite pencils were still popular in England, Conté's pencils were going to become the best way for manufacturers in the mid1800s to imitate. This necessity-led development became a convenient way in which writers and artists required different tones of leadership to produce specialist pencils. Today we still using the Conté mixture of graphite-clay. During the mid-to-late 1800s, the development of Conté's combined methodology coincided with the increase in machines. Machinery could simply build round or polygon wood bodies of pencils. Small family enterprises have built factories in order to produce pencils. Graphite was booming. Throughout this era of history, German and Yankee businesses have gained prominence. The German company A.W. Faber, known today as Faber-Castell (1761), became so popular that the other producers stitched "Faber" onto their crays and made a great deal of sales fraudulently. Two million pencils a year in the 1870s produced by the J.S.S. Staedtler Company (1835), who is the long-standing German competitor of Faber-Castell. In other part of the globe the Joseph Dixon Crucible Company in America has been turned into one of the most recognizable brands in the world.

In 1915, the mechanical pencil of Ever Ready Sharp, or just the Ever-sharp pencil, was invented by Japanese metals worker Tokuji Hayakawa. It was as slim and smooth as a regular wooden pencil but made of metal with having mechanism were screwing it together and the graphite lead is coming out. The business of Hayakawa would have been named after its pencil "*Sharp Corporation*". Now pencils are at your fingertips on every strip. Carpenter's pencils, colorful pencils, Mechanical pencils, which retain the rectangular shape of the early days of the invention, complete classification systems are now in place. The letter-based approach used by Europe and Asia is the **H** pencils, they are Harder side. The greater the number before the H, the more difficult the pencil. The **B** range is located at the other end of the spectrum. B is the black, darker and the softer pencil mark the higher the number preceding the b. HB with H in the middle A 9B pencil is essentially pure black, a 7B slightly lower and a 5B lower. A 9H is a very difficult pencil which is extremely light. HB, is the middle black pencil having medium depth.

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TIMELINE OF GRAPHITE PENCIL

	During 16th century, styluses contained lead that was shaved to a point and inserted into a wooden handle. These were used to make marks on parchment, papyrus, or wax-coated tablets.
	1630: This handmade pencil was discovered while Swabian architects were restoring the roof of an old farmhouse. A carpenter who worked there at the time accidentally left it for over 300 years
	1662: Produced by the Staedtler Pencil Factory, the pencils pictured here are modern versions of the first machine-made pencils which is mass produced in Nuremberg, Germany. At the time, their simple wood pencils made their way all over Europe.
	**1812:** William Munroe created America's first wood pencils from the popular Eastern Red Cedar trees in Tennessee. His pencils inspired other manufacturers in the south and were used by many industries.

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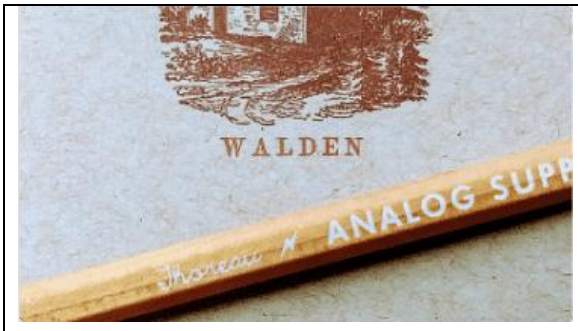	**1820:** Henry David Thoreau and his father substituted clay for wax and created the world's first #2 pencils. The graphite produced an easily readable mark, making them standard school supplies in classrooms across the country.
	**1870:** Joseph Dixon created 132 pencils per minute that resembled this contemporary design. His pencils were used by everyone from carpenters to soldiers during the Civil War.
	**1889:** The iconic yellow pencil made its debut at the World Fair in Paris and reflected Chinese royalty and respect. These pencils were in high-demand since they were easy to customize with advertising messages.
	**1900:** The ability to mass-produce pencils and paper during the Industrial Revolution changed the way classrooms functioned. Wood pencils were used in schoolhouses instead of the standard slate.
	In 1915, the mechanical pencil with having mechanism were screwing it together and the graphite lead is coming out.
	**1950:** Pencils were sold by the case and offered for as little as a nickel, such as these produced by the Wallace Pencil Co. For the first time, pencils became a trendy school supply for kids to use in

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	class.
	**1980**: Strongly resembling a classic #2 pencil, this mechanical pencil was popular during the Reagan era. It fused both the traditional style of a yellow pencil with the contemporary design of a mechanical one.
	2018: Even though we're moving toward a digital world, we're not leaving the pencil behind. This stylus is compatible with many iPhones, iPads, and other iOS apps and has the ability to erase mistakes, blend colors, and create fine details.

TRACES OF GRAPHITE PENCIL DRAWING IN ART WORLD[iv]

Although the graphite was extracted at the 16th century, it was not known as a drawing material before the 17th century that artists can use in a pencil holder. But from 18th century graphite become more popular, particularly in the landscape representations by Dutch artists, graphite was used for drawings in other media to be completed, the finished pencil drawings were produced less frequently by artists of the 18th century than sketches in crayons, charcoal and stylus, and stone and ink, while the use of graphite slowly grew in terms of painters, miniature artists, architects and designers in the late 18thcentury. (1795 approx.). After the technological upgrade of Conté allowed the manufacture of finely regulated pencils that vary in weight and hardness, darkness and lightness. Such excellent graphite pencils were used more commonly by artists of the nineteenth century, and pencil drawing was used in experiments and

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primary drawings. The graphite pencil can be used on nearly any form of drawing surface, which made it indispensable for the artist's studio.

Graphite pencil provided the opportunity for smooth modeling and a wide range of light to dark results, shading suitable for the drawing and offered a wide range tonal value. The concept of pencil drawing was contrasted with the concept sometimes used in the 18th and 19th centuries, when artists and miniature artists rub the soft graphite powder with stumps, a tightly woven piece of soft paper, or with chamosites, produced extensive tonal modulizations of three-dimensional formats and elaborate effects from light and shade. In the very selective designing of the Neoclassicist French artist Jean-Auguste-Dominique Ingres (19th century), the precise and clarifying use of a medium-hard graphite pencil were developed. Lot of his portrait studies and Sketches were the height of pencil drawing, where minimal shadows and intense contours lines were united to create a beauty and preservation spirit. This is how many artists around Europe, including Adrian Ludwig Richter, allowed the toughest pencils and the sharpest points to create wire-like delineations of figures and nations. For more creativity and spontaneity flexibility Softer and darker graphite pencils allowed the artists their tastes. The drawings made quickly of flamboyant and undetailed strokes by the romantic painter Eugène Delacroix indicated dramatic figures and compositions. For powerful, blunt strokes, Van Gogh selected a wide carpenter's pencil. Particularly in his sketchbooks Paul Cézanne employed the pencil better, to imitate the brilliant atmosphere of Provence, in order to produce highly reducible landscapes in silvery value. The French artist Edgar Degas was one of the most prolific users in the 19th century of the graphite pencil. A master pastel artist and drawing maker of painted lime and oil, Degas created warmth and charm pencil drawings that differed from cool, classic Ingres ' works or the Delacroix's highly animated, sometimes violent drawings. Degas, which have high selectivity, gracefully combines fluid contours with soft, limpid tones.

In the 21st century, graphite pencil continues to be used as a tool for individual artwork and also for drawing and preparing conceptional proofs later in painting or sculpture.

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Figure 2, Albrecht Durer, Self-Portrait as the Man of Sorrows, 1522, pencil on paper

Figure 3, Self-portrait by Albrecht Durer on paper at the age 13, 1484.

Figure 4the Raphael and Fornarina study, Jean Auguste Domique Ingres, c. 1813, graphite on paper

Figure 5, Pencil and pencil on paper Francisco Goya Accuse the Time of 1812

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Figure 6, Pablo Picasso, Seated Nude, 1906, charcoal and pencil on paper

Figure 7, Salvador Dali, Portrait of Maria Carbona, 1925, graphite on paper

Retrieved on 9th May 2019 form http://www.beginnersschool.com/2015/05/04/history-of-drawing[v]

SOME OTHER PENCIL DRAWING PRODUCED BY RENOWNED ARTISTS

The tough points were most suitable for the Neoclassical and Romantic drawing makers of the 18th century, with their long-lasting, clear thin pulsations.

- Jean-Auguste Ingres (1780-1867): The maestros of pencil portrait of Madame Guillaume Guillon Lethiere (lead pencil painting, at the Museum in Fogg Art in Harvard University).
- John Constable (1814): The English landscape artist who used pencil and a washing of sepia wash in his trees (Victoria and Albert Museum, London). and
- Pablo Picasso (1913) (Still Life with Glass, Apple, playing Card and Package of Tobacco, the Winston Art Collection, Michigan).
- Alice Meynell of John Singer Sargent are two particularly good craftsmanship works at the Tate Gallery in London.

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- William Strang's Thomas Hardy in The National Self-Portrait Collection in Ireland at the University of Limerick shows other modern examples of the use of pencil.

CONCLUSION

Due to this early familiarity, graphite pencils remain for many artists is the most comfortable and safest choice before they begin to study art. Graphite, which is mostly regarded as a linear medium, is than is attributed by many artists and professors. Graphite pencils are coming in different forms, sizes and durability and quality. This enables a range of fine tonal value, to hard strokes. The most negative feature of graphite is its inability to attain the depth of darkness that can be achieved from condensed charcoal or paint. It makes marks 450 years ago and still current remarkable in current time. It also certainly marked the civilization of mankind and different cultures. Many poems, philosophical ideas, scientific observations or humorous figures could not have been registered without the scribbling of the pencil. Ballpoint pen and smartphones certainly exist, but pencils were the first really portable tools for memory and reflection. The pencil has still become the emblem for creative freedom were software programs have become ruling offices and studios. In other words, pencil is what you use for fun. And ultimately, we can say that the pencil is our direct link between our mind and page.

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