

Book Review

The Pencil Perfect

by Caroline Weaver
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James Conway in his classic 1959 textbook *Evidential Documents* wrote:

Whatever one's past attitude, several realities should be faced squarely. Every person who can read and write does know "something" about handwriting, about typewriting, about ink, about pens, about pencils, and about documents in general. Each literate member of society has enjoyed some training in the preparation and execution of documents and experience in their uses.

While that was certainly the case in 1959, in 2020 it can no longer necessarily be assumed that those entering the profession would necessarily have experienced the range of documents and materials used to produce them as in previous times.

With this in mind it is worth considering references that provide some background into the development of writing instruments and their place in modern times. Caroline Weaver has done this with great enthusiasm in a historical progression from the 16th to the 21st century. In writing about the history, she includes topics that are relevant to the document examiner such as:

- pencil lead is not the element lead
- the basics of the atomic structure of the carbon in the graphite used in pencils
- the birth of the Conté process to form graphite/clay cores in pencils

- the 12 steps of wood case pencil manufacture
- pencil hardness grades, #1 to #4 used in the USA, ...2B, B, HB, F, H, 2H... used more outside of the USA, and the lack of universality in grading
- the development of the eraser from bread crumbs to "elastic gum" to vinyl erasers
- the evolution of the major manufacturers in Europe and their connections to the birth of manufacturers in the USA

Certain topics are explained in their historical context, for example the development of the clutch and mechanical pencil by Caran d'Ache was motivated by World Wars which caused cedar wood shortages in manufacture.

Ms Weaver uses non-technical language to describe the materials for manufacturing specialised pencils. She also provides an insight into pencils that may be rarely encountered such as the copy pencil. Copy pencils of the early 20th century were non-erasable pencils with aniline dyes that allow for document copying, when the purple dye was moistened it could be transferred to another page by simple paper-to-paper contact. Such a process reached its zenith during the First World War. Copy pencils also served as a substitute for writing with a pen when fountain pen use was not practical or possible. The early copy pencils with aniline dyes were toxic and the shift to non-toxic synthetic dyes was made for the few manufacturers who still make them today.

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Another example is that of pencils developed for automated test-scoring machines. These may be called electrographic pencils which use a type of graphite with high electrical conductivity. Some pencil manufacturers still make pencils for such purposes. They may be "Mark Sense" or "Marksheet" pencils if they are made in Japan.

In the latter part of the book Ms Weaver describes novelty pencils and related items which may not be as relevant to the document examiner. Of greater interest is the detailed account of some manufacturers in: Japan, India, Portugal, Denmark, Pakistan and China. She closes

the book with a discussion on how the internet has been of invaluable assistance in researching different aspects of pencil history, and current trends including the rise of e-commerce permitting the opportunity to learn about and buy pencils from "countries far away".

The book provides an excellent resource into the world of pencils. In the reviewer's opinion there has not been a book so detailed on pencils since Henry Petroski's book *The Pencil: A History of Design and Circumstance* first published in January 1990.