

Anonymous

Traité de la peinture au pastel (Treatise on pastel painting)

In Anonymous (C. B.), *Traité de la peinture en miniature (Treatise on miniature painting)*, The Hague: van Dole, 1708

**An English translation with a speculative essay on its authorship
by Rolf G. Kuehni**

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Who wrote *Traité de la Peinture en Pastel*? A speculative essay

Rolf G. Kuehni

In 1708 the Dutch publishing firm of Louis and Henri van Dole in The Hague issued an edition of *Traité de la Peinture en Mignature* (Treatise on miniature painting), a book first published simultaneously in Paris and Rouen in France in 1673 under the title *Ecole de la miniature*. The van Dole edition is notable for its inclusion of a new essay on pastel painting not seen in any other edition. That essay itself is notable for the inclusion of two engravings of color circles to be hand-colored, the first such circles appearing in print, and only four years after the publication of Isaac Newton's *Opticks* with its own semi-quantitative, but uncolored, circle demonstrating the arrangement of spectral colors and their mixtures. The authors of both, the *Traité de la Peinture en Mignature* (*Miniature*) and the *Traité de la Peinture en Pastel* (*Pastel*), are unknown. Before offering some speculations concerning the author of *Pastel* a few facts and comments about *Miniature*.

École de la Mignature and Traité de Mignature

The essentially identical text was published, for as yet unknown reasons, simultaneously in Paris and in Rouen under the title *École de la Mignature*. The former was published under a royal privilege issued in 1673 to the King's Only Publisher of Music Christophe Ballard (1641-1715),¹ the latter by Bonaventure le Brun.² It is not evident why a music publisher should have printed a small book on painting, unless perhaps personal favors were involved. Ballard does not appear to have published any other text books. In 1673 and 1674 a new (2nd) edition was published by Ballard in Paris under the name *Traité de Mignature*.³ New printings were made in 1676, 1678, 1681 and 1684. It is evident that the little work was popular. A third, augmented edition was published by Ballard in 1696, followed by a 4th "revised, corrected, and augmented by the author" edition in 1697. A "new edition" by Ballard appeared in 1711 in Paris.⁴ Except for spelling differences and minor edits this version remains essentially identical to the 1673 edition. In 1693 and 1694 enlarged editions appeared in Lyon by Baritel and by Guerrier, respectively.^{5,6} The Ballard editions are typically 166 pages in length; these editions both have 238 pages. They included 87 pages of new material beginning with "Traité de la peinture et de son objet" containing a short section on pigment mixture. The extract of royal privilege at the end of the book refers to C. Ballard. Meanwhile, two editions of essentially the original text under the title *École* appeared in Lyon in 1679 and 1709, published by Duchesne.⁷ Sources for purchasing painter's materials are given that vary depending on the city in which the edition was published.

In 1687 a 168 page version of *Traité* was published in The Hague in Holland by the publishing firm Etienne Foulque and Louis van Dole.⁸ Foulque was a French printer who had moved to The Hague in the same year. He formed a partnership with the local printer Louis van Dole, then 27 years old and a member of the local printer's guild. It only lasted two years.⁹ During that time they published six French books, including *Traité*. Their edition of *Traité* contains a new section: "Ceux qui etudient aux fortifications apprennent ici à enluminer toute sort de plan et de paysage (Those that study fortifications will here learn to illuminate any kind of map and landscape)." Its

author is not mentioned. One might conclude that Foulque had brought the texts from France and they were published perhaps less than fully legally. After the breakup Louis van Dole formed a company with his younger brother Henri and continued to print and publish.⁹ They had a successful business lasting until 1724 when Henri's oldest son Antonie took over, continuing until 1755. As mentioned, in 1708 Louis and Henri published a new (269 page) edition that contained, with a number of textual changes, the contents of the Ballard editions, the section on map coloration, as well as a newly added extensive essay on pastel painting (25 pages) and a glossary of terms (59 pages). There is no inclusion of a privilege and no later edition of this version was published. In 1744 the Utrecht printer A. Lobedanius published an edition of the van Dole version translated into Dutch by P. J. Verly, with new engravings that are copies of the original ones.¹⁰

Aside from later French editions of *Traité* there were German translations, beginning in 1688, English editions beginning in 1729, and Italian editions beginning in 1755.

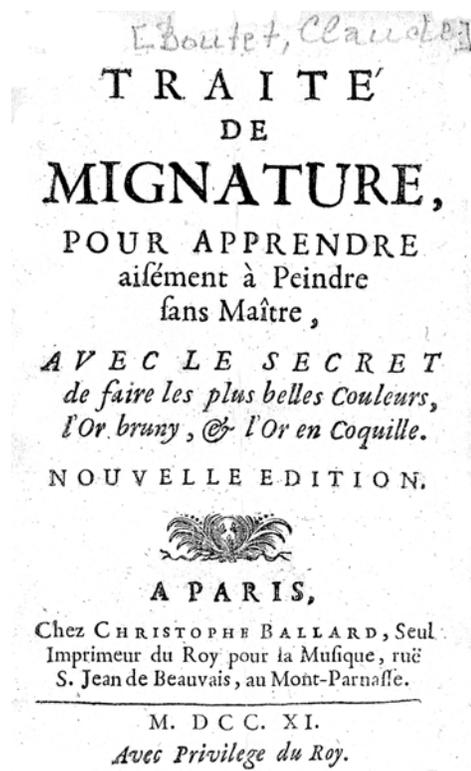


Fig. 1 Title page of the Ballard 1711 edition of *Traité*.

Who was the author of the original *École/Traité*?

None of the mentioned editions of the book has an author listed. The title page of the 1711 Ballard edition is shown in Fig. 1. In the literature and on WorldCat the author is generally given as one Claude Boutet (see handwritten note in Fig. 1). The source of this attribution is a French lexicographer, Joseph-Marie Quérard (1797-1865) who published a multivolume bibliographic dictionary, *La France Litteraire* in 1826-1842.¹¹ The entry

on *Traité* is shown in Fig. 2. However, in the same work in the entry on Christophe Ballard, Quérard's co-worker A. A. Barbier claims that the author is Ballard himself (Fig. 3). Note that Boutet and Ballard have the same initials. This is important because the book is dedicated to a Miss Fouquet, with the dedication signed by "your very humble, very obeisant, and very obliging servant, C. B." Barbier claims that the dedication in a 1672 edition of *École* spells the full name of Ballard. A reference to a 1672 Lyon edition of *Traité* is found in Schmalhofer.³ However, no copies of such editions have been located. The authorship of the small book remains undetermined.

BOUTET (Cl.). *Traité de la mignature, pour apprendre aisément à peindre sans maître; et le Secret de faire les plus belles couleurs, l'or bruni et l'or en coquille.* Nouv. édit. Paris, 1711, in-12. — Autres éditions, sous ce titre : « École de la miniature. » Rouen, Duménil, 1742; Bruxelles, 1759; Paris, 1782, ou 1802, in-12.
La prem. édit. est de Paris, 1674.

BALLARD (Christophe), imprimeur-libraire, reçu en 1666. *C. B. Traité de miniature pour apprendre aisément à peindre sans maître.* Paris, Ballard, 1692, 1674, in-12 : 1696, in-8. L'auteur, à la fin d'une Epître dédicatoire à mademoiselle Fouquet, s'est désigné par les lettres C. B., lesquelles paraissent signifier Christophe Ballard, comme le prouve le privilège de l'édition originale. Il n'avait pas avoué ce travail, sans doute parce qu'il n'était qu'amateur dans la peinture. Aussi l'ouvrage a-t-il toujours passé pour être de La Voye-Mignot. Cet ouvrage a paru aussi sous le titre de « L'École de la miniature, dans laquelle on peut apprendre aisément à peindre sans maître, avec le secret d'employer l'or bruni, etc. Nouv. édition, aug. Lyon, Franç. Duchesne, 1679, in-12. Cette édition est anonyme, mais le privilège entier, qui est dans celle de 1672, où se trouve déjà l'épître dédicatoire à mademoiselle Fouquet, signée également C. B., porte en toutes lettres Christophe Ballard, semble indiquer le vrai rédacteur de cet écrit. *Art. d'A. A. Barbier.*

Fig. 2 (left) Entry Boutet, Fig. 3 (right) entry Ballard from Quérard's *La France Litteraire*, Ref. 11

Who was Miss Fouquet and who was Claude Boutet? The former question appears easier to answer. A good candidate for Mademoiselle Fouquet is the daughter of the very rich finance minister of Louis XIV Nicolas Fouquet (1615 – 1680) and his wife Marie-Madeleine de Castille-Villemareuil (1633-1716): Marie-Madeleine Fouquet (1656-1720).¹² The Fouquets built the Château de Vaux where Mme. Fouquet conducted a literary salon that attracted some of France's most famous people of the time and had parties of an excessive style that made Louis XIV jealous. She also dabbled in miniature painting and had taken lessons from one of Louis XIV's most esteemed painters, Charles Le Brun (1619-1690), who at times also worked in pastel. Fouquet was accused in 1661 of financial misconduct and imprisoned until his death in 1680. When *Traité* was likely

originally written, around 1670, young Marie-Madeleine was 14 years old and, encouraged by her mother, engaged in activities such as painting.

In *Traité* the dedication letter (DL) is followed by a preface for the reader (P). In DL the author makes two revealing statements: 1. He says that he is "taking the liberty to offer [her] the book as it is, but not as a present, because people of my kind do not make presents to persons of your quality" and 2. "I had the honor of being educated in [your illustrious house] since my earliest years and hope to be able to finish my life there." In P he indicates that he wrote the book because "especially out here in the country ... it is easier to find a book on the subject than a master" from whom to learn. After 10 years of persecution after the arrest and conviction of her husband Mme. Fouquet bought in 1671 a small seat out in the country, the Château de Pomay in Lusigny, in central France.¹² Later in P, the author states: "...thank be to God, I am neither envious of painters nor, indeed, do I have the need to make my living as a painter." It appears that C. B. was an employee, or the son of one, of either the Fouquets or the Castille-Villemareuils. He was not a painter but an amateur writing the book for other amateurs and not for professionals.

Du 29. Juin 1680.

Arrêt du Conseil, qui ordonne qu'en attendant l'expédition & enregistrement du Bail fait à M^e. Claude Boutet, à commencer du premier Octobre 1680. pour finir au dernier Septembre 1686. ledit Boutet jouira de la Ferme de la vente & débit de toutes sortes de Tabacs en feuilles, cordes, rouleaux & en poudre, parfumez ou non parfumez.

Fig. 4 One of the several references to Maître Claude Bouquet in Ref. 13, pp. 8/9.

Looking into available records of the period only one Claude Boutet is found. He appears in state records as the holder of an extensive lease of tobacco and salt business interests of the king, a so-called *Ferme generale*, for which he paid in 1680 over 3 million livres and which was to last six years (Fig. 4).¹³ Surprisingly, after one year the lease was cancelled and transferred to a M. Jean Fauconnet.¹⁴ Taxing of farm land and of trade in certain goods, such as salt and tobacco, had begun before the new finance minister Jean-Baptiste Colbert (1619-1690) assumed his position but was expanded by him. Believing that individuals were more effective tax collectors than the state the rights to collect the taxes were leased to individuals.¹⁵ More recently there have been suggestions that people like Fauconnet (who also oversaw the French possessions in Canada of the time) were stand-ins for the real owners of such leases. Claude Boutet is called *maître* (master) in these documents, indicating that he was in charge of some enterprise, without belonging to nobility. Unfortunately, there is no indication of where he lived or what he did. A speculative idea is that he obtained the lease on behalf of Mme. Fouquet, if he was really the same as the author of *Traité*. There is also no indication why the lease was cancelled a year later and what became of Boutet. There are no public records indicating on what basis Quérard decided the author of *Traité* was Boutet and not, as deduced by Barbier, Ballard. But considering the facts indicated above, Boutet seems a likelier candidate than Ballard, even assuming that the Boutet on record as lease holder is the same as the author.

One reason is that Ballard’s father was already a publisher and Christophe grew up in Paris.

A chapter on pastel painting: *Traité de la Peinture en Pastel*

As indicated, the edition of *Miniature* issued by the van Dole brothers in The Hague in 1708 differs in a number of respects from the Ballard editions. Aside from the addition of the section on pastel painting with its two hand-colored figures of hue circles and the glossary (where colors are defined as colorants) there are some changes in the main text. The dedication to Mlle. Fouquet is missing, replaced by an “Advertisement for this new edition.”¹⁶ It mentions the success of earlier editions and the reasons for the changes and addition of new sections. A small section is added in the beginning of the main text that discusses the historic origin and progress of painting, the six kinds of painting (of which pastel is one), with four (oil, fresco, water color, and pastel) considered in some more detail.¹⁷ Next is a section on design as a basic subject of painting, with the precepts taken from an unidentified “expert on the subject.” Because pastel painting has its partisans, like miniature painting, a chapter on pastel has been included. Related to the pastel section the advertisement then states: “one finds here something rather curious, relating to primitive colors and the generation of composed colors. This should be of considerable interest to amateurs of [pastel painting] because up to now one has not seen anything on that subject, except for a small article found written by M. Félibien” [André Félibien, 1619 – 1695]¹⁸ Concerning the glossary, Félibien is mentioned as a source of information. It is evident that the author of the various additions is well educated in the matter of the art of painting and specifically, pastel painting. As mentioned, the article on pastel painting contains a representation of the idea of yellow, red, and blue being the painter’s primaries and the first colored hue circle.

Historical development of the idea of yellow, red, and blue as the chromatic primaries in painting

The idea of yellow, red, and blue as chromatic primaries reaches back into the 4th century CE. Around the year 325 the philosopher Chalcidius wrote a commentary on Plato’s *Timaeus* dialog in which he stated five generic “colors”: white and black surrounding light yellow, red, and blue. This general idea was taken up again in the 13th century and was mentioned on and off into the 18th century. The following table gives a brief overview of the major proponents of this idea as well as the original color terms and the adjective they used to describe them

Year	Author	Color Terms	Descriptive Term
Ca. 325	Chalcidius ¹⁹	pallidus, rubeus, cyaneus	generic colors
Ca. 1266	Roger Bacon ²⁰	glaucus, rubeus, viridis	principal species
1502	Camillo Leonardi ²¹	flaveus, rubeus, viridis	generic colors
1581	Filippo Mocenigo ²²	flavus, ruber, hyacinthinus	simple colors
1609	Anselm de Boot ²³	flavus, ruber, caeruleus*	principal colors
1613	Franciscus Aguilonius ²⁴	flavus, rubeus, caeruleus**	simple colors
1664	Robert Boyle ²⁵	yellow, red, blue	simple, primary
1677	Francis Glisson ²⁶	flavus, ruber, coeruleus	simple species

Ca. 1680	André Félibien ²⁷	jaune, rouge, bleu	principal, primitive
1708	Anonymous ¹⁶	jaune, rouge, bleu	primitive colors
Ca. 1725	J. C. LeBlon ³³	yellow, red, blue	primitive colors

*De Boot introduced two reds, ruber (bluish red) and minium (yellowish red) from which true red could be mixed.

**Aguilonius mentioned three reds: bluish lake, yellowish minium, and cinnabar which he considered closest to his simple red.

It should be mentioned here that Isaac Newton referred to the painter's primaries red, yellow, and blue in Part II, Lecture 8 of his *Optica* lectures (1670-72). "... painters have known that grays are compounded from white and black and all others from red, yellow, and blue."²⁸ However, he pursued the idea of seven color primaries based on his experimental work with prisms. He did not mention the painter's primaries in his book *Opticks* of 1704.

Félibien, as mentioned by the author of the *Pastel* text, described the "principal" or "primitive" painter's chromatic primaries in his discussion about coloration in painting. He also described the intermediate hues as follows: "Yellow and red mixed together make orange; from yellow and blue is born green; and purple is engendered by the mixture of red and blue."

The author of *Pastel* goes into considerably more detail, introducing, as Anselm de Boot had, two reds, as well as describing a total of eight mixtures in the 12-hue circle.

Some candidates for authorship of *Traité de la Peinture en Pastel*

As of now, the author of the changes and of the section on pastel painting has not been firmly identified. In the following four candidates for authorship are presented according to this author's opinion of likelihood.

1. Jakob Christoph Le Blon (1667 – 1741)

Le Blon descended from Huguenots fleeing France in 1576, having settled in Frankfurt. Among his ancestors was the artist and engraver Mattaeus Merian the Elder (1593 – 1650). Le Blon is reported by some to have received training as a young man from the artist Conrad Ferdinand Meyer (1618 – 1689) in Zurich²⁹ but there is no documentary evidence. Meyer is believed to have studied under Mattaeus Merian which would provide a reason why Le Blon went to study under him. It is generally agreed that Le Blon had an extended stay sometime between 1696 to 1702 in Rome where he is reported to have studied art under the painter Carlo Maratta (1625 -1713). There he became acquainted with the Dutch painter and engraver Bonaventura van Overbeek (1667 -1706) who created an extensive work of views of the antiquities of Rome, published posthumously in 1708.³⁰ Encouraged by van Overbeek, le Blon moved to Amsterdam, presumably in 1702, where he worked as a miniature painter and engraver. In 1705 he married a Dutch woman with whom he had two sons that appear to have died in infancy. In 1707 Le Blon issued a short publication in Dutch on the forms of the human body. In 1708 and 1709 he is known to have made colorant mixing experiments and in 1710 he made his first color prints with yellow, red, and blue plates.³¹ In 1711 two brothers von Uffenbach from Frankfurt visited Le Blon in Amsterdam and saw two of his three-color prints and various

miniatures,³² but there is no direct evidence that he worked in pastel. His wife died in 1716 and in 1717 he moved to London where he received a royal patent for the three-color printing process. In 1722 he published *Coloritto* in French and English.³³ There he stated that “Painting can represent all visible objects with three colors, yellow, red, and blue” (pp. 6, 7).

What speaks for Le Blon as a potential author of *Pastel* is that he had a thorough education in painting and engraving, presumably theoretical as well as practical, and may have learned about pastel crayons from Maratta who, as several other artists of his time, occasionally used them. In 1707 he wrote a small theoretical tract on an art subject and he was fluent in French. Around the same time he may well have appreciated another opportunity to add to his income. In *Pastel* the expression ‘couleurs primitives’ is used for yellow, red, and blue, a term earlier used, on and off, by Félibien. The same term is employed in the French version of *Coloritto*. For mixed colors the term ‘composer’ is again used in both works. Either Le Blon is the author of both works or possibly he has gotten some inspiration for the idea of three-color printing from reading the van Dole edition of *Traité*.

2. Adam van Broekhuizen (1682 – 1748)

He was captain of a company of the Guard, poet, genealogist, naturalist, and miniature (and likely pastel) painter.³⁴ He came from a well-to-do family in Maastricht (southern Holland), became a lieutenant in 1715 and 15 years later a captain. He wrote, among several on various non-related subjects, two manuscripts related to painting, the second of which is unfortunately lost: ‘Introduction to miniature painting’ and ‘Treatise on the manufacture and use of pastel crayons,’ as mentioned in Ref. 34. Van Broekhuizen would have had to be about 24 when he wrote the *Pastel* section, unusual but not impossible. It is not known when he wrote the two treatises on painting and no paintings of his appear to survive.

3. Constantijn Huygens II (1628 – 1697)

He was born into a family of Dutch nobility and was secretary to two princes of Orange.³⁵ His younger brother was the well-known mathematician, astronomer, and physicist Christiaan Huygens. In his spare time he was a poet and musician and dabbled in art. He became interested in the technology of producing pastel crayons and, together with his brother ran experiments, as mentioned in letters between the two from the early 1660s. There is no evidence that he wrote a treatise on pastel painting and his death in 1697 makes him a not very likely candidate.

4. David Coster (? – 1752)

Little is known about Coster except that he was active in The Hague from the mid 1690s until his death as an engraver of works of art, maps, and other images.³⁶ Based on a stylistic comparison he is the engraver of the signed frontispiece (Fig. 5) as well as of the two (unsigned) plates with the color circles in the *Pastel* chapter (see translation below). There is no indication that Coster did work in pastel and very likely he was a hired engraver to produce the three plates used in the van Dole’s *Traité*.

A brief early history of pastel painting

The beginnings of pastel reach back to Leonardo da Vinci who is known to have used them rarely and mostly for sketching purposes. Among other early users are Guido Reni (1574 – 1642), Charles Le Brun (1619 – 1690) who made several pastel portraits of Louis XIV, and Robert Nanteuil (1623 – 1678) who popularized pastel portraits in France. Pastel portraits received a strong boost from the work of the Venetian portraitist Rosalba Carriera (1675 – 1757) who in 1704 was inspired to use pastel crayons by her English friend Christian Cole, first duke of Manchester, who dabbled in pastel work and in 1704



Fig. 6, Frontispiece by David Coster representing the invention of portrait painting in the 1708 van Dole edition of *Traité*.

supplied her with the best available crayons at the time. Carriera soon became the favorite portraitist of European nobility, travelling to various countries for her work. Her success inspired many of the several hundreds of artists of the 18th century to take up pastel portrait painting. Among the best known are Jean-Siméon Chardin (1699 – 1779), Jean-Étienne Liotard (1702 – 1789), Maurice-Quentin de la Tour ((1704 – 1788), Thomas

Gainsborough (1727 – 1788), Anton Raphael Mengs (1728 – 1779), and Elisabeth-Louise Vigée-LeBrun ((1755 – 1842).³⁷

The Pastel section in the van Dole *Traité* was ideally timed to take advantage of the growing interest also among amateur artists. It seems surprising that no later editions were printed.

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37. For information about hundreds of pastel painters before 1800 go to www.pastellists.com.

Translation

Anonymous

Treatise on Painting with Pastel Crayons, with how to produce the pastel crayons

In: Anonymous (C. B.), *Traité de la peinture en miniature*, The Hague: Louis and Henry van Dole, 1708, pp. 149-174

I. Application of painting with pastel crayons

Painting with pastel crayons has not any less enthusiasts than *miniature* painting, among other reasons because, like in *miniature* painting, one can pretty much do as one pleases; working in pastel does not require a high degree of engagement nor a commanding ability because it is only practiced in small format. In addition, it offers the same freedom and a comparable simplicity of work as when painting with *oil paint*, it has hardly any constraints, and practicing it is cleaner; not even counting the fact that it is not necessary to be careful in regard to the choice of colorants because they hardly change in mixture and do not change after having been applied.

II. Whence the name?

At the beginning of this treatise it was mentioned that the term *pastel* painting is due to the fact that it is practiced with crayons made from *pastes* of different colors mixed together, according to the various hues, tints, and shades needed depending on what one wants to represent.

III. Its principal application

This kind of painting is particularly appropriate for painting *portraits*; one can make them of natural size, but normally they are made only half of natural size. Chances for success are better because they do not result in the intensity and liveliness of oil painting; one finds that if the object is smaller than in nature expectations are reduced, because one supposes to be a bit further removed from the subject.

IV. The purpose of this treatise

I hope it will be pleasing to the amateurs of this science to obtain in this text rules for practicing it; another purpose is to teach them how to produce the *pastel crayons* used in this kind of work, in part by relating them to the nature of the colors for which they are the material sources. Another purpose is instruction in how to mix the colorants depending on the different shades that are needed. That could make pastel painting so much more acceptable, because one very rarely finds manufactured *pastel crayons*. I do not know of anybody who has described how to produce them.

V. It is necessary to have pastel crayons of all colors

To have a complete assortment of *pastel crayons* one must have them in all colors, *simple* colors as well as *mixed* ones, with pure hues, tints, and shades of each one, from the lightest to the darkest. It must also have all necessary shades of *flesh-tone colors* and several others of subdued colors for backgrounds and for various other situations that may be encountered.

VI. Primitive colors

Properly, there are not more than three primitive colors, those that cannot be composed of other colors, but from which all other colors can be mixed. These three colors are *yellow*, *red* and *blue*, because *white* and *black* are not properly colors, white being nothing but the representation of light and black the absence of that same light. But because there are two kinds of *primitive reds*, one leaning toward yellow, such as *fire red* or *vermilion*, and the other toward blue, such as *crimson red* or *Indian lake*, there are four primitive colors, *yellow fire red*, *crimson red*, and blue.

VII. Mixed colors

All other colors are mixed from these four primitive colors, such as *yellow* and *fire red* forming *orange*; *crimson* and *blue* producing *violet*. Finally, *blue* and *yellow* make *green*. Together they make a suite or a circle of seven colors, *yellow*, *orange*, *fire red*, *crimson red* or just *crimson*, *violet*, *blue*, and *green*; they then produce others. Because *yellow* and *orange* produce *golden yellow*, *fire red* and *crimson* produce true *red*.

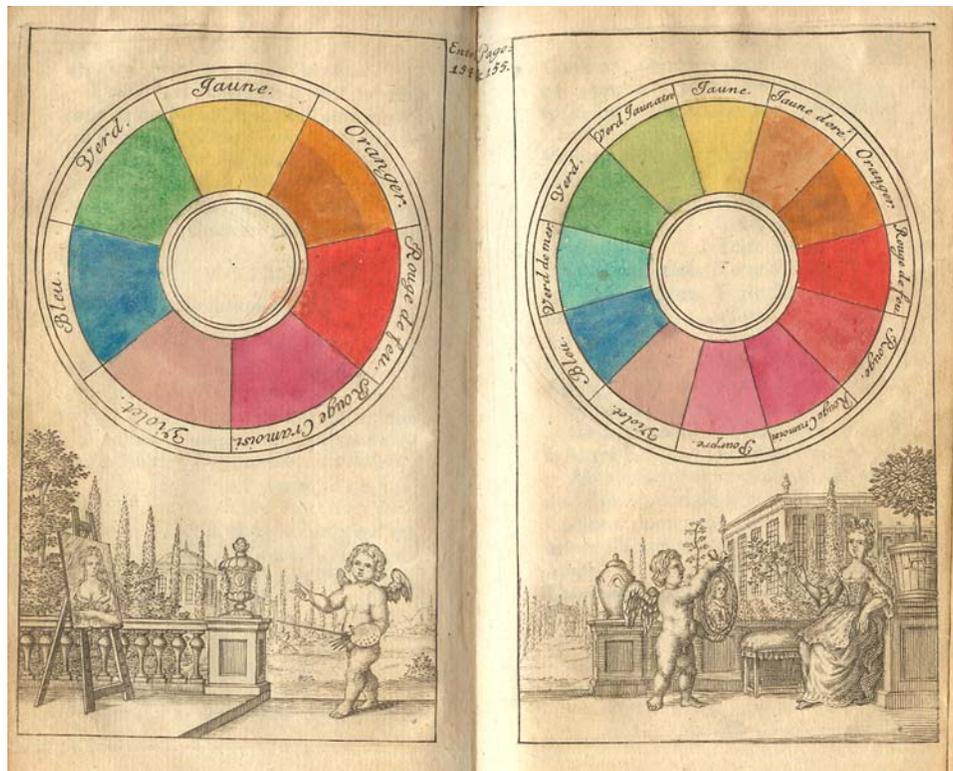
Crimson and *violet* produce *purple*. *Blue* and *green* produce *sea green*. Finally, *green* and *yellow* make *yellow-green*, or leek green.

All these colors are vivid, but if one mixes them in other pairs, for example, *orange* with *violet*, *fire red* with *blue*, *violet* with *green*, and *green* with *orange* or with *fire red*, the mixtures produce nothing but dirty and disagreeable colors.

VIII. Demonstration of the colors

Here are two figures that demonstrate how the primitive colors, *yellow*, *fire red*, *crimson*, and *blue*, combine to produce the other colors, what one might call the “*Encyclopedia of Colors*.”

The first figure contains the four primitive colors, together with their three mixed colors. The second figure contains all those, with five others added that are composites of the primitive colors and the mixed colors. [Yellow, golden yellow, orange, fire red, red, crimson, purple, violet, blue, sea-green, green, yellow-green].



[Illustrations of the seven-color and the twelve-color hue circles from the 1708 van Dole edition of C.B.s work *Traité de la Mignature*, with an added chapter on pastel painting. Note that in several of the color fields the colorants have deteriorated.]

IX. Colorants used to make pastel crayons

The same colorants that are used for oil painting are employed to make pastel crayons of all these colors. Here is a list of them

- | | |
|-------------------------------------|---|
| Lead white | Indian lake |
| Pale lead yellow | Ultramarine |
| Lead yellow | Sanders blue [copper carbonate] |
| Naples yellow [lead antimony oxide] | Indigo |
| Yellow ochre | Smalt [cobalt, aluminum silicate] |
| Brown ochre | Green earth [celadonite] |
| Grain yellow lake, bright | Umber |
| Grain yellow lake, dark | Cologne earth [ground lignite deposits] |
| Minium [lead oxide] | Bistre [ground wood soot] |
| Vermilion [mercury sulfide] | Carbon black |
| Brown red [calcined yellow ochre] | German black [?] |
| English red [version of brown red] | Bone black or ivory black. |

Carmines [ground cochineal insects] can be added to these. Also used are sanguine [a version of cochineal] and black stone [?], shaped into crayons.

Pastel crayons are made from all these materials, not just in all the colors mentioned, but in addition in *dulled* and *broken* colors and the *different shades* used for flesh-tones, and for many other applications.

X. What needs to be considered in the composition of pastel crayons

First of all it is necessary to make pastel crayons from all of the unmixed colorants and to do that it is necessary to keep the following in mind.

1. *Lead white, bright grain yellow lake, yellow ochre, brown red, umber, and Cologne earth* have a good consistency for the intended purpose; as long as one can find sufficiently large lumps they can be directly shaped into crayons, just like sanguine and black stone; if not they are ground as the others.
2. All the other colorants that do not have the consistency to be directly shaped are ground with water in a marble mortar or on a grindstone, as fine as it is possible. They must be reduced to sufficient fineness so that they can be rolled into crayons the thickness of the stem of a pipe or somewhat bigger and a length that they can be conveniently handled.
3. Most of all, it is necessary to assure that the crayons mark easily without the need to press down hard on them. This is because there are colorants of a consistency too hard to be made into pastel crayons, such as *dark grain yellow lake, green earth, bone or ivory black, and indigo*. They must be combined with other materials of a color very similar to it and that are soft. For example, *Cologne earth* should be mixed with *dark grain yellow lake, to green earth smalt* and a small amount of *bright grain yellow lake* should be added, *ivory black* combined with a small amount of *carbon black*, and *indigo* with *smalt*.
4. There are other colors with the opposite problem; they are too soft, such as *smalt, ultramarine, cochineal, vermilion*, and some others. In those cases, instead of using just water to soak them in, a weaker or stronger solution of gum Arabic should be used, depending on how soft the colorant is. And so that one doesn't err in this matter it is best to do some testing before producing the *pastel crayons*.

XI. On the mixture of colorants for pastel crayons

To make pastel crayons in many colors as specified earlier in their *tints* and *shades*, from the lightest to the darkest colors, here are the colorants to be used, arranged according to the colors discussed, their *tints* and *shades*.

A. Yellow

1. Tint: pale yellow lead oxide *or* addition of lots of white and a small amount of light grain yellow lake
2. Naples yellow or good pale yellow lead oxide plus yellow ochre; *or also* white, light grain yellow lake and yellow ochre.
3. Yellow ochre
4. Dark ochre, *or* yellow ochre and dark grain yellow lake.
5. UMBER

B. Golden yellow

1. Golden yellow lead oxide
2. Golden yellow lead oxide or yellow ochre with a small amount of minium.
3. Yellow ochre, light grain yellow lake with a small amount of minium.
4. Dark grain yellow lake and minium.

5. Umber and Indian lake; *or* dark grain yellow lake and red brown.

C. Orange

1. Golden yellow lead oxide and a small amount of minium.
2. Minium
3. Minium, vermilion and dark grain yellow lake, *or* light grain yellow lake and red brown.
4. Dark grain yellow lake and vermilion, *or* light grain yellow lake, Indian lake and red brown.
5. Dark grain yellow lake, Indian lake and red brown.

D. Fire red or vermilion

1. White and vermilion
2. Vermilion and white
3. Vermilion
4. Indian lake and red brown
5. Indian lake, dark grain yellow lake and red brown

E. Red

1. White, Indian lake and vermilion, *or* white and cochineal.
2. Indian lake, vermilion and white, *or* cochineal and white.
3. Indian lake and vermilion, *or* cochineal.
4. Indian lake and English red; *or* Indian lake and cochineal.
5. Indian lake and a small amount of English red.

F. Crimson or Indian lake

1. White and Indian lake.
2. Indian lake and white.
3. Indian lake and a small amount of white.
4. Indian lake and very little white.
5. Indian lake

G. Purple

1. White, Indian lake and ultramarine.
2. Indian lake, ultramarine and white.
3. Indian lake, ultramarine and a small amount of white.
4. Indian lake, ultramarine and very little white.
5. Indian lake and ultramarine.

H. Violet

1. White, ultramarine and Indian lake.
2. Ultramarine, Indian lake and white.
3. Ultramarine, Indian lake and a small amount of white.
4. Ultramarine, Indian lake and very little white.
5. Ultramarine, Indian lake.

I. Blue

1. White and ultramarine.
2. Ultramarine and white.
3. Ultramarine and a small amount of white.
4. Ultramarine and very little white.
5. Ultramarine

J. Sea green

1. White, ultramarine and pale yellow lead oxide; *or* white and green earth.
2. Ultramarine, pale yellow lead oxide and white, *or* green earth and white.
3. Ultramarine, pale yellow lead oxide, *or* green earth with little white.
4. Green earth and ultramarine.
5. Green earth and carbon black.

K. Green

1. White, ultramarine and golden yellow lead oxide, *or* white, ultramarine and light grain yellow lake; *or* white, green earth and pale yellow lead oxide.
2. Ultramarine and golden yellow lead oxide, *or* ultramarine, white and light grain yellow lake; *or* green earth and pale yellow lead oxide.
3. Ultramarine, light grain yellow lake and white; *or* green earth and golden yellow lead oxide.
4. Ultramarine, light grain yellow lake and a little white; *or* green earth.
5. Green earth, dark grain yellow lake and carbon black.

L. Yellow-green

1. Pale yellow lead oxide and a little ultramarine, *or* white, pale yellow oxide and green earth.
2. Golden yellow lead oxide and ultramarine, *or* white, light grain yellow lake and ultramarine, *or* pale yellow lead oxide and green earth.
3. Light grain yellow lake, ultramarine and white; *or* light ochre, and green earth and a small amount of yellow lead oxide.
4. Light grain yellow lake, ochre and green earth.
5. Dark grain yellow lake, dark ochre and carbon black.

All these colorants must be mixed on a grinding stone, and once the mixture is complete, rolled into crayons, as has been mentioned.

Note that preference must always be given to the first named colorant, for example in case of purple use of Indian lake and ultramarine was mentioned, and for violet ultramarine and Indian lake; this means that for purple one must use more Indian lake than ultramarine and for violet more ultramarine than Indian lake, and comparably for the others.

To reduce costs one can use smalte instead of ultramarine or indigo in case of darker colors.

All of these pastel crayons are useful for drawing draperies, flowers, and generally all objects that require bright colors. Here are the pastel crayons for skin-tone colors.

XII. Pastel crayons for skin-tone colors

Most of the pastel crayons needed for *skin-tone colors* are made from the pure *colorants* discussed above, but there is also a need for several others made from mixtures of some of the mentioned colors.

There is an infinite number of different *skin-tone colors* or colorations, nearly as many as there are people, but in general there are two groups. The first consists of *soft and delicate* colors, like those of women, children and young people; the second group consists of *strong colorations*, for men and older people. In both of these *coloration* groups there are *light, medium, and shade* colors. Here are the colorants to be used for making the *principal pastel crayons* for both of the groups, in *light, medium* and *shade* colors. I call them *principal colors* because if one wants to mix the true colors for all colorations according to their *light, medium* and *shade* colors, there is an infinite number but in practice one supplements those of one group with those of the other just as I indicate them below.

A. Soft colors

a. Light colors

1. White and a very small amount of yellow ochre.
2. White and a very small amount of vermilion.
3. White, vermilion and Indian lake.
4. Vermilion, Indian lake and white.
5. White and English red.

b. Medium colors

1. White and ultramarine.
2. White, ultramarine and a little yellow ochre and Indian lake.
3. Less white and more of the other three.

c. Shade colors

1. Ultramarine, yellow ochre and Indian lake.
2. Dark ochre, Indian lake and a small amount of ultramarine.
3. Dark grain yellow lake, Indian lake and a small amount of Cologne earth.

B. Strong colors

a. Light colors

1. White and a small amount of dark ochre.
2. White and a small amount of red brown.
3. White, red brown and dark ochre.
4. Less white and more of the others.
5. Red brown and white.

b. Medium colors

1. White, green earth and a small amount of dark ochre.
2. White, green earth and English red.
3. White, green earth and red brown
4. Green earth, red brown, dark ochre and white.

c. Shade Colors

1. Green earth, red brown and dark ochre.

2. Bone black and English red.
3. Dark grain yellow lake, Indian lake and bone black.

In addition to these pastel crayons the following can be useful in *one or the other skin color* group and in other applications.

1. Yellow ochre and little white.
2. Dark ochre and little white.
3. Light grain yellow lake and white.
4. Vermilion and a little white.
5. Indian lake and a little white.
6. Vermilion and Indian lake.
7. Indian lake and vermilion.
8. Ultramarine and a little white.
9. Ultramarine and yellow ochre.
10. Yellow ochre and carbon black.
11. Dark ochre and ivory black.
12. Green earth and English red.

The following are useful for linen, laces, pearls, Ermine furs, white fabrics, etc.

1. White
2. White with a little carbon black
3. Less white, more black and little bit of vermilion.
4. White, black, ochre and vermilion.
5. Less white and more of the other three.
6. White, yellow ochre and a little bit of black.
7. Black, ochre and a little bit of red brown.

These crayons are for backgrounds and buildings.

1. White, ochre, black and red.
2. Less white and more of the other three.
3. Black, ochre and red.

When a more grayish background is desired the amounts of *ochre* and *red* in the *pastel crayons* are reduced. If one wants them more reddish, more *red* is added, and if one adds more *yellow* the result will be more yellowish.

XIII. A box for the pastel crayons

Just above all the *pastel crayons* needed to paint any kind of object have been introduced. A sufficiently large box in which to store them, of approximately two inches in height, is required. It needs to be subdivided into small *compartments* with dividers to place the crayons in according to color so that one does not confuse one group with another and one can find them easily according to the particular need. Room should also be left in the box to place a few colorants as fine powders to be used in certain situations in place of

the pastel crayons. To apply them one uses the point of a small paper roll, called a *stamp*, used in this kind of painting in place of a brush.

XIV What kind of paper should be used in working with pastel crayons

It has already been mentioned at the beginning that this kind of painting is practiced on *gray paper*, but there is also *bluish paper* used. One or the other must be selected of sufficient *strength* and of *fine grain* and *uniformity*. It must be quite *strong* so that it can stand repeated applications with the *pastel crayons*, as often as necessary, and of *uniform* and *fine grained* surface so that the resulting work is delicate and very beautiful. But it should have a *fine grain* so that the *pastel pigments* attach themselves more easily and stick to it better. It nevertheless is required that the work, having been completed, should be placed behind glass, that somebody touching it with a hand or in some other way does not accidentally smear it; and also to protect it from dust and smoke deposit that cannot be removed without at the same time destroying the pastel colors and with it the work.

Note that the paper should be mounted on a small, plain and slim easel, by attaching it at the edges.

XV How to make a preliminary sketch

To make a desired work it is first necessary to correctly *draw* the subject, to clearly set all the contours, and to place each thing in its proper location. After that is done one begins by placing the *highlights* and *shadows* as *solid areas* by applying the *pastel crayons* of the color appropriate for the subject to the paper. If we assume it to be a head, a portrait if you will, having said that this is the most common subject for pastel painting, the *highlights* are marked with *pastel crayons* prepared for *skin colors* by hatching in several directions, just as when one draws. Once the general *highlights* are applied the next step is to apply, in general, the largest and main *shadows*, paying attention to not right away making the *highlights* as bright as they need to be, nor the shadows as dark; in this fashion the head can be seen in its *totality*, after which one proceeds with the eyes, the nose, the mouth to which one gives the forms and colors they require, with the help of *highlights*, *middle colors*, and shadows, taking care that at first the *highlights* are not too bright nor the *shadows* too deep.

XVI To conclude the placing of shadows

Once the head has been *sketched* as described, all the areas requiring darker *pastel colors*, *brownish* or *reddish*, giving the shadows the necessary depth required by the object, making them more tender if the *coloration* is *delicate* or stronger if the image is that of a man or of an older person, making sure that the *reflections* are correct, in line with the color of the *reflecting* objects, and of a strength appropriate for depicting roundness.

XVII To properly achieve the right lights and the various tones of the face

The bright areas demand no less observation and investigation so that the *highlights* are properly placed and to give the face its natural colors, its freshness, and the *yellowish*, *bluish*, or *brownish* tones, as required by the subject. For this purpose, pastel crayons made from virgin colorants are used, that is, they contain only one colored pigment with more or less of white, such as those of nearly pure white for the *highlights* of delicate skin colors, *white* with *vermillion*, *white* with *Indian lake* or *carmine*, *white* with *ochre*,

white with *ultramarine*, etc. They are applied carefully and delicately, treating the *highlights*, *middle colors* and *shadows* so that the head looks clearly roundish, well colored, demonstrating good taste. The design is done keeping in mind that pastel crayons are being used; without that it will be nothing but a continuous mess, and in regard to paper, crayons, and whatever else, just wasted materials and time.

XVIII How certain pastel crayons can be used in place of others

If while working a *pastel crayon* of exactly the *color* needed cannot be found it is possible to use the one coming closest to it, after which it is worked over lightly with a *lighter* or *darker* one, *yellower*, *redder*, or *bluer*, in order to achieve the desired color. For example, if after using the closest pastel crayon the color is found to be too *blue* it is necessary to lightly work over it with a pastel crayon of the same general color, but *redder*, *browner*, or *yellower*, depending on what is required by the subject. By this method the user acquires knowledge of the colorants and their effects in mixtures and it is possible to work with only half the number of pastel crayons because the other half can be replaced by mixtures.

XIX The mixture of oil paints is similar to that of pastel crayons

In passing we are saying here that all the various mixtures mentioned earlier in the discussion of the composition of *pastel crayons* produce nearly the same effects as *oil paints* mixed with a blade on a palette so as to achieve a certain effect on the canvas. However, the following needs to be kept in mind. In oil painting neither *carmine* nor *bistre* are used. *Indigo* is never used except in mixture with *white*. In skin colors neither *smalte* nor *green earth* are used, except if a work of little importance is made. It is better to use *black* for sketching and *ultramarine* for finishing it.

XX Certain rules of working with color crayons applied to work with pastel crayons

As working with *pastel crayons* is similar to drawing with *color crayons*, various matters discussed in Chapter 2 of this book can be applied also to working in pastel, especially those of articles 28, 29 and beyond, touching on the manner of providing spirit and character to the items to be represented. So as not to unnecessarily repeat what has been said there the reader is referred back to it. It is only necessary to add in conclusion that after having copied good paintings and good portraits by major masters nothing better can be done to become accomplished than to work a lot out in nature; it is the source from which the greatest masters have drawn all their knowledge.