

Restorations of the monumental polychromy of the Gothic cathedrals undertaken by Viollet-le-Duc

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ABSTRACT

The 19th Century restoration campaigns of Viollet-le-Duc constitute the general framework of this study which is limited to the Gothic cathedrals Notre-Dame de Paris and treats only one aspect of its restoration: monumental polychromy. By monumental polychromy we refer to the medieval use of colour on the sculpture and on the architectural elements both inside and outside the building.

The goal of this paper is to ascertain whether the restorations of the monumental polychromy of the Gothic cathedrals undertaken by Viollet-le-Duc truly uphold the ideal proclaimed by the architect, namely, the restitution of the primitive aspect of the monuments. The first part resumes the concept of restoration according to Viollet-le-Duc. The second part analyses the restoration of the internal polychromy of Notre-Dame de Paris chapels taken by the architect, analysing his choices and the polychromatic system he created. The third part concerns external polychromies.

KEYWORDS

Viollet-le-Duc, Middle Ages, gothic, polychromy, colour and architecture, restorations, cathedrals.

Received 20 October 2017; **Revised** 08 February 2018; **Accepted** 24 April 2018

CITATION: Pauliac L. (2018) 'Restorations of the monumental polychromy of the Gothic cathedrals undertaken by Viollet-le-Duc', *Cultura e Scienza del Colore - Color Culture and Science Journal*, 09, pp. 29-38, DOI: 10.23738/ccsj.i92018.03

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1. INTRODUCTION

From the 1840's onwards, Viollet-le-Duc was one of the principal, if not chief, protagonists in the establishment and execution of the conservation and restoration campaigns of historic architectural monuments in France. The number of building sites he directed in his career is impressive (more than 200) and we owe him the writing of numerous publications, among theoretical essays on the restoration and the famous *Dictionary of French Architecture from 11th to 16th Century* in 10 volumes (Viollet-le-Duc, 1854-1868).

In 1843 a competition launched to restore the cathedral Notre-Dame de Paris, victim of the torments of time and of the vandalism of the French Revolution. It was Viollet-le-Duc and Lassus who wined this competition.

Through the example of the cathedral of Paris, we will try to verify if the restorations of the monumental polychromy of the Gothic cathedrals undertaken by Viollet-le-Duc really respect the ideal of restoration of the architect, namely a return to the primitive aspect of monuments.

We will see how Viollet-le-Duc went against its own convictions. No restoration of the outside polychromy was envisaged, and several of the restorations of internal painted decorations seem to make a reference to personal theories on colour in architecture rather than to Gothic chromatic conceptions.

2. RESTORATION ACCORDING TO VIOLLET-LE-DUC

The innovations brought by the architect, real theoretical, technical and historic revolutions, totally transform the world of restoration and their influence is met nowadays too.

Let's start our analysis with an extract of his - now famous - definition of restoration:

«Le mot et la chose sont modernes. Restaurer un édifice, ce n'est pas l'entretenir, le réparer ou le refaire, c'est le rétablir dans un état complet qui peut n'avoir jamais existé à un moment donné »

("The word and the thing are modern. To restore a building, it is not to maintain it, to repair it or to redo it, it is to re-establish it in a complete state which can never have existed at a certain point") (Viollet-le-Duc, 1854-1868).

Viollet-le-Duc's purpose was to restore entirely a building in a state of perfect historic, structural and stylistic coherence, such as it was, or it should have been once finished. The fact that this "complete state" did exist or not, doesn't seem

capital to him. The most important thing was to return life in the monument by restoring all the physical and material characteristics of a given period. His controversial restoration work was very much criticized over the years but this is not the purpose of this article.

We kept three major points of the architect's theories on restoration directly applicable to the restorations of the monumental polychromy: the return to an ideal state, the respect of the style and the respect of the primitive materials.

By studying the attitude of Viollet-le-Duc as for polychromy and their possible restoration, we will be able to define if he applied to the latter the same principles as in the rest of its restorations. The external factors which have influenced Viollet-le-Duc will of course be a part of our analysis: financing problems of the restorations, needs and wills of the clergy, contemporary debate on the polychromy, recent reflections and scientific publications on colours and their perception.

3. INTERNAL POLYCHROMIES: NOTRE-DAME DE PARIS'S CHAPELS

3.1 THE CHOICE OF A PARTIAL RESTORATION

Nobody can assert that, in the Middle Ages, a polychromatic decoration recovered completely the inside of Notre-Dame, but such decorations were an integral part of this period projects, and considering the importance of the building, the opposite would be very surprising.

The objective of our analysis being to verify if the restorations of the monumental polychromy of the cathedral undertaken by Viollet-le-Duc respect his ideal of a return to the primitive aspect, it is suitable, at first, to study the primitive aspect of the inside of Notre-Dame, or, more exactly the opinion of the architect on this matter.

When the restorations of Notre-Dame were undertaken, only some rare traces of its original medieval decoration remained. In its monograph on the colour setting of the cathedral chapels, Viollet-le-Duc recognizes unarguably the medieval will to conceive such polychromatic decorations. However, he supports that:

«Il est certain que les nefs des cathédrales de Paris, de Bourges, de Reims, d'Amiens, de Rouen, de Chartres, de Sens, n'ont jamais reçu de peintures sur les parois de leurs piliers & de leurs voûtes » ("It is certain that the naves of the cathedrals of Paris, Bourges, Reims, Amiens, Rouen, Chartres, Sens have never received paintings on the walls of their pillars and their vaults") (Viollet-le-Duc and Ouradou, 1876).

And adds:

«A notre avis, le temps a manqué pour compléter les conceptions premières. Quelques-uns de ces monuments reçurent seulement leur décoration translucide, les vitraux colorés, mais aucun d'eux ne se revêtit intérieurement des couleurs qui devaient contribuer à l'harmonie générale » ("In our opinion, they were short of time to complete the first design. Some of these monuments received only their translucent decoration, the coloured stained-glass windows, but none of them put on inside colours which had to contribute to the general harmony") (Viollet-le-Duc and Ouradou, 1876).

From his point of view if the project of these paintings undoubtedly existed, their execution was not thus able to be led to good port for lack of time (in 1985, the cleaning of the walls of the north and south arms of the transept allowed to discover not insignificant traces of medieval polychromy: the walls of the north arm were totally covered with a uniform coloured bottom stopping in the capitals which receive the fallout of gallery arches whereas blue, red and black colour settings underlined the reliefs of the architecture).

Further, Viollet-le-Duc specifies:

«La cathédrale de Paris [...] n'a jamais été peinte à l'intérieur, bien que nous ne mettions pas en doute que l'édifice ait été conçu pour recevoir ce complément décoratif ; mais lorsque, vers le milieu du XIII^e siècle, on établit des chapelles entre les contre-forts de sa grande nef, ces chapelles furent, en partie, décorées de peintures ; &, en effet, les murs latéraux de ces chapelles – qui n'étaient que les joues des gros contre-forts – laissaient voir, à l'intérieur, des surfaces froides et blafardes. Il fallait nécessairement que ces surfaces fussent occupées par une décoration » ("Paris Cathedral [...] was never painted inside, although we do not question that the building was designed to receive this ornamental complement; but when, by the middle of the 13th century, some chapels were established between the foothills of its big nave, these chapels were, partially, decorated with paintings; and, indeed, the side walls of these chapels - which were nothing but the "cheeks" of the big foothills - let show, inside, cold and pale surfaces. These surfaces had to be inevitably occupied by a decoration") (Viollet-le-Duc, 1854-1868).

This event explains the choice made by Viollet-le-Duc and Lassus right from their first proposals

of restoration: a restitution of polychromies in the arms of the transept, the side chapels and the chapels of the chorus only.

Let us note that this will to mask irregularities and architectural defects by polychromatic decorations corresponds perfectly to one of the missions of the medieval monumental paintings. Our purpose is not to examine the accuracy of the restorer's knowledge of the primitive aspect of the monument but his respect for what he conceived as such according to its own researches, his ideas, but also the historic knowledge of the period. We can thus consider that because Viollet-le-Duc thought that the inside of the cathedral had never completely received an entire painted decoration, the choice of a partial restoration of this decoration was justified and was corresponding actually to the logic of restoration maintained by the architect.

3.2 THE ORNAMENTAL PROGRAM

Viollet-le-Duc considered the medieval monumental polychromy as a mean to emphasize the architecture while glorifying it. The good integration of the paintings in the architecture was one of its main objectives. However far from subjecting themselves to the architectural effect, the paintings had to take actively part in it.

So he specifies:

«La peinture décorative grandit ou rapetisse un édifice, le rend clair ou sombre, en altère proportions ou les fait valoir, éloigne ou rapproche, occupe d'une manière agréable ou fatigante, divise ou rassemble, dissimule les défauts ou les exagère. C'est une fée qui prodigue le bien ou le mal, mais qui ne demeure jamais indifférente » ("The ornamental painting increases or makes a building look smaller, makes it either clear or dark, distorts its proportions or asserts them, moves away or closer, occupies the space in a pleasant way or tires, divides or gathers, hides the defects or exaggerates them. It is a fairy who lavishes the good or the evil, but who never remains indifferent") (Viollet-le-Duc, 1854-1868).

These ideas, which resume perfectly the medieval tendencies (to put into relief the existing structures and to create false volumes modulating the space), were however rather audacious for this period. Viollet-le-Duc contemporaries limited indeed the polychromy to a simple tool of architectural development.

The principle set up for the decoration of Notre-Dame was based on a more or less identical general plan in all the chapels. Their surface was systematically divided into three horizontal zones:

Zone 1: from the base up to approximately two meters off the ground (including the altar). This part of the walls was covered with dense motives in dark tones (Figure 1).
 Zone 2: down from the walls up to the vault. The motives decorating the top of the walls are less dense and are executed in clear tones (Figure 1).
 Zone 3: the vault and the nervures. A false starry sky covers vaults. The nervures were painted with plain colours or decorated with motives such as chevrons or foliage (Figure 2).
 An ornamented horizontal frieze separates zone 1 and zone 2. Vertical friezes also frame the left and right extremities of zone 2 often conferring

a wallpaper look to the set. This last detail is more important than it could seem: thanks to the industrialization, wallpapers knew a success and a phenomenal development in the 19th century.
 The most important chapels, such as the side chapels of the chorus, received a more developed treatment with narrative scenes illustrating the life of the saints to whom they are dedicated. These scenes are placed over the altar and thus constitute a kind of altarpiece. They are relatively simple compositions, in tint area and without perspective.
 We have already briefly mentioned that

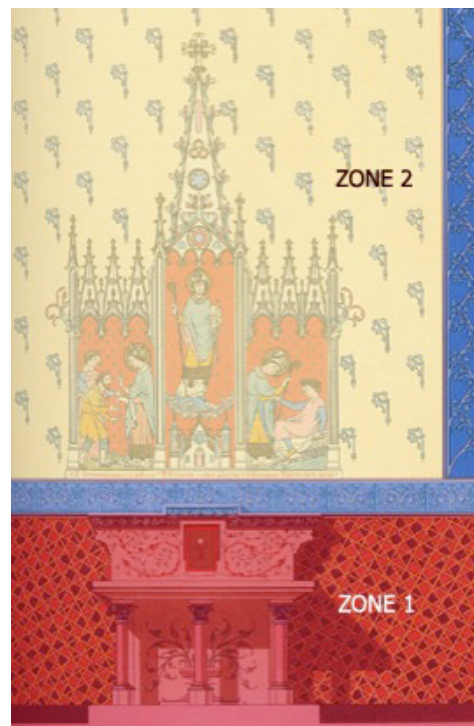
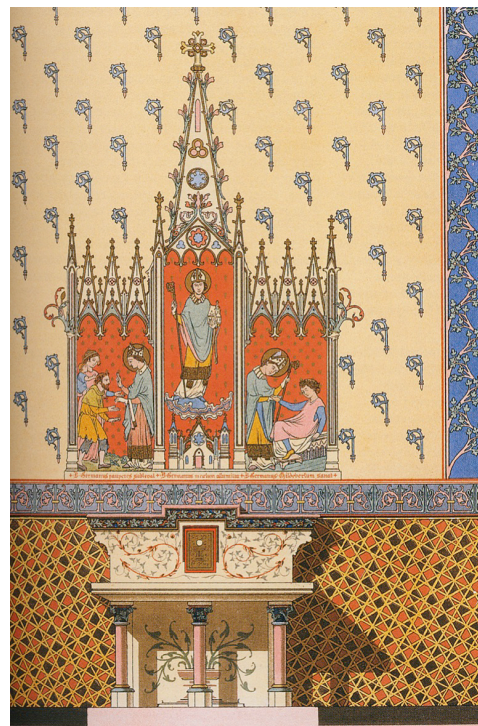
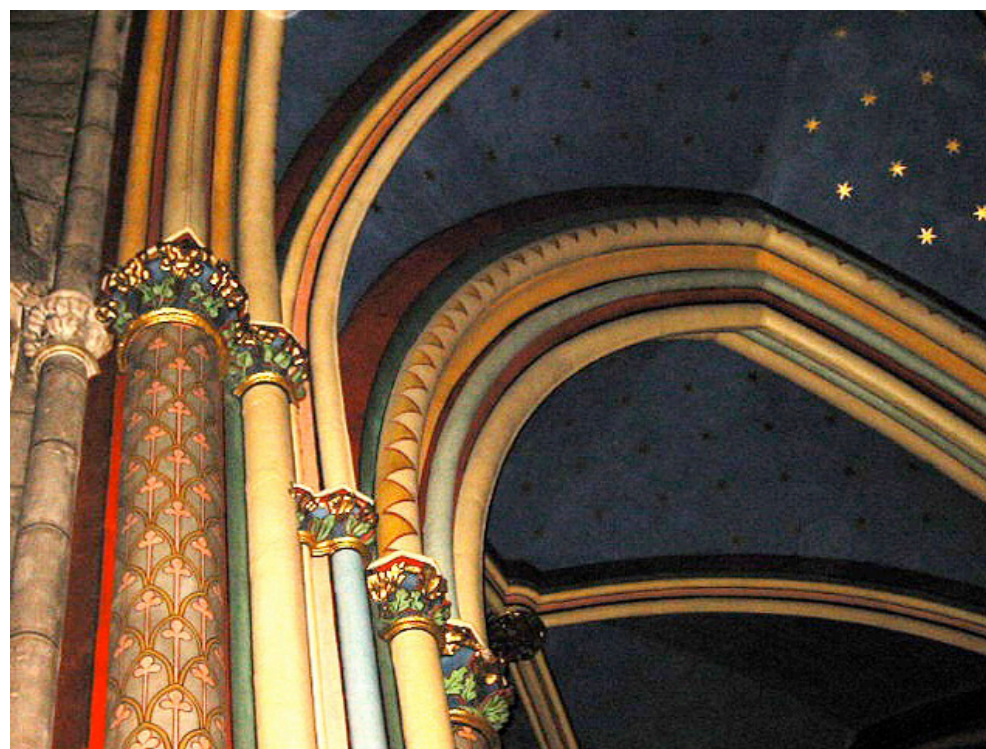


Figure 1 - (a-left) Cathedral Notre-Dame de Paris, Chapel Saint Germain, tracing of the paintings made by Mr. Ouradou. (b-right) Explanatory plan of the division in zones of the decoration of the choir chapels.

Figure 2 - Cathedral Notre-Dame de Paris, Chapel St-Georges, an example of vault with false starry sky and painted nervures.



when Lassus and Viollet-le-Duc began the restorations of Notre-Dame its internal original medieval decoration had practically completely disappeared. The most important of the rare remaining vestiges was apparently a mural from the 14th century, which decorated the right wall of the axis chapel. This painting, a Madonna with Child surrounded with Saint Denis and with bishop Matiffas of Buci in prayer (his grave was formerly situated just below), was preserved but directly inserted within the new project of decoration into the same vein as the chapels with narrative scenes.

3.3 THE POLYCHROMATIC SYSTEM

The polychromatic system adopted by Viollet-le-Duc for the decor of Notre-Dame de Paris's chapels is a very good illustration of the architect's idea regarding monumental painting. Viollet-le-Duc claims to base his entire theories on the study of medieval examples, but their analysis denounces several contemporary influences such as the modern notions of chromatic circle, primary, secondary, complementary colours and the theories of Chevreul on the perception of colours. Always on the lookout for the last scientific researches and Substitute Professor of composition and ornament since 1834 in the art school of "rue de l'École-de-Médecine", Viollet-le-Duc could not ignore these theories. The catalogue of the books of its library (Catalogue des livres composant la bibliothèque de feu M. Viollet-le-Duc, 1880) shows moreover, that he was himself in possession of a work of Chevreul (Chevreul, 1867).

Known for his studies on fat and his works on colours, Michel Eugène Chevreul (1786-1889) published his essay *De la loi du contraste simultané des couleurs* (*The principles of harmony and contrast of colours*) in 1839. Named, in 1824, Director of the dye works at the Gobelins Manufactory in Paris, he was interested in the theories on the colour within the framework of his functions which included the supervision of the manufacturing of colouring agents being in use to dye the wools of the famous factory. Confronted with various problems, he thought the colouring agents had, sometimes, nothing to do with chemistry, but more with optics: when a tint did not produce the wished effect, it did not always come from the pigments in use, but from juxtaposed or nearby coloured tones.

While developing its works, he discovered

and analysed diverse phenomena in relation to the conditions of vision of colours and their simultaneous contrasts, which influenced numerous artistic movements particularly Divisionism, Impressionism and Orphism.

In order to understand better the influence of Chevreul on Viollet-le-Duc, let us remind briefly his theory on simultaneous contrasts:

Two colours juxtaposed on the same surface modify themselves mutually in two manners: as intensity and as nuance.

Intensity: the clearest lighter seems clearer and the darkest darker.

Nuance: a colour gives to its neighbour a complementary nuance in the tone.

Therefore, an orange circle placed on a white bottom makes this one appear blue in its circumference whereas a white circle on a blue bottom seems, on the contrary, orange-coloured. In the case of an orange circle on blue bottom, both colours act mutually to deepen their tints and it is the same for two juxtaposed complementary colours (Figure 3). On the contrary, two objects whose colours are close on the chromatic circle tend to throw complementary shadows one on other: yellow takes a purple nuance when placed near green. While opposite complementary get clearer and are mutually excited, non-complementary colours thus tend to damage themselves by mutually "getting dirty".

THE HARMONIOUS BALANCE ACCORDING TO VIOLLET-LE-DUC

The system established by Viollet-le-Duc is based on the harmonious balance of the values between muted colour and pure colour (to mute a hue means reducing its purity by adding to it a certain amount of its complementary colour or a grey created from the mixture of the three primary colours). He follows a law on the hierarchy of colours intensity deduced from the analysis of several medieval paintings. This law takes as a base the yellow colour whose value corresponds to 1. The two other primary, red and blue, correspond respectively to 2 and 3, and the secondary colours, orange, green and purple, 3, 4 and 5. According to these observations, in a yellow, red and blue decoration, the yellow has to occupy twice more surface than the red and three times more than the blue so that the harmonious relations between colours are



Figure 3 - Simultaneous contrasts of nuances according to the theories of Chevreul. A colour gives to its neighbour a complementary nuance in the tone. So, an orange circle placed on a white bottom makes appear this one blue in its circumference, whereas a white circle on a blue bottom seems, on the contrary, orange-coloured. In the case of an orange circle on blue bottom, both colours act mutually to deepen their tints.

preserved. An artist who chooses to use these three colours will thus obtain logically red and blue motives on yellow bottom (with the red dominating in quantity on the blue).

Whatever are the chosen tones, some muted hues, relatively neutral, always have to cover the biggest surfaces whereas the pure colour are limited to small parts thus accentuated.

The coloured light emanating from the stained glasses, which enlightens the chapels is also at the origin of this harmonious rule which attaches a major importance to shades. According to the calculations of the architect, the coloured lights from stained glasses tend to break down the pure colours and to weigh them down. To fight this tendency, it is necessary to privilege modulated tones according to the colour of glasses:

“Thus, for example, if windows spread a slightly glazing lilac light and what we want to obtain is a tone of blue, it is necessary to turn the blue into a greenish hue” (Viollet-le-Duc and Ouradou, 1876).

The influence of Chevreul’s writings is indisputable on this point.

In addition, the value of colours to be applied must be chosen according to its intensity. If we take the above example of the ornament with red and blue motives on yellow bottom, the red and the blue have to be of different values, like a red brown and a light blue.

Viollet-le-Duc lists three possibilities of harmony of tones used in the Middle Ages:

- A binary harmony red / yellow with black and white (shade and light).
- A tertiary harmony red / yellow / blue



Figure 3 - Cathedral Notre-Dame de Paris, Chapel Saint-Louis

with black and white or with only black. In order to balance the set, this harmony involves necessarily the joint use of green, purple and orange.

- A harmony obtained by all the colours with black and gold, where gold is then substituted to white, occupies an essential place to complete or even restore the harmony.

THE NECESSITY OF COLOURED OUTLINES

The systematic use of a black line as colours outlines is not only a graphic game reminding stained-glass windows but it also makes a reference to the concepts of simultaneous contrasts. Under the influence of the contrasts, we saw that colours tend to merge and mutually "get dirty". Black outlines prevent their direct confrontation and this fusion feeling. According to Viollet-le-Duc's observations, brown-red tones and strong coloured oppositions do not require it.

VARIATION OF COLOURS ACCORDING TO THE ORIENTATION OF THE CHAPELS

The choice of the range of colours decorating every chapel was dictated by their orientation and the light's quality entering in each one of them. Starting from observing that half of facing south chapels receives a much more lively and warmly coloured light than the half facing north, Viollet-le-Duc chooses to keep this difference to protect the harmonious balance. Consequently, the North chapels were provided with stained-glass windows in cold and pearly tones whereas South chapels' received windows in warm tones. In order to keep the general harmony, the pallet of the paintings of every chapel matches the colours of stained-glass windows (Figure 4).

3.4 TECHNICAL AND MATERIAL CHARACTERISTICS

Concerning the restorations materials and realization's techniques, Viollet-le-Duc favoured the use of materials similar to the primitive ones, but, if the latter revealed themselves to be of poor quality, he then used more solid modern substitutes.

The execution technique of Notre-Dame paintings is very badly documented. The only apparently existing information is in *Peintures murales des chapelles de Notre-Dame de Paris* (Viollet-le-Duc and Ouradou, 1876), where Viollet-le-Duc specifies:

«Le procédé de peinture employé est dû à M. Courtin; nous avons pu reconnaître les qualités de ce procédé, qui réunit une solidité au moins égale à celle de la peinture à la cire la transparence & la fraîcheur de tons que donne la détrempe» ("The painting process here in use is due to M. Courtin; we were able

to recognize the qualities of this process, which combines a solidity at least equal to that of wax painting and a transparency and freshness of tones like the one given by tempera") (Viollet-le-Duc and Ouradou, 1876).

In spite of in-depth researches, we did not find any document concerning this "Courtin process" so praised by Viollet-le-Duc and its exact composition remains a mystery. Maybe the techniques and materials used by the medieval painters of Notre-Dame seemed too fragile to Viollet-le-Duc and he preferred a modern process of better quality. However, perhaps the "Courtin process" indicates a method similar to old recipes. The importance that Viollet-le-Duc attached to the hard and solid character of the process, close to the final aspect of wax paintings, is not indeed fortuitous. A very wide-spread theory in the 19th century wanted that murals recently found in Pompeii were realized with wax polish, which would explain their technical qualities (hardness, resistance in time) and artistic (depth, smooth finished close to some polite marble) – further in-depth studies of these paintings proved that they are realized in fresco.

4. OUTSIDE POLYCHROMIES

All the previously studied points demonstrate a real motivation of Viollet-le-Duc to restore Notre-Dame de Paris's internal polychromatic decorations. The outside paintings did not have the same treatment, neither in Notre-Dame de Paris nor in the other construction sites managed for by the architect and his decision was never questioned.

Viollet-le-Duc described many times Notre-Dame de Paris's outside polychromy, in particular in the article "Painting" of his *Dictionary* (Viollet-le-Duc, 1854-1868):

«Ainsi, à Notre-Dame de Paris, les trois portes, avec leurs voussures et leurs tympans, étaient entièrement peintes et dorées, les quatre niches reliant ces portes, et contenant quatre statues colossales, étaient également peintes. Au-dessus, la galerie des rois formait une large litre toute colorée et dorée. La peinture, au-dessus de cette litre, ne s'attachait plus qu'aux deux grandes arcades avec fenêtres, sous les tours, et la rose centrale, qui étincelait de dorures». ("Thus, in Notre-Dame, the three doors, with their arches and their tympanums, were completely painted and gilded, four niches connecting these doors, and containing four colossal statues, were also painted. Above, the kings' gallery shaped a wide coloured

and gilded border. The paint, over this border, did attach to no more than two big arches with windows, under the towers, and the central rose window, which glistened with gilts").

Despite the numerous restorations executed on the facade of Notre-Dame, it was nevertheless never questioned to restore the polychromy nor to colour the replaced statues. This idea is not even suggested in the form of a possible future project in the Report of the restoration project (Lassus and Viollet-le-Duc, 1843), and we did not find any trace of such an intention somewhere else.

In the Middle Ages however, no difference was apparently made between internal paintings and outside paintings and nobody would have been able to imagine a religious monument with walls, architectonic decorations and sculptures were left with a stone appearance: it would have been understood as unfinished, unthinkable incomplete.

This analysis allows us to underline and notice that, asking about the attitude of the architect toward the polychromies's restorations of the Gothic cathedrals does not come down to estimate the coherence of its method with its theories. The question actually opens up the way to a problem more profoundly anchored in the ideologies of this time: a taste then almost universal for the purity of bare materials. These monochrome limits, nearly achromes, imposed to architecture and sculpture since the Reformation were so rooted in that time mentalities that the rediscovery of antique polychromy by Quatremère de Quincy in 1814 (Quatremère, 1815), far from easing the prejudices, actually re-launched the monumental polychromy debate between opponents and defenders.

The architect's differences of behaviour toward interior and exterior colour setting are completely part of this historic context. Mural interior paintings, narrative or not, were appreciated in the 19th century. Ornament was fashionable and the decorative aspect of interior paintings certainly had a positive influence. None of the detractors of polychromies "of reliefs" (sculptures and architectonic elements) would have thought of criticizing the internal polychromies. Unlike in the Middle Age, in the 19th century, these two practices did not belong to the same artistic categories (this concept is always true nowadays).

In this context, it is very interesting to notice the ambiguity of the architect's attitude facing monumental exterior colour setting. In spite of its numerous positions against the then used principles, Viollet-le-Duc had to compose with the prejudices of his contemporaries and external factors such as coal pollution, then very present,

and the cost of the possible restorations.

In the article "Painting" of its *Dictionary* (Viollet-le-Duc, 1854-1868), Viollet-le-Duc admits that

"ornamental painting [...] played an important role outside of buildings".

The totality of the paragraph dedicated to exterior monumental polychromy is written in a positive tone leaving no doubt about the architect's favourable feelings for the object of his study. Some passages clarify his opinion even more clearly. And so, he notices:

«Pourquoi nous privons-nous de toutes ces ressources fournies par l'art? Pourquoi l'école dite classique prétend-elle que la froideur et la monotonie sont les compagnes inséparables de la beauté, quand les Grecs, que l'on nous présente comme les artistes par excellence, ont toujours coloré leurs édifices à l'intérieur comme à l'extérieur, non pas timidement, mais à l'aide de couleurs d'une extrême vivacité » ("Why do we deprive ourselves of all these resources provided by art? Why does the so called classic school claims that coolness and monotony are inseparable partners of beauty, when Ancient Greeks, introduced to us as the ultimate artists, have always coloured their buildings inside as outside, not in a bashful way, but with extremely bright colours").

However, passages from the article *Sculpture*, in the same *Dictionary* (Viollet-le-Duc, 1854-1868), suggest that Viollet-le-Duc had a more finely shaded opinion. Rather than to analyse sculptures in a global way, he separates the formal analysis and the analysis of the possible polychromies. The descriptions that he makes of Notre-Dame portal sculptures are thus very detailed, but strictly colour free. In addition, pictures illustrating the text are precise and meticulous line drawings, but without colour. It is only at the end of the article, after some long descriptions and formal studies of medieval sculptures, that some passages tackle the issue of colour. The architect's tone is then very careful, as if soaked by all the quarrels on monumental polychromy, which interested the majority of artists, architects and other intellectuals of this time:

«Les artistes qui ont fait les admirables vitraux des XIIe et XIIIe siècles avaient une connaissance trop parfaite de l'harmonie des couleurs pour ne pas appliquer cette connaissance à la coloration de la sculpture. Et, à vrai dire, cela n'est point aussi facile qu'on le pourrait croire tout d'abord. Les tentatives en ce genre qu'on a faites de notre temps, prouvent que la difficulté en

pareil cas est grande, au contraire, quant on veut conserver à la sculpture sa gravité, son modèle, qu'on prétend obtenir autre chose que des poupées habillées [...] il faut reconnaître que la peinture appliquée à la sculpture lui donne une valeur singulière, mais à la condition que cette application soit faite avec intelligence et par des artistes qui ont acquis l'expérience des effets de la couleur sur des objets modelés » ("The artists who made admirable stained-glass windows of the 12th and 13th centuries had a too good knowledge of colour's harmony for not applying this knowledge to sculpture colouring. And, in truth, it is not as easy as we could believe it at first. Attempts which have been made in our time, prove that the difficulty in such a case is big, on the contrary, when we want to preserve in a sculpture its gravity and its model, we claim to obtain something else rather than dressed dolls [...] it is necessary to recognize that paint applied to sculpture gives it a singular value, but provided that this application be made with intelligence and by artists specialized on the effects of colour on relief objects").

Viollet-le-Duc warns against the effect of "dressed dolls" which apparently characterizes the polychromatic sculptures of his time, but he does not go further than this report and does not suggest trying to restore the polychromies "decently".

When talking about interior decoration, the architect criticized some of the works of his contemporaries but proposed and carried out his own conception of things, concerning the exterior polychromies. He does not go farther than written remarks. These comments have much less eloquence and confidence than many of his writings and only prove the ambiguity of his opinion on the issue.

However, can we assume that Viollet-le-Duc's personal opinion on polychromy is the only explanation in the fact that he did not restore them? We would be tempted to answer positively. Many other components could, indeed, be considered: the financial aspect, a possible agreement (or disagreement) of the Church or some other authorities able to wreck such a project. But there is a problem: no trace of project. Nowhere in the papers of the architect is mentioned a plan, or, at least the will, to restore exterior paintings. If pecuniary or "diplomatic" motivations had delayed or cancelled the architect's desires, he would have expressed loud and clear his dissatisfaction and would have made every effort to find new solutions...

As an historian and archaeologist, Viollet-le-Duc

had to recognize and, in a way, appreciate the existence of Gothic monumental polychromy. But as a restorer, and especially as a man of the 19th century, his opinion on sculpture was soaked by his contemporaries colour free, pure and idealized view.

5. CONCLUSION

The only choice to restore a single aspect of this immense entity that we name monumental polychromy contradicts Viollet-le-Duc's own principle to give back the monument restored to its primitive state. This "no restoration" of exterior polychromies would be enough by itself to move forward a negative answer to the question that we chose to answer at the beginning of this study. Renovations of interior paintings only confirm this answer. The peculiarity of their realization (only in the choir chapels) and the flagrant use of modern theories on colour are as many "compromising" elements.

Notre-Dame de Paris's chapels paintings certainly show a very ingenious use of Chevreul's scientific theories. However, these principles do not correspond to medieval realities and their use contradicts the architect's restoration ideal. Regarding exterior polychromies Viollet-le-Duc finally never grows away from his colleagues' ideas, which explains the absence of restoration attempts. It is of course impossible for us to judge the architect's attitude, it is inscribed in a totally different context from ours and, even today, no restorer ventured to restore a whole cathedral exterior polychromies.

Despite many incoherencies, the architect's initiative was so innovative that we can only keep positive aspects for the medieval heritage protection and for monumental paintings restoration science advancement. Paintings that we hardly start to really study, more than a hundred years after Viollet-le-Duc. It would be moreover very interesting to examine the correctness, the accuracy and the relevance of any study on sculpture or medieval architecture that does not take into account polychromy.

FUNDING

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sector.

CONFLICT OF INTEREST

The author disclose any actual or potential conflicts of interest including financial, personal or other relationship with other people or organisations within three years of beginning the submitted work that could inappropriately influence, or be perceived to influence, her work.

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