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1 – These constituted assignments to document France's architectural heritage (the *Mission héliographique*, 1851), the Rhône floods (1856), and the construction of the New Louvre (1855–57).

2 – Baldus's non-governmental commissions culminated in the albums *Chemin de fer du Nord* (1855) and *Chemins de fer de Paris à Lyon et à la Méditerranée* (1861). These form the subject of Malcolm Daniel's dissertation, 'The Photographic Railway Albums of Edouard-Denis Baldus', PhD diss., Princeton University 1991.

3 – Published in 1852, the process involved submerging the paper in a gelatin solution prior to sensitisation and exposure. For a translation, see Malcolm Daniel, *The Photographs of Édouard Baldus*, New York: The Metropolitan Museum of Art 1994, Appendix 12, 250–54.

4 – For ease of use, 'photogravure' will, throughout this article, refer both to Baldus's specific gravure process and the diverse range of photomechanical processes in use in France from the 1840s to the 1870s.

5 – These publishers included not only Ve. A. Morel & Cie – previously identified in Daniel, *Photographs*, 246–47 – but also the contemporary specialist firms Ch. Claesen, which opened in Paris in 1871, and J. E. Ogier. This was determined through the examination of the title pages and catalogue records of various copies of *Palais du Louvre et des Tuileries*, including those held in the Robert Hill Collection, the Canadian Centre for Architecture, and Northwestern University's Deering Library. The bookseller and publishing company J. Baudry, which announced the appearance of the fifth installment of *Palais*, probably constituted a fifth publisher. See *Bibliographie de la France*, Paris: Cercle de la librairie 1871, 318 and 997.

A Process of Selection: Édouard Baldus, the New Louvre Photographs and *Palais du Louvre et des Tuileries*

Kate Addleman-Frankel

Édouard Baldus, a prominent figure in the history of French photography, is known almost exclusively for his silver-based photographs of the 1850s and early 1860s. Yet Baldus was also at the forefront of developments in photomechanical reproduction, publishing seven albums of photogravure prints between 1866 and 1884. *Palais du Louvre et des Tuileries. Motifs de décorations*, published in various editions between 1869 and 1875, was the first to reproduce his own photographs rather than engravings by earlier artists. It depicts architectural elements of the Louvre and Tuileries palaces, images that derive largely from Baldus's commission between 1855 and 1857 to document the construction of the New Louvre. Drawing from analyses of *Palais's* prints and their corresponding photographs, this article examines Baldus's photogravure process and his strategies as an editor and publisher of his own work. It furthermore demonstrates that he chose to illustrate *Palais* with photogravures rather than photographs for specific aesthetic and conceptual reasons in addition to concerns about economy and the stability of silver-based prints. Lastly, this article argues for the significance of Baldus's photogravure production to his entire oeuvre and to the development of photomechanical processes in the mid-nineteenth century.

Keywords: *Abel Niépce de Saint-Victor (1805–70), Édouard Baldus (1813–89), Louis Figuier (1819–94), Alphonse Poitevin (1819–82), Charles Nègre (1820–80), Henri de la Blanchère (1821–80), Ernest Lacan (1828–79), photogravure, image reproduction, photographic books, Louvre, architecture, nineteenth-century France*

The French photographer Édouard Baldus began his career in the late 1840s, and within little more than ten years had completed three documentary commissions from the French government,¹ two private commissions to promote the country's new railways,² and numerous entrepreneurial projects, including the government-supported *Villes de France photographiées* (1853–57), a collection of art reproductions (1852–53), and the albums *Vues et monuments de France* (compiled ca. 1861) and *Monuments de Paris* (compiled ca. 1862). He had proven himself technically adept and flexible early in his endeavours, working variously with a calotype negative process of his own invention,³ collodion on glass negatives, salted paper and albumen positives, and photogravure.⁴ However, it was the latter that would hold most of his attention for the final twenty years of his career. He released seven collections of photogravures onto the market between 1866 and 1884, either publishing them himself or through external publishers.⁵ At the time, they

represented probably the largest body of work in photogravure ever produced by a photographer.

Over the past twenty-five years several studies have highlighted the intersections between French photography and printmaking during this period. Sylvie Aubenas and Michel Poivert's exhibition catalogue *D'encre et de charbon: le concours photographique du Duc de Luynes 1856–1867* (1994) investigated and brought attention to the Duc de Luynes competition, and Stephen Bann's *Parallel Lines* (2001) demonstrated the extent to which photography, in the initial stages of its development in France, was viewed as a promising printmaking technique and a potential means of achieving high-quality reproductions without recourse to engravers. *Les trois révolutions du livre* (2002), the comprehensive exhibition catalogue edited by Alain Mercier, treated the rise of photomechanical illustration as a pivotal occurrence in the entire history of publishing. Likewise, the doctoral dissertations of Jeff Rosen (1988), Sylvie Aubenas (1998), and Jacob Lewis (2012) showed that the development of a stable, reproducible photographic process was of primary concern to those participating or interested in photographic production in mid-nineteenth-century France.⁶

Mention of Baldus's photogravures first began appearing in the scholarly literature in the 1980s, but they have generally been classified as commercial products and not been assigned the artistic or historic merit of the salted paper and albumen prints Baldus created prior to the mid-1860s.⁷ However, it is arguable that Baldus's photogravures should be considered of equal significance to these earlier 'art photographs' (which were likewise produced for profit; Baldus made few photographs for non-pecuniary reasons). Owing to their lack of chemistry they are better preserved, and technically and aesthetically they are equally accomplished: the grain pattern of the prints, a feature of the photogravure process, is subtle; the ink is evenly deposited; the tones are rich, and continuous from black to white; and the details are finely described. Baldus took great care in producing them, retouching and cropping to define or highlight certain areas, and to direct the viewer's attention to what he deemed the images' most significant passages. These prints are furthermore intimately connected to a moment of widespread and ardent interest in photomechanical reproduction and its potentialities. Nonetheless, Baldus's photogravures have rarely been included in exhibitions or addressed in academic texts.⁸

Palais du Louvre et des Tuileries. Motifs de décorations first appeared in 1869. This was Baldus's fourth collection of photogravures but the first comprising reproductions of his own images rather than engravings by fifteenth-century to eighteenth-century artists – a common subject amongst photographers from the time of Niépce's early photographic experiments in the 1820s.⁹ Significantly, *Palais* also constitutes Baldus's first publication to recreate photographic mid-tones, representing a major advancement in his printmaking process.

Published serially in three volumes between 1869 and 1875, *Palais* depicts sculptural elements, statuary, and façades from the Louvre and Tuileries palaces and gardens. These images derive from Baldus's assignment to document the construction of the New Louvre (1855–57), at the time the largest government commission ever awarded to a photographer, and from his subsequent work on the building site in the early 1860s. For the commission alone, Baldus produced thousands of salt and albumen prints, approximately 1,150 of which were assembled into presentation albums with the title *Réunion des Tuileries au Louvre, 1852–1857* at the end of 1857.¹⁰ Intended to mark the new palace's inauguration in August 1857, and to celebrate this major building project as a demonstration of the great artistic and industrial power of Napoléon III's empire, the albums were sent to selected personages and collections throughout France and Europe. Baldus did not make the selections for the albums or arrange the photographs himself; this was undertaken by the office of Hector Lefuel, the

6 – See Jeff Rosen, 'Lemercier et Compagnie: Photolithography and the Industrialization of Print Production in France, 1837–1859', PhD diss., Northwestern University 1988; Sylvie Aubenas, 'Alphonse Poitevin (1819–1882): photographe et inventeur: la naissance des procédés de reproduction photographique et de la photographie inalterable', PhD diss., École nationale des chartes 1998; and Jacob Warren Lewis, 'Charles Nègre in Pursuit of the Photographic', PhD diss., Northwestern University 2012.

7 – Examples of the dividing of Baldus's work into 'commercial' photogravures and 'artistic' or 'documentary' silver-based photographs can be found in *Primitifs de la photographie: le calotype en France 1843–1860*, ed. Sylvie Aubenas and Paul-Louis Roubert, Paris: Éditions Gallimard 2010; Barry Bergdoll, 'A Matter of Time: Architects and Photographers in Second Empire France', in Daniel, *Photographs*, 99–119; and Malcolm Daniel, 'Édouard Baldus: Artiste photographe', in Daniel, *Photographs*, 17–97. On the marginalisation of photogravures as commercial products, see Jeff Rosen, 'The Printed Photograph and the Logic of Progress in Nineteenth Century France', *Art Journal*, 46:4 (1987), 305–11.

8 – On this body of work, see Daniel, *Photographs*, 95; and Bergdoll, 'A Matter of Time', 116–18.

9 – Baldus's first photogravure publications were *Recueil d'Ornements* (1866), *Œuvre de Marc-Antoine Raimondi* (1867), and *Œuvre de Jacques Androuet dit Du Cerceau* (ca. 1869). For a listing of these publications see Daniel, *Photographs*, 246–47. For a decisive discussion of the interplay between photography and fine engraving in mid-nineteenth-century France, see Stephen Bann, *Parallel Lines: Printmakers, Painters and Photographers in Nineteenth-Century France*, New Haven and London: Yale University Press 2001, 89–125.

10 – The exact number of photographs is contested. Malcolm Daniel and Françoise Heilbrun have both placed it at 2,000, but an email from Thomas Cazentre, curator of nineteenth-century photographs for the Bibliothèque nationale de France, to Robert Hill gives the number as 1,149. Email correspondence, Cazentre to Hill, 20 April 2012. Additionally, the Musée d'Orsay places its count of the photographs in the museum's complete set of four albums at 554. See Malcolm Daniel, 'Stone by Stone: Édouard-Denis Baldus and the Nouveau Louvre', *History of Photography*, 16:2 (Summer 1992), 115–23; and Geneviève Bresc-Bautier, Françoise Heilbrun, Emmanuel Jacquin, and Marie-France Lemoine-Molimard, *Le photographe et l'architecte: Édouard Baldus, Hector-Martin Lefuel et le chantier du Nouveau Louvre de Napoléon III*, Paris: Réunion des musées nationaux 1995.

11 – Daniel, *Photographs*, 58–59.

12 – Barry Bergdoll first advanced the hypothesis that Baldus intended *Palais* as a pattern book for architects, sculptors, and designers, contextualising it within the growing market for architectural study photographs. Bergdoll, ‘Architects’, 116–18. See also Martin Bressani and Peter Sealey, ‘The Opéra Disseminated: Charles Garnier’s *Le Nouvel Opéra de Paris* (1875–1881)’, in *Art and the Early Photographic Album*, ed. Stephen Bann, Washington, DC: The National Gallery of Art; New Haven and London: Yale University Press 2011, 195–219.

13 – In an email from Robert Hill to the author (22 August 2013), Hill states that the compiler and the date of compilation of these folios remain undetermined. According to the provenance report compiled by Hill and the Dutch dealer H. J. Hendricks, the folios were sold to a Belgian artist and decorator named Emile Ouetlet in 1881. Ouetlet’s collection was subsequently put up for sale in 1904 by Louis de Meuleneere, a Belgian book dealer; the folios were among the unsold items that de Meuleneere retained in his stock. They remained in the shop until its closure in 2010, at which time they were auctioned. Hendricks acquired the folios in the sale and sold them to Hill two years later in 2012.

14 – On the Duc de Luynes competition, see Sylvie Aubenas and Michel Poivert, *D’encre et de charbon: le concours photographique du Duc de Luynes 1856–1867*, Paris: Bibliothèque nationale de France 1994.

15 – Daniel, *Photographs*, Appendix 9, 242 and 35–36.

project architect, who had proposed the idea of the albums to the Minister of State, Achille Fould.¹¹

With *Palais*, Baldus had the opportunity to impose his own order on his Louvre photographs, selecting only three hundred images for publication and sequencing them across three volumes: the first comprising interior views, the second exterior, and the third a combination of the two. This severe editing process, assessed through a comparison of the Louvre photographs with the *Palais* photogravures, reveals certain attitudes that Baldus held toward his Louvre images and how he might recast them to meet the needs of his intended audience.¹² This selection process was based on visual interest with regard to subject and form, sequence and variation, and the subjects’ imagined ideal appearance.

This article focuses on two aspects of these publications. First, it addresses the physical features of the prints, and makes new proposals regarding their production. Second, it analyses Baldus’s editing process – specifically his selection and sequencing of the Louvre images across the three volumes, and how he changed them visually in translating them from the photographic to the photogravure form.

The Hill Collection, assembled and managed by the Toronto architect and photography collector Robert Hill, includes all three volumes of *Palais* and 628 photographs pertaining to the Louvre commission (the latter group consisting of 538 salt prints contained in six numbered folios with the inscribed title *Fragments du Louvre*, and ninety loose albumen prints that constitute a seventh folio).¹³ These objects, supplemented by second and third sets of the *Palais* volumes in the collection of the Canadian Centre for Architecture in Montreal and digital images of the photographs in the four presentation albums held by the Musée d’Orsay in Paris, form the basis of this study.

The Prints of Palais du Louvre et des Tuileries

Baldus’s first photogravure publication, *Recueil d’Ornements*, was published in 1866 when the Duc de Luynes competition was still underway. A protracted eleven-year contest conceived of and financed by Honoré d’Albert, the duke of Luynes, the competition consisted of two prizes intended to stimulate research into stable photographic and photomechanical print production. The larger prize was to reward the inventor of the best means of photomechanical reproduction – a nascent endeavour in France, and one that, it was understood, would have to be perfected. If photography was ever to become truly and broadly useful, the images it produced would have to be permanent and widely distributable. None of the photographic processes in use when the competition was launched in 1857 fulfilled these requirements satisfactorily.¹⁴

Baldus’s early experimentation in photogravure was therefore undertaken during a time of great interest in and excitement around new photomechanical printing methods. But unlike Hippolyte Fizeau, Charles Nègre, Alphonse Poitevin, and other contemporaries in Paris who were actively engaged with advancing this technology, Baldus was not particularly public in his efforts. According to Malcolm Daniel, Baldus exhibited his photogravures twice in 1855, in Amsterdam and Paris, and presented them to the photographic societies of Paris as early as 1854,¹⁵ but he did not participate in the Duc de Luynes competition and did not publish his photogravure process at any point. Nonetheless, the photogravure prints he produced and shared in the 1850s were well received. In 1854, Baldus presented a photogravure reproduction of a typical Jean Le Pautre engraving – two cherubs wreathed by swirling flora – to the editors of *La Lumière*. They published the following critique in response:

We would like to write a long article about this fine work, which the artist has undertaken with much zeal and talent; but the plate we have before our eyes

relates, better than we ever could, the progress that he [Baldus] has made and the importance of his oeuvre.¹⁶

Although Baldus was relatively quiet about his experiments in photogravure, he was obtaining results that others in his field viewed as consequential.

By the time of the first instalment of *Palais du Louvre et des Tuileries*, Poitevin's photolithographic process had been awarded the Duc de Luynes prize, Nègre had invented and published a photogravure process that produced widely renowned prints, the collotype had become suitable for substantial print runs thanks to the improvements of various inventors, including Joseph Albert of Munich and Jakub Husnik of Prague, and Walter Bentley Woodbury's woodburytype, which eventually became the most popular photomechanical process of the nineteenth century, was on the verge of common use. Baldus therefore had several functional photomechanical processes available to him, yet he continued to develop and apply his own. The reasons for this are manifold: by doing so he avoided patent fees; maintained and strengthened the reputation for technical brilliance that had helped elevate him above the many professional photographers working in Paris at the time; participated in the advancement of his medium in what was then deemed the most crucial way; and achieved visual results comparable with, if not preferable to, those yielded by other contemporaneous processes, and perhaps by simpler means.

Baldus's process

In the exhibition catalogue *Graver la lumière: L'héliogravure d'Alfred Stieglitz à nos jours* (2002), Malcolm Daniel published an account of Baldus's photogravure process that drew from historic texts, including Louis Figuier's *Les merveilles de la science ou description populaire des inventions modernes* (1869) and Henri de la Blanchère's *Répertoire encyclopédique de photographie* (1864).¹⁷ Figuier, a popular science writer, and de la Blanchère, a photographer, described Baldus's prints as issuing from both intaglio and relief methods of printing. This is unusual as photomechanical processes are typically divided into intaglio, relief, and planographic methods. The process developed by Nègre in the early 1850s, for instance, produced intaglio plates, meaning that the image was etched into the surface of the printing matrix. Ink was applied such that it was held only in these etched reservoirs, and then transferred to paper under the immense pressure of the printing press. In relief printing, the image is raised above the surface of the matrix and can thus be printed with text. Relief printing became possible at the industrial level only in the 1880s, following the concurrent invention and refinement of the halftone process by figures such as Georg Meisenbach, Frederic Ives, and Charles-Guillaume Petit.¹⁸ In halftone printing, the image is broken into dots of black and white by a screen; by a trick of optics, this renders areas of grey. Planographic processes consist of printing from a flat surface, and are based on the immiscibility of oil and water – greasy printer's ink does not adhere to damp portions of the plate, which are created in correspondence with the light areas of the image. Photolithography, first developed by Poitevin (1855), is one example of the many planographic processes in commercial use from the 1860s up until the digital era.

The term 'photogravure' is typically applied to processes that use the intaglio method, such as Nègre's and, at least intermittently, Baldus's. From the 1850s to the 1880s, when it was essentially standardised following the advancements of the Austrian artist Karl Klíč, the process for obtaining a photogravure print could vary significantly between practitioners. However, all processes stemmed from two principles: that certain light-sensitive materials harden and become insoluble where exposed to light, forming an acid resist; and that the more gradually acid is allowed to work through a resist, etching the image onto the plate, the more finely differentiated the depths of the etched reservoirs will be. This differentiation

16 – 'Gravure héliographique', *La Lumière* (29 April 1854), 67: 'Nous voulions écrire un long article sur ce beau travail, que l'artiste a entrepris avec tant de zèle et de talent; mais la planche que l'on a sous les yeux dit, bien mieux que nous n'aurions pu le faire, les progrès qu'il a réalisés et l'importance de son œuvre'.

17 – Malcolm Daniel, 'Journal d'une invention: les débuts de l'héliogravure en France', in *Graver la lumière: L'héliogravure d'Alfred Stieglitz à nos jours*, ed. Jean Genoud, Katherine McCready, and Florian Rodari, Mont-sur-Lausanne, Switzerland: Fondation William Cuendet and Atelier de Saint-Prex 2002, 79–93, esp. 91–92.

18 – Thierry Gervais, 'La similigravure: le récit d'une invention (1878–1893)', *Nouvelles de l'Estampe*, 229 (May 2010), 6–25.

allows for the production of mid-tones – the greys that distinguish a photograph from traditional intaglio or relief prints, which are composed entirely of black and white – that, in the mid-nineteenth century, were central to the concept of a successful photomechanical process.

Figuier and de la Blanchère (and through their writings, Daniel) explain the duality of Baldus's process as the result of electroplating, a technique wherein a copper printing plate is attached to the pole of a Bunsen cell, a battery used to extract metals. Connection to the positive pole caused the areas of the plate unprotected by the resist to build up on its surface, producing an intaglio plate, and connection to the negative led the same areas to be etched below the plate's surface. According to de la Blanchère and Figuiet, this produced a matrix suitable for relief printing.

Figuier's *Les merveilles*, published five years after de la Blanchère's text, states that at the time of publication Baldus no longer utilised the electroplating technique in the production of photomechanical prints. Instead, Baldus coated the copper plate with a layer of bichromated gelatin, exposed it to light through a transparency, and washed the unexposed gelatin away before placing the plate in a bath of ferric chloride. This was a rather ineffective means of creating the variegated reservoirs necessary for obtaining a broad tonal range as it produced only a shallow relief. Figuiet reports that in order to compensate for this, Baldus rolled the plate with printer's ink (this acted as a temporary acid resist, adhering to the areas that were already dark) and then reimmersed the plate in the ferric chloride solution to etch further all the other areas. This was a standard printer's trick, and could be repeated until the engraved areas differed in depth to produce mid-tones in the final print.¹⁹

However, it is very difficult to achieve subtle black-to-white transitions only through manual stopping out and re-etching,²⁰ and such transitions are a defining aspect of many of Baldus's *Palais* photogravures. Plate 7 of Volume II, showing a column capital ornamented by scrollwork and curling vegetal forms, provides a particularly striking example of this characteristic feature (figure 1). Nègre's 1856 patent indicates that his photogravure process involved successive etchings in acid, and the ability of his process to produce mid-tones is evident in his famous images of Chartres Cathedral, including *South Transept Porch*, *Left Portal*, *Chartres Cathedral* (figure 2). But Nègre also deposited a fine layer of gold onto the surface of his plates after exposure by means of galvanoplasty.²¹ As with the traditional printmaking process of aquatint, this created a network of tiny pockets between the grains that could be etched to various depths, producing a tonal print.²² The process of Abel Niépce de Saint-Victor also used this principle of aquatint; Saint-Victor dusted his plates with rosin following the dissolution of the unexposed bitumen. Indeed, the application of an aquatint texture to the surface of the plate eventually became a standard feature of the photogravure process.²³ Was this a feature of Baldus's process as well?

There was another common means of producing the continuous tone desired of photomechanical positives: the use of a screen to create a dot or grid pattern on the plate.²⁴ This method was already known in the 1850s. William Henry Fox Talbot, for example, used gauze as a screen in a technique patented in 1852.²⁵ However, this process remained unrefined and little used until the 1880s. Even Talbot had switched to the aquatint method by 1858, using gum copal powder melted onto the plate to produce the grain.²⁶

The regular, sharp grain pattern of a print produced by a screen can be recognised under magnification. Examined with a magnifying glass, Baldus's *Palais* prints exhibit an irregular and very fine grain pattern that is difficult to distinguish from the fibres of the paper. Given this, Baldus apparently grained his plates prior to etching in order to achieve the mid-tones visible in many of these prints, as Niépce de Saint-Victor and Nègre did, although neither de la Blanchère, nor Figuiet, nor Daniel acknowledged this aspect of the process. Given the number

19 – Louis Figuiet, *Les merveilles de la science*, Paris: Furne, Jouvet et Cie. 1869, 136.

20 – 'Stopping out' is the process by which certain areas of a photographic print or plate are masked to prevent their exposure to light or, in the case of photogravures, acid.

21 – Lewis, 'Charles Nègre', 289.

22 – Richard Benson, *The Printed Picture*, New York: The Museum of Modern Art 2008, 40; and Lewis, 'Charles Nègre', 280.

23 – Benson, *Printed Picture*, 230.

24 – William Crawford, *The Keepers of Light: A History and Working Guide to Early Photographic Processes*, Dobbs Ferry, New York: Morgan & Morgan Inc. 1979, 246–47; and Deli Sacilotto, *Photographic Printmaking Techniques*, New York: Watson-Guption Publications 1982, 116–19.

25 – Crawford, *Keepers*, 244; Herbert Denison, *A Treatise on Photogravure in Intaglio by the Talbot-Klic Process*, London: Illife [ca. 1890], 132–33.

26 – Crawford, *Keepers*, 244–45.



Figure 1. Édouard Baldus, *Nouveau Louvre*, from *Palais du Louvre et des Tuileries. Motifs de décorations*, volume II, plate 7, photogravure, 20.0 cm × 18.5 cm, 1871. Hill Collection, Toronto.

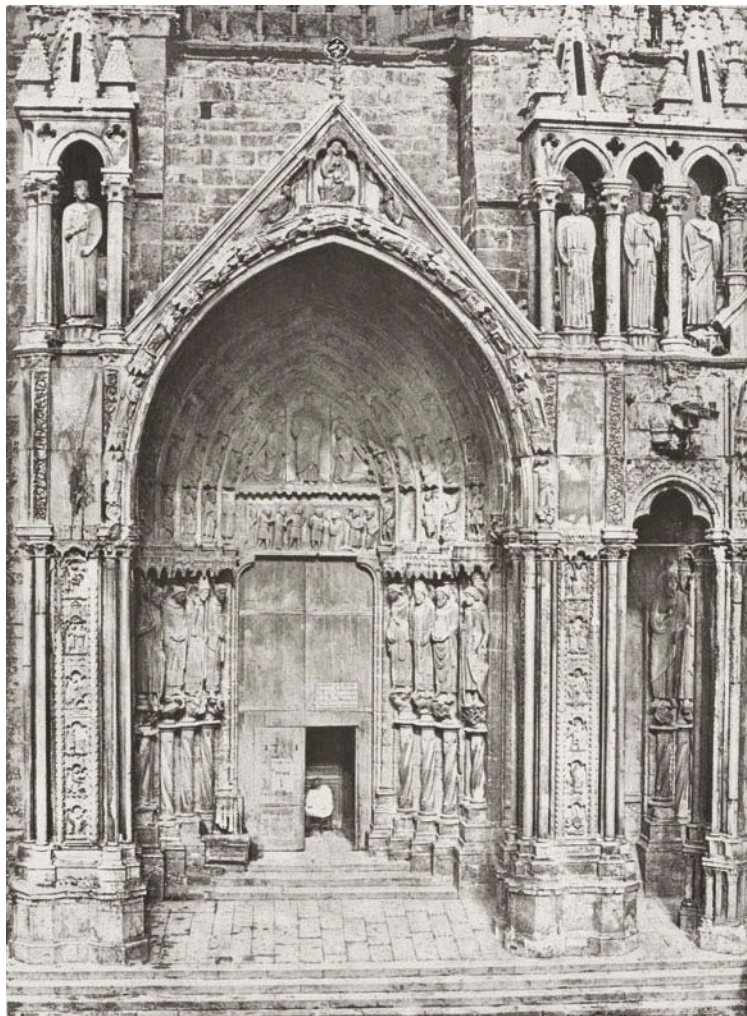


Figure 2. Charles Nègre, *South Transept Porch, Left Portal, Chartres Cathedral*, photogravure, 32.3 cm × 23.6 cm, before 21 October 1854. Collection Centre Canadien d'Architecture/Canadian Centre for Architecture, Montréal.

27 – Sacilotto, *Photographic Printmaking Techniques*, 118.

28 – Volume I (interior views): thirty black backgrounds, seventy white; Volume II (exterior views): nine black backgrounds, eighty-one white, and ten façades (no 'background'); and Volume III (interior and exterior views): sixteen black backgrounds, eighty white, and two façades.
29 – As yet there is no consensus on the chemistry of this solution, although William Crawford posits it as nitric acid. See Crawford, *Keepers*, 283.

30 – Ernest Lacan, 'Gravure héliographique', *Le Moniteur de la Photographie* (1867), 45: 'M. Baldus a présenté à notre Société des gravures remarquables d'après des photographies obtenues sur nature; la dégradation des teintes y est bien rendue, et ses épreuves prouvent une fois de plus que la gravure photographique est maintenant un fait accompli'.

31 – Critics had described Baldus's taste for dramatic contrasts between light and dark, as well as his remarkable use of light, since the 1850s. Malcolm Daniel, for example, has imagined Baldus's reaction to the cloister of Saint-Trophime in Arles in 1851 as one of attraction to the light effects he found there, and a desire to render them photographically. Daniel, *Photographs*, 21. Ernest Lacan, writing in typically purple prose, describes the light as that which allows Baldus, in his photograph of a funerary monument by the sculptor Germain Pilon, to delineate the beauty of sculpted form: '[The light] slides softly across these pure faces, it passes lovingly between the light curls of hair styled à la grecque, it follows the rounded contours of these delicate arms, these voluptuous breasts, to reveal their beauty; it searches beneath each diaphanous fold of fabric to reveal, to charmed eyes, the elegant forms it covers up: the sculptor's genius has bestowed these chaste creations with beauty, and the light gives them warmth and life'. See Ernest Lacan, 'Revue photographique', *La Lumière* (1 July 1854), 103: 'Elle glisse mollement sur ces purs visages, elle passe avec amour entre les boucles légères de ces cheveux relevés à la grecque, elle suit les contours arrondis de ces bras délicats, de ces poitrines voluptueuses pour en découvrir toutes les beautés; elle fouille sous chacun des plis diaphanes de ces draperies si légères pour révéler aux yeux charmés les formes élégantes qu'elles recouvrent: le sculpteur a donné la beauté à ces chastes créations de son génie, la lumière leur donne la chaleur et la vie'.

32 – Jacob Lewis writes of the 'varying quality' of Nègre's photogravures for Louis Vignes's *Voyage à la mer Morte* (1874) and notes the 'subtle differences between proofs pulled from different states of the plate'. Lewis, *Charles Nègre*, 333.

33 – Certain visual motifs, such as the recurring letter 'N', or inscriptions on the Louvre fragments allow fourteen plates to be identified as reading correctly: in

of prints made for *Palais du Louvre et des Tuileries*, Baldus probably used a cheaper alternative to the gold favoured by Nègre, such as a dusting of rosin or asphaltum powder, which adhered to the plate when heated.²⁷

Finally, although the *Palais* photogravures exhibit a range of tones between black and white, they are nonetheless often high in contrast. In fact, among their most striking features is the rich black background against which Baldus isolates bright plaster or stone objects in almost twenty per cent of the prints.²⁸ This indicates that Baldus's ferric chloride solution etched with greater rapidity through the gelatin resist than Nègre's use of an acid bath (Nègre's *Voyage d'exploration* prints are far greyer and grainier than Baldus's *Palais* prints).²⁹ The slower the acid worked through the resist, the wider the possible tonal range. Taken together, the features of Baldus's photogravure process make it one of the most successful of those conceived during this period.

Formal attributes

Writing in 1867 of Baldus's photogravures, Ernest Lacan deemed them definitive proof that 'photographic engraving is now a *fait accompli*'.³⁰ Baldus naturally would have shown the critic his best work, and while many of his prints are indeed exquisite, the three hundred that comprise *Palais* are demonstrably inconsistent. Plate 11 of Volume III, for example, shows what are probably two sections of a cornice from the Tuileries palace (figure 3). Expertly isolated against a white background, the images are aligned along their upper edges, providing a sense of the element's continuation. The texture and form of each intricate detail is also vividly apparent. The tonal range is broad, with the shadow areas defined by progressively darkening greys, and the scale of the two images demands their gradual consideration by the slow movement of the eye over the entire page.

A second example, Plate 6 of Volume III, also shows two images against a white background: one full and one detailed view of statues on the façade of the Louvre palace (figure 4). Here, however, the relation between the two images is unclear, the grain pattern is relatively coarse, and the images are not sharp and are smaller than those of the Tuileries palace cornice (figure 3). Furthermore, their isolation is far less clean or complete. The contrast in the print is stark, making it difficult to ascertain the details in some areas of these statues.

A final example, Plate 5 of Volume III, depicts a fragment of interior decoration, destined for a stairway in the Tuileries palace, placed against a black background (figure 5). Again, the contrast is strong in this print, with information lost in its darkest and brightest passages, but the effect of these contrasting shades is so striking that Baldus probably intended it.³¹ White against black, seemingly floating in empty space, the element draws the eye irresistibly; a crucifix protruding above almost glows in the blackness that envelops it. The background is opaque with a velvety texture – a common result of re-etching in photogravure. The details are sharp, with the mottled appearance of the plaster clearly rendered on the upper and lower portions of the element's left side.

Baldus's *Palais* prints therefore vary in their individual clarity, tonal range, and overall quality. Despite critical approval, Baldus's photogravure process was manifestly inconsistent and continued to produce variable results after more than a decade of experimentation and practice.³² However, it was also sufficiently flexible and manageable to accommodate Baldus's shifting ideas of what constituted a satisfactory final print. For example, with regard to lateral reversal – a standard feature of intaglio prints that results from turning the non-reversed plate over onto the paper in the press – Baldus's photogravure prints do not always exhibit it.³³

An examination of *Palais*'s prints indicates that, like Niépce de Saint-Victor, Nègre, and Poitevin, Baldus had invented a photomechanical process capable of



Figure 3. Édouard Baldus, *Tuileries*, from *Palais du Louvre et des Tuileries. Motifs de décorations*, volume III, plate 11, photogravure, 20.9 cm × 33.4 cm, 1875. Hill Collection, Toronto.



Figure 4. Édouard Baldus, *Louvre*, from *Palais du Louvre et des Tuileries. Motifs de décorations*, volume III, plate 6, photogravure, 17.0 cm × 26.2 cm, 1875. Hill Collection, Toronto.



Figure 5. Édouard Baldus, *Tuileries. Escalier* from *Palais du Louvre et des Tuileries. Motif de décorations*, volume III, plate 5, photogravure, 19.3 cm × 23.4 cm, 1875. Hill Collection, Toronto.

Volume I, Plates 9, 28, 81 and 83; in Volume II, Plates 8, 9, 12, 23, 29, 31, 32, 36 and 52; and in Volume III, Plate 85.

producing prints that mimicked a photograph's tonal gradations. Based on the volume of prints produced for *Palais*, Baldus's method was furthermore relatively practical and inexpensive. It was also well suited to his taste for dramatic lighting and contrast, as well as his interest in the articulation of three-dimensional space. How this photogravure process suited his new vision for his earlier Louvre photographs, and how he turned the process to the articulation of this vision through the retouching, editing, and cropping of his prints, will be discussed in the next section.

Baldus's Edits

Photogravure is by nature a hybrid process: part photography, part printmaking, it borrows aspects of each tradition to produce prints that satisfy a unique set of goals. By comparing photographs and photogravures that issue from the same negative, we can ascertain what Baldus wanted to achieve with *Palais* visually, and how photogravure enabled visual effects that photography did not. Thirty photogravures in the *Palais* volumes correspond to photographs held in the folios in the Hill Collection: nineteen from Volume I, nine from Volume II, and three from Volume III, which derive from photographs, respectively, in Folios 2, 5, and 7. Analysis of these image pairs reveals how Baldus retouched, cropped, sequenced, and selected his Louvre photographs in recreating them for *Palais*, and how the photogravure process made their ideal presentation in these volumes possible.

Looking at the thirty image pairs in the Hill Collection side by side also immediately clarifies why mid-nineteenth-century photographers and publishers considered the discovery of a workable process for reproducing photographs in ink so crucial; indeed, the respective level of deterioration of the photographs and photogravures is the most readily discernible difference between them. Whereas the photographs have faded, lost highlight detail, and yellowed, the physical state of the photogravures is sound. Whereas the silver-based prints appear cloudy, the ink prints are sharp, the shadow areas are dense, and the highlights are bright. Overall, the appearance of the latter is probably comparable with their original quality at the time of production. Take Plate 33 of Volume I – showing an interior decoration pertaining to a library stairway, although reversed – and the matching Plate 39 of Folio 7 as an example (figures 6, 7). The photogravure displays none of the yellowing and overall fading visible in the photograph, particularly in the highlights.

Further, while the photogravures are reliably black, the overall colouration of the photographs ranges from cool purplish grey to warm reddish brown. Elements 325 and 378 of Folio 5 exemplify the wide variation in tones visible in the photographs, including those created by the same photographic process (figures 8, 9). This could be due to chemical deterioration, but also to the numerous variables that attended the printing of photographs prior to the commercial production of photographic chemicals and paper, which essentially standardised them, or developing-out paper.³⁴ Present-day curators and scholars have noted the plethora of colours visible in the salted paper prints of Baldus and his contemporaries as contributing to the beauty of their photographs.³⁵ However, Baldus's *Palais* and later photogravure publications indicate that he valued his images equally, if not more, as uniform black-and-white pictures. With the predictable colouration it generated, and the knowledge that ink prints would not fade as photographs did, the photogravure process must have been irresistible to a practitioner with Baldus's concern for aesthetics and professionalism.

34 – Both salted paper and albumen photographs are typically printed-out, meaning that the image is formed solely by the action of ultraviolet light on the silver-halide emulsions embedded within (as with salted paper prints) or suspended on the surface of (as with albumen prints) the paper, and that the image is fully visible prior to fixing, toning, and washing. With the wide popularisation of developing-out paper at the end of the nineteenth century, which used chemical developers to bring out the latent image, the print quality and appearance was no longer affected by the strength or quality of sunlight on a given day.

35 – This widely held sentiment has been eloquently expressed by Malcolm Daniel in his monograph: 'We pause at the surface of the picture before moving from our own world into the photographer's and revel, as did Baldus's contemporaries, in the seductive *matière* of the still-handcrafted medium – the rich, velvety salted-paper prints in colors of gray violet, eggplant, cool black, and ruddy brown'. Daniel, *Photographs*, 97. The photographer and writer Alan Greene has described the tonal variation that is visible in developed-out salted paper prints as well, proposing that a quick exposure time combined with lengthy development, and a long exposure time combined with rapid development, produced two different print tones: cool blue-black with the former, and warm red-brown with the latter. See Alan Greene, 'Les épreuves salées par développement (1843–1866)', trans. Virginie Greene, *Études photographiques*, 14 (January 2004), 130–43.



Figure 6. Édouard Baldus, *Untitled* (Stairway decoration), folio 7, plate 39, albumen print, 19.8 cm × 22.8 cm, ca. 1860. Hill Collection, Toronto.

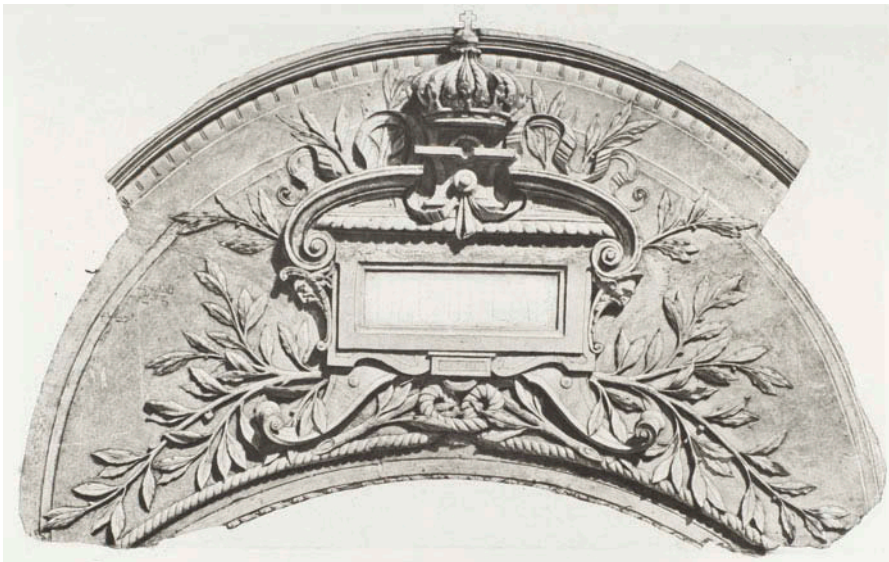


Figure 7. Édouard Baldus, *Ministère d'État. Escalier de la Bibliothèque* from *Palais du Louvre et des Tuileries. Motifs de décorations*, volume I, plate 33, photogravure, 18.4 cm × 24.3 cm, 1869–71. Hill Collection, Toronto.

Selection, sequencing, and arrangement

A comparison of the prints in *Palais du Louvre et des Tuileries* with the Hill Collection photographs and those of the *Réunion des Tuileries* albums held in the Musée d'Orsay shows that the three hundred images Baldus chose to reproduce in *Palais* generally represent a cross-section of the subjects he photographed at the Louvre. However, Baldus did eschew certain types of images in formulating these volumes. He did not include any of his pictures of the statues decorating the Louvre's northern, eastern, and southern façades overlooking the *cour Napoléon* and the Richelieu wing, which represented historical personages. He also chose not to print his shaded, atmospheric *La colonnade intérieure, palais du Louvre, Paris*, with its long view of a soaring interior gallery, nor many of the façade views featured across the four albums. These choices support Barry Bergdoll's proposition that Baldus intended this publication primarily for architects and artists.³⁶ Encouraged to emulate Classical forms, these professionals required precise images of decorative elements on which to model their own designs.

36 – See note 12.

Figure 8. Édouard Baldus, *Untitled* (Statue of man and boy with lion), folio 5, element 325, salted paper print, 17.4 cm × 22.1 cm, ca. 1860. Hill Collection, Toronto.



Figure 9. Édouard Baldus, *Untitled* (Column capital with boar's head), folio 5, element 378, salted paper print, 18.3 cm × 15.6 cm, ca. 1860. Hill Collection, Toronto.



The sequencing of the photographs in *Réunion des Tuileries au Louvre* – which Baldus was not responsible for, although he may have contributed opinions – was straightforward; it followed the completed architecture of the two palaces, with the photographs grouped according to the location of their subjects.³⁷ The ordering principle of *Palais* is more discreet, and can even seem arbitrary from a present-day perspective. For example, Plates 26–36 in Volume III show, in sequence: a statue from the Tuileries gardens; a planter; another statue from the Tuileries gardens; two horizontal panels; two vertical panels; an oval-shaped panel; another planter; another oval-shaped panel; two more horizontal panels; and a third planter. Such an order suggests that while Baldus was not compelled to group similar subjects together, he was interested in thematic variation and often made specific choices to emphasise the differences between similar objects. In Volume I Baldus includes twelve column capitals carved with the heads of beasts – horses, rams, bears, wolves, owls, and so forth. He retouched and cropped each of these images the same way in each case, and their overall presentation is identical. By thus standardising the context in which the capitals appear, Baldus renders the variations in their design details all the more apparent, as befits a project whose primary purpose is the description of such details.

Baldus furthermore arranged the prints according to the formal attributes of their subjects. If he did not place every planter and every carved capital together, he did position each object so that the pattern of one complemented or reinforced that of the next. This stands in contrast to the folios, where the images are arranged differently and apparently without the same concern for an object's design. Plate 80 of Folio 7 includes two albumen prints of ceiling medallions (figure 10). The print placed above features the heads of four cherubs around a decorative central disk, while the one below shows a cruciform design. Both photographs are reproduced in *Palais*, but paired with objects of greater similarity: the former appears with another ceiling medallion decorated with curly-haired cherubs (figure 11), and the latter appears with a ceiling medallion featuring a similarly non-figurative symmetrical pattern (figure 12). This example is one of three comparable instances of rearrangement seen in the Hill Collection, and it provides further evidence that Baldus's sequencing was deliberate and that, like his choices regarding the selection and arrangement of his images, it was intended to highlight the objects' formal attributes as much as possible.

Retouching and cropping

In rendering his subjects in photogravure, Baldus altered their appearance beyond the necessary parameters (that is, more than would have resulted normally from changing a photographic print into a photomechanical one). Perhaps the most drastic of these alterations is the staging of the fragments as though they existed apart from the New Louvre, or indeed apart from anything.³⁸ The photograph Plate 53 of Folio 7 shows the surround of a door on the ground in front of a building: construction debris is strewn at its base; a window and pilaster are visible behind it; and it is propped up by stacks of bricks (figure 13). In the corresponding photogravure – Plate 30 of Volume I of *Palais* – all of these details and contextual clues in the foreground and background have been stripped away and replaced by swaths of solid black (figure 14). The isolated object hovers against an empty background. Divested of its context, it now constitutes a subject without referent. Despite its photographic root, the image does not, nor was it intended to, provide a truthful record so much as illustrate an idea of consummate architectural design.

Baldus appears to have sought this effect of decontextualisation. He eliminated all background information in ninety-six per cent of *Palais* prints,³⁹ isolating the decorative motifs pictured in such a way that there is nothing – none of the drapes, scaffolding, debris, or supports pictured in the photographs – to distract from them. Examination of Plate 49 of Folio 7 shows how, where the process (in this

37 – The catalogue of the Musée d'Orsay lists them as follows: *album 1: décor de la façade Nord, sur la cour Napoléon*; *album 2: décor des façades Est et Sud sur la cour Napoléon*; *album 3: décor des deux cours Sud, dites aujourd'hui Lefuel et Visconti*; *album 4: décor de l'aile Richelieu*.

38 – A similar strategy of visual isolation was later employed by the photographer(s) of *Le Nouvel Opéra* (1875–76).

Photographs of decorative details were probably among those most valued by architects from the 1860s. See Bressani and Sealy, 'Opéra Disseminated', 210–11.

39 – This calculation was based on a total of 288 images, excluding those twelve where isolation would not have been possible, such as with the façades.

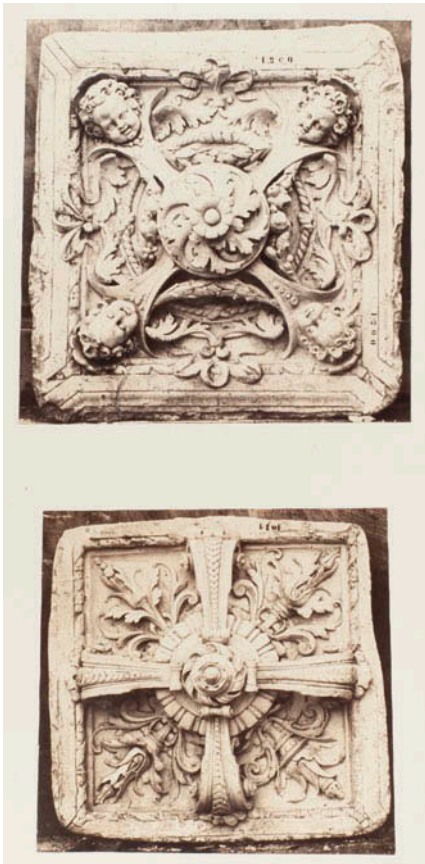


Figure 10. Édouard Baldus, *Untitled* (Two ceiling medallions), folio 7, plate 80, elements 1200 (top print) and 1191 (bottom print), salted paper prints, 10.4 cm × 10.0 cm and 8.6 cm × 9.3 cm, ca. 1860. Hill Collection, Toronto.



Figure 11. Édouard Baldus, *Ministère d'État. Escalier* from *Palais du Louvre et des Tuileries. Motifs de décorations*, volume I, plate 58, photogravure, 10.0 cm × 9.3 cm (top image), 1869–71. Hill Collection, Toronto.

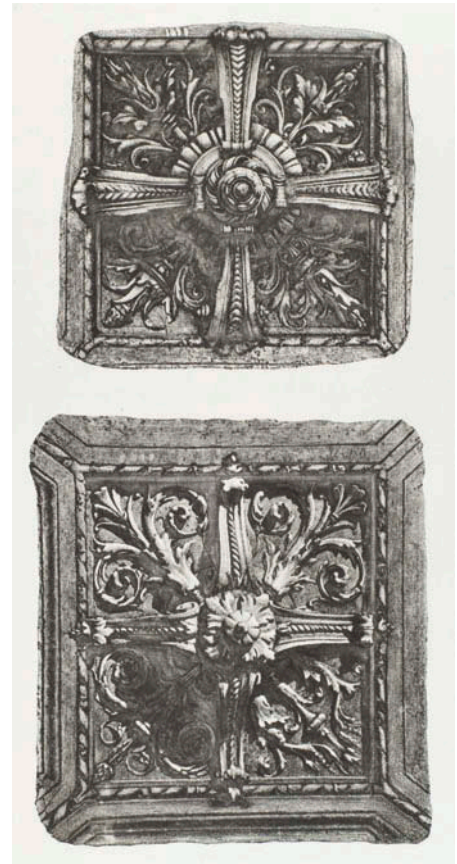


Figure 12. Édouard Baldus, *Ministère d'État. Escalier* from *Palais du Louvre et des Tuileries. Motifs de décorations*, volume I, plate 60, photogravure, 7.9 cm × 8.5 cm (top image), 1869–71. Hill Collection, Toronto.

40 – Baldus worked with assistants to produce the thousands of photographs destined for the New Louvre project files and the presentation albums *Réunion des Tuileries au Louvre*. It is therefore impossible to state unequivocally, pending further research, that it was he who made the manual alterations to the photographs, although presumably his assistants would have been following his direction rather than making their own decisions.

case, albumen printing) did not allow such remarkable alterations to the original scene during print production, the photographer – or one of his assistants – attempted to alter the finished print through crude manual techniques.⁴⁰ Here, the space inside the fireplace surround has been blacked out with a pigment applied to the surface of the photograph. This photograph was not reproduced in *Palais*, but in a similar image, Plate 87 of Volume I, the interior area of the enframing is rendered as a clean black rectangle. Baldus's other techniques for isolating his photographic images included trimming them as closely to the edges of the object pictured as possible (figure 15) and cutting photographs that showed two elements into two pieces, again eliminating the 'unnecessary' space around or between the objects, and then gluing the manually cropped photographs to the mount board side by side (figure 16).

Returning to the image of the door surround described above, the date carved into the pediment, 1858, is not visible in the corresponding photogravure (figures 13, 14). The only other photograph on which a date appears in this set of thirty is a ceiling medallion carved with cherubs (figure 17); here, too, the date has been removed from its photogravure match (figure 18). Further, in the two instances where the element's intended location is inscribed on its surface, those marks have been removed; in the seven instances where the sculptor's name is visible in the photograph, it has been removed in the photogravure; and in every case but one, the element number, stencilled onto every object, presumably as a tracking method devised by the project managers,



Figure 13. Édouard Baldus, *Untitled* (Door surround), folio 7, plate 53, albumen print, 19.8 cm × 22.8 cm, ca. 1860. Hill Collection, Toronto.

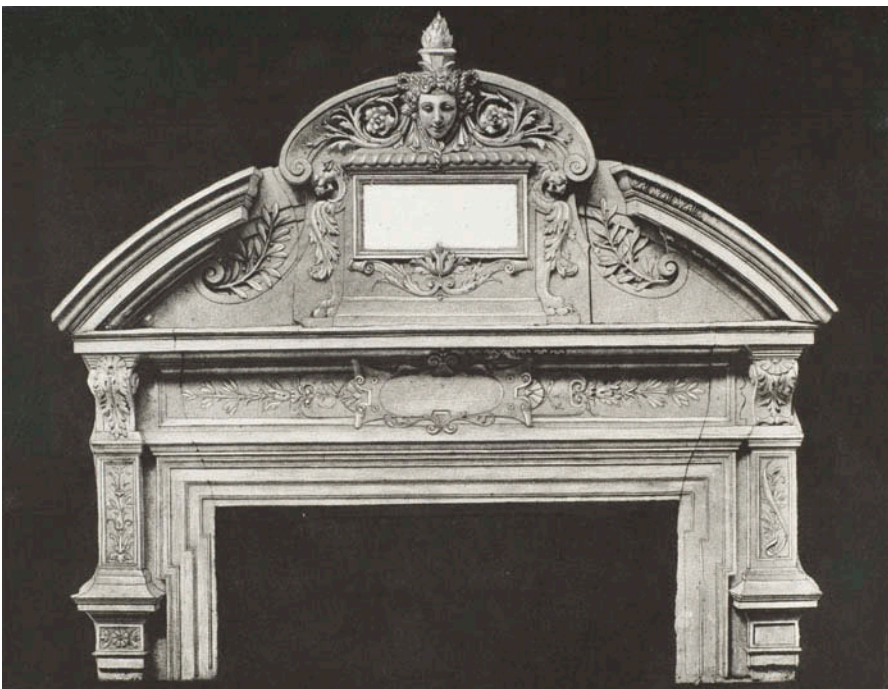


Figure 14. Édouard Baldus, *Ministère d'État* from *Palais du Louvre et des Tuileries. Motifs de décorations*, volume I, plate 30, photogravure, 18.4 cm × 24.3 cm, 1869–71. Hill Collection, Toronto.

is either masked or invisible in the photogravure.⁴¹ Therefore, in *Palais* an object is typically divorced both from its physical environment and the circumstances of its creation. Even if Baldus's efforts were more successful in some cases than in others, by using photogravure he could make the viewer unaware of the object's original context, thus allowing him or her to view it as an object of design, a work of aesthetic value for study, emulation, or contemplation, rather than a fragment of the New Louvre in mid-construction.

41 – Details with regard to this kind of retouching, as illustrated by the image pairs found in the Hill Collection, are as follows: Volume I, Plate 27: element number, location, and sculptor removed; Volume I, Plate 33: element number, location, and sculptor removed; Volume I, Plate 41: element number and sculptor removed; Volume I, Plate 45: element number and sculptor removed; Volume II, Plate 58: element number, sculptor, and date removed; Volume I, Plate 54: element number removed, sculptor not removed; Volume II, Plate 50: element numbers removed, sculptor not removed; and Volume II, Plate 75: element number not removed.

Figure 15. Édouard Baldus, *Untitled* (Column capital with hunting horn), folio 5, element 423, salted paper print, 19.1 cm × 19.8 cm, ca. 1860. Hill Collection, Toronto.



Figure 16. Édouard Baldus, *Untitled* (Scrollwork brackets), folio 7, plate 54, albumen prints, each 16.0 cm × 16.5 cm, ca. 1860. Hill Collection, Toronto.

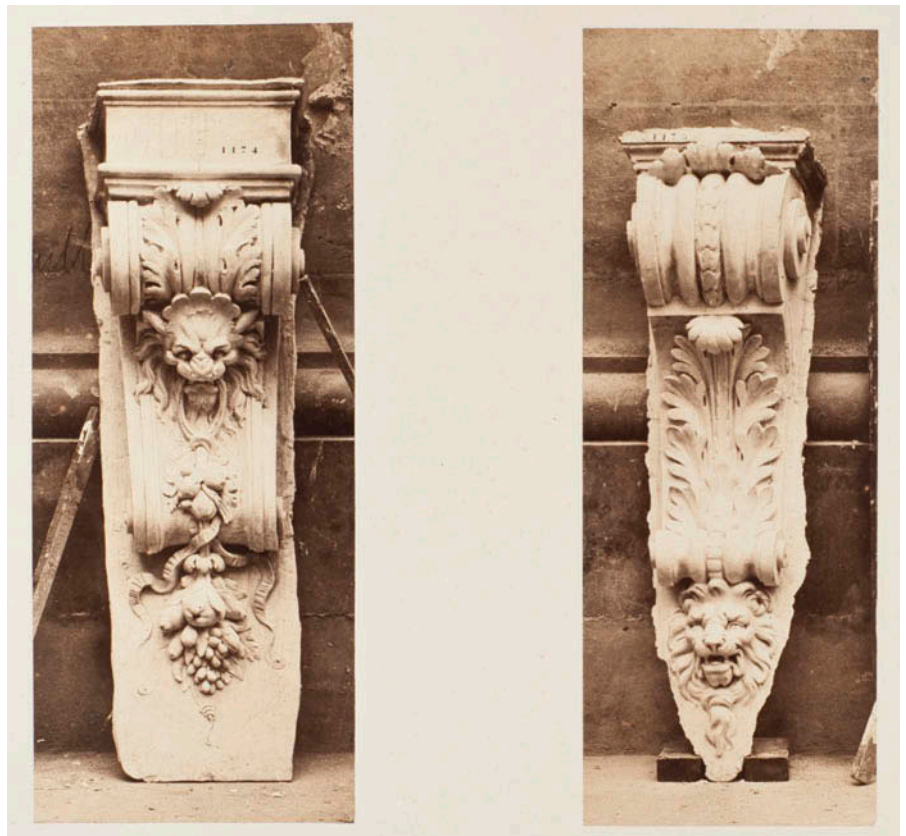




Figure 17. Édouard Baldus, *Untitled* (Ceiling medallion with cherubs), folio 5, element 526, salted paper print, 19.8 cm × 19.6 cm, ca. 1860. Hill Collection, Toronto.



Figure 18. Édouard Baldus, *Louvre* from *Palais du Louvre et des Tuileries. Motifs de décorations*, volume II, plate 58, photogravure, 19.8 cm × 19.5 cm, 1871. Hill Collection, Toronto.

42 – These plates are as follows: Volume I, Plates 13, 26, 41 and 45.

43 – Bann has sought to dispel the notion of photography's immediate predominance over other reproductive media in numerous writings, including Stephen Bann, 'Ingres in Reproduction', *Art History*, 23:5 (December 2000), 706–25; and Stephen Bann, 'Photography, Printmaking and the Visual Economy in Nineteenth-Century France', *History of Photography*, 26:1 (2002), 16–25.
44 – The image shown in Plate 15 of Volume I measures smaller than its photographic match, Element 405 of Folio 5.

45 – The example held by the Musée d'Orsay, *Porte du pavillon de la Bibliothèque, palais du Louvre, Paris*, is also cropped far more closely than the *Palais* photogravure, although some wall space is evident around the door in this print.

Baldus also utilised this process to remove surface cracks from objects, often excising these imperfections completely. In Element 405 of Folio 5 – a column capital decorated with the heads of war horses, a shield, and weaponry – a sizeable fissure runs from the top of the capital on the right-hand side through the carved horse head below (figure 19). There is also a superficial crack extending upward from the bottom right of the element to the base of the central shield. Neither is evident in the corresponding *Palais* print (figure 20). Baldus effected this change in four other photogravures in the set of thirty.⁴² In several others, he left such imperfections as they were, such as with the image of the fireplace surround discussed above. This suggests that unlike the data inscribed on the elements for use by the building project's managers, Baldus did not consider cracks necessarily damaging to his project of presenting the elements as architectural fragments divorced from the New Louvre construction. Far more important was that every sculpted detail of these ornate objects be well represented. Where he felt clarity of design or form was lacking, Baldus used engraving tools to draw lines into the plate. Often, this was done to emphasise the outline of a particular design feature in the object, or the shape of the object as a whole. The goal was the articulation of form, and Baldus often pursued it to the point of eliminating any trace of photographic realism; indeed, many *Palais* images exhibit the visual syntax of charcoal drawings. If, as Stephen Bann has shown,⁴³ varied modes of reproduction overlapped chronologically in the French fine arts during the nineteenth century, prints such as Plate 26 of Volume I demonstrate that they overlapped aesthetically as well (figure 21).

Measurements taken of twenty-nine of the thirty photographs and photogravures show the elements pictured to be the same size.⁴⁴ However, Baldus did crop them differently, adding more space around them in some cases and tightening the framing in others. The column capital decorated with warhorses and weaponry and its photographic match can illustrate this as well (figures 19, 20). The cropping is tighter at the sides of the element in the photogravure than in the photograph, and more expansive at the top and bottom. With the fragment of decoration from the Louvre library stairway (figures 6, 7), the cropping is slightly tighter on all sides than it is in the corresponding photograph. A comparison of Plate 44 of Volume II with Plate 89 of Folio 7, which show a richly ornamented door in the façade of the Louvre, comprises a rare example of a *Palais* photogravure depicting more than its corresponding photograph (figures 22, 23). Here, the photograph has been manually trimmed along the edges of the door, while the photogravure includes the wall around it.⁴⁵ This may indicate that while the surrounding wall was not relevant to Baldus's New Louvre commission, he found its forms and placement in the image visually appealing. In this case, the element that Baldus is concerned with representing is better appreciated in context. Comprehended as a door, a mundane feature of every habitable structure, its flourishes appear even more remarkable.

For Baldus, photogravure promised both increased longevity for his Louvre pictures and greater control over their appearance and content. As demonstrated by the widespread removal of contextual information that he effected with these prints, the process allowed him to present building fragments, photographed on a construction site, as artistic works with individual value. Through the deliberate choices he made with regard to the selection, sequencing, arrangement, retouching, and cropping of his images, Baldus emphasised the formal qualities and intricacies of the palaces' decorative elements. In so doing, Baldus presented his images for the appreciation of his audience, both as studies for artists, architects, and designers, and as dramatic representations of Second Empire design.



Figure 19. Édouard Baldus, *Untitled* (Column capital with horse heads), folio 5, element 405, salted paper print, 20.0 cm × 22.8 cm, ca. 1860. Hill Collection, Toronto.



Figure 20. Édouard Baldus, *Nouveau Louvre. Manège* from *Palais du Louvre et des Tuileries. Motifs de décorations*, volume I, plate 15, photogravure, 22.4 cm × 20.9 cm, 1869–71. Hill Collection, Toronto.

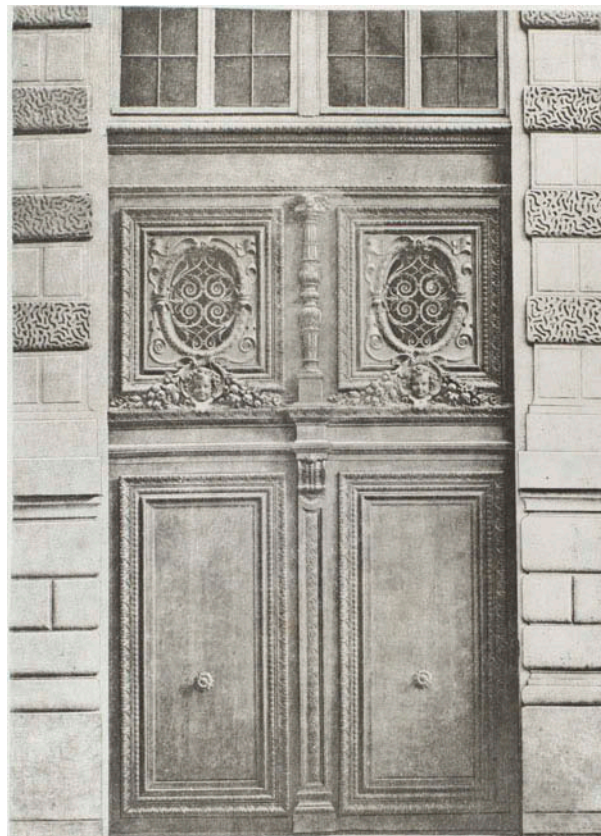


Figure 21. Édouard Baldus, *Nouveau Louvre. (Manège)* from *Palais du Louvre et des Tuileries. Motifs de décorations*, volume I, plate 26, photogravure, 18.0 cm × 22.2 cm, 1869–71. Hill Collection, Toronto.

Figure 22. Édouard Baldus, *Untitled*
(Exterior door and windows), folio 7, plate
89, albumen print, 25.0 cm × 11.5 cm, 1860.
Hill Collection, Toronto.



Figure 23. Édouard Baldus, *Louvre* from
*Palais du Louvre et des Tuileries. Motifs de
décorations*, volume II, plate 44, photogra-
vure, 23.5 cm × 16.2 cm, 1871. Hill
Collection, Toronto.



Conclusion

Palais du Louvre et des Tuileries arose from deliberate, reasoned choices made by Baldus in the interest of creating images of economic, pedagogic, and aesthetic value from his Louvre photographs. Why did he choose the photogravure process for this project? Beginning in the 1850s, identifying a process that would allow for the production and wide dissemination of stable photographic images was a pressing concern for both photographers and publishers. Photogravure and its potentialities were part of what photography *was*, and photomechanical printing represented in the collective imagination the medium at its most refined point. By experimenting with and working in photogravure, Baldus was engaging with photography as it was in his time. Furthermore, Baldus was ensuring that his work would remain of interest to his peers beyond his government commissions, guaranteeing its relevance to larger, contemporary discussions on the advancement of photography.

Aside from this, Baldus was simply taking advantage of the reproductive media that were available to him. *Palais's* worth as an entrepreneurial and conceptual project depended upon its being reproduced in quantity,⁴⁶ and Baldus was manifestly unconcerned with whether its prints appeared 'photographic', whether they confounded divisions between printmaking and photography, or how closely they approximated his New Louvre photographs. Indeed, photographic realism would have hindered his project. The photogravure process Baldus developed thus presented itself as the best means of turning his vast store of New Louvre photographs to a new and advantageous use, and the only way to produce the images he envisioned for the *Palais* volumes.

What did these hypothetical prints look like? Baldus conceived of *Palais* as an album of reproductions of artistic design, a genre he knew well from the early 1850s when he photographed paintings and sculpture by Corot, Delacroix, Michaelangelo, and others,⁴⁷ and from the three photogravure publications that preceded *Palais*, which were dedicated to the reproduction of fine and applied artworks. However, he faced a difficulty with *Palais*. At the time that he had documented the decorative elements of the Louvre, they were situated in such a way that made it difficult to regard them as objects that embodied an ideal artistic style, despite their Classical forms and sumptuous decoration. They were propped up on scaffolds, surrounded by debris, stamped with identification numbers, and inscribed with indications of their eventual location. To be presented as pieces of art, representative of the highest goals of architectural design, they had to be divorced from the building project for which they were intended, and photogravure allowed for this decontextualisation in a far more dramatic way than purely photographic processes. Furthermore, photogravure promised increased longevity and circulation for the prints, and made it possible for Baldus to retouch and arrange them so as to highlight their formal details. Thus, in their new form, Baldus's Louvre photographs became useful models for architects, designers, artists, and students of these fields, as well as attractive to an educated audience interested in national achievements in architectural and decorative design. Baldus had identified this market and, using photogravure, created a product to suit it.

How is *Palais* to be understood in relation to Baldus's larger output? It is characteristic of his work; it demonstrates his aptitude and interest in technical and compositional experimentation; and it reinforces his predilection for a dramatic picture, as well as his ambition and professionalism. For these reasons, this body of work should be considered as significant as the silver-based Louvre prints. Yet it has not been acknowledged as such. Indeed, this article is the first to examine any of Baldus's photogravure publications in depth or to fully integrate this branch of his production within the contexts of Baldus's career and the development and practice of photography in nineteenth-century France.

46 – As a written record indicating the extent of *Palais's* production has yet to be found, it is difficult to determine how many copies were created. I have thus far located volumes of the publication in seventy-six public and private institutions in thirteen countries in North America and Western Europe, indicating that it was widely disseminated.

47 – Daniel, *Photographs*, 35–36.

Scholars have already demonstrated that in order to understand what photography promised to mid-nineteenth-century practitioners we must embrace hybrid images as a crucial part of the story. Yet we are still only beginning to move beyond silver-based photographs as the only valuable subjects of study and collection. The continued omission of Baldus's photogravure publications from academic and curatorial evaluations not only of the photographer, but also of French photography during the nineteenth century more generally, is symptomatic of the work that remains to be done.