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Dominique Robert

Independent Scholar, Official Photographer for the Fondation pour la Sauvegarde de l'Art Français

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Photo Essay: Emulating Zodiaque: The Aesthetics of Black-and-White Photography applied to Romanesque Art & Architecture

DOMINIQUE ROBERT

Independent Scholar

Official Photographer for the Fondation pour la Sauvegarde de l'Art Français

Zodiaque was the name of an unusual publishing house, started in post–World War II France and developed in a rather unlikely place: the confines of a Benedictine abbey, deep down in rural Burgundy, with the nearest medium-sized town, Dijon, almost an hour and a half away.¹ The brainchild of a single monk, it grew from the humblest beginnings (an abbey periodical published every three months with only a symbolic readership at the start) into a publishing powerhouse whose success spanned half a century and produced several hundred thick-section volumes, most of which managed to achieve academic reference textbook status, but also commercial success with the *grand public* at large. There, in the abbey, hundreds of thousands of books, perhaps millions, were laid out, printed, and assembled by the monks, then shipped all over the world for decades, broadcasting such an inspiring, such a different vision of Romanesque art and architecture, that they contributed to molding the perception of several generations of scholars. Even today, with the venture sold in 2001 by the abbey to a commercial publisher and keeling over shortly thereafter, the Zodiaque books, long out of print, are still held by university libraries and often fetch truly unreasonable prices (hundreds of dollars or euros apiece) on the secondhand market.

I do not know what the age is of *Peregrinations'* average reader; however, I suspect that quite a few (many?) already know about Zodiaque books. For the others,

¹ I would like to acknowledge the considerable contribution made by Janet T. Marquardt, Distinguished Professor Emerita at Eastern Illinois University and Research Associate at the History Department of Mount Holyoke College. Her book, *Zodiaque, Making Medieval Modern, 1951–2001* (Pennsylvania State University Press, 2015) was tremendously helpful in learning about the behind-the-scenes of the Zodiaque publishing house, its books, and the photographs therein. Janet was also very welcoming and helpful in answering my various queries, and generous in allowing me to borrow background information from her book, which I encourage all Zodiaque aficionados to procure, assuming they haven't done so already.

and those who would appreciate a refresher, I will begin with an historical introduction — what filmmakers would call an establishing shot. I do keep in mind that this essay's focus is about photographing Romanesque art and architecture; therefore, I will keep the introduction short.

How Zodiaque began

During the postwar 1950s in France, knowledge of and appreciation for Romanesque architecture and art was low. The 19th century had seen a renewed interest from the Romantiques for all things medieval (architecture, art, statuary, illuminated manuscripts), but with an almost exclusive focus on Gothic, spurring the Neo-Gothic movement, which began in France just after the fall of the First Empire, almost a century after it did in Great Britain. Although the Romantiques may have coined the term “Romanesque” to describe basically anything that was pre-Gothic medieval, they showed very little interest in it.

Art in those days walked hand in hand with nationalism, with three major Western European countries trying to claim ownership over Gothic: the English calling their version of Gothic, Early English, implying they had invented it, while in *Notre-Dame de Paris* (first published in 1831), Victor Hugo sought to “kindle the nation's love for the national architecture,” meaning Gothic, as illustrated by the Paris cathedral. Concurrently, while Viollet-le-Duc designed a flamboyant (and unauthentic) Gothic spire for that cathedral (inaugurated in August 1859), between 1842-1880, the Germans completed the construction of Cologne Cathedral (between 1842 and 1880), begun in 1248 and never finished; its completion made it the tallest building in the world, and therefore the apex of true Gothic architecture which, as the name itself implied, had to have been born on the eastern side of the Rhine...

Then and well into the 20th century, Romanesque in France was of limited interest, including for such prominent art historians as Élie Faure and Émile Mâle. Modern painters, and in particular those practicing abstract art, were however trying to uphold the cause of Romanesque, as their artistic emphases were on concepts such as shapes, lines and rhythm, which Romanesque art exemplifies beautifully. Their voices were hardly heard.

It is in this context that a young man, born in 1924 in Burgundy in a rather humble family with a taste for artistry (his father was a forestry administrator, but also a novelist), finished secondary school. His parents agreed to let him study art for a year (including a sort of “internship” with sculptor Henri Charlier) in order to enable him to make a choice between his two callings: modern art and monasticism. The youngest of five brothers and a sister, his name was José Surchamp and it turns out he would find a way to embrace both callings after all.

In 1942, upon completion of that post-baccalaureate year of art studies, an 18-year old Surchamp walked through the gates of the Benedictine abbey of Sainte-Marie de La Pierre-qui-Vire in Burgundy, but therein brought with him his passion for modern art, and a strong belief in the existence of a previously unnoticed connection between abstract art and religion. “Don’t you believe [...] that abstract art, because it transfers our sense of reality, facilitates access to the sacred?” would he be quoted saying by Aragon,² years later. His parents’ decision to let him take the cowl (or at least try for it) at a time when legal majority was still at age 21, is testament to the young man’s interest in the “communal life of monks,”³ but may also have been intended to protect him against all manner of dangers at a time when, in the middle of World War II, France was under the Nazi boot and the dangerous temptation to join the Résistance lurked in many youngsters’ minds.⁴ One of Surchamp’s older brothers, Claude, was already a monk in the same abbey; from the parents’ viewpoint, it was probably a good thing.

During the course of his monastic training at the abbey, Surchamp obtained permission to pursue his interest in modern art (as well as in music, as all the Surchamp children had learned an instrument: his was the piano), including outside of the enclosure: with the war coming to an end, he left to spend the summer of 1946 at the home of Cubist painter Albert Gleizes in Provence, with the abbot’s permission — which was issued again for another stay in 1947. Soon after his return, he began painting frescoes in various parts of the abbey, and in 1948, his attempts were officially endorsed by the institution with the creation of the Cœur Meurtry (the “Wounded Heart”) workshop. Around Surchamp, who was ordained in 1948 and took the name Angelico, in homage to the famous 15th century Italian monk and painter, were two other monks, and the trio proceeded to paint a number of frescoes, both in the abbey and in other churches or religious institutions, that aimed at bringing together modern art and sacred art. They also featured their works in the abbey’s art journal, *Témoignages*, which Surchamp’s brother Claude had started in the early 1940s.

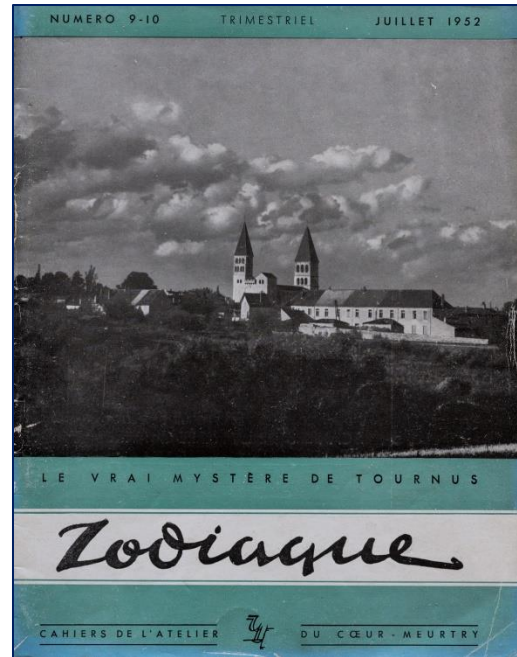
In 1950, as the monks at La Pierre-qui-Vire were in charge of the massive basilica of Vézelay, which doubled as the parish church, they organized within an exhibition in which Mediaeval and modern pieces were on display next to one another, prompting indignant reactions from some parishioners and other visitors. Surchamp defended the approach in an essay, which would later be included in the first issue of *Zodiaque*, the name chosen for the second art journal of the abbey which, in 1951, would kickstart the whole adventure of the Zodiaque publishing house.

² Louis Aragon, “Écrits sur l’art moderne,” in *Arts sacrés*, #2 (Nov.–Dec. 2009).

³ Janet Marquardt, *op. cit.*

⁴ Several of the monks at La Pierre-qui-Vire became members of the Résistance.

Figure 1 The *Zodiaque* journal, Issues 9–10, July 1952, on the abbey church Saint-Philibert of Tournus. Its photos would be reused in *Bourgogne romane*, the first book ever published by the abbey in 1954. Photo: author.



There were several ideas behind the *Zodiaque* project.

First, a disdain for the “official” sacred art that had been in favor since the 19th century: the realistic, tear-jerking imagery that was characteristic of *l’art saint-sulpicien* (because it was sold in particular in the many religious shops around the Saint-Sulpice church in Paris) was deemed bland and mawkish, if not outright decadent. Surchamp readily adopted Gleize’s view according to which (in Surchamp’s own words)⁵ “the evolution of the arts, starting from the spiritual and sacred ambition [of the primitive arts], had evolved towards a realism that petered out into materialism —thus following, it must be said, the same path as the civilizations.”

Second, a conviction that modern art, and in particular abstract art, with its emphasis on concepts such as shapes, lines and rhythm, was more conducive to meditation and facilitated the elevation of the mind. To quote Surchamp again,⁶ “he [Albert Gleizes] made me understand how superior, with respect to the sacred, Romanesque was to Gothic, and especially to which extent the researchers of modern art —the one derived from Cézanne, Van Gogh and Gauguin— formally came together with those of the 11th and 12th centuries.”

Third, the realization that Romanesque art and architecture, because of (inter alia) the absence of perspective and the emphasis on shapes, lines and rhythm, were the form of sacred art closest to modern/abstract, and therefore the most apt at “[recapturing] a sense of mystery and [facilitating] exploration of the sacred.”⁷

There was also another, more personal element: the young José, now Angelico, wanted to see the world —and see it he would, as his life was going to be in many respects very different from that of an ordinary Benedictine monk...

⁵ Dom Angelico Surchamp, *L’Aventure de Zodiaque, discours devant l’Académie de Mâcon*, June 2001.

⁶ Dom Angelico Surchamp, *ibid.*

⁷ Janet Marquardt, *op. cit.*

It seems that at no point in time did the monks envision the possibility of publishing photo books, i.e., books almost entirely filled with photographs, the only texts being the captions, and perhaps a foreword and a conclusion. That this was never part of the equation may have stemmed from the fact that at the beginning, even Surchamp did not have in mind to produce a book, let alone several of them; in fact, his initial ambition seems to have been limited to publishing articles in the abbey's periodicals. Apparently, it is a bookstore owner from Mâcon⁸ (who probably stocked copies of those periodicals) who first suggested that some articles published at Surchamp's initiative about Romanesque monuments of Burgundy, could be assembled into a book: thus *Bourgogne romane*, the first of the *La Nuit des temps*⁹ series, was born, "fortuitous in its origin," as Surchamp wrote in the foreword to the 5th edition.

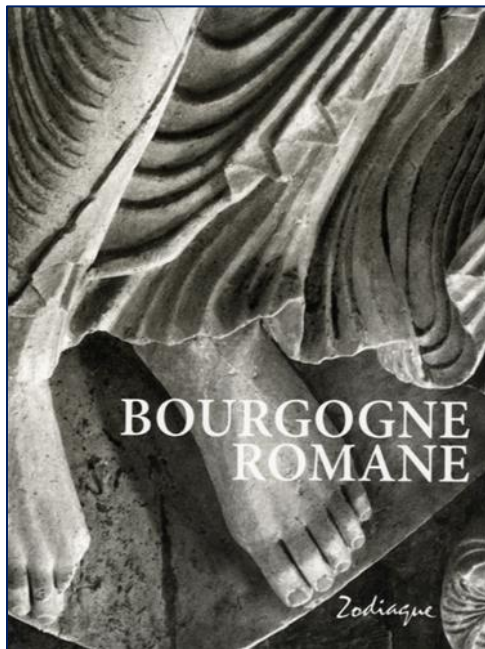


Figure 2 The cover of the first edition of *Bourgogne romane* in 1954: strikingly unusual and modern, dispensing with the canons of traditional documentary iconography, it sets the tone for what's to come: shapes, lines, and rhythm. Photo: Gérard Franceschi, with kind permission.

"What's my Angle?" – The Zodiaque approach to photography

Postwar years in France were marked by rapid economic growth and the accumulation of material goods in proportions never seen before. Automobiles became more commonplace and mass tourism dawned on the horizon as a distinct possibility for the years to come. For a monk who intended to make Romanesque known to the masses as a way to renovate Christian faith material and facilitate a renewed and "modern" approach to the sacred, it made sense to produce books that, from a practical standpoint, could also serve as

⁸ Dom Angelico remembers him as Léon Fernex.

⁹ "The Dawn of Time". Some say the name was chosen in reaction to (or to contrast with) the *Les Artistes de notre temps* ("The Artists of our time") collection. It may be so, but *La nuit des temps* also is a ready-made French expression, a way of saying "for a very long time": *Je le connais depuis la nuit des temps* means "I've known him since time immemorial." Naming a collection *La Nuit des temps* implies that the books will dive very deep into the past, and discuss subjects long forgotten, i.e., buried into the "dark night of time". It is a beautiful phrase, and I think this is what the monks had in mind when they chose that name for their collection: "We will take you deep into our past, and reveal things long forgotten..."

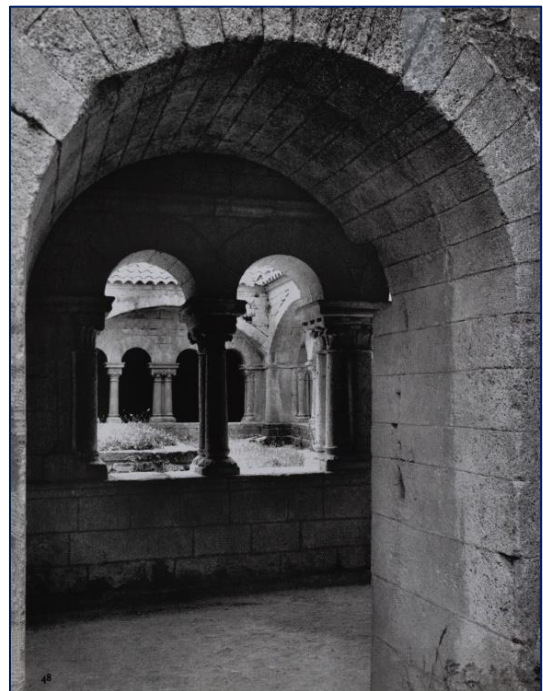
tourist guides and therefore contained maps, road directions and... photographs. The Zodiaque books meant to make Romanesque desirable, and in order to do that, they first needed to make it known, for truly in those days people (and among them Catholics) knew about Gothic cathedrals and sculpture, knew about *saint-sulpicien* “art,” but most of them did not think much of anything pre-Gothic (“primitive” [meant in a bad way] and “unrefined” come to mind), about which they knew basically nothing anyway.

Still it was necessary to make people understand, and above all feel, the monument’s message. “Guided tours¹⁰ [...] showed how important and urgent it was to make the arcane language of the 12th century monks understandable to those strange modern-day pilgrims that tourists are, who are more readily aware of the æsthetic splendor of a monument than of its deep significance.”¹¹

That explains why, from the very beginning, the photographs were of prime importance in Zodiaque books. Just like the faithful in the Middle Ages had to be educated by means of sculpture and frescoes because they could not read, a large proportion of the post-World War II faithful in France had to be “educated into Romanesque” by means of photography.¹² Zodiaque books simply had to have pictures.

Figure 3 Priory of Ganagobie, *Provence romane*, photo 48. Photo: Abbey of Sainte-Marie de La Pierre-qui-Vire, reproduced by author by permission.

Aside from the dust jacket illustrations, and the occasional inside color plate (of lesser quality than the rest of the photographs), color was never an issue. At the time, color photography, and especially color reproductions in books, were not considered mature enough, or else museum-caliber color processes were outside the shoestring budget of Zodiaque’s first years. It was also argued that color, where architecture and sculpture were



¹⁰ Surchamp refers here to the tours that monks conducted for visitors in Vézelay.

¹¹ Dom Angelico Surchamp, *ibid.*

¹² What was true for France also seemed to apply to other countries, as Zodiaque books sold very well, both in Europe and in the Americas.

concerned, provided unnecessary additional information (as stone was mostly white or off-white)¹³ that would detract from full appreciation of the shapes, lines and rhythm, the beholding of which was, for Surchamp, as we have said, conducive to meditation and hence served, to a degree, a religious purpose. To trigger such thought processes, modern, abstract art, may have been even more efficient than Romanesque — and certainly more than Gothic-and Renaissance-inspired naturalism that had turned into *saint-sulpicien* “art” by the end of the 19th century. However, openly introducing abstract art into the realm of the sacred was obviously too aggressive a move,¹⁴ therefore the next best way to convey that message would be to use Romanesque, which was more “pure,” even “primitive” (meant in a good way), an art made “for the people by the people”... and for that purpose, Surchamp would set about showing Romanesque architecture and art in a way never seen before, moving increasingly away (as book after book came out) from documentary iconography and truly venturing into the realm of modern art, the keys to which Gleizes had given Surchamp.

As Janet Marquardt puts it in the best possible words:

At the heart of the *Zodiaque* project is the photograph: the artistic expression of the editor, the *raison d'être* of the texts, the religious subject of the abbey, and the visual appeal that made the publications a success... He [Surchamp] did not want people to merely admire the photographs or even the medieval artwork [they] portrayed; rather, he hoped the bold manner of presentation would evoke a personal engagement between the aesthetic form and the holder of the book that might lead to an uplifting of the spirit — both artistic and religious. In other words, he hoped to activate viewers’ affective responses through the formal artistry of the photographs in order to bring them to a greater awareness of both the aesthetic and iconological values of Romanesque art.¹⁵

As the years went by, the text contents of the books became more and more elaborate, in-depth and geared towards academia, which, judging by the overall sales, did not detract the profane, touristy readership (perhaps already educated into higher spheres by earlier books), which in itself was an achievement one shall never cease to wonder about in this age of “reality television” and people living in homes entirely devoid of

¹³ Contrary, of course, to what medieval crowds had seen, as many churches were painted at least inside (including the statuary) and sometimes even outside, both during Romanesque and Gothic times.

¹⁴ As reactions to the Vézelay exhibits showed, and later the interdiction by the Church and the withdrawal from circulation of a modern art-inspired missal for children designed by Surchamp’s brother, Dom Claude Jean-Nesmy.

¹⁵ Janet Marquardt, *op. cit.*



Figure 4 Making Romanesque almost abstract: abbey of Notre-Dame de Montmajour, *Provence romane*, photo 111. Photo: Abbey of Sainte-Marie de La Pierre-qui-Vire, reproduced by author with permission.

any book.

I will now try to describe how the photographs in the *Zodiaque* books were taken, both from the technical and artistic viewpoints. I will do this by cobbling together various fragments of information gathered from different sources, and use reproductions (made by myself with the permission of the abbey, owner of the intellectual property rights) of some photographs as examples. Then, I will endeavor to

explain how, with human (and clerical!) means more limited than were available to the monks and their photographers, but also with a much broader and more sophisticated array of technical tools at our disposal, we may try to emulate the beautiful imagery we still admire as we page through the books. Contrary to the approach taken very consciously in the books, I will caption the photos appearing in this essay, both regarding subject matter and technical data, as this may be useful to some of you.

How the Zodiaque photographs were taken

Preliminary warnings

This essay is not intended to be a course about photography in general, not even about architectural photography; there are plenty of excellent programs out there that offer this kind of training, including some free ones that can be accessed via Youtube. I will assume mastery by my readers of basic photographic concepts, such as exposure, shutter speed, ISO sensitivity, focal lengths, focusing and depth of field, bokeh, zooms versus primes, DSLRs versus mirrorless cameras, etc., and I will do my best to explain other, more specific concepts as I go along. I strongly advise you to look up anything that may sound not familiar: all the concepts I will be talking about are described in all desirable detail all over the internet. Please also keep in mind that the photos shown herein were either (a) photographs of photographs (be they high-quality

photogravures), therefore not quite as good as what you have been used to see in the books, in spite of the precautions in reproducing them; or (b) JPEG files from my own original photographs, having been compressed for publication in *Peregrinations*.

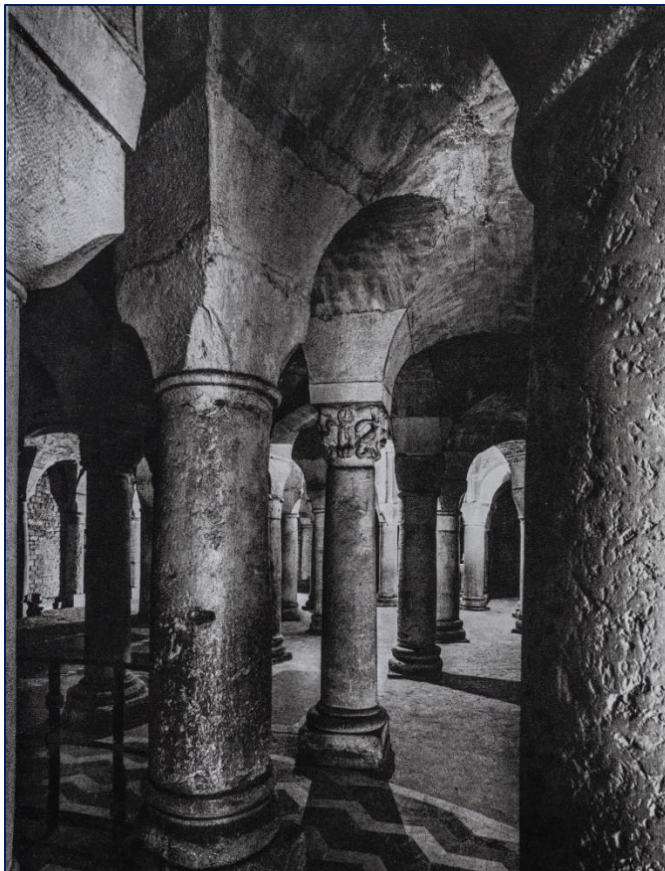


Figure 5 Crypt of Saint-Bénigne church in Dijon, *Bourgogne Romane*, photo 1. This is the very first photograph in the very first Zodiaque book ever published. It exhibits all the characteristic traits of Zodiaque photography and exemplifies its iconic qualities. Photo: Abbey of Sainte-Marie de La Pierre-qui-Vire, reproduced by author with permission.

Photographic equipment and accessories

It is not very easy to unearth precise information about the photographic equipment that was used by Dom Angelico and his assistants to photograph churches for the *Zodiaque* books. It is known that he first used the services of professional photographers: Roger-Georges Phéliepeaux, a man from Burgundy like himself, installed in the nearby town of Auxerre, or Pierre Kill, yet another man from Burgundy, installed in the other nearby town of Avallon. He also hired several other pros, among whom Pierre Belzeaux and Jean Dieuzaide, to whom we owe (apart from many gorgeous *Zodiaque* photographs) the amusing snapshots of Surchamp himself using a feather duster to clean capitals in a Catalan cloister, or more or less precariously perched high up in the air, in his black robes, on various scaffolds and firemen's ladders, to get closer to the sculptures on tympani...

Figure 6 Dom Angelico feather-dusting the cloister of Gerona (Spain) in 1959. Photo: Jean Dieuzaide, with kind permission.

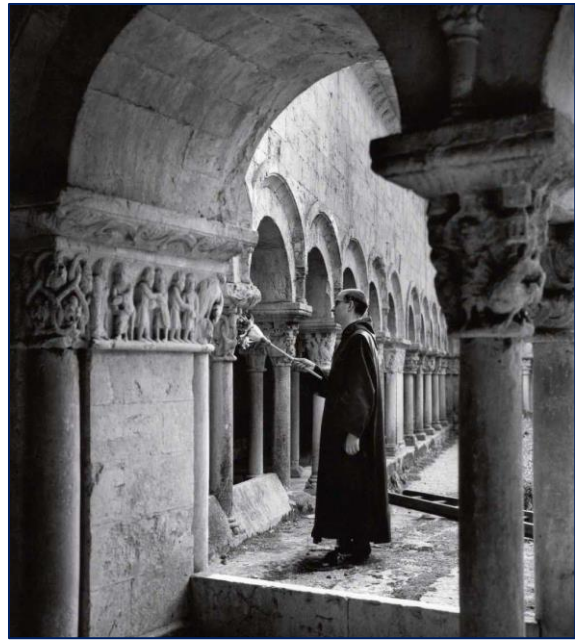


Figure 7 Dom Angelico, high up in the air on a firemen's ladder, on a reconnaissance mission of the tympanum of the Angoulême cathedral. Photo: Pierre Belzeaux, with kind permission.

While Surchamp always kept a close control over what he wanted photographed, and how he wanted it photographed, at first it was only artistic guidance.¹⁶ To that, and as years went by, he obviously added technical proficiency, as from the early 1960s, he had become *Zodiaque*'s sole photographer,¹⁷ and would almost always remain so until he retired from the job of editor-cum-photographer-in-chief and left La Pierre-qui-Vire altogether in 1995, as if the death of his brother Claude the year before had signaled the end of this long chapter in Angelico's life. He subsequently went on to live most of the rest of his days at another abbey, the women's convent of Notre-Dame de Venière in the small Burgundy town of Boyer, where he served as confessor, received regular visitors and admirers of his work, and even advised about further editions of the *Zodiaque* books, in different hands after the abbey sold the business to a Catholic printing house in 2001. He returned to La Pierre-qui-Vire in 2013¹⁸ and passed away in March 2018.

I have found two pictures that, judging from how Surchamp looks in them (he is still fairly young), seem to have both been taken during the same years. In one, he is standing next to what looks like a 4×5-inch Sinar view camera,¹⁹ although it is not clear if he is actually operating it; and in the other, he is holding a 6×6-cm, twin-lens Rolleiflex from the 1950s, similar to the one we see Jean Dieuzaide use in the 1960 photo by Louis Balsan below (**Fig. 10**), where Dieuzaide is perilously standing on the great tympanum of the Sainte-Foy basilica in Conques, while an unconcerned but watchful Surchamp (having finished using the broom we see at his feet to clean the sculptures) is watching as Dieuzaide's son Michel casts a proud look at the photographer.

¹⁶ "I always accompanied them [the photographers], telling them, most of the time, the shooting angles that I wanted. It seemed important for me to know the monuments, so as to make educated choices during the preparation of the upcoming books." Dom Angelico Surchamp, *ibid.*

¹⁷ "There came a time when traveling and shooting costs incurred by those specialists threatened the survival of our small house, in spite of the preferential terms they agreed to for our sake. That is when we decided to buy equipment in order to carry out most of the work ourselves." Dom Angelico Surchamp, *ibid.*

¹⁸ "He came back 'home' in 2013 and very simply took his place among us again, until he had to be admitted to the Infirmary." Dom Luc Cornuau, abbot of La Pierre-qui-Vire, in his eulogy of Dom Angelico, *France catholique*, March 3, 2018.

¹⁹ The make is confirmed by Dom Angelico who recollects, about a photo trip to Ireland: "We barely had time to set up the camera, then the shower came. We had to quickly throw a plastic sheet over the Sinar to protect it..." (Dom Angelico Surchamp, *ibid.*).

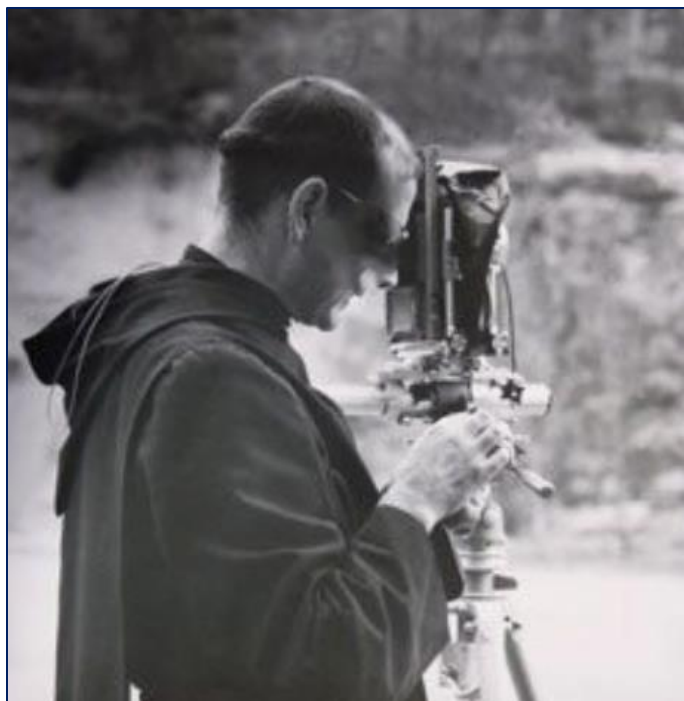


Figure 8 Dom Angelico and a Sinar view camera, folded and without lens. Photo: © all rights reserved.



Figure 9 Dom Angelico using a 6×6-cm Rolleiflex camera. Photo: © all rights reserved.

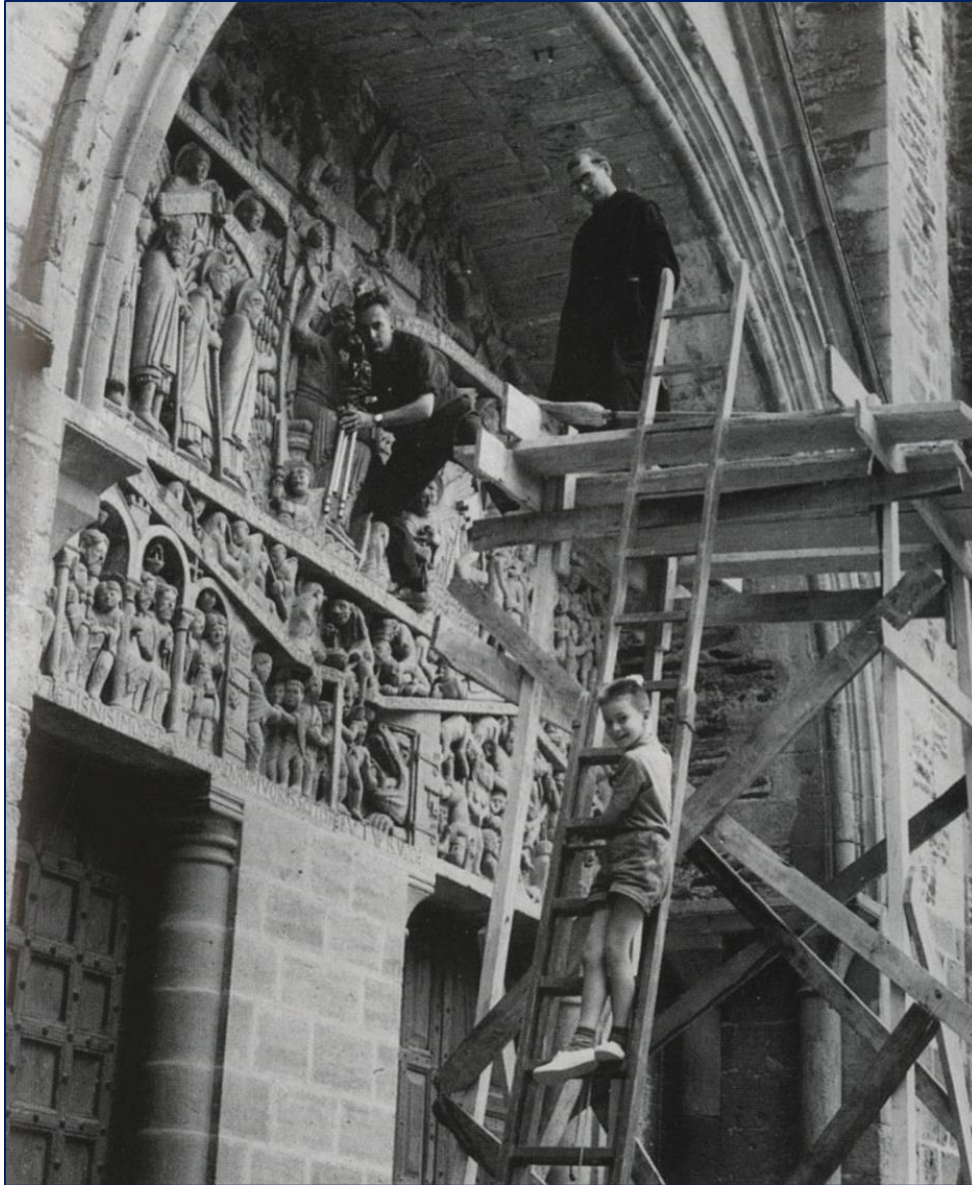


Figure 10 Dom Angelico and Jean Dieuzaide at work in Conques in 1960. Photo: Louis Balsan, with kind permission.

For all I know, those two pictures are illustrative of Surchamp's training years in photography, the Rolleiflex was Dieuzaide's and Surchamp was simply trying to familiarize himself with the controls, like he did with the view camera that might have been Kill's or Belzeaux's or Franceschi's. The next thing we know is that there is this other snapshot of Surchamp, this time in company with Brother Norbert, while Surchamp is shooting an Aragonese church in front of the camionnette (panel van) lent by the abbey to transport luggage, photographic equipment and props (including assorted brooms and feather dusters, no doubt). As the *Aragon roman* book was first published in 1971 (and there was only one edition), we can estimate that this photo was

taken in 1969 or maybe 1970.²⁰ In it, we see Surchamp operate a Hasselblad 500C on a Gilux tripod (consistent with our estimated period). Now, he is clearly in charge (as well as older and slightly plumper in the face), with Brother Norbert reverently holding the umbrella.

Figure 11 Dom Angelico operating his Hasselblad, sheltered by Brother Norbert and in front of the abbey van. Photo: Jaime Cobreros, with kind permission.



Marquardt touches only briefly on the subject of the photographic gear used by Surchamp and mentions “4×5-inch [...] Linhof or Sinar cameras [...] for the buildings or 6×6-inch²¹ [...]”

²⁰ Marquardt dates it from September 23, 1986, but I wonder if that date is right, as there was no Aragonese (nor Iberic altogether) book in preparation at that time: the first volume of *Portugal roman* was about to be published a few weeks later and the second would be a few months after that. Undoubtedly, all photography had already been done on those, and Portugal is nowhere near Aragon anyway. Next on the list was *Pouilles romanes* (Christmas 1987), then in 1988, the second tome of *Angleterre romane* and *Calabre & Basilicate romanes* (possibly photographed during the same trip as *Pouilles romanes*, as they are next door to each other). This reasoning seems confirmed by Surchamp himself in his speech in front of the Académie de Mâcon (previously quoted), placing him in Spain for a series of shootings in June 1969. We also know from the “feather-dusting photo” in Fig. 6 that there was another photography campaign in Spain, but that was years earlier, in 1959. Jean-Louis Peudon, in his small book about Dom Angelico, dates it from September 1960, specifying it was taken in Sabiñanigo, a small town in Aragon... but *Aragon roman* would not be published until 1971, and it’s unlikely they went there to shoot ten years ahead (J.-L. Peudon, *Dom Angelico Surchamp, inventeur de Zodiaque, artiste*, p. 66, self-published, BooksOnDemand, 2014).

²¹ 6×6 centimeters, not inches.

Hasselblad (always with a Zeiss 150 lens, sometimes with a doubler) or a Rolleiflex for the decoration.”

Most of that information will not surprise the trained eye, because regardless of the quality and skill with which the héliogravures were produced for the books in all the Zodiaque collections, they had to have come, most of the time, from very high-quality negatives or original prints, and in those days, that meant at least medium-format film, or large-format sheet film. Needless to say, Hasselblad cameras and Zeiss lenses were enormously expensive, being worth months and months of the average salary. This hasn’t changed, and to give you a 2021 example, today’s equivalent of the 500C we see Surchamp use would be the H6D – 100C, retailing for almost 35,000 euros in France, while the higher definition H6D – 400MS goes for a measly 48,000 euros. And that’s without any lens... In other words, and all things being equal, the abbey had forked out considerable amounts of money to outfit Surchamp, even if the gear was bought secondhand, which we do not know. Of course, ten years or so into publication, sales of the widely successful books had to have brought in equally considerable amounts of cash profits.



Figure 12 Documentation for the Hasselblad model 500C with its standard Zeiss Planar lens 80mm *f*/2.8. Catalog © Victor Hasselblad AB.

Some of the gear-related information given by Marquardt (and which she obtained directly from Dom Angelico himself) is very interesting. It confirms, in almost identical words, an interview Surchamp gave in the

Spring of 2011 to Cédric Lesec, one of the authors of *Zodiaque, le monument-livre*:²²

Whether it be the great photographers that Pierre Belzeaux and Jean Dieuzaide were, or myself thereafter, we always worked with view cameras: Sinar or Linhof, for architecture, and Hasselblads for sculpture.

²² *Zodiaque, le monument-livre*, ENS Éditions/Éditions Stéphane Bachès, Lyon, 2012, pp. 139 *sqq.*, partic. pp. 147–148, appearing three years earlier than Marquardt’s work.

In addition, Marquardt provides information on the format of those view cameras: 4×5 inches, the smallest format of camera made by either the Swiss Sinar or the German Linhof, but more than adequate for medium-sized books.²³

Some of that technical information, however, raises questions. First of all, as you can see in the **Fig. 11** photo above, Surchamp is using a Hasselblad while taking an outside shot that looks like a general view of whatever church he is photographing. Judging by where photographer Jaime Cobreros is standing, the two Benedictine monks are not particularly close to their subject. This tells us first that the Hasselblad was not only used for photographing sculpture and decoration up close.

Then, the lens on the camera is not a 150mm, but a standard-issue Zeiss Planar 80mm *f*/2.8 lens²⁴ (with its hood on), which was usually sold with the camera (nowadays, we would call it “the kit lens”). On medium-format, 6×6 film, that lens would be equivalent to a 44mm lens on a “normal” camera, like the Canons and Leicas and Nikons of the film days (which, now that digital sensors have almost entirely replaced film, we call somewhat confusingly “full frame cameras”). In other words, the lens we see Surchamp using would never have had enough “reach” to shoot closeups of sculpture like we see in the books, not from that distance—but, on the contrary, would have been acceptably wide enough to show at least part of a façade or of an apse, possibly all of it if the building were distant enough. A 150mm lens (as mentioned by Marquardt) would have provided almost twice the reach, being comparable to an 85mm on our modern-day “full frame” cameras, and indeed, back in the day, Zeiss made two such lenses for Hasselblad cameras, an *f*/4, and a more expensive, faster *f*/2.8, which would have been enormously costly—and pointless, as Surchamp needed depth of field and would not benefit from a fast lens that he would have used substantially stopped down anyway. Bokeh was not the point.

Considering that, as we have seen in previous pictures, Surchamp did not hesitate to use scaffolds and ladders to bring himself up close to his subject, a 150mm on 6×6 film would have sufficed; a “kit lens” on a Hasselblad would have done the job too, assuming one was able to get close enough.²⁵ To give you an indication, for closeup

²³ A 4×5-inch negative would be 10×12.7 centimeters. The books in the *Nuit des temps* collection were 17×22 centimeters, while those in the *Travaux des mois* were 21×25, and almost the same (21×26) for the *Points cardinaux* series. Therefore, even assuming a full-page photogravure print, almost no enlargement was required, ensuring the sharpest possible photographs. When using a 6×6-cm Hasselblad or Rolleiflex negative, a 4× enlargement ratio would be required, which remains very reasonable.

²⁴ See it better in Fig. 12.

²⁵ A large-format view camera is bulky and heavy and will not tolerate any tremor while the photo is being taken. It cannot be used handheld and certainly not while perched on some ladder. A Hasselblad could conceivably be used that way, although it would require a good amount of self-control and photographic expertise. A view camera would require the stability of a platform to set up its mandatory tripod.

shots in fairly large (and high!) churches, I often use a 135mm lens, and sometimes a 200mm telephoto when shooting from ground level. The equivalent on a Hasselblad would have been almost 400mm. Today, the longest focal length available from Hasselblad is 300mm.

Hence the use of a so-called “doubler,” probably translated directly from the French *doubleur*, which was a term commonly used during the film photography era for what we would call today a 2× teleconverter. I didn’t think such a thing ever existed for Hasselblad, as the (relatively) inexpensive *doubleurs* were of notoriously mediocre optical quality, but lo and behold, Zeiss did manufacture one for Hasselblad cameras, called the Mutar 2×! If Surchamp used one, that would have given him the reach he must have needed sometimes, in spite of all his ladders. The only problem is that *doubleurs*, even when made by Zeiss were, well, mediocre. I do better understand now why I have sometimes had the impression that some Zodiaque photos were noticeably “softer” than others!



Figure 13 Eve, Museum of Autun. *Bourgogne Romane*, photo 100. Photo: Abbey of Sainte-Marie de La Pierre-qui-Vire, reproduced by author with permission

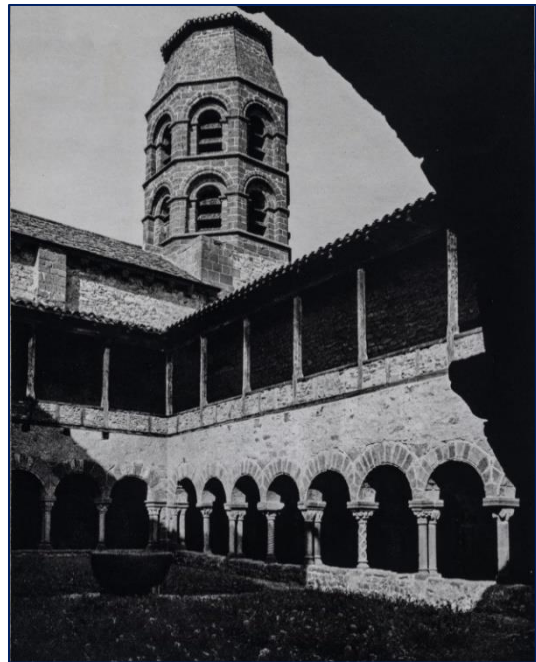
Viewpoints and perspective

In *Zodiaque* books, you will rarely find general outside views of a monument, and even fewer views of a monument in its local context. When you do find one, it will often be a color photograph of comparatively inferior quality. It is not that outdoor shots cannot be treated with the same palette as indoor ones: look for example at this photo I took of the cloister and bell tower of the abbey of Lavaudieu in Auvergne:

Figure 14 Abbey of Lavaudieu (Auvergne). Nikon Z7, Nikkor 19mm *f*/4 tilt-shift lens.



Figure 15 Abbey of Lavaudieu, *Auvergne romane*, photo 109. Photo: Abbey of Sainte-Marie de La Pierre-qui-Vire, reproduced by author with permission



You may be interested in comparing it with a similar view from *Auvergne romane*, which shows a narrower field of view, much deeper blacks (which could of course be achieved with digital photography) and in general a more limited array of shades of grey (look in particular at the walls above the cloister arcature). This comparison gives you a good first assessment of what can be expected when using today's gear (and software tools) versus yesterday's

If Brother Angelico did not want to have too many such photos, it is probably because they looked too documentary and could not really be nudged towards abstraction. What you will find more often are photos of apses or façades (or parts thereof), and only in such cases will you occasionally find images that do not fully comply with the diktats of perspective and vanishing points, which are otherwise fully abode by. We will get back to that later.

Most of the photos in the Zodiaque books have been taken indoors. If we set aside the close-ups which I will discuss later, most of those indoor shots show only parts of the architecture of the concerned church. You will see three-quarter views of the nave and aisles, head-on shots of transepts and apses, sometimes including the choir, but very rarely full shots of the whole length of the nave, regardless of how small or large the church is. My impression is that whole-length photos were also regarded as too conventional, and Surchamp always tried to pass on a flavor of originality in his use of photography. The "quest for originality" is one of the worst possible sins for a scholar, and has led to the commission of more blunders than can be counted, but in the case of Dom Angelico, it was always used with a strong sense of purpose, which makes it very effective. In this domain, we can only walk in the footsteps he left for us.

Aside from perspectives and choice of viewpoints, Dom Angelico had at his disposal three things you will most likely not have, or not to the same extent:

- First, he had a lot of time, which is the most precious commodity. As his photo expeditions were planned over weeks, if not months, he could and would devote at least one full day to each monument, sometimes several, which is a luxury few of us will have:

A large edifice cannot be photographed in one day —and even then, you need to have a sunny day! [...] We would picnic on-site at midday —a midday that would often be at 4 or 5 in the afternoon, Spanish hours! — because the midday sun is often the ideal time to photograph an oriented church. Provided that you are a bit nimble and quick, you can move from the east-oriented apse to inside views illuminated by the Sun then fully in the south, and on to the façade that will soon receive a low-angled, raking light well suited to emphasize the reliefs.²⁶

²⁶ Dom Angelico Surchamp, *ibid.*

Figure 16 A rare full view of a nave: the Saint-Nectaire church, *Auvergne romane*, photo 40. Photo: Abbey of Sainte-Marie de La Pierre-qui-Vire, reproduced by author with permission.



- Second, being a monk and coming from a powerful Benedictine house, he benefited from what I would call “the clerical VIP pass”: churches normally closed would be opened for him; access would be granted to places not normally available to the public (and often providing the best photographic angles); precious statues and reliquaries would be readily taken out of vaults and locked display cases to be shot outside in better light; no objection would be raised to the erection of scaffolding in the nave to give closer access to capitals; local priests and fire brigades would only be too

happy to oblige with the loan and setup of ladders of varying lengths... Even with all those facilities, arrangements had to be made in advance, and this is a bureaucratic part of the photographic work you will absolutely need to take care of as well if you want to avoid serious disappointments. More on that later.

- Third, he had at least one assistant, and could count on (or muster) the help of quite a contingent whenever he wanted a church cleared of dozens of pews or heaps of building materials —no objection at all from the local clergy, whereas today, we have to deal with multiple religious posters and notice boards awash with glaring colors, that block our perspectives and ruin our mediæval ambiances, that we have to take down or move on the sly, hoping no one will see us until we can put them back —not to mention those that we so often have to “fix in Photoshop” because there was no other way. Not having all those facilities at your disposal, you will need to make up for them by being well organized and planning in advance (see *Approaching the shot* below).

From a technical viewpoint, those indoor pictures require some comments. While a number of them were obviously taken with a wide-angle lens, many others, and among the most striking, feature a compression of planes that is usually associated with longer lenses, while at the same time offering the straight verticals. The combination of the two is very typical of Zodiaque photography, as illustrated in **Fig. 16**.

This effect derives from the use of a longer lens, probably equivalent to a 50 to 85mm on a modern full-frame camera: the nave in Saint-Nectaire above is over 40 meters long, and it looks half that length, while retaining all the breadth and perfect perspective of a shifted lens, and the wow! factor of a wide-angle. This is made possible because on view cameras like the one that was most certainly used to take this photograph of Saint-Nectaire, the shifting mechanism is on the camera itself, not on the lens, allowing it to be used with a variety of lenses, wider and longer: here, the longer length provides the compressed distances, while the shifting preserves the perspective and the ampleness. It can be replicated, as we will see below.

Another trait of Zodiaque photography is the use of very deep blacks, which were easy to obtain with photogravure (itself a costly printing process, though). The scale of greys is well preserved, while the blacks are very dark, accentuating the dramatic effect. This technique is also used to make the background disappear entirely to better isolate the main subject.

Figure 17 Abbey of Moissac, *Quercy roman*, photo 31. Photo: Abbey of Sainte-Marie de La Pierre-qui-Vire, reproduced by author with permission.



Figure 18 Stoup, church of Grézieu-la-Varenne, *Lyonnais & Savoie romans*, photo 98. Photo: Abbey of Sainte-Marie de La Pierre-qui-Vire, reproduced by author with permission.

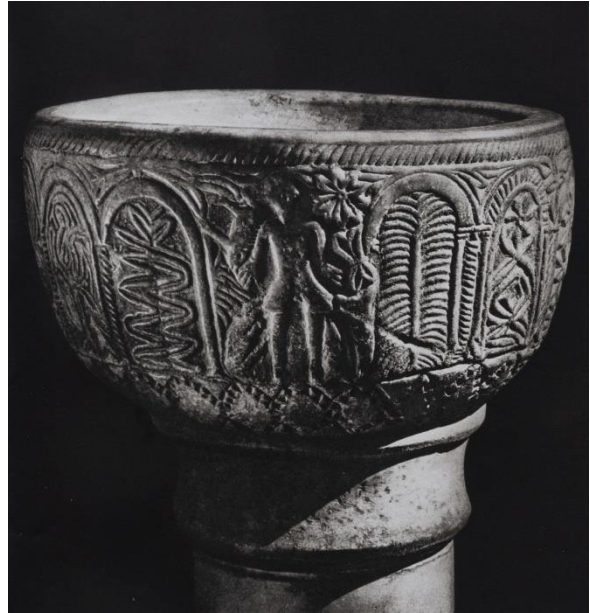


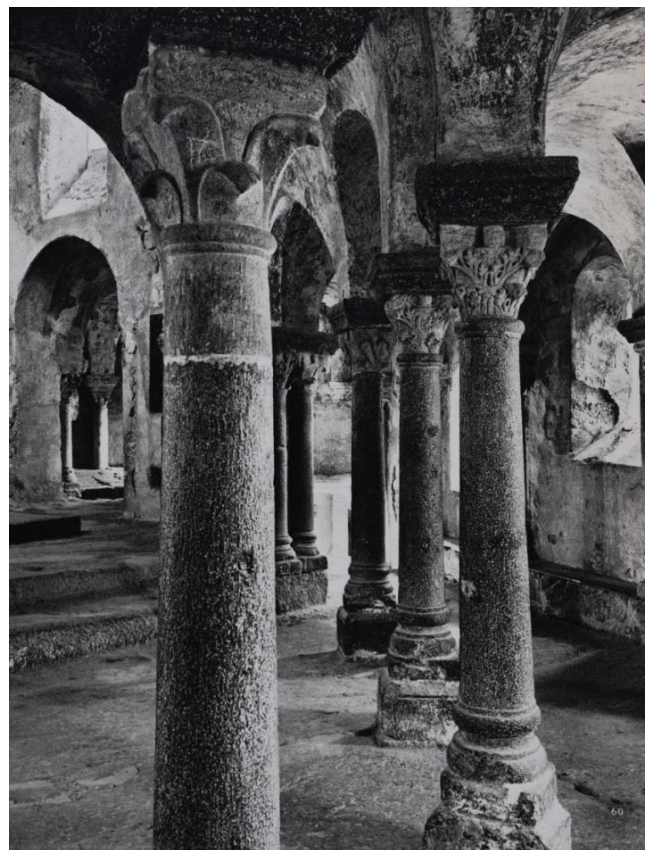
Figure 19 Abbey of Moissac, *Quercy roman*, photo 39. A remarkable view, only made possible by the exceptional access rights that came with the “clerical VIP pass”... Photo: Abbey of Sainte-Marie de La Pierre-qui-Vire, reproduced by author with permission.

Figure 20 Abbey of Paray-le-Monial, *Bourgogne romane*, photo 50. Probably the most striking photograph in the *Zodiaque* collection, this abstract shot would not have been possible without some very special permission to access. Photo : Abbey of Sainte-Marie de La Pierre-qui-Vire, reproduced by author with permission.



Figure 21 Saint Michel d'Aiguilhe chapel, Le Puy, *Forez & Velay romans*, photo 60. Photo: Abbey of Sainte-Marie de La Pierre-qui-Vire, reproduced by author with permission.

In addition to using medium-length lenses combined with lens shifting capabilities, Don Angelico would often use off-center viewpoints (as shown in **Fig. 16**), providing sort of “three-quarter views” of whatever architecture he intended to show, and framing his composition so that only part of that architecture was included. Once again, the idea was not to document, but to create in the viewers a



half-abstract impression, a mental image conducive to reflection and thought.

The “clerical VIP pass” I mentioned above, giving Dom Angelico and his team access to parts of churches not normally open to visitors, allowed them to shoot from strikingly original viewpoints.

When shooting from ground level like the rest of us, Dom Angelico would strive to find viewpoints emphasizing the concepts of forms, lines and rhythm, even if that meant putting a column smack in the foreground, seemingly blocking part of the view, but in fact leading our eye into those very concepts, such as in **Fig. 21**. The lens that was used is not a wide-angle, it is probably a “normal” focal length lens (corresponding to a 50mm or thereabouts on a modern-day full-frame camera), even possibly a short telephoto lens, as it slightly compresses the various planes in the image to accentuate this idea of rhythm, even if that means cutting off the base of a column or two, which would be frowned upon in classic architectural photography.

It is also quite possible that this image was cropped into to select only part of the original frame. Nowhere have I found undisputable evidence of any such practice during the photogravure process, and nowhere any statement about the sacrosanctity of the original framing... As we will see below, post-processing of the Zodiaque photographs involved some pretty heavy trickery...

Regarding closeups of sculpture, they are usually tackled head-on, at very close range. For us in this day and age, that means at least a stepladder (and the authorization to deploy it), sometimes quite a tall one. As already noted, if I can toy with the idea of shooting handheld, or maybe with the help of a monopod resting on the stepladder, in a dimly lit church, with a modern stabilized camera, this kind of exercise was out of the question with a view camera, and even with a heavy and un-ergonomic Hasselblad.

Both those cameras required a sturdy tripod, and thus some sort of platform offering enough real estate to set it up on. I can vouch for the fact that, for example, the magnificent low-relief sculpture in **Fig. 23** (part of the Arch of Gerlannus in Tournus) sits more than 2.5 meters above ground in a place not easy to access; setting up a large camera exactly level with it involved some logistics, and I’m not even talking about monumental tympani 10 or 12 meters above ground!

We will of course, most of us and most of the time, not be able to match those achievements. Sometimes, we will get lucky, as there are rare cases in which, for example, a series of capitals have been deemed too unique and precious for the originals to remain in place high above the ground: they were brought down to eye level for everyone to admire them,²⁷ or they sit safely in a museum, sometimes right next to the church itself. In cloisters, the columns are not tall: if the light is good, you may be able to shoot handheld and level with the capitals, as shown in the photos of the

²⁷ Such are the famous capitals in the former abbey church of Mozac in Auvergne, shown in Figs. 28 and 29.

Lavaudieu and Tourtoirac cloisters (**Figs. 24- 27**). Otherwise, a tall tripod²⁸ will save the day.

Crypts also are (usually) low places where sculpted capitals are within easy reach (see photos of the Cruas abbey, Champdieu priory and Saint-Martin church in Aime, **Figs. 30-33**).

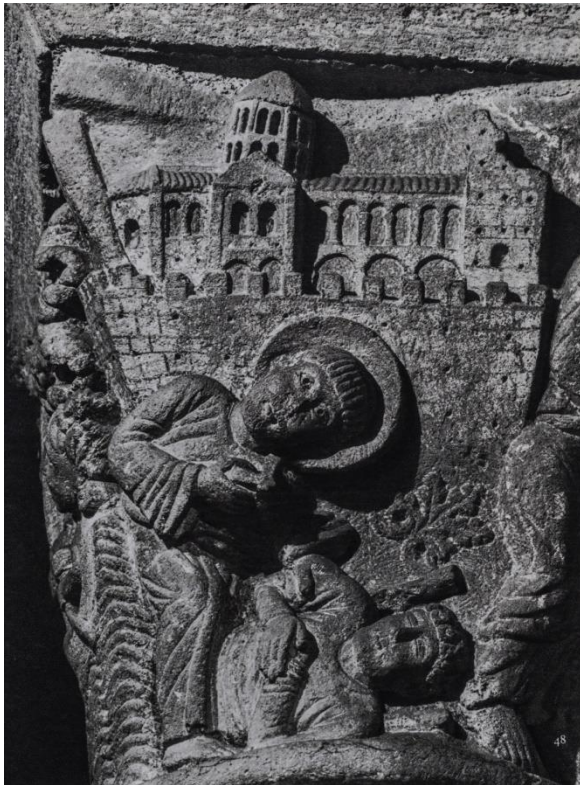


Figure 22 Saint-Nectaire church, *Auvergne romane*, photo 48. Photo: Abbey of Sainte-Marie de La Pierre-qui-Vire, reproduced by author with permission.

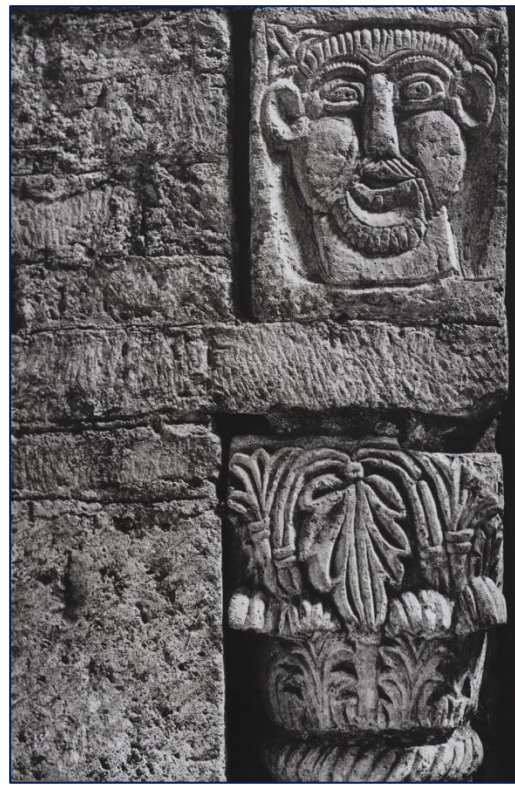


Figure 23 Saint-Philibert Abbey, Tournus, *Bourgogne romane*, photo 15. Photo : Abbey of Sainte-Marie de La Pierre-qui-Vire, reproduced by author with permission.

²⁸ My tallest tripod gives me a maximum height of 2.30 meters (that's roughly 7.5 feet) and there are times when it is barely enough.



Figure 24 Cloister, abbey of Lavaudieu (Auvergne). Nikon Z7, Nikkor 19mm *f*/4 tilt-shift lens.



Figure 25 Cloister, abbey of Lavaudieu (Auvergne). Nikon Z7, Nikkor 24~70mm *f*/4 S lens.



Figure 26 Cloister, abbey of Tourtoirac (Dordogne). Nikon D810, Nikkor 35mm *f*/1.4 lens.



Figure 27 Cloister, abbey of Tourtoirac (Dordogne). Nikon D810, Nikkor 35mm *f*/1.4 lens.



Figure 28 Capital, former abbey of Mozac (Auvergne). Nikon D810, Nikkor 24mm *f*/1.4 lens.



Figure 29 Capital, former abbey of Mozac (Auvergne). Nikon D810, Nikkor 24mm *f*/1.4 lens.



Figure 30 Capital in the crypt of the former abbey church of Cruas (Ardèche). Nikon D850, Nikkor 19mm *f*/4 tilt-shift lens.



Figure 31 Capital in the crypt of the former abbey church of Cruas (Ardèche). Nikon D850, Nikkor 19mm *f*/4 tilt-shift lens.



Figure 32 Panoramic photograph of the crypt of the priory of Champdieu (Forez). Composite of 3 exposures. Nikon Z7, Nikkor 19mm f/4 tilt-shift lens.



Figure 33 Panoramic photograph of the crypt of the Saint-Martin church in Aime (Savoy). Composite of 3 exposures. Nikon Z7, Nikkor 19mm f/4 tilt-shift lens.

More often, we will have to make do with whatever best angle we can contrive and resign ourselves to shoot from below... which after all is not so bad, as that is indeed the exact angle from which capitals and other elevated sculpture were meant to be viewed and “read” by the faithful. Most figures will look right at you, and their heads, which are often too large for their bodies, will look about right from where you will stand, as they were designed to. If possible, step back so that the angle under which you will be working will not be too extreme (see the capitals in Conques, **Figs. 34-35**). If

the sculpted motifs are nonfigurative (entirely or almost), photographing them at an angle will be less of a problem (see the capitals of Le Puy, **Figs. 36-37**).

Figure 34 The angel is looking right at you... Cupola of the abbey church of Conques (Aveyron). Nikon D810, Carl Zeiss Apo-Sonnar 135mm *f*/2 lens.

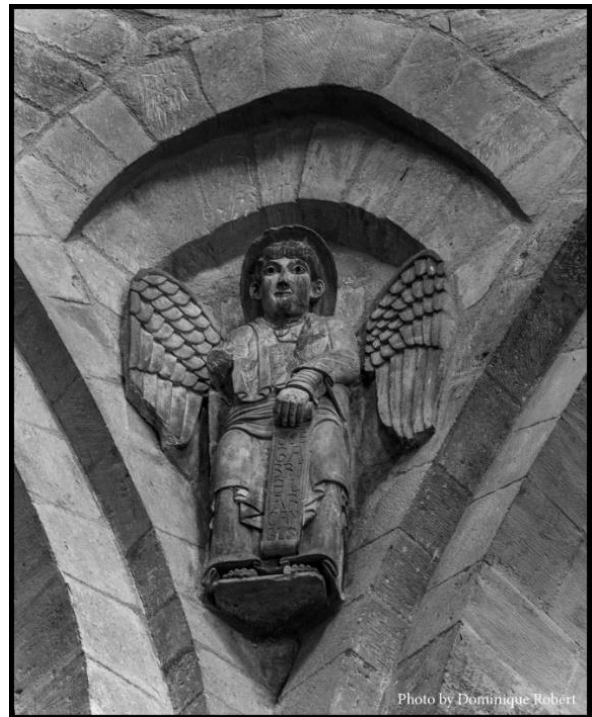


Figure 35 Capital decorative programs are meant to be “read” from below. Abbey church of Conques (Aveyron). Nikon D810, Carl Zeiss Apo-Sonnar 135mm *f*/2 lens.





Figure 36 Capital, cathedral church of Le Puy (Velay). Nikon D810, Micro-Nikkor 105mm *f*/2.8 lens.



Figure 37 Capital, cathedral church of Le Puy (Velay). Nikon D810, Micro-Nikkor 105mm *f*/2.8 lens.

The equipment you will need to emulate the Zodiaque look

Camera

As in all fields of photography, the number of megapixels packed on your camera's sensor should only be relative to your intended uses. If you will only ever look at your photos on a computer screen or on devices such as smartphones or tablets, and therefore at sizes and resolutions compatible with those screens, a 24-megapixel camera is more than enough. In fact, even half of that would suffice! Printing is more demanding than viewing on a computer screen because the required resolution is 300 points per inch, instead of the standard 72 PPI for internet use, and even at that higher resolution, a 7.2-megapixel camera would be enough to print 8 × 10s, and great 16 × 20 prints would only require a 28-megapixel camera to keep a resolution of 300 PPI. Only if you envision printing at larger sizes, or cropping heavily into your photos (which shouldn't normally happen when photographing old stones), will you need a higher megapixel count.

Figure 38

Showing monuments in their context can help to create the ambiance, provided the surroundings lend themselves to it. Ruined church of San Nicola di Silanis,



More important than pixel count is *pixel size*. If 8 million pixels can be crammed on a smartphone sensor, those pixels are obviously much smaller individually, and much closer to one another, than the same 8 million pixels comfortably sitting on the sensor of a camera, which is 10 or 20 times larger. Image quality and dynamic range (which will be discussed below) depend directly on the size of the pixels and how much space they have between them, which is why, if you are after the best possible image quality, you will want a camera with the largest sensor you can afford: at least an APS-C sensor (a little smaller than 15×24 mm), preferably a full-frame sensor (24×36 mm or thereabouts), or if your budget allows, a medium format one.

In summary, there is most likely no need for you to get anything bigger than 24 to 28 megapixels,²⁹ and most of the time, your typical use cases will require a lot less. A full-frame camera will be my recommendation for this kind of work,³⁰ as it is the best compromise all-round.

You do not need a camera that is particularly agile nor fast. Being able to shoot 12 frames per second or boasting a splendidly fast and reactive autofocus system that can unerringly follow a hummingbird in flight on a moonless night will be equally and

²⁹ See *Lenses and cropping* below.

³⁰ There are many articles on this subject on the internet. One of the best and easiest to read is by Sally Wiener Grotta on Tom's Guide website: <https://www.tomsguide.com/us/how-many-megapixels-you-need,review-1974.html>.

utterly moot. Overall image quality and wide dynamic range are what you want to look for.

Lenses³¹

Lenses in photography are like speakers in high-fidelity systems (before the age of MP3s): much less flashy than amplifiers, with tons fewer controls and settings, no dials and flashing lights, but... more important in achieving top-notch sound quality. Lenses, with both feet firmly planted in the realm of analog and just one toe or two in that of digital, will age a lot better than cameras. Like tripods, which I will discuss below, they deserve a lot of investment as good glass is expensive, but if well chosen, will stay with you for a long time: bodies come and go as technology progresses by leaps and bounds, lenses (and tripods!) remain.

That said, which lenses will you need to try and emulate “the Zodiaque look”? First, it is obvious that you will not need long telephotos, like our wildlife or sports colleagues.³² You will also not need fast lenses, because you will almost always³³ use them stopped way down to obtain a deep depth of field: if two lenses are equally good at $f/8$, why spend more on the one that opens at $f/1.4$ instead of, say, $f/4$, to almost never use the extra stops?³⁴ Furthermore, as we are working on sturdy tripods (see also below), we can pose for whatever length of time we need to compensate for the meagre quantities of light that will be allowed inside our lenses.

You will need one wide-angle lens, and one or two lenses to shoot closeups of more distant subjects. The wide-angle lens will be your workhorse.³⁵ It will need to be very wide, at least 24mm of focal length, to accommodate tight spaces, preferably 20mm

³¹ All the focal lengths I mention are for full-frame cameras, unless otherwise specified. If you use an APS-C camera, I trust you will know that, when I speak about “a 24mm lens”, it will translate for you into “an 18mm lens.”

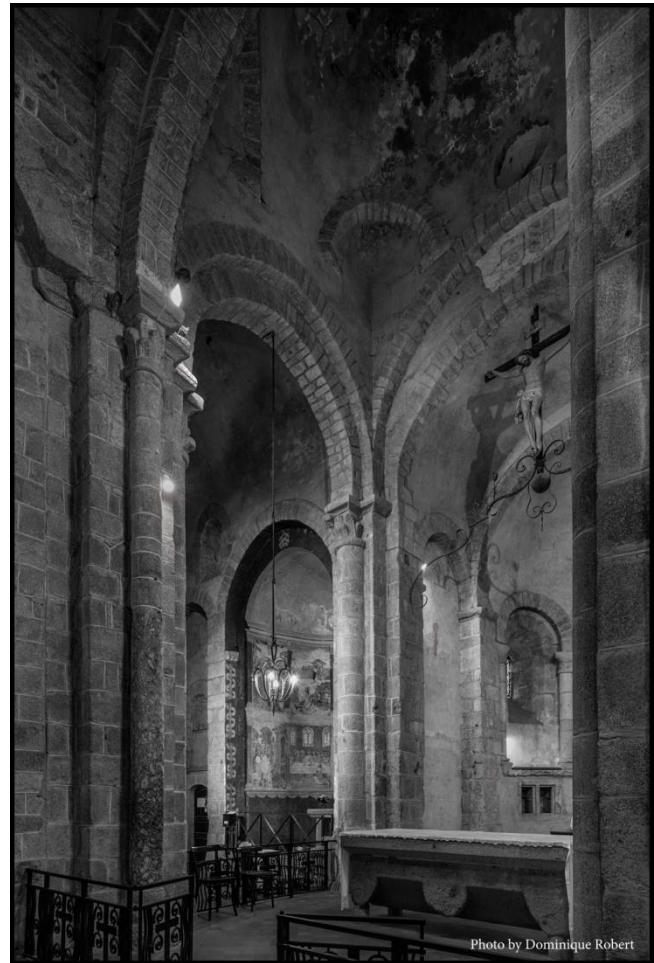
³² Let’s have a quick caveat, however: it may happen that in order to show in its environment, say, a lonely abbey church lost in a lush valley, your sole option would be to stand a kilometer or two away on a hilltop... From there, you will need a telephoto, but personally, I have never needed anything longer than 300mm, 400 in one exceptional case. When to bring such a long lens, which you would not normally need? That will be dealt with in the *Approaching the shot* section below.

³³ The only exception I can think of is closeup shots of sculpture or statuary, to better isolate your subject from its background. Then, you will use wider aperture values.

³⁴ Obviously, if the faster lens *also* happens to perform better when stopped down, then you should consider procuring it.

³⁵ I could conceivably imagine using a longer lens, and systematically stitching panoramas to produce wide-angle final photos. In fact, it would be an interesting technique to try, but it would require a very large amount of work (and extra equipment, including nodal point contraptions) during the shooting phase, as well as during post-production, while always taking the risk of an imperfect stitch. Going the wide-angle route is safer.

Figure 39 Keeping them straight even in tight places. Priory church of Pommiers (Forez). Nikon Z7, Nikkor 19mm *f*/4 tilt-shift lens.



or even 15.³⁶ It will of course need to be rectilinear, as we cannot afford to have distortion, and if we have to tolerate a modicum of it, it will need to be contained within limits that will make it easy to correct for in post-production.

You will have noted that, except in some very exceptional cases, no *Zodiaque* photograph exhibits those “converging verticals” that are the trademark of the amateur photographer, and make buildings look like they’re about to fall backwards. This happens whenever the photographer tilts the camera upwards in the hope of “making it all fit in”, and should of course be avoided. To do so, *Zodiaque* photographers used a basic feature of view cameras: the ability to shift the lens upwards, so as to include the very top of that bell tower, while always keeping the focal plane vertical, i.e., parallel to the walls of the monument. On our small, modern-day cameras, this is not a basic feature anymore, yet it can be very successfully emulated by using a tilt-shift lens.³⁷ Tilt-

³⁶ The widest rectilinear lens I use is a manual focus Carl Zeiss lens, the 15mm *f*/2.8 Distagon. I do not need it often v. the 19mm tilt-shift.

³⁷ Let us remember that, besides view cameras, *Zodiaque* photos were also taken with a Hasselblad camera. I have never heard of tilt-shift lenses for Hasselblads in the 1960s–80s; Hasselblad did make two short-lived adapters, the FlexBody and the ArcBody, but they were only introduced in 1996 or 97. Nowadays there are also adapters that provide that function, first and foremost the HTS 1.5× from Hasselblad themselves, which is a gorgeous piece of gear that gives tilt and shift movements to basically any Hasselblad-mount lens, for a measly 4,000 euros (and change).



Figure 40 Church of Saint-Martin in Aime (Savoy). Nikon Z7, Nikkor 19mm *f*/4 tilt-shift lens. Panorama made of 3 exposures stitched with PTGui software.

shifts are big, heavy, cumbersome, specialized lenses that come bundled with a hefty price tag and a steep learning curve, but without autofocus. Nevertheless, they are the absolute weapon of the architecture photographer. There are made only by a handful of manufacturers: Canon, Nikon, and a couple of third-party providers such as Laowa or Samyang, with results varying in quality. The best of them deliver stunning image quality. They are not fast (meaning both that it takes time to set them, and they usually have a fairly humble aperture), but once again, we do not need fast lenses in either of those senses, so that's all right.

I use a 19mm *f*/4 tilt-shift, and if super-ultra-wide is called for, I have a 15mm *f*/2.8 which in spite of the measly 4mm of difference in focal length, is substantially wider than the 19mm. The former I almost always use, as its shifting capability is truly irreplaceable, and in case of dire need, I have a special collar that allows me to shoot panoramas, although I must admit I have never so far had to resort to that last-ditch option. Simply shifting the lens (while, if needed, rotating it at the same time) has so far given me ample coverage for panoramas, even in the tightest Merovingian crypts (**Figs. 32-33**). I also use an 85mm *f*/2.8 tilt-shift for that "compressed look" shown for example in **Fig. 16**, and a 45mm *f*/2.8 tilt-shift for... well, whenever 19 is too wide, and 85 too long!

Fig. 40 is an example of another interesting use of the panorama, to show almost the whole length and height of a magnificent northern side wall in the early

Figure 41 Balancing what is “up there” and what is “down there” helps keep clean verticals easily, without a tilt-shift lens. Abbey church of Conques (Aveyron). Nikon D810, Nikkor 35mm, $f/1.4$ lens.

Romanesque church of Saint-Martin in the town of Aime: three exposures did it, one with the lens shifted horizontally all the way to the left, one in the center, and the last one with the lens shifted all the way to the right.

If using tilt-shift lenses is not an option for you, and if you are not willing to correct your perspective in post-production because of the degradation to image quality, there is still a solution.

The converging verticals problem (and hence the need to use tilt-shift lenses) comes because, when we are photographing a monument at human height, a lot of what there is to photograph is above us, and very little below us. Therefore, we are tempted to tilt the camera upwards, thus creating the problem. To remediate it, an option would be to better balance the amount of subject that is above you vs. that is below: without setting up the complex scaffoldings that Dom Angelico sometimes used, if you can find a way to shoot from a higher location (anything from a stepladder to a first-floor or second-floor tribune in large churches), you may very likely be able to photograph with a normal lens.

Let's be honest, however: this will not happen often, because few churches have this kind of elevated floors, and when they do, access is usually not open to the public but may be negotiated...). The case of the abbey of Conques, where guided night-time tours of the church are organized, remains exceptional (see **Fig. 41**).

Apart from that wide-angle prime lens, preferably tilt-shift, you will need longer lenses for details. Specializing in Romanesque architecture, I rarely have to cope with super-high churches where details are almost out of sight. Consequently, I have happily

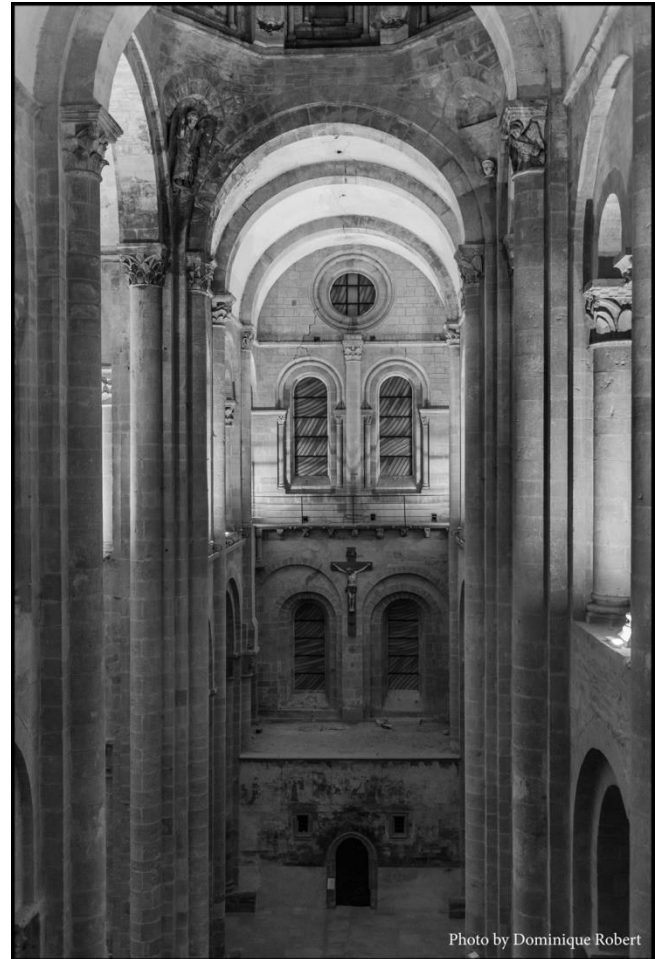


Photo by Dominique Robert

Figure 42 Bell tower detail, Saint-André church in Saint-Just–Saint-Rambert (Forez). To obtain the desired reach, this photo was taken in APS-C (cropped) mode. Nikon Z7, Sigma 135mm *f*/1.8 Art lens.



used a 105mm lens, sometimes a 135mm, as my long lens. In rare cases, I wished for a 200mm telephoto (which on those occasions, I had of course left at home upon apt guidance by Murphy). The bonus of the 105mm lens is that it is also a macro lens, which means I can use it for details as close as I could wish, up to 1:1.

And because, between 19 and 105 or 135mm, the gap is quite wide, I also bring a small and light 50mm prime lens, a middle-of-the-road solution that will often be enough in small churches. I find that those three lenses, the wide-angle tilt-shift, the “normal” and the short macro telephoto, manage to cover all my needs, 99 percent of the time. Alternatively, and as already mentioned, I use a 45mm and an 85mm tilt-shift lenses to obtain that “compressed perspective with tilt-shift amplitude” that is characteristic of Zodiaque photos... Often, I wish I had a Brother Norbert with me to carry the bag...

Lenses and cropping

I said above that 24 to 28 megapixels were, in my experience, enough for the kind of photography that is being discussed here. However, you will have noted from reading the captions that I use sensors much more “populated” than that: 36 megapixels for the Nikon D810, and almost 46 for the D850 and the Z7. The first reason why is that I use those cameras for other work as well, where the higher definition is necessary; and the second is that, indeed, there may be cases where you will find a sensor with more pixels useful: if you want to photograph a distant motif from as close as possible, but you cannot get physically near enough and your longest lens isn’t long enough. Then,

cropping will give you that extra reach.

For example, my mirrorless camera normally gives me 46-megapixel photos in full-frame mode. But if I crop to APS-C mode, it will still produce photos of almost 20 megapixels, which is substantial, and my 105mm lens, which was not long enough, suddenly becomes a 157mm telephoto lens! Therefore, what I said above about 24 to 28-megapixel sensors remains true, but keep in mind this caveat about possible cropping.

A word about aperture

I said above that we do not need fast lenses per se in this kind of photography, because we want to stop them down to obtain our deep depth of field. The question is, Stop down to where exactly? As you know, image quality degrades when you stop down too much, because an optical phenomenon known as diffraction steps in when the opening in the camera's iris becomes too small. When does that happen, and how far can you safely go? It varies from one lens to the other, but there is an easy way to make sure: look up good articles on the internet about your lenses' performance, especially articles that feature so-called "MTF charts." On those charts, you will see, stop by stop, how well your lens performs towards the center of the frame and in the corners; you will see what is its best aperture value (often called the "sweet spot"), and you will see at which point the quality begins to degrade seriously, owing to diffraction.

That information is, in part, theoretical, as you will not be shooting charts in a lab, yet it can guide you to make the right decisions in the field: for example, it is precious to know that a lens should not be used beyond $f/10$, and that it delivers its best image quality at $f/5.6$. I even know some photographers who always use their lenses at the "sweet spot" value only, and stack focus whenever necessary (see *Framing, focus and depth of field* below), giving themselves a lot more work in front of the computer, in exchange for the best image quality their glass can deliver. I have been guilty of that same sin from time to time, especially when I realize that, even if I stop down way beyond the sweet spot and enter into diffraction territory, my depth of field will still be too shallow...

A word about zooms

I have mentioned prime lenses. I know that some zoom lenses are quite good, even wide-angle ones. However, none of them are tilt-shift, and most of them will not deliver

Figure 43 The magnificent Cistercian abbey of Mègemont (Auvergne). Nikon Z7, Nikkor 14~30mm f/4 S lens.

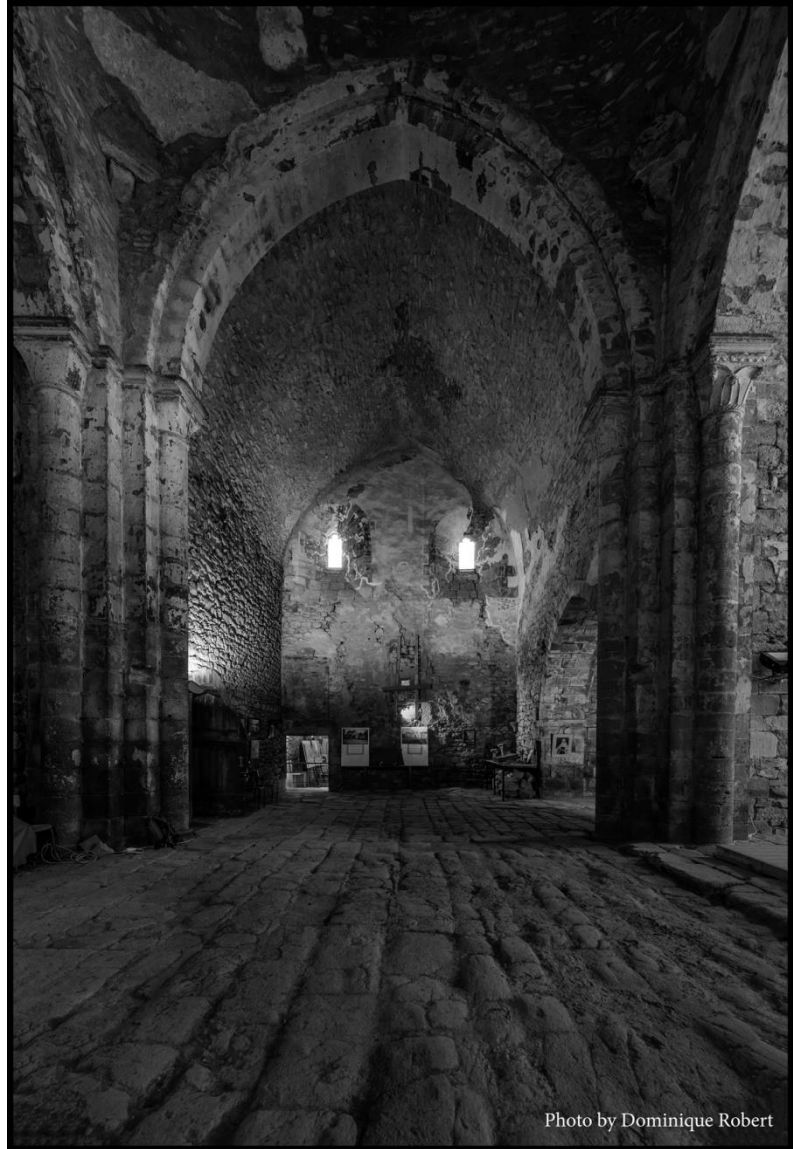


image quality on par with their prime equivalents, unless you start spending a lot more money, and even then... Additionally, most zooms are heavier and bulkier, and once again, we are in photographic situations where we should have a lot of control over things. Wildlife or sports specialists are never really sure where the action will happen; to them, zooms are necessary tools, but I do not believe they are for us. However, I have used them occasionally, as some photos in this essay reveal (see for example **Fig. 43**), and you should feel free to make your own opinion on the subject, and your own choices.

A word about autofocus

For those wildlife or sports people I just spoke of, fast and reliable autofocus is a godsend. For us, it is a convenience that should not detract us from always verifying in the viewfinder or on the back LCD screen, using the appropriate magnification ratio, that all that needs to be in focus indeed is before we press the shutter release (see *Framing, focus, and depth of field* below). Therefore, relying too much on the autofocus may entice us to get sloppy where depth of field is concerned. On modern-day mirrorless cameras (and some DSLRs as well), the focus peaking feature makes it extra-easy to see where the focus is, so much so that I often altogether disable autofocus on those of my lenses that have it.

Tripods and heads

Tripods come in many different varieties. I even know of a German manufacturer that makes them with four legs (quadropods, then?). They also are one of the domains in which very little technological progress occurs, the latest significant one being the use of carbon fiber (as rigid, if not more, than steel, and much lighter than aluminum), and that was 20 years ago. Occasionally, innovative products appear, but one quickly realizes that they have their own drawbacks and limitations, which less innovative ones didn't. Being immune to fashion trends, tripods should therefore be one accessory on which *Thou shalt not skimp*: a good one will last you decades. My oldest tripod is going on 17 years now, and I plan to use it for at least as long as that, as it is still functioning perfectly, even though I never babied it. You may, however, buy several excellent tripods, the only difference being their size and weight. I have a big one for studio use, or for when I know I will need the extra height and/or will not have to walk very far with it; a medium-sized one for general purpose uses; and a very small and light one for when I need to travel by plane or walk long distances.

As far as tripod heads are concerned, there are three kinds, and I have tried them all. The ball-head is the most common and the quickest to set, assuming you don't require a lot of precision, as it moves on 3 axes simultaneously, and finely adjusting one without changing the others is very difficult. The panoramic head, which moves along 2 axes only and requires what is called a leveling base for proper adjustment; it is more precise than the ball-head as you can adjust each axis independently, yet the adjustment is purely manual, so you have to move very precisely when minute adjustments are required, and the geared head, which is bulky and heavier than the previous one (did I mention more expensive?), but ensures millimetric, super-precise adjustment along each of the 3 axes independently, as it uses geared mechanisms that lock in place by default, so they cannot be mistakenly knocked out of alignment; it is the best head for architecture photography and any type of photography where you need very fine and repeatable adjustments of your framing. (Fig. 44)



Figure 44 Various types of tripod heads: from left to right, ball-head, panoramic head and geared head. Photos: courtesy of Really Right Stuff, LLC, Zhongshan Laitu Photographic Equipment Co., Ltd and Benro Image Technology Industrial Co., Ltd.

Whenever possible, you will prefer geared heads, of which there are much fewer manufacturers than for the other two categories. Geared heads are slower and will force you to work more deliberately, but that is a good thing, and in architecture and art photography, your subjects are rarely about to run away from you.

Using a good tripod and head combination (meaning: sturdy, very stable, and permitting fine adjustments) is key in quality architecture work, particularly indoors where available light is often limited and one needs to expose for several seconds, if not more, to preserve the balance of light and shadow intended by those who built the monument.

Coping with large differences in lighting

Photographing inside churches will cause you to encounter very challenging lighting conditions. There will be strong highlights where the stone is hit by direct sunlight coming in through the windows, and (comparatively) very dark areas where shadows remain. (**Fig. 45**)

You will therefore need to know the extent of the dynamic range your camera sensor is capable of recording in the same exposure. You will need to know the theoretical value expressed in EVs, and you will also need practical experience based on previous trials and errors, so as to be able to evaluate “by eye” most lighting situations: it will save you a lot of time. In uncertain cases, or if you think your eye is not yet trained enough, you may want to use a light meter to measure the incident light falling on the various parts of your scene, and verify whether those values fall within what your sensor can record (hence the need to know your “theoretical” dynamic range in EVs). If you do not have a light meter, you may use your camera’s meter in spot mode to measure the reflected light in the darkest and the brightest areas. What I often used

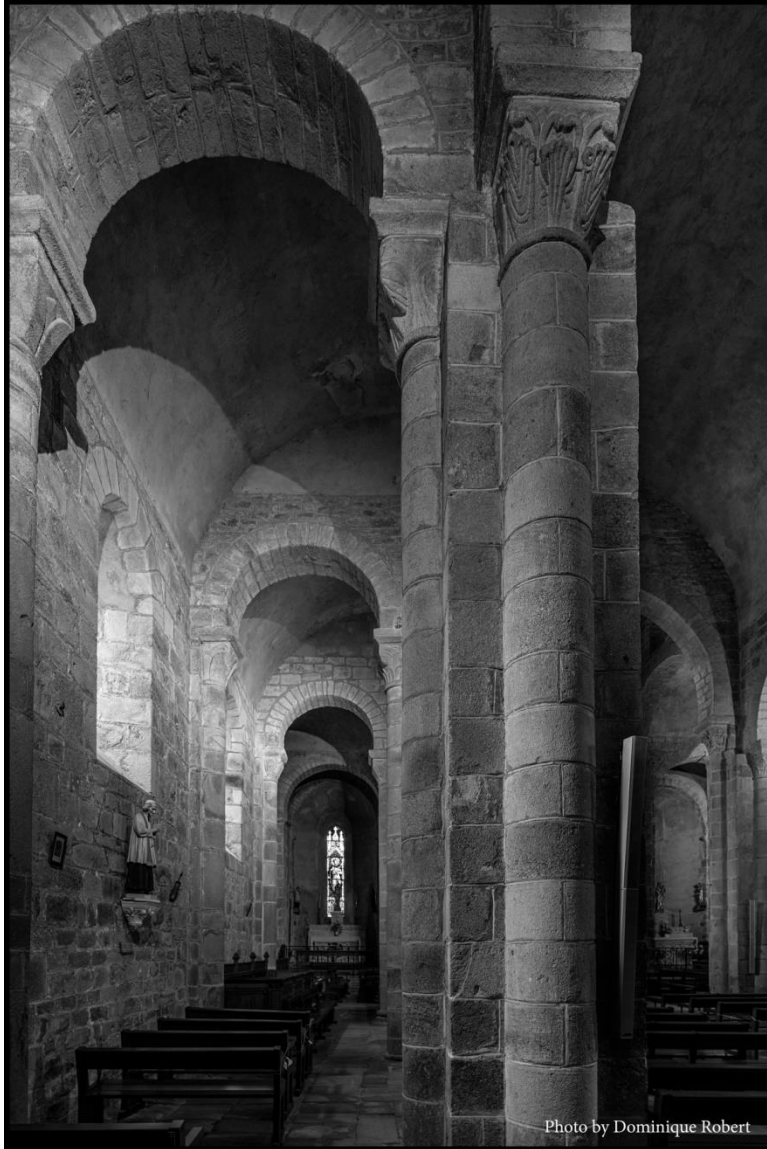


Figure 45 An example of the wide dynamic range typically encountered in a Romanesque church. Priory church of Champdieu (Forez). Nikon Z7, Nikkor 19mm *f*/4 tilt-shift lens.

to do with my DSLRs is average those values, giving a little more weight to those parts of the scene that were most important (and of course you can check right away on the back screen by looking at a reasonably accurate JPEG interpretation of the RAW photo you just took). With mirrorless cameras, it is even easier, and you can have that reasonably good idea of what your final image will look like before you take it, simply by looking into your electronic viewfinder or on the back LCD screen.

If the dynamic range of the scene obviously exceeds what your sensor can record in one exposure, then you need to take several. Shooting on a tripod will simplify things when you post-process in your favorite software. When necessary (which is not often), I usually take only two photos, one for the highlights and one for the rest of the scene. What happens often is that, when the scene in general is correctly exposed, the light coming through the stained-glass windows is too strong to properly view the motifs on



Figure 46 Two types of radically different light meters by manufacturer Sekonic: on the left, the traditional Studio Deluxe III, which works without any battery or power of any kind, looks complicated but isn't really, and measures only incident light; and the latest, touch-screen, feature-packed L-858D, which includes a spot measuring mode for reflected light. There are several other manufacturers and many other models to be found new and used. Photos: courtesy of Sekonic Corp.

the stained glass. That is when I will take a second exposure, with the rest of the scene very dark but the windows correctly exposed, and composite both in software.

The camera I currently use has a range of 14 EVs, and that is usually enough to recover whatever proportion of the highlights and shadows you deem necessary for your artistic purposes. If your camera's dynamic range is narrower, you may want to take three or four shots to make sure you will have all the material you need to composite successfully in post-production.

Framing, focus and depth of field

In architecture photography, most of the time, everything that's in the frame needs to be in focus. That is what you can see when you browse through those gorgeous Zodiaque photographs: no matter how long that nave is, the column close to us is sharp, and the very end of the apse, all the way down, is also sharp — or almost. In order to do that, the pro photographers, and later Dom Angelico himself, had to use insanely small apertures on their view cameras, like $f/45$ or even $f/64$...³⁸ That would

³⁸ Just a reminder: the larger the surface on which the image is formed, the shallower the depth of field. The view cameras used by Zodiaque were, as we have seen, 4×5 inches: imagine a sensor 100×120mm, instead of 24×36mm...! The depth of field on view cameras was so shallow that the lenses were designed to be operated at very small apertures.

also mean (i) that diffraction would have stepped in and hurt image quality to some extent, and (ii) that exposure times would have been terribly long, as sheet film sensitivity would have been around ISO 25.³⁹

Today, we are facing similar problems, but on a much smaller scale, and we have new, very efficient tools to solve them successfully, because we use much smaller imaging devices, our depth of field is much deeper, all things being equal. Using, most of the time, wide-angle lenses helps as well, as they come with the added bonus of deep depth of field. We can verify it visually, and for extra precaution, we can use one of the several depth of field calculation applications that are available, most of them for free, for each and every breed of smartphone on the market. (**Fig. 47**)

And if we find that not all that's in the frame is truly in sharp focus, we can still be saved by the technique called focus stacking. Focus stacking is a simple enough technique. It can be tricky to implement at very close range, such as in macrophotography (the domain for which the technique was invented), but for our kind of subject, it is fairly easy. It consists in taking several photos of exactly the same subject from exactly the same place and angle of view (use of a tripod is therefore mandatory). However, each photo will be focused on a different plane from the camera. For example, the first exposure will be focused on a pillar quite close to the camera, near the edge of the frame; the next one will be focused on a pew 3 or 4 meters away; the next on another column, maybe 7 or 8 meters away; and the last one on an element of the composition much farther away. Then, all those exposures will be combined in software, so that only the parts of each exposure that are in sharp focus will be kept in the final photo. Image processing software such as Photoshop or others know how to do this, and normally do an acceptable job of it. Specialized software such as Helicon Focus or Zerene Stacker can also be used.

The idea is to obtain a composite that is sharp throughout and, as explained before, you can do so while using your lens at its "sweet spot" aperture instead of stopped way down and diffracting all over the photo, with the accompanying quality loss. You only have to know exactly how deep is the depth of field that your lens provides at that sweet spot aperture, and set your various focusing points accordingly, so that they always overlap by a comfortable margin for perfect sharpness all the way from foreground to background/infinity. Some of the aforementioned depth of field smartphone calculators will also do all of that work for you. In closeup photography, you need to worry about things such as focus breathing, but with most good lenses, that shouldn't be a problem at the sort of focusing distances we are talking about here (we count at least in meters, not millimeters).

³⁹ Jean-Louis Peudon mentions shutter speeds (but can one still call them that?) of 1 to 1.5 hours... *Op.cit.*, p. 69.

Of course, it is not because Zodiaque did their best efforts to have sharp pictures from front to back that we must do the same. We can make different creative choices and try to emulate the Zodiaque look while blurring our backgrounds: it's all up to you!



Figure 47 An “ambiance” altar shot with blurred background. Notre-Dame chapel in Gréville (Rhône). Nikon Z7, Nikkor 50mm *f*/1.8 S lens.

Accessories and artificial lighting

Image quality is paramount when emulating “the Zodiaque look.” That is why we shoot on tripods, never raise our ISO setting above base value, use the best prime lenses we can afford and take our time instead of snapping away with a smartphone. I will discuss the part about how to approach a shot below, but allow me to underline right away how anything that could cause our camera to move ever so slightly must absolutely be eliminated. It is even truer when using large-definition sensors whose image quality will suffer if there is any kind of camera tremor. When shooting outside, this is less important, because you will normally have lots of light and will therefore be able to use a fast shutter speed. Indoors, however, will be a whole different ball game, as the inside of churches, and particularly of very old, Romanesque ones, is often quite dark —and most of the time, you will want to use naturally available light only, to respect and faithfully reproduce the ambiance.

In addition to having to pose for several seconds, and sometimes dozens of them, you will need to avoid generating any kind of operator-induced movement, particularly when pressing the shutter release. It is therefore recommended to use a remote, whether wired or wireless. The only case in which you can dispense with that accessory is when

your camera offers a delay function of at least 3 seconds,⁴⁰ so that any vibration caused by your pressing the shutter release and removing your finger will have died down when the actual exposure commences.⁴¹ Stand still and don't stomp around during the exposure, I have seen very solid-looking flagstones that did transmit vibrations in the most alarming manner!

Aside from the remote, the most useful accessory is a cleaning kit for your camera and lenses. While working outside, there will be dust floating around, and even inside, old churches are dusty places —not to mention the occasional cobwebs. And to take a leaf out of Dom Angelico's book: a feather duster often proves very useful when shooting sculpted capitals... not to mention a stepladder to help you reach at least some of those that are higher up!

I just advocated using natural light only, and so did Surchamp... until he himself was faced with the difficulties of the task, as he recounts:

Initially, I asked the photographers to make do with natural light for inside views of churches [...]. But, when I came to carrying out that job myself, I realized that in fact, the printing technician⁴² had to cheat as much as possible to balance light intensity and avoid pitch-black as well as blown-out areas.

When faced with the same issues today, we are better equipped than Dom Angelico, as most sensors in good cameras have a dynamic range that's much wider than the film stocks used in the 20th century, and we can "bracket" several photos with different exposure settings, as explained above, and combine them in software a lot more powerfully than was ever possible with traditional film processing and printing. Thus, we will not feel the need for additional lighting so often.⁴³ Let's read what Dom Angelico says about it:

The contribution made by halogen lamps proved essential. Before they appeared on the market, electrical lights could not be used in a reflected manner.

⁴⁰ That kind of delay would certainly not be regarded as long enough in macrophotography for all vibration in the camera to have ceased, so let's count our blessings!

⁴¹ Alternatively, you can use your camera's self-timer. If you are using a DSLR, you will also need to activate the Mirror Up function.

⁴² The word used in French by Dom Angelico ("*le tireur*") refers to the technician —the artist, really— who engraved the copper plates used subsequently in the photogravure process.

⁴³ Sometimes, the churches themselves will be equipped with lighting, although that can do more damage than good: the lighting is generally meant to provide illumination (of the physical kind) to the congregation, so that people can read prayer books and see where they are going during Mass. It is not designed to illuminate the architectural beauties of the church, or very rarely. Use it if it serves, but often it will not, or not much.

Conversely, those new lamps supplied some of the characteristics of sunlight, which is properly extraordinary. Their discreet and moderate use allowed us to compensate the too wide disparities in lighting that our eyes [...] barely notice, but that camera lenses register unerringly.

Of course, for most of us, the use of continuous lighting will be out of the question, as it would require logistics beyond the capabilities of a single photographer. At most, we can use portable LED panels or other similar devices such as the Ice Light I used for the photos in **Figs. 28-29**, but those are only powerful enough to be used on subjects close by.

Other than that, we will have to use flash, and while our ordinary, “cobra” flash guns will be derisory, studio strobes putting out 500 or 600 watts/second, if not more, could conceivably be used. In the days of Dom Angelico, those kinds of lights already existed, in particular for fashion photography, but they were quite large, very heavy, and could not be operated in the field, as they needed to be plugged into the mains. Nowadays, studio strobes of reasonable quality, running on battery power, can be bought for amounts definitely not negligible, but still within the reach of the dedicated photographer. As with all things, additional equipment will be required, such as reflectors, diffusers, scrims, etc., and of course all that equipment will need to be packed, moved, unpacked, installed on site... All of this will not be easy, which is why I don’t regard it as a truly viable option to be used on a regular basis. In special cases, or for the purposes of a specific creative approach, such strobes could conceivably be used, as they are now quite easy to set and trigger remotely from a master transmitter installed on the camera.

Finally, don’t underestimate the usefulness of a bubble spirit level, to make sure your camera is sitting straight vertically and horizontally. Many cameras have a built-in one, and many tripods and heads also carry one or several. If none of the above works, buy one that you can slide into the camera’s hotshoe.

Approaching the shot

As already noted before, we humble amateurs will rarely enjoy the luxury of being able to spend one full day on a church or other monument, however large, then come back the next day, or the day after, if the light is better or if we missed something. In the best of cases, we will have a few hours, not necessarily at the moment of the day we would have chosen, and we will count ourselves lucky if we don’t have a languishing spouse or partner eager to “move on,” or a few kids demanding to know if we are done yet. Therefore, we will have to use the resources at our disposal to compensate for the lack of time and make the most of our precious time on-site.

The lay of the land and the shot list

If you are shooting a church, it will most likely be “oriented”, i.e., the apse will face the Orient. This is not always the case, so the first thing you will do in terms of preparatory work is fire up Google Earth and peek at the way things appear from above, then from street level if that view is available. You will also use this phase to locate vantage points that may exist in the vicinity, and from which you could shoot views of the monument in its context and from a less usual perspective. Google Earth is also very useful to determine the existence and layout of access roads, parking lots, and the possible presence of any nearby buildings that may impair your capacity to take the various outside shots you had in mind.

In order to determine precisely how the monument will be lit (assuming no overcast sky, so looking up the weather forecast will also be part of your preparations),⁴⁴ you may use a specialized application such as The Photographer’s Ephemeris or PhotoPills, which are very powerful and useful, in particular if you are planning a very specific shot, such as “I want the Sun precisely aligned between those two towers”, or even “when will the Galactic Core show right above the bell tower?” Those applications will tell you all that and much more, and allow you to simulate your shot to the second.

The weather outside will be less important for indoor shots: a bright sunshine will mean some more light will flow inside, but if there is less, you will just have to pose for a somewhat longer time.

What I do next is look at the (undoubtedly many) photographs that have already been taken of the monument, inside and outside, and are available online. In addition to any book documentation you may already have consulted (first and foremost any Zodiaque book covering that monument), this will give you an approach more centered on how photographer colleagues have looked at that monument, and what they have produced. This may stimulate your inspiration, or will at least give you a usually fairly good idea of what the place has to offer. You may already have your own detailed shot list in mind (in which case photos existing online will at the very least serve to confirm feasibility), or it may help you draw one up.

The concept here is to have as good a knowledge as possible of what you’re about to find on site, to have a good idea of what you will be interested in photographing, of when will be the best moments to do it and in which order, of which

⁴⁴ You do not need bright sunshine to take good outdoor architecture photographs. In fact, an overcast sky will give you a very soft light that’s much easier to work with in post-production, as it gives you more “wiggle room” to adjust most parameters. Furthermore, a dramatic, cloudy sky will always be more interesting, especially in black-and-white, than a boring, uniformly blue sky.



Figure 48
Dramatic, stormy skies will often enhance a photo. Sant' Elena pre-Romanesque church, Sardinia. Nikon Z7, 24~70mm, f/4 S Nikkor lens.

props and equipment may be needed (stepladder? very tall tripod? knee pads as you will have to take closeup shots of column bases kneeling down? high shoes to wade through tall grass with possible snakes? rubber boots to deal with seemingly muddy surroundings? I've encountered all of these), etc. The better you plan ahead, the more detailed your planning, the more efficient you will be *in loco*, and the better equipped to cope with the unexpected. This will contribute to the enjoyment of what may very well be the only visit you will pay to that monument in all of your life.

Authorizations, clearances, permits

You will also need to find out who owns or manages the monument you're interested in, and how to gain access. Very often, village churches and chapels are locked, and the key needs to be obtained from the town hall, the parish priest, the *association des amis*, a keeper living nearby, a private owner, etc. Other, larger monuments will publish their opening hours online, which will also need to be verified to make sure they're current. Many of those that are owned by the State, a *département* or other big public organizations will be very administratively managed, and you will have to go through layer after layer of public servants to obtain your clearance. Many of those will prohibit photographing with tripods and stepladders unless specifically permitted, so that will have to be negotiated as well. You will keep written evidence of everything, so as to be able to apprise anyone unaware, but who shouldn't be.

The idea is that, when you arrive on site, you are expected and welcomed, because the people in charge will have acknowledged your legitimacy and your

purpose. At least, you will be well prepared to cope with what you will find, and there will be as few surprises as possible. Don't worry, there will always be one or two, but the fewer you need to face, the more efficient you will be in terms of photo-taking in the limited amount of time you can afford.⁴⁵

Remember also that the information you may find in the *Zodiaque* books, while always extremely valuable where architecture and art are concerned, may be out of date in other respects. Recently, I went to photograph the lovely La Madelène (the Provençal way of spelling Madeleine) priory chapel in the village of Bédoin (see *Provence romane*, vol. II, pp. 73 sqq.), about which Surchamp wrote:

As the priory is occupied by a community, take into account the schedule and wishes of the monks to protect the quiet which is indispensable to thought and prayer.

However, between the mid- to late 1970s (the book was published in 1977, my second edition is from 1981) and 2021, the monks had gone, the place had become privately owned, and on that very warm and sunny late June day, the owner, however nice and well-mannered, was entertaining guests and had rightfully no intention of being disturbed by strangers barging in to take photos of *his* chapel. All I could do was retreat gracefully and take a quick snap of the bell tower through the foliage, from outside the property, before driving away... This was a typical ill-prepared visit. It didn't matter much because we were in Provence for family reasons and the photo part of the trip was an added bonus which had already proved at least partly fruitful, but if I had driven hundreds of kilometers just to see that chapel based on *Zodiaque* information, I would have been extremely disappointed.

During the shoot

Taking black-and-white photographs, for us who are constantly surrounded by colors, is not easy —or rather, it's seeing in black-and-white that isn't. Successful monochrome photography requires that you train your brain to perceive how things will look in shades of grey, mentally discarding color information and remembering that contrasts and transitions matter a lot more than they do in color photography. Something very blue and something very red will look much more similar, the main difference becoming, Is the blue thing a lot more in the shadow than the red one?

Training your brain to see in black-and-white is fun and extremely useful when

⁴⁵ Speaking of surprises, how about arriving fully prepared on a distant site that's taken you hours to reach, only to discover that the church you intended to photograph in extenso is covered with scaffolding and tarps and undergoing major restoration works? Asking in advance will spare you the hair-pulling and the self-hate.



Figure 49 A more successful part of the Provençal trip: the prior church of Mane in Salagon (Provence). Nikon Z7, Nikkor 19mm f/4 tilt-shift lens.

you pick up the camera. Additionally, setting that camera to black-and-white mode, if possible, will of course help keeping your vision and your thinking in the right realm. This will not be possible when using rangefinder or DSLR cameras, which have optical viewfinders through which you will obviously see the world in color, but it is feasible on cameras using electronic viewfinders.

Regardless of your settings, make sure your camera is still recording photos in color, unless you have decided to go the purist way and record in monochrome only. You may, after all, also want to retain the color information within the raw files for possible future use.

As you go methodically through your shot list, or as you improvise by walking leisurely around while looking for opportunities (both approaches may produce excellent results), be aware not only of your main subject, but also of the ancillary details in your frame: an unsightly bright red fire extinguisher (as found in the nave of the Saint-Philibert abbey church in Tournus, believe it or not!) may be tricky to remove physically, in which case there will be no other option than “fix it in Photoshop”, as the saying goes, but small furniture, vases with (often wilted) flowers, piles of missals can be rearranged or moved away until after the photo is taken; pews and benches can, to some extent, be moved, or at least arranged; and, as said before, a feather duster or microfiber cloth will work wonders on neglected statuary and sculpture.

Fueling your photographic inspiration

My history as a photographer shows me that, when you arrive on site to photograph a very old monument, you need to take time to experience for yourself the incredible, almost miraculous fact that those stones you can now behold with your own eyes and touch, feel with your own hands, have been there for close to a thousand years, sometimes longer than that. Those stones have traveled through time, wars and plagues and joys of countless generations, yet they now stand in front of you, ready for you, with their threshold worn in by the scuffle of millions of feet... The Zodiaque books never hid their religious overtones (which earned them some discredit in the academic world), and when you remember that it was a monk who either instructed the photographers what to shoot, or took the shots himself, it becomes obvious that the technical, materialistic process of making photographs must have been infused by a form of inspiration that was at least partly spiritual in essence.

What I am trying to say, very clumsily, is that Dom Angelico did not walk around or into a church merely with a technical agenda of things to do: first shoot this with that lens, using that setup, then wait until the light comes through there and shoot that with that other lens, etc. Of course he had that also, because he had to do the job well from a technical standpoint, but although he never mentions it in so many words, I'm convinced he was often in awe of what he saw, and had to take time to just sit alone and take it all in, let the monument's own rhythm, color, atmosphere literally suffuse into him. His religious beliefs, his lifelong vocation as a monk and a priest would have given that sort of experience a color most lay persons will remain alien to, yet I myself have often felt the need to just sit there and "let it all sink in" for a while, before I resumed going about my photographic business with a sort of rekindled inspiration, a slightly different way of looking at the same architecture and sculpture.

Regardless of whether you have religious beliefs or not, you may experience the same need, and you should heed it if you do. As I said before, it is the first time in your life that you're here, in this time capsule of a place, and it is also, probably, the last time in your life; when you walk away, it will be forever goodbye. Therefore, you should give your brain, your mind, and maybe your soul, some time to absorb all that is around you, so that you can, for the rest of your days, remember the color of the walls, the smile of that angel, and the soft grain of the stone against your hand, resting now where an untold number of hands rested before.

Post-processing

About the big moral point: should we post-process or not?

The photographic world is like the religious one in at least one respect: in either, you will encounter holier-than-thou persons who will pretend to know better about sin and virtue. They will come forward in particular when you broach upon the subject of

post-processing: “Unforgivable sin! Don’t post-process or thou shalt be forever damned! All good photographers do everything in-camera! *Vade retro, Satanas!*” Usually, next comes an appeal to *nos grands anciens*, all those great photographers from bygone days upon the shoulders of whom we stand tall: “How do you think they did, the likes of Arbus and Adams, Stieglitz and Cartier–Bresson, Erwitte and Brassai? How did they survive without Photoshop?”

The straight answer is, Not so well —or rather, they would have been a lot better off with Photoshop than left to their feeble old devices... Because, yes, our forefathers did post-process, to the best of the abilities they had then: as early as the mid–1800s, Gustave Le Gray learned to combine exposures to increase dynamic range, and Janet Marquardt reports that Édouard Baldus did the same shortly thereafter.⁴⁶ As soon as the modern enlarger was invented, photographers learned to “mask” (which was a primitive way of dodging and burning), and more generally “work under the enlarger,” which involved many complicated and very personal techniques to enhance their photos. That was post-processing as best they could do it then, and no one thought for a minute about it. Even those who publicly held the black border around their negatives as sacrosanct were known to crop, occasionally... Yes, Henri, that’s you I’m talking about! And I’m not even mentioning the analog “rubberstamping” of dignitaries having fallen into disfavor and who were erased from Soviet or Chinese official pictures.

In other words, for over a century, all knowledgeable photographers used post-shooting “trickery” to make their photos look better, and the more knowledgeable they were, the more elaborate and successful the trickery was. The so-called “moral” dispute about post-processing only arose in the digital age, as the trickery became more powerful, easier to use, and more affordable to greater numbers of people.

Dom Angelico followed quite happily in the same footsteps. As Janet Marquardt noted, “There are two levels in Zodiaque photography: the photography itself, and the photogravure”, i.e., the stage of the process where the copper plate that will serve to produce the final print (to be bound into the book) is engraved based on the original photograph. During that stage, which really was like a Photoshop session with quite powerful tools, we have evidence that, in outdoor shots, electric wires and pylons were erased, as well as cars and pedestrians and bus stop signs;⁴⁷ indoors, protruding nails, cobwebs, and unsightly Stations of the Cross of the 19th century were removed (“*Art saint-sulpicien*, begone!”). Skies were redone, and anything regarded by Surchamp as

⁴⁶ Marquardt, *op. cit.*, p. 91.

⁴⁷ In *Zodiaque, le monument-livre*, already mentioned, Cédric Lesec includes a number of amazing behind-the-scenes pictures of the Zodiaque photographers in action, but also a stunning comparison of the sort of post-processing work that was afoot during the photogravure stage: the two photos shown side by side on p. 118 of the Panthéon and rue Soufflot in Paris give us a truly surprising (and enlightening!) vision of the “before” and “after” that will amaze many seasoned practitioners of Photoshop.

warts on Romanesque art was deleted. It was not just having teams of clerics or laymen clean out a nave of all its pews and chairs, it was, let's not say systematically, but quite oftentimes, a cleansing of all elements that were regarded as detrimental to the visual and spiritual message that the photographs were meant to convey. There were of course times when such "polluting elements" remained: on color prints, which were not reproduced via photogravure, or simply because there were oversights, as in all human activities, no matter how diligent the people in charge were. It is fun to try and locate those exceptions while admiring the photographs in any Zodiaque book.

So, because of the examples set by our own "fathers of the photographic Church" and by Dom Angelico himself, there is no reason of principle why we should refrain from retouching our Zodiaque-like photos.

Of course, like in all such debates, the answer is personal to each photographer. I myself believe that shooting and post-processing are the two sides of the proverbial coin: when you shoot, you already think about post-processing, and you do all you can to make the future post-processing as efficient and easy as possible, to achieve the vision you have in mind; then, in front of the computer, you use all the tools that are available to make the photo look like what you saw. You notice that my credo is *What I saw*. I do not intend to distort reality, I will not push the software cursors to make my sunset even more glowing in the hope it will attract more likes on Instagram. We photographers of architecture and art should strive to make the photo look as closely as possible like what we saw. Let's do all we can in-camera, not because it will earn us bonus points, but because it is efficient (and possibly artful?) to do it that way if we can, and will save us time and effort later. For the rest, let's not be shy in the use of our post-processing skills, within reason, with good taste and the guidance of the naturalistic approach of the *What we saw*.

And if we stray from the path and occasionally make a picture look more dramatic in black-and-white than what we truly saw in color, we will remember than Dom Angelico did that, too, when he had his engraver dig those wide, deep pits that would be filled to the brim with rich, black ink... only to better hide a background he would rather not show!⁴⁸

A note about software

The workflow I normally use is to develop my RAW color photos in Adobe Lightroom, then retouch them (including switching to black-and-white) in Photoshop, therefore those are the two programs I will mention in this section.⁴⁹ However, there are

⁴⁸ See *inter alia*, Fig. 18.

⁴⁹ Adobe CameraRAW, which is the module of Photoshop that is used to develop RAW files, is 99 percent a clone of Lightroom, and can be used in exactly the same way. If you're an Adobe user, you may prefer Lightroom for its additional cataloging options.



Figure 50 In this photograph of the unique mediæval masterpiece that is the altar of the Notre-Dame de l'Assomption church in Avenas (Rhône), I intentionally darkened the back of the apse to better offset the altar. Nikon Z7, Nikkor 50mm *f*/1.8 S lens.

many other paying and free options out there, among which Darktable, GIMP, Skylum Luminar, Affinity, Capture One, Photo Studio, etc. Your camera may even have come bundled with one. Just make sure that it offers enough detailed tweaking options for black-and-white, as those are the ones you will be using. Software that allow you to use layers to apply corrections on some parts of the image only have an edge, as that is something you will want to do quite often. If your photo retouching software of choice doesn't allow you to use layers, there are workarounds, however they are more cumbersome to use and often less precise — which is why layers were invented in the first place.

Development of the RAW files

Provided that you were able to use a digital camera equipped with a sensor offering a wide dynamic range, you will have a lot of “wriggle room” to correct exposure mistakes or modify the general ambiance of your photos in post-production. This essay is of course not the place to discourse on how to develop RAW files in any software program. However, and just to serve as possible pointers, my own development workflow is centered around the use of the following controls:

- Camera color profile: I make sure I don't remain in "Adobe Color," which is the profile selected by default. I have created color profiles⁵⁰ for my main camera-and-lens combinations and for the main lighting conditions: sunshine, shade, natural light indoors, flash, and I select the appropriate profile as step 1 of my developing process. Thus, I make sure the development algorithm will be best adapted to the abilities of my camera and lens.
- White balance: I usually leave the camera on Auto White Balance, unless I have a very good reason not to do so, in which case I take a white balance shot first, using the SpyderCheckr color chart by Datacolor, which is essentially a larger avatar of the ColorChecker Passport mentioned in the footnote above. As I (and you, I hope!) are of course always shooting in RAW, we will have every possibility to adjust the white balance as step 2 of our development workflow.
- Tone controls: When used with moderation, Shadows is very useful to recover detail in low-light areas. Highlights and Whites often help me slightly bring down the lighter areas when they clip, or visually seem to be clipping, even if the actual figures tell you otherwise.
- Presence controls: Clarity helps a lot to enhance micro-contrast, and thus give some added "pop." It is sometimes interesting to play with Vibrance and Saturation, even though they only affect color information, which will be discarded later. However, the way they tweak the color picture will sometimes be reflected interestingly in the black-and-white version.
- Lens Correction controls: Use Defringe to get rid of any chromatic aberration (although personally, I prefer to do that in Photoshop). Note that this is only for any future use of the color version of the picture, as chromatic aberration will not produce anything really visible in black-and-white, unless maybe it is extremely pronounced.
- Transform controls: these must absolutely be used to correct any straightness issues that may remain, in spite of the precautions taken when shooting. Lightroom has good basic tools for this, Photoshop has a host of much more sophisticated ones under either Transform or Lens Correction. Again, you will have to use what your preferred software has to offer.

⁵⁰ Custom color profiles can be easily created with a small foldable color chart called a Colorchecker Passport, made by a company named X-Rite (there may be other options out there). Once created with the free software tool provided with the Passport, each profile can be as easily imported into Lightroom (and Photoshop, for those who use CameraRAW as their development software), and then selected via a drop-down menu.

Retouching the photographs

I realize that we have now come to the last part of our technical and artistic voyage together, and it scares me to reckon that I do not have much more than one page of further tips to give you, where you may have expected a lengthier exposé. The fact is, however, that if you have adequately “seen” the scene in black-and-white when you were shooting, then developed your RAW files in accordance with the guidelines above, most of the work will already be done.

Once the RAW photos have been developed, I export them out of Lightroom in TIFF format, which creates very large files but best at preserving image quality, and import them into Photoshop. Again, if you’re using some other software, your workflow will be different, and that’s fine. Sometimes, I will first process a color version of the photo, then switch to black-and-white and start adjusting the 6 Tint sliders.

This could also be done in Lightroom, and it could seem to be even more beneficial, as there are two more sliders in that program: Orange and Purple. However, you will see that in most cases, for photos taken indoors, the bottom sliders do not make much change to the photo: in Photoshop, only the Reds and Yellows will have some effect. Lightroom may seem to be still more precise, because of the additional Orange slider, but in practice you will see that this Orange slider in Lightroom does almost exactly what the Reds slider does in Photoshop. Additionally, when in Photoshop, you can use layers, which I find to be enormously advantageous to apply corrections to parts of the photo only.

In summary, all of the above does not matter much: what matters is that you find your own way to tweak your black-and-white photo until you’re happy with it, and that will be done mostly with the Reds and Yellows sliders if in Photoshop, and with the Orange and Yellow (no s) sliders if in Lightroom. Tweaking those tint sliders, however, is not all there is to do to emulate the look of the Zodiaque photographs. It is only the beginning.

The next phase of adjustments may take quite a long time to do in front of your screen, but it will be quick to describe: we will do what the very first photographers, such as Gustave Le Gray, did in the middle of the 19th century, i.e., dodging and burning. And their 20th century successors did nothing else when they “worked under the enlarger” while printing their negatives.

“Dodging” was hiding a certain area of the picture under a black card, so that the concerned area on the photographic paper would receive less light coming from the enlarger: it would therefore be underexposed. “Burning” was the opposite: you left a certain area of the photographic paper receive the light for a longer period of time, by hiding the rest of the frame, so that the concerned part would be overexposed. Nowadays, you achieve the same result, but with greater precision, with *ad hoc* tools in your retouching software.

Before you start dodging and burning, you may want to do a Levels adjustment, to make sure you are using the whole range of chromatic gradation from black to white. And then you begin to work.

What you are trying to achieve is a richly toned and slightly dramatic image, without either drowning your shadows into unreadable black (or only on very specific areas of the frame), or blowing your highlights into something resembling the cover of The Beatles' "white album." Zodiaque photogravures featured very rich, deep blacks, which would normally mean strong contrast; it wasn't the case however, because beside those deep blacks, the entire palette of greys was present, often with very soft gradations and very rarely a blown-out part. There was not the strong contrast we could have expected as a consequence of those deep blacks: there was strength where it mattered, and there was lightness and softness elsewhere, thanks to the talent of the engraving artists that were so expert at translating Dom Angelico's vision.

We can obtain this result in the digital darkroom as well, but we must be quite careful to apply our "dramatization" very selectively (hence the importance of layers and masks) over parts of our photos, and not everywhere. That is why you will want to work with different software brushes, soft ones most of the time, and take your time to do it well. There is really no explaining to be done here: it is a process that must be experienced firsthand, through trial and error, until you achieve that delicate balance between strength and fragility, presence and suggestion, truth and illusion, that was the very fabric of the Zodiaque photographs.

In addition, there is of course the issue of the "cleaning up." As we have seen, Dom Angelico did clean up his frames very liberally (or rather, so instructed his engravers), so we should not feel the weight of any prohibition. I personally will remove mercilessly:

- Unsightly fire extinguishers, ugly green "Emergency Exit" luminous panels, modern microphones and loudspeakers, liturgy and pandemic signs and assorted advertising: in summary, anything that I think disturbs quiet and harmonic beholding of the architecture and the art, and that can go, goes.
- Outdoors: poles, lines, satellite dishes and TV aerials, stationary cars if possible, anything unsightly and that can be removed within the scope of my limited retouching abilities (I see experts doing wonders on Youtube that I can never hope to match);
- People: when I wish to obtain a clean photo of a crowded monument (e.g., the façade of a UNESCO-listed cathedral), I use the multiple exposure trick: with the camera firmly bolted to its unmoving tripod, I will take several photos, seconds or minutes apart. The important thing is to finish the sequence before the light changes, so watch those clouds coming in! As most people will move when in front of a monument, you

will probably be able to composite your half-dozen or so pictures into one clean image...

Once again, how much such cleaning up is or should be done is a matter of personal preference. Zodiaque photos were almost always devoid of all distracting elements, provided those could be removed, so you will have to walk down the same path if you seek to emulate that look.

Portfolio

In the previous pages, I have used some of my own photos à la Zodiaque to provide in-context illustration. I will now use some others to illustrate other aspects of photo-taking and post-processing.



Figure 51 Churches and other monuments of interest to us are rarely surrounded by interesting buildings. When they are, do not hesitate to include them! La Garde-Guérin church (Languedoc). Nikon Z7, Nikkor 14~30mm f/4 S lens.



Figure 52 Long exposures can be put to good use with scattered clouds and a breeze blowing from the right direction, creating a dynamic contrast with the stately grandeur of the church. Ruined fortified church of Saint-Hippolyte (Burgundy). Nikon Z7, Nikkor 19mm *f*/4 tilt-shift lens, ND1000 grey filter, 25-second exposure.

Figure 53 Ruined abbey church of Jumièges (Normandy). Nikon D850, Nikkor 19mm f/4 tilt-shift lens.

Plan ahead and use local resources to your advantage: the abbey of Jumièges is of course closed in the evening, and enclosed behind a high wall. I knew this from prior research, and I also located a cheap inn with scant creature comforts, but what looked like an excellent view over that wall... I booked, and bingo! I spent the evening with sandwiches and bottled water, watching and shooting, and finally got lucky when that flight of pigeons circling the towers positioned themselves just so...



Photo by Dominique Robert



Figure 54 As mentioned before, cloudy, thunderstorm skies can provide a great background, especially with sunlight still falling on the monument...



Figure 55 ... but think about walking around as well, because other viewpoints may be just as striking. Early Christian (built around 550) church of San Giovanni di Sinis, Sardinia. Both photos by Nikon Z7, 24~70mm f/4 S lens.



Figure 56 Short telephoto lenses can nicely compress the perspective, while the shifting function keeps the verticals straight. To the extreme right, you can glimpse through the foliage the white wall of the inn I stayed at the night before. Through either of these windows, the photo of Fig. 53 was taken. Ruined abbey church of Jumièges (Normandy). Nikon D850, Nikkor 85mm *f*/2.8 tilt-shift lens.

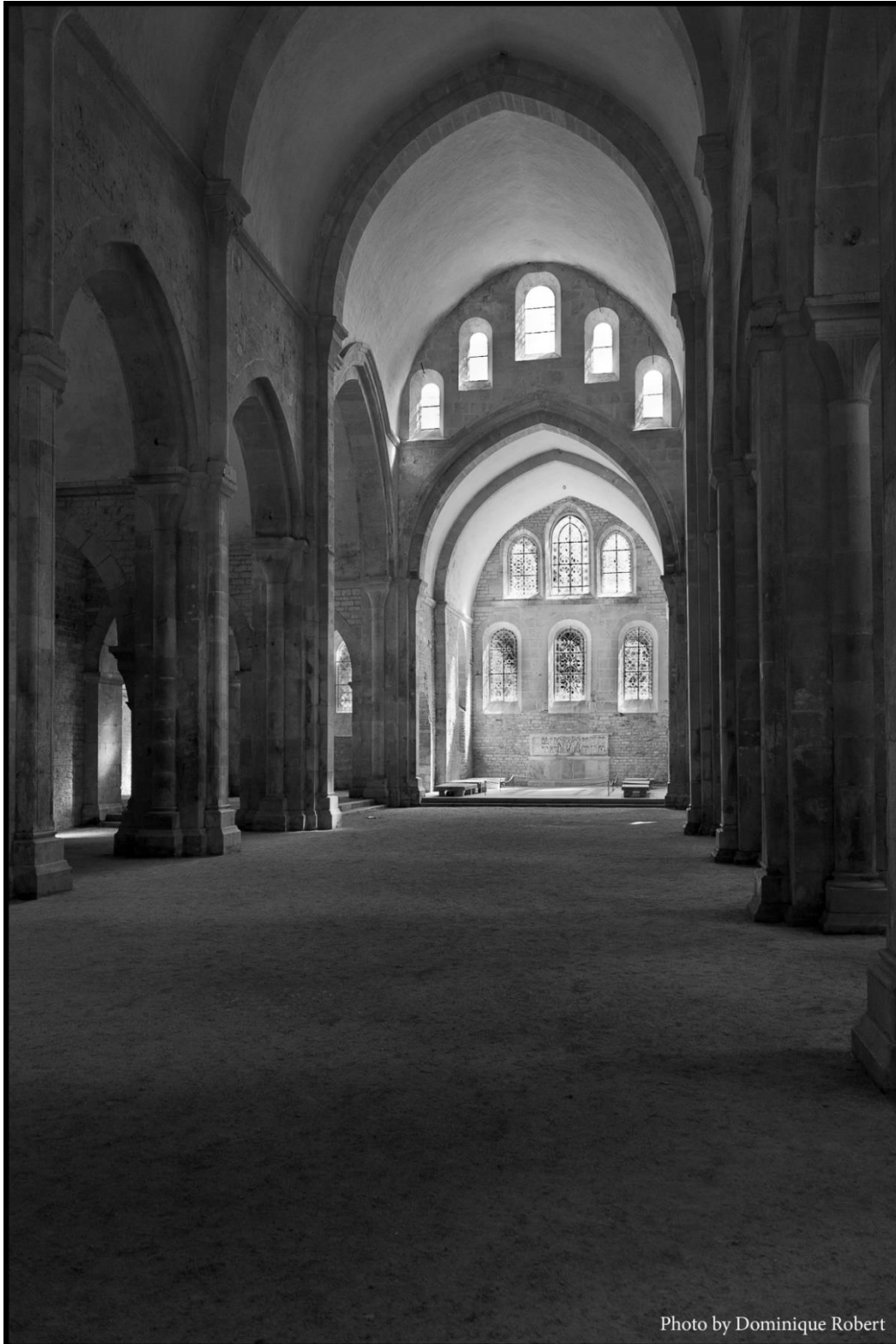


Figure 57
Abbey of
Fontenay
(Burgundy).
Nikon D3s,
Nikkor
24~70mm f/2.8
lens.

“I ordered an
army of lay
brothers to
clean out the
nave for me...”
Sometimes, you
strike pay dirt,
but don’t let it
get in the way
of your
oncentration
and remember
to expose so
that you retain
some detail in
whatever is
behind some of
those
windows...

Photo by Dominique Robert

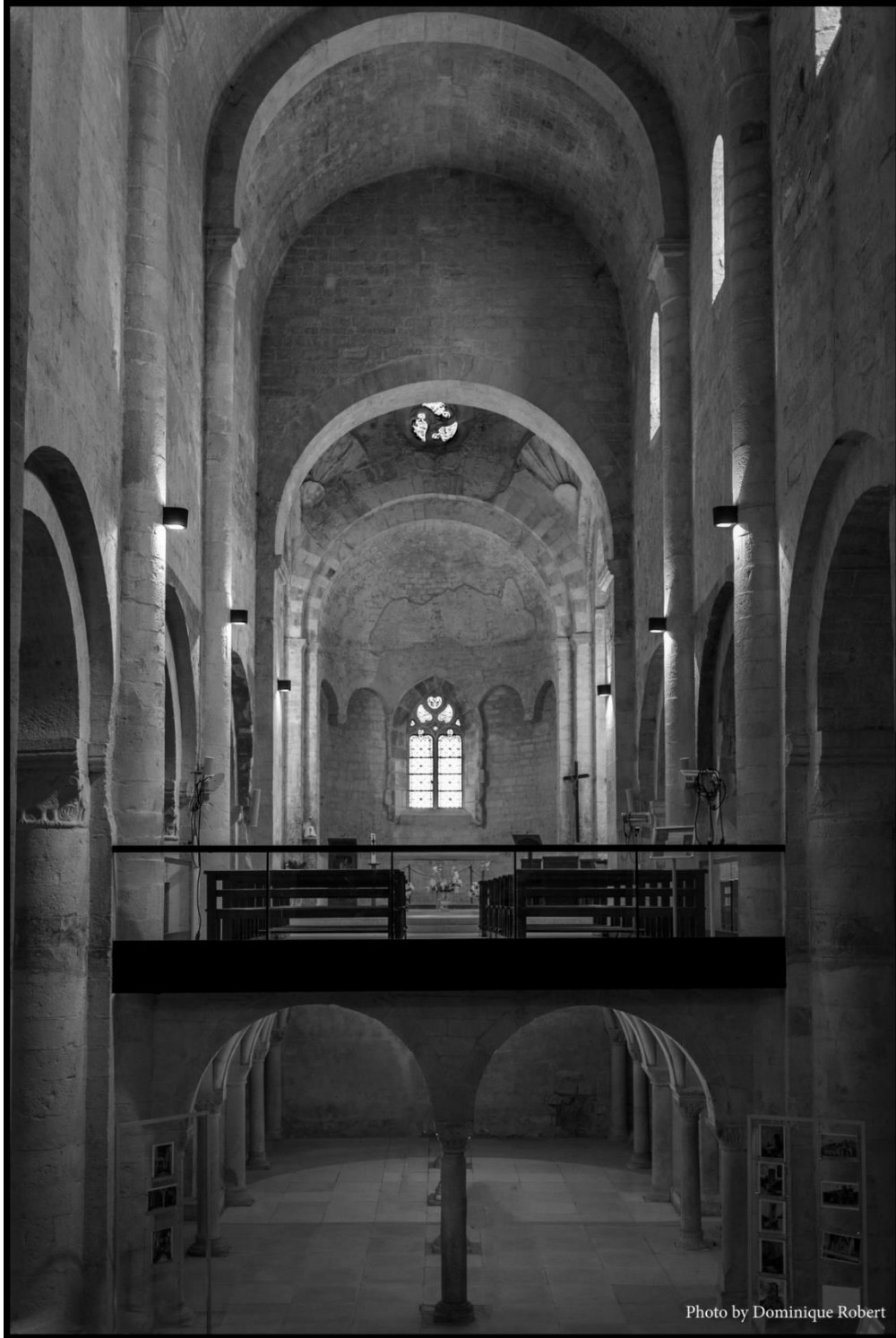


Figure 58 “As above, so below”: balancing the volumes helps with keeping straight verticals with an “ordinary” lens. Cruas abbey church (Ardèche). Nikon D850, Nikkor 35mm *f*/1.4 lens.



Figure 59
Ruined
churches
always have
a strong
evocative
power...
Fortified
Benedictine
priory
church of
Saint-Jean-
de-Balme,
Causse Noir
(Languedoc).
Nikon Z7,
Nikkor
14~30mm *f*/4
S lens.

Photo by Dominique Robert



Figure 60 I am particularly happy with this photo, which shows a perspective-correct view of the short side of the sculpted altar of Avenas (see **Fig. 50**). There was not enough space between the altar and the wall of the apse to squeeze a tripod and a camera at working distance, so I had to angle my setup and use the lens shifted all the way to frame the whole marvelous motif straight on... Notre-Dame de l'Assomption church in Avenas (Rhône). Nikon Z7, Nikkor 19mm f/4 tilt-shift lens.



Figure 61 *Chiese campestre* (“Rural churches”) are a peculiarity of Sardinia: very old Romanesque or pre-Romanesque churches, built in the middle of nowhere... Sant’ Antonio church, Sardinia. Nikon Z7, 19mm f/4 tilt-shift lens.

Figure 62

By walking around your monuments, try to find viewpoints that showcase unusual architecture. This may lead you to shoot on uneven and unstable terrain, so be very careful about your own safety and that of your equipment. Priory church of Saint-Romain-le-Puy (Forez). Nikon Z7, Nikkor 19mm *f*/4 tilt-shift lens.



Photo by Dominique Robert

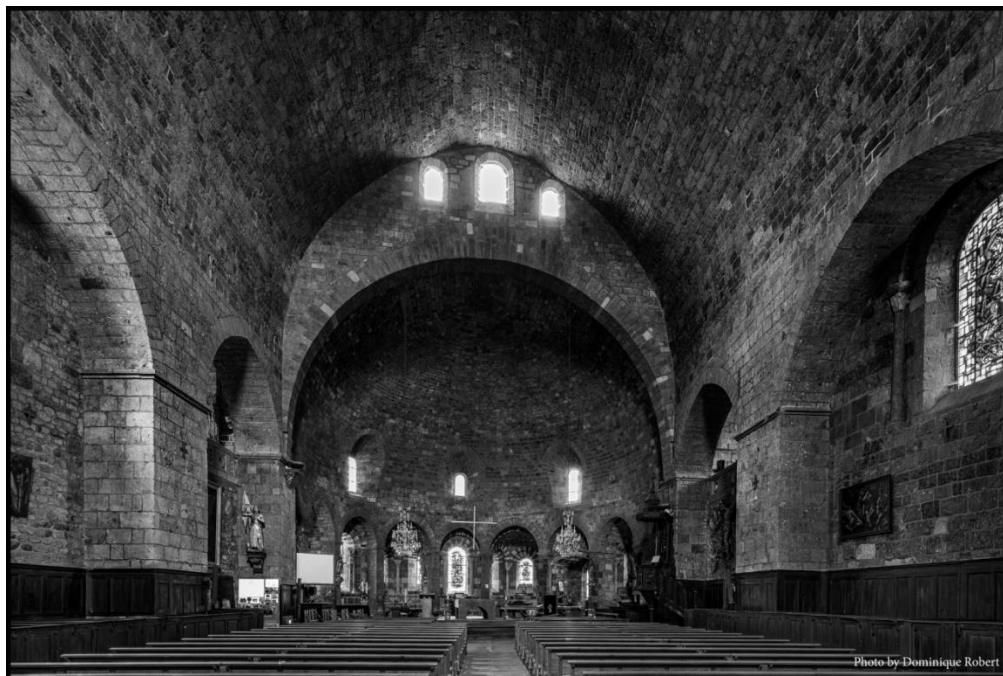


Figure 63 Seek out spectacular and unusual monuments in the most unlikely places, like this enormous church, without any pillar or column... which stands in a small out-of-the-way village! Zodiacque books are great sources, but there are others...Saint Georges church in Saint-Paulien (Forez). Nikon Z7, 19mm f/4 tilt-shift lens.



Figure 64 Reasonable dramatization in post-production can be useful to enhance your vision of a monument, if not overdone! San Nicola di Silanis church, Sardinia. Nikon Z7, 24-70mm f/4 S lens.



Figure 65 The oldest parts of churches often are the most meaningful and atmospheric, even if less spectacular... Probable baptismal fonts in the Carolingian crypt under the Saint-Pierre-de-Lémenc church in Chambéry (Savoy). Nikon Z7, Nikkor 19mm *f*/4 tilt-shift lens.



Figure 66 Carolingian, possibly even Merovingian crypt under the priory church of Saint-Romain-le-Puy (Forez). Nikon Z7, Nikkor 19mm *f*/4 tilt-shift lens.

Photographing the architecture should not detract you from also getting good pictures of Romanesque church furniture such as stoups or cancels, decorations such as fresco paintings, and of course sculpture: however humble or refined, capitals are oftentimes of particular interest, as *Zodiaque* books have shown us.



Figures 67-68 Transept capitals in the Saint-Martin-d'Ainay church in Lyon. Nikon Z7, Sigma 135mm *f*/1.8 Art lens.



Figure 69 Carolingian capital in the crypt under the Saint Martin church of Aime (Savoy). Nikon Z7, Nikkor 50mm *f*/1.8 S lens.



Figure 70 Use raking light and post-production dodge and burn to enhance relief and legibility of faded capital motifs. Priory church of Saint-Romain-le-Puy (Forez). Nikon Z7, Nikkor 50mm *f*/1.8 S lens.

Figure 71 Light and shadow, lines, shapes, rhythm... The photographic credo of Zodiaque. Saint Georges church in Saint-Paulien (Forez). Nikon Z7, 85mm *f*/2.8 tilt-shift lens.

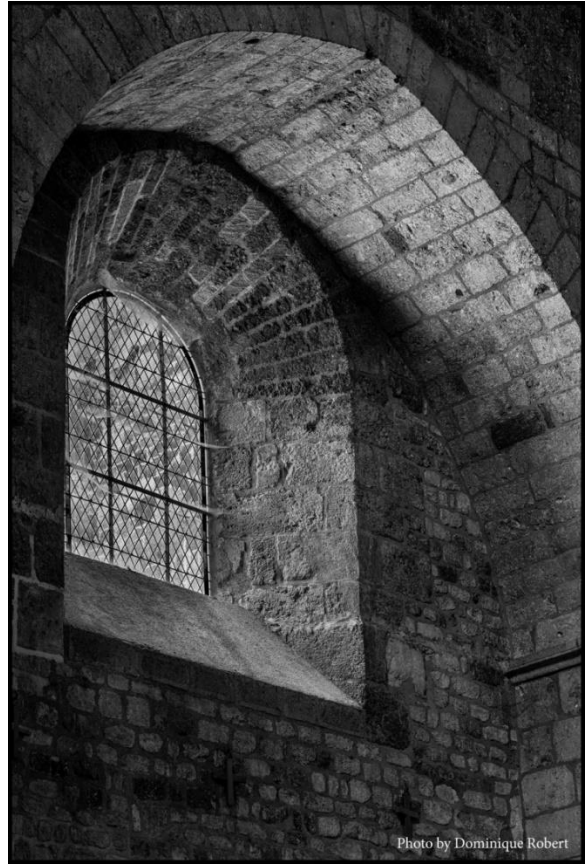


Figure 72 There is happiness at the end of the road... I drove 12 kilometers on a very bad dirt track, thankful for being in my 4 × 4 vehicle but unsure of where I was going, until I indeed found this pre-Romanesque, dry stone wonder of a church... Believe in miracles! Sant' Elena church (Sardinia). Nikon Z7, Nikkor 24-70mm *f*/4 S lens.



Acknowledgements

I hope this journey into the technical and (hopefully!) artistic aspects of the black-and-white photography in the *Zodiaque* books of the 20th century (and how we can emulate it with the tools of this century) has been of interest. It would not have been possible without, first the blind faith, and then the continued encouragements of Sarah Blick, who is and shall forever remain to *Peregrinations* what Dom Angelico Surchamp was to *Zodiaque*. May she accept my most heartfelt thanks.

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The reproductions of the original photos from the *Zodiaque* books included in this essay were made by myself, with kind permission from the abbey of Sainte-Marie de La Pierre-qui-Vire, using a Nikon Z7 mirrorless camera and a Nikkor Z MC 105mm f/2.8 S macro lens, mounted on a Smith-Victor CS42K copy stand with dual LED panel lights. The books are my own. All commercial registered names and trademarks have been mentioned for educational purposes only, and remain the sole property of their respective owner(s). 🐼