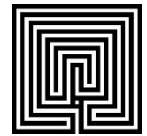


The Chartres Cathedral Labyrinth FAQ's

Jeff Saward



As one of the best-known examples in the world, much has been written and said about the pavement labyrinth in Chartres Cathedral. But what is fact and what fiction?

Here are some of the most frequently asked questions about this labyrinth...



The Chartres Cathedral Labyrinth – photo: Jeff Saward/Labyrinthos

Introduction

It is no wonder that Chartres Cathedral has drawn so much attention over the course of its long history. As a repository of holy relics, the cathedral has attracted pilgrims for over 1000 years, and in much the same way has attracted popular folklore as well as misinformation. For instance, the story that the cathedral is situated on the site of a former Druidic temple, erected in honour of the “Virgo Paritura” (The Virgin who will conceive) is not based on any historical or archaeological evidence. As Mgr. Michon has shown (Michon, 1984), this story was created in the 16th century and popularised in the early 17th century by Sebastian Rouillard. Recent archaeological excavation has shown that the cathedral overlies the alignment and foundations of earlier Roman buildings. However, the topic of this study will be one particular part of this remarkable building, the pavement labyrinth situated in the nave of the cathedral. Not surprisingly, the published information about this labyrinth is riddled with confusion, supposition and fantasy, probably more so than any other labyrinth.

When can you walk the labyrinth at Chartres?

Chartres Cathedral is a working building and a place of worship. Normally, the nave of the cathedral is lined with chairs and most of the labyrinth is subsequently obscured. It has long been the tradition at the cathedral to remove the chairs and uncover the labyrinth, to allow it to be walked, on mid-summer day, June 21st. In recent years the cathedral authorities have also instigated a program of regularly uncovering the labyrinth every Friday during the summer months - typically from the first Friday following Lent, until the last Friday in October. However, this schedule is always subject to change, and special services, funerals and events within the cathedral can result in the labyrinth remaining covered. Essentially, the best advice is to go on a Friday during the summer, or on mid-summer day, and if you can, plan to get there early, before the crowds on the tour buses arrive, or otherwise late in the afternoon when they leave and the cathedral becomes a little less crowded. But bear in mind that finding the labyrinth uncovered is never guaranteed - you make the pilgrimage and take your chance! And if you go there, and get the chance to walk in the footsteps of countless others that have followed the path of the labyrinth, please respect local customs and behave in a dignified fashion - this is a place of Christian worship.

When was the labyrinth in Chartres Cathedral constructed?

Nobody actually knows when the labyrinth was constructed, because no surviving documents record that information, although various writers have published dates of 1200, 1220 and 1235, even as late as 1240, all given as if they were provable installation dates. The architectural detective work of John James (James, 1990) suggests that the labyrinth must have been laid early in the first decade of the 13th century (c.1201-1205 is a commonly quoted figure), as its position is so integral to the geometric layout of the cathedral, but this argument has a hint of circularity. Craig Wright (Wright, 2001) places its construction around 1215-1221, when the construction of the nave was essentially complete and the masons moved on to finish other parts of the cathedral structure. As the masons would surely not have invested considerable time and expense in installing the labyrinth while there was still the possibility of damage by falling masonry, from work on the roof above, this would seem a sensible dating. Besides, until the construction scaffolding surrounding the pillars in the nave was removed, it would have been very difficult to install the labyrinth, the outer circuits of which run very close to the base of the pillars on either side.

Was there an earlier labyrinth in the Cathedral?

Speculation that the current labyrinth replaced an earlier labyrinth in the nave is totally unfounded. While labyrinths with 'mediaeval' designs laid as floor decoration first appeared in churches and cathedrals in Italy during the early 12th century, it would appear that the idea did not spread to Northern France until the last decade of that century at the earliest. The labyrinth formerly at Sens may date to the 1190's, but the example at Chartres was certainly among the early examples, and was clearly influential in the subsequent popularity of labyrinths in 13th century France and elsewhere in central and northern Europe.

What was at the centre of the Labyrinth?

All that remains of the brass or copper plaque that formerly decorated the centre of the labyrinth in Chartres Cathedral are the worn stubs of the rivets that held it in place. While we know, from a description of the plaque from around 1640 (Chaliline, 1918), that it bore a representation of the combat between Theseus and the Minotaur, we have no plan or diagram of the layout of its design. It would surely have been similar to the depictions of this scene found in contemporary labyrinth-decorated manuscripts, or at the centre of the 12th century floor labyrinths in Italian cathedrals. The plaque was removed in 1792, supposedly to be melted down for cannons for the army of the newly founded French Republic.

*Central panel of the Chartres labyrinth, showing the rivets that held the former plaque in place.
Photo: Jeff Saward/Labyrinthos*



Was there something buried beneath the centre?

This is a piece of folklore, in circulation since the mid-19th century. In 1849 an excavation of the centre of the labyrinth was carried out to determine if a memorial to the builders of the cathedral was buried at this spot - a theory in circulation at that time. Despite digging down five metres, nothing of significance was found and the central stones were replaced (Wright, 2001).

What was the original name of the labyrinth?

The lack of surviving documents contemporary with the construction and original use of the Chartres labyrinth means that we simply don't know. However, drawing parallels with other, better documented labyrinths in French cathedrals and manuscripts of the time, it would be fair to assume that it was known at the time of its construction as the "Domus Daedali" (House of Daedalus), a popular title equating the intricacy of these labyrinths in the cathedrals - the "Domus Dei" - with the work of Daedalus, the master builder of antiquity and designer of the 'original' labyrinth. In the mid-1600's it is again described as a "Dédale," and during the 18th century was popularly known as "la lieue" possibly in reference to the old Gaulish measure of a league of 1500 paces, a very rough estimate of the number of steps taken to traverse the labyrinth. By the late 18th and early 19th centuries, the writings of antiquarians had popularised the naming of the cathedral labyrinths, including the example at Chartres, as "chemin de Jérusalem" (road to Jerusalem), a term that may well date back to the 17th century, but is not documented prior to this time (Wright, 2001).

Was there an inscription on the pathway?

Another misunderstanding, which has appeared on a number of occasions, concerns the claim that the words of the 51st psalm, *Miserere mei, Deus*, were once engraved on the stones forming the path of the labyrinth at Chartres. This old chestnut continues to appear from time to time, despite the fact that Jean Villette dispelled this notion as nothing more than a misinterpretation of an old engraving of the words of the psalm superimposed over a plan of the labyrinth, drawn in the mid-17th century, but not published until 1918. As Villette rightly points out, had the words ever been engraved on the flagstones, some trace of their former presence would surely survive, however worn (Villette, 1984).

Plan of the Chartres labyrinth with psalms superimposed on the pathway, from the Recherches sur Chartres manuscript of Charles Chalilne, first published in 1918, but originally written c.1640



What size and shape is the labyrinth?

Much has been written about the exact size and measurements of the Chartres labyrinth. Hermann Kern (Kern, 1982), for example, stated categorically that the labyrinth is elliptical rather than circular, 12.60 x 12.30 metres (41 feet 4 inches by 40 feet 4 inches). He based his statement on comments from Maurice Guinguand, who had presumably taken his measurements from the often-published overhead photograph that appears in many books. However, this photograph, taken through a small hole in the ceiling of the nave, where the vaulting ribs intersect, is not directly above the centre, but offset toward the entrance of the labyrinth. As a consequence, it will always appear slightly elliptical in any of these apparently 'overhead' photographs.

The exact size of the labyrinth has been the subject of some disagreement. W.H. Matthews said about 40 feet, Nigel Pennick and Lauren Artress say approximately 42 feet and Emanuel Wallet gives 13 metres, nearer 43 feet. Actually the labyrinth is 12.887 x 12.903 metres (42 feet 3 $\frac{3}{8}$ inches by 42 feet 4 inches) - an average of 12.895 metres (42 feet 3 & two-thirds of an inch) - with the longest axis across the line of the entrance to the far side, or top, of the labyrinth (1). This slight discrepancy from a true circle, although only a 0.0465 % error, might seem to support the claims that the labyrinth is slightly elliptical, but it is difficult to see that the original architects would have created this slight obliquity of $\frac{5}{8}$ inch (1.6 cm) on purpose. It would seem more likely to be the result of 800 years of gradual compression of the floor from the weight of the aisle pillars that line the

nave, either side of the labyrinth, causing the individual interlocking stones that form the pavement to creep slightly inwards across the width of the labyrinth. The mortar gaps between the individual stones would easily absorb this movement without damage to any of the stones.

How long is the pathway?

Similarly the path length from entrance to centre is claimed to be anywhere between 450 feet (Matthews, 59) and 965 feet (294 m, according to Kern). This is clearly a considerable range, which should suggest caution in believing any of these figures, however reliable the source may seem. Several books give the path length as 666 feet, a number that is surely too good to be true, often quoting Jean Shinoda Bolen's *Crossing to Avalon*, published in 1994. However, Bolen gives her source as Barbara Walker's *The Woman's Dictionary of Symbols & Sacred Objects* (1988), which in turn quotes Elizabeth Pepper and John Wilcock's *Magical & Mystical Sites* from 1976. Turning to this source, we discover that this information comes from an unnamed "old book about Pagan Rome," clearly not a reliable basis for the subsequent faith in this almost magical path length.

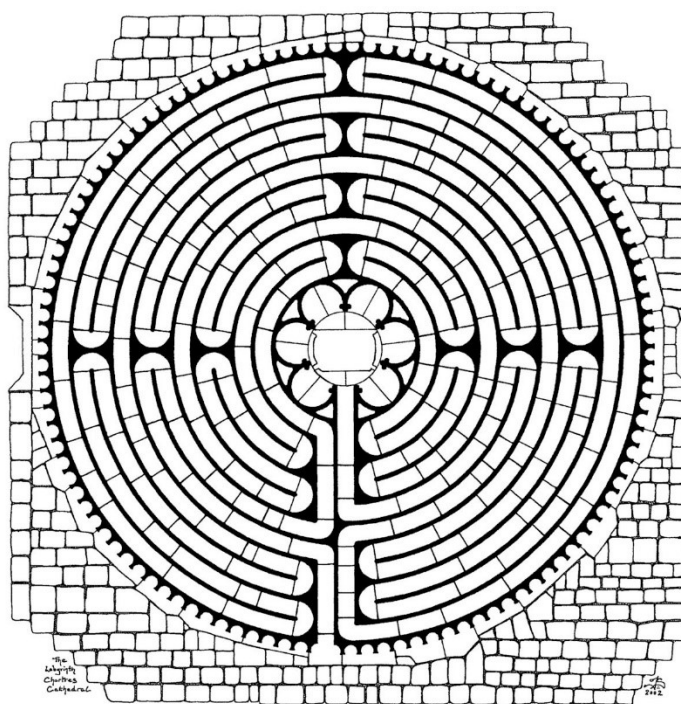
The thing to bear in mind is that, almost certainly, none of the authors confidently quoting numbers for this measurement have actually taken a tape to the path and measured it in person. At best these numbers are estimates based on approximate diameters, at worst just wild guesses! John James, who has personally measured much of Chartres Cathedral, gives a path length of 261.5 metres (858 feet), which seems very plausible, although it is not specified exactly where his path measure begins and ends. Based on actual measurements and a mathematical model of the labyrinth, I calculate that the path length from the entrance to the very centre of the labyrinth is somewhere around 262.4 m (860.9 feet), but it is still worth checking if you ever happen to be in Chartres Cathedral with a pedometer - but be careful to push it along the exact dead centre of the path!

How wide is the path?

There is also confusion surrounding the width of the paths of the labyrinth. Some claim the paths are 16 inches wide; in fact they average 34 cm (13 ¼ inches) with a 7.5 cm (3 inch) wall separating each path. However, there is variation in the width of individual path stones and the mortar joint between the stones also varies considerably, taking up much of the difference between individual stones.

How many stones in the pathway?

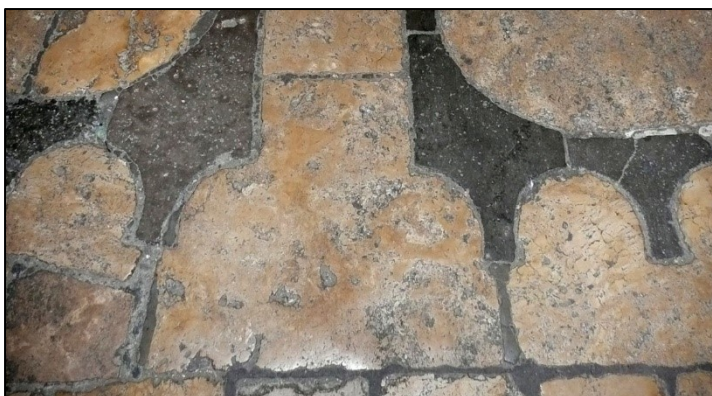
The number of stones that form the path of the labyrinth provides a final numerical puzzle. Often quoted as exactly 270 or 272, and considered by many as symbolic of the number of days of human gestation (2), the exact number is in fact difficult to determine. Several of the original stones have clearly broken since they were originally laid in place and now appear to be two slabs instead of one. Those with ragged, interlocking cracks are easy to spot; others with clean breaks are more difficult. There are also a few short slabs that look suspiciously like 'patches' inserted to replace damaged portions of pathway. Depending on how you count, it is possible to arrive at a number anywhere between around 268 and 274. Either way, the use of the word 'exactly' in discussion of this, or practically any other aspect of the Chartres labyrinth, should be treated with caution, as labyrinths tend not to conform to exactitudes.



Stone by stone plan of the Chartres labyrinth, by Jeff Saward

What was the purpose of the lunations?

Without doubt, the most remarkable feature of the Chartres labyrinth is the halo of ornamentation that surrounds the outer circuit of the labyrinth. Comprising of 112 'cusps,' enclosed within 113 'foils,' the complete circle would contain 114 of each, but for the two cusps and one foil omitted to allow entrance to the labyrinth. Various described by different authors as cups, cusps, spikes, scallops, teeth or cogs, the majority of recent books on the subject refer to this unique arrangement as the 'lunations.' This term is obviously redolent with connotation, suggesting some ancient symbolic meaning, but what is the origin of this terminology?



Chartres labyrinth, entrance stone and 'lunation'

Keith Critchlow first coined it, almost inadvertently, as recently as the early 1970's (Critchlow, Carroll & Lee, 1973). Talking about the 112 cusps around the halo, he says, "When one does divide 112 by 4 (the major divisions of the paths of the maze) we find it gives us 28. The days of a lunar month?" He later talks in the same sentence about the 'lunations' and 'cusps' and although he is talking about lunar months, and not naming the pattern as such, the connection was made and this nomenclature has been used ever since, especially since it was popularised by Lauren Artress in her 1995 book *Walking a Sacred Path*. In that book, Artress says, "Some believe that the labyrinth served as a calendar. It offered a method of keeping track of the lunar cycles of 28 days each. Using this, the church could determine the date of the lunar feast of Easter." Many folk have picked up on this qualified statement without inquiring how exactly such a lunar calculator might work in practice, and what started as nothing more than simple speculation, soon become accepted fact in many circles.

The biggest problem with this notion is that there are actually 29.5306 days in an average synodic lunar month (the time between consecutive new moons), not 28, and the mediaeval scholars and clerics were well aware of this awkward number, if not its precise and slowly changing value. They created complex lunar calendrical systems with alternating months of 29 and 30 days, employed embolistic years with additional intercalated months and inserted leap days, to keep track of this cycle in order to keep the theoretical lunar cycle in sequence with the solar calendar according to the principles determined by Dionysius Exiguus during the early 6th century CE (Richards, 1998). These tables were constructed to determine in advance the date of the first full moon that would occur on or after the spring equinox in any given year, and thus calculate the date of Easter, the primary festival of the Christian Church. They were assiduously compiled, copied and distributed by Christian scholars, scriptoriums and centres of learning across Europe and can still be found in old Bibles as the tables of Golden Numbers.

In medieval Christian manuscripts and encyclopaedia these tables were sometimes accompanied by drawings of labyrinths, presumably to illustrate the complexity of the subject matter, as much as anything else. Arguably, this juxtaposition may have been influential in the subsequent connection between labyrinths and Easter festivals and dances in the cathedrals of France. Undoubtedly, the complex alternating circuits of the labyrinth were seen as symbolic of the intermeshing cycles of the calendars, as well as the spheres on which the sun, moon and planets moved around the firmament against the background of the fixed stars. Beyond these lay additional spheres representing the spiritual heavens, where saints and angels resided. The use of labyrinths to exemplify these principles is a further demonstration of the flexibility of the symbol to reflect the complex interplay of the scientific and spiritual worlds of mediaeval thought.

However, the supposed 28-day medieval lunar month is a fallacy - take a look at mediaeval clocks with moon phases in cathedrals (Wells in England, for example) and they all give 29½ days for the cycle - and the connection between lunar cycles and the ornamentation around the labyrinth at Chartres (the so-called 'lunations') has never been adequately explained, nor does it have any historical documentation for support.

Does the rose window perfectly overlay the labyrinth?

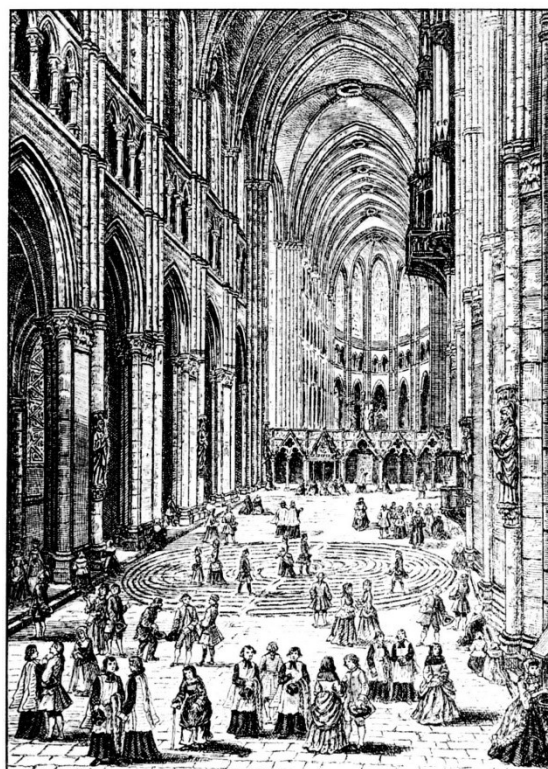
Without doubt, one of the most frequently quoted ‘facts’ about the labyrinth at Chartres is the notion that the famous rose window, set high in the west frontage of the cathedral, if hinged down along the length of the nave, would exactly overlay the pattern of the window onto the labyrinth. It's a nice image, but unfortunately it isn't true. This is a good example of a statement that has been repeated so frequently, but never checked, that nobody ever questions its authenticity. The idea was, again, first popularised by Keith Critchlow in the 1970's, but even then he stated only that... “the west rose window conforms basically in size to the labyrinth” and admitted that... “there is room for splitting hairs at the mechanically precise level.” As the Rose Window has a diameter of around 11.9 metres (clear aperture of the glazed area, and nearer 13.6 metres including the moulding around the window), with the labyrinth measuring just under 12.9 metres, these are thick hairs indeed.

However this ignores a vital error in the original concept - the height of the rose window on the west wall is not the same as the distance of the labyrinth from the base of that same wall, indeed the difference would seem to amount to approximately 3 metres (10 feet) based on published plans of the cathedral and trigonometric measurement (3). The whole business is a nice piece of imagery, but in reality it just doesn't work. Instead, the two designs would probably overlay to form a symbol somewhat akin to a vesica. No doubt this piece of imagery could also spawn a whole new mythology, especially if it were to be retold in the same fashion as the original overlay concept.

Did pilgrims or priests walk the labyrinth on their knees?

One of the most popular stories concerning the original use of the labyrinths in French cathedrals, and indeed the turf labyrinths in England, is that they were walked, or more frequently traversed on bended knees, by priests and pilgrims. While the labyrinth on the floor of the cathedral at Chartres was undoubtedly walked from the time of its construction - why else would it be installed at such a size, filling the entire width of the nave - information about the exact way in which this practice was conducted is surprisingly scant. Indeed, much of what is commonly held to be truth on this matter is little more than the imaginative speculation of 19th century antiquarians.

It is recorded that pious visitors to the labyrinths at Reims, Arras and Sens would recite prayers while shuffling around the pathway on their knees during the late 17th and early 18th centuries, but no evidence exists for this practice much prior to this time (Wright, 2001). At Chartres there is no specific mention of this penitential use, but Challine's diagram of the Chartres labyrinth overlain with a spiritual text winding its way along the pathway (drawn around 1640), suggests that a similar ritual may have played out there. However, it is also recorded around 1650 that visitors to the cathedral would noisily walk and run around the labyrinth, even during services, much to the annoyance of the Canon of Chartres at the time, who refers to it as “...only a crazy amusement at which those who have nothing better to do pass the time running and turning...” An engraving of the nave of the cathedral from 1696 likewise shows fashionable ladies and gentlemen of the day walking the labyrinth, seemingly more as a social gathering, rather than as any form of spiritual practice. Prior to this point in time there are no surviving documents from Chartres that mention the labyrinth, nor record how it was used or its specific purpose. However, other labyrinths in French cathedrals, better documented, provide some clues...



Interior of Chartres Cathedral, original engraving 1696, retouched and published by Bulteau, 1887-1892

How were the cathedral labyrinths used by the clergy?

While there are a number of documents recording details of services, practices and rituals at Chartres, dating back to the 14th century at least, none mention the labyrinth specifically. However, the rituals carried out in connection with the pavement labyrinths at Auxerre, and to a lesser extent, nearby Sens, are better known as a consequence of a number of petitions and decrees that either allowed or forbade certain customs observed by the clergy at those cathedrals. In 1413, a petition from the lesser clergy to the canons of Sens, requested that on Easter Sunday, “according to custom...” they be allowed to “...play freely the game on the labyrinth during the ceremony.” The game and the ceremony are not specified, but it can be inferred that this was a liturgical dance that took place around the labyrinth, and probably involved a game of pilota, where a ball was tossed back and forth between the participants (Wright, 2001).

This can be inferred from the detailed description of this practice as recorded at Auxerre, where from at least 1396 until 1538, the canons and chaplains of the cathedral would gather around the labyrinth early in the afternoon every Easter Sunday and perform a ring-dance while chanting *Victimae paschali laudes* (Praises to the Easter Victim). While this was taking place, the Dean would stand (presumably at the centre of the labyrinth) and throw a large leather ball (the pilota) back and forth to the clergy as they danced around the labyrinth (*circa Daedalum*). Following the singing and dancing, the participants, various officers of the cathedral and local dignitaries would gather in the chapter house for a substantial meal and appropriate Easter sermons, before proceeding to Vespers (Reed Doob, 1990; Wright, 2001).

The details of this extraordinary Easter ritual are, ironically, fully detailed in legal documents attempting to outlaw the practice as unsuitable for a Christian place of worship, lodged during the late 15th and early 16th centuries. Despite early success in upholding the tradition, it was eventually stopped in 1538. Similarly, the ceremony at Sens continued until 1517, when it was also outlawed, although by that time the dance was no longer held on the labyrinth (Wright, 2001; Brandstatter, 2008).

Unfortunately, none of these documents record when these rituals started, but it would seem fair to assume that if it was a well-established custom at both Auxerre and Sens by the late 14th century, then this tradition of Easter dances on these labyrinths may well be contemporary with the construction of the labyrinths in the early 13th century. And can we therefore infer that similar rituals were carried out at Easter on the labyrinth at Chartres? While no specific document provides direct evidence, there were certainly Easter dances at Chartres, recorded in the 15th and 16th centuries, so it would also seem probable, although in the absence of documentation, this can only be matter of speculation.

And what would have been the original purpose and use of the labyrinth at Chartres at other times of the year, was it used by pilgrims and other visitors to the cathedral? On that matter, the documentary evidence is, unfortunately, completely silent.

Jeff Saward, Thundersley, England; August 2009, revised March 2017

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The Chartres Labyrinth, plan by Jeff Saward



Notes:

1. Measurements taken by Jeff Saward and Marty Kermeen, June 2002.
2. It would appear that this matter was first mentioned by Robert Ferré in his unpublished manuscript *A Day at Chartres* (1995), where he credits Canon Legaux and Jean Villette for pointing out that the path is composed of 272 stones.
3. Measured by Jeff Saward with a Suunto 360 PC clinometer, May 2001, averaged from three readings taken across the labyrinth and weighted towards the reading taken from the centre of the labyrinth to the centre of the rose window. If the centre of the rose window were truly equidistant from the base of the west wall and the labyrinth, it should subtend an angle of 45 degrees - instead it measures a little under 41 degrees, although the exact distances are complicated by the sloping floor of the nave and reliance on the accuracy of published plans.

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