

Introduction

The aim of this article is to report to labyrinth and maze researchers a type of labyrinth located in a number of churches in the province of Bizkaia, in the Basque Country of northern Spain. Dating from the early 17th century onwards, these labyrinths have two consistent characteristics:

1. All of them are floor designs made with pebbles, according with the ancient technique known as *opus barbaricum*, consisting of pebbles pressed into a bed of mortar. The shape of the figures is first outlined on the floor with lines of small pieces of red clay (usually bits of tiles or flat bricks), and the whole pavement is then filled with pebbles that follow the arrangement of the lines. This technique is also known as *opus vermiculatum* (literally: pebbles arranged like worms). In the seventeenth century these designs of labyrinths were called, by their builders, *Labores de Troya*, an equivalent of “Troy-works” or, say, “Troy pebble works.”
2. The labyrinths are placed outside of the walls of the churches, normally under the roof of the portico that surrounds the building, and generally, in front of, or near the main door. The position and the size of the pavements suggest that the figures of labyrinths were intended to be walked (in fact, nowadays, children that live near the churches often play hopscotch on them). In some of churches, along with the design of the labyrinth, there are other figures or geometrical patterns, some of them related with Christian iconography, such as lily flowers, Solomon’s knots, wheels, rose windows, spirals, chessboards, etc. However, in the examples where there are various figures, the labyrinth usually stands out as the main figure because of its position in front, or near the doors of the church.

The designs of these church labyrinths derive from well-known models: the unicursal patterns of the seven-circuit Classical or Cretan design, and the eleven circuit Otfrid type.¹ There are some reasons to consider that the study of these labyrinths is of great interest: first, these labyrinths are inserted in a religious context in an epoch in which the labyrinth is commonly considered as a mundane plaything, the time of garden mazes of the stately homes.² The time of their construction is also contemporary with the English turf-mazes, but in this case, the relation with a religious context is not clear.

Secondly, the church labyrinths of Bizkaia are made with techniques of vernacular masonry and their designs seem more ‘primitive’ than the labyrinths of the gothic cathedrals of the Medieval. If we also consider the rural environment in which they are placed, it can be thought that their existence is related with popular and, perhaps, marginal forms of religious practice, for instance, the survival of the (religious) labyrinth in the Baroque period takes place not in the great churches of the cities, nor in the great convents and cathedrals, but in humble small churches and chapels of villages and hamlets. Thirdly, because of the unusual nature of their location, outside the church, these labyrinths are of a type not yet documented in the main inventories (such as Mathews, Santarcangelli and Kern, etc.).³ Therefore, we think these labyrinths add a new link to take into account in the study of the chains of historical, geographical and cultural diffusion of this symbol.

This study is the fruit of the amateur fieldwork of the authors, visiting many places, the joint work of a geographer and a historian, and along with the fieldwork we have used the resources of civil and ecclesiastical archives. The result of this research has been an inventory of church labyrinths found in an area of around 7000 square kilometres, in which the survey has been intensive. We don’t know of further examples of this kind of labyrinth in the wider area (i.e., the Iberian Peninsula), but the inventory is opened for new discoveries.

1. Santa Maria de Bakio
2. San Pedro de Mendexa
3. San Nicolás de Zaldu
4. Santa Maria de Arrankudiaga
5. Santo Tomás de Olabarrieta (3)
6. Santa Águeda de Bikarregi
7. Santa Maria de Uribarri (2)
8. San Pedro de Murueta
9. San Miguel de Mugarraga
10. Santa Maria de Zalao (2)
11. San Antón (Bilbao)

- Labyrinth preserved
- Damaged or destroyed

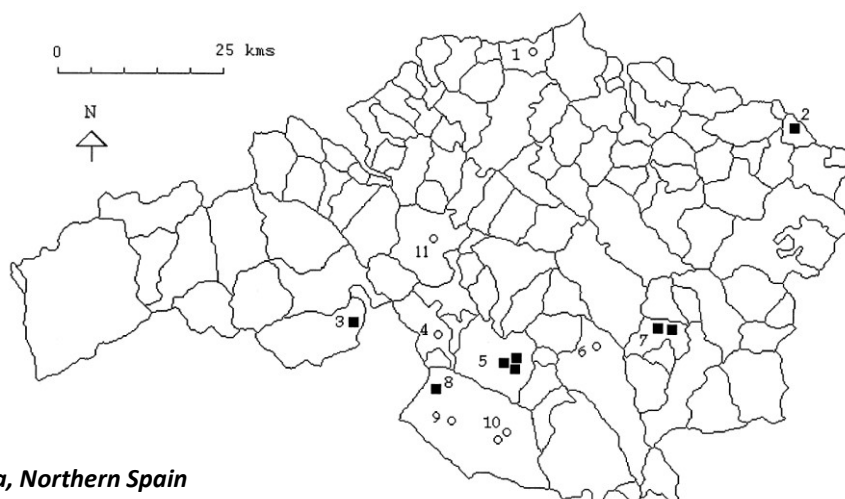


Figure 1: Pavement Labyrinths in Bizkaia, Northern Spain

The map (figure 1) shows the location of churches with labyrinths in the province of Bizkaia. The inventory includes eleven churches, and a total of fifteen labyrinths (three churches have two or more labyrinths). The table below gives the characteristics of each labyrinth.

<i>Name of Church</i>	<i>Labyrinth type</i>	<i>Side of church</i>	<i>Entrance orientation</i>	<i>Situation with respect to doors</i>	<i>Size (m.)</i>	<i>Condition</i>	<i>Construction date and builder</i>
San Pedro de Mendexa	Classical	W	W	Main door	2.93 x 3.28	Good	Unknown
San Nicolás de Zaldu	Classical	S	S	Main door	3.80 x 4.03	Good	Unknown
Santa Maria de Zalao (1)	Classical	W	W	Main door	3.50 x 3.40	Damaged	Unknown
Santa Maria de Zalao (2)	Classical?	S	W	Side door	2.60 x 2.36	Damaged	Unknown
San Miguel de Mugarraga	Classical	S	W	Side door	2.6 x 2.90	Damaged	Unknown
Santa Águeda de Bikarregi	Classical?	W	W	Main door	3.50 x 3.30	Damaged	Unknown
Santa Maria de Bakio	Classical?	W	W	Main door	2.97 x 2.60	Substituted	Unknown
San Pedro de Murueta	Modified Otfrid	S	E	Side door	4.35 x 4.10	Good	1604, Juan de Pagazurtundua
Santo Tomás de Olabarrieta (1)	Modified Otfrid	W	N	Left of main door	5.30 x 4.65	Good	1628, Martin de Gorostiça
Santo Tomás de Olabarrieta (2)	Modified Otfrid	NE	E	Exterior apse	4.47 x 4.90	Good	1628, Martin de Gorostiça
Santo Tomás de Olabarrieta (3)	Pseudo labyrinth	SE	E	Exterior apse	4.10 x 4.82	Good	1628, Martin de Gorostiça
Santa Maria de Arrankudiaga	Classical	W	S	Left of main door	2.10 x 2.10	Damaged/defective	1782, unknown
Santa Maria de Uribarri (1)	Medieval	SW	E	Side door	7.50 x 7.50	Good	1938, Francisco Eguia Torrealday
Santa Maria de Uribarri (2)	Medieval	SE	W	Side door	7.50 x 7.50	Good	1938, Francisco Eguia Torrealday
San Antón (Bilbao)	Unknown	S	S	Side door	?	Destroyed	Documented 1632, unknown

These churches are located mainly in rural areas, and the ages of the labyrinths range from 1604 to 1792. The date of six labyrinths remains unknown, but we can suppose that they belong to the same period. One exception is Santa María de Uribarri, in Durango, that has two Gothic-style labyrinths constructed in 1938.

The location pattern shows a concentration of churches in the south of the province. The total number of churches in this territory (the diocese of Bilbao) is 324 parish churches and 458 mainly rural chapels. The number of churches with pebble floors in their porches is small, approximately 50, compared with the total and there are, of course, pebble floors with other decorations but no labyrinths. Other churches of similar age have pavements made with slabs or flagstones, especially in 'wealthier' situations such as towns and urban locations, but normally these stone pavements have no decoration.

The spatial distribution of churches with pebble floors can be explained as a survival pattern. The pebble floors of the past were uncomfortable for feet with modern shoes, and many parish churches replaced the old pavements inside and outside the building. However, in the past such pebble pavements were very common in towns and cities, certainly until the 18th century, and in Spain, the name *empedrado* or *encachado* describes this kind of pavement in the streets, suited for horseshoes. The *empedrado* pavements were later replaced with a better-quality cobble pavement, made with square stones (*adoquines*).

Through one document from 1634 we know of the existence of a pavement labyrinth in Bilbao, the capital and main city of Bizkaia. This labyrinth was placed outside the church of San Antón, just in the centre of the Plaza Mayor, the main public space of the town. This document mentions one "labor de Troya," that, in this context, is the unmistakable signature of a labyrinth.⁴

This evidence shows that the labyrinth design outside the churches was not restricted to those in rural areas, and perhaps these designs were once also common in the cities. There are pebble floors with flowers and geometrical motifs throughout Spain, in the Rioja, Aragon and Andalusia regions, but we don't know of any pebble labyrinth designs, other than those described here.

The only example of a similar pebble labyrinth pavement outside of Spain is the example found at Castletownroche, County Cork, Ireland.⁵ This labyrinth was formerly situated on the kitchen floor of a farmhouse and dated to the last decade of 18th century. At least two of the Biscayan labyrinths were made near that date, but the context is different: the Castletownroche labyrinth is an isolated example and it is sited in a civil building.

The location of all these labyrinths in the province of Bizkaia is not an essential feature of their spatial distribution. In fact, the territory of this province was completed in different periods, not reaching its current boundaries until 1833, when the administrative reform of the whole territory of Spain took place. Some municipalities were independent of this territory until the end of 18th century (such as Orozko, in which some of these churches are located). In relation to the ecclesiastical regions, the territory belonged to the Diocese of Calahorra from the eleventh century to 1862. From that date until 1949 it belonged to the Diocese of Vitoria and from 1949 to the present, to the Diocese of Bilbao.

In this research, the authors have explored the neighbouring provinces, looking for similar pebble labyrinths: Burgos (specially the north area of this province), Cantabria, Alava and Gipuzkoa, along with Rioja. In the province of Alava, and very close to the area with a higher density of labyrinths, there is one example of a design similar to the labyrinth; it belongs to the chapel of Santa María del Yermo, in the municipality of Llodio, sited on the top of a mountain. But it is not a labyrinth. It is a circular design of seven circuits whose middle merely resembles the centre of a labyrinth.

In the study area there are no examples of labyrinths from the Middle Ages, and also few archaeological Roman ruins. The nearest examples from the time of the Roman Empire are one incomplete mosaic labyrinth in Pamplona,⁶ and the mosaic labyrinth of Salinas de Rosio, Burgos.⁷ Possibly from the Middle Ages, is the classical labyrinth engraved on a stone found in the ruins of a church, San Pantaleón de Arcera, in the southern area of Cantabria.⁸ However, we doubt that any of these examples have relation with the cases studied here.

There are a few examples of places named Troya in this region. As in many European countries this name is often supposedly related with the Romans and their old settlements. In Bizkaia there is one place called Troyagane (in Basque language, the Hill of Troya), a hill near the Roman settlement of Forua. In the neighbouring province of Gipuzkoa the name Troya is applied to an old mine, in Mutiloa. Nevertheless, the expression *labores de Troya* is clearly associated with the form of a labyrinth, employed in the same style that ancient Romans used Troya for their mosaic floors.

The Designs of the Labyrinths

From the table on page 2 we can see that the Classical (or Cretan) model is the predominant design in this group of labyrinths. Because not all the labyrinths are in a good state of preservation, we have put a question mark against some of the examples. We have the evidence that these examples are, effectively, labyrinths, by taking into account some distinctive clues: one is the number of circuits (seven circuits or eight walls, in the case of the classical model), another is the existence of corners and turns in which the direction of progression is changed. But, as we will see below, the builders could also change some of the classical designs to introduce variations such as bifurcations (also called *biviums*), to produce multicursal patterns that can symbolize 'mystical' choice, for example, good or evil.

In two other churches another model appears. It is the eleven-circuit or twelve-walled model known as the Otfrid, in which the builders have made a single modification.⁹ There is another design that we have called a 'pseudo-labyrinth,' because it consists of a small labyrinth surrounded by a maze-like structure without an entrance. And, finally, the labyrinths constructed in 1938 in the church of Santa María in Durango, covering an ample space in the porch, consist of two interconnected Chartres-type medieval labyrinths.

The Classical Type

Only two labyrinths of this type are in a good state of preservation. These are situated at the church of San Pedro de Mendexa (figure 2), and San Nicolás de Zaldu (figure 3). Both are round in shape, but the generative pattern of cross and 'L's' is angular. They are placed in front of the door of the main entrance to their respective churches. We know the date of construction of the labyrinth at Zaldu, the year 1792, because it is written with pieces of tiles in a corner, now covered with grass. The age of the floor labyrinth at Mendexa is unknown, but the church was built in 1545 on the site of a hermit chapel, as a parish segregated from the church of Santa María de Lekeitio. Both labyrinths are inscribed in a square frame, and are of a size that permits them to be walked. The design at Mendexa is nearly three meters of diameter and four metres in the case of Zaldu.



Figure 2: Labyrinth of San Pedro de Mendexa

Figure 3: Labyrinth of San Nicolás de Zaldu

Even if both are reproductions of the well-known model with a level sequence 0-3-2-1-4-7-6-5-8, there are at least two interesting differences between the two designs. One of the differences is iconic and the other is topological. The Mendexa labyrinth has the shape of a tree, with the trunk aligned in the direction of the entrance. This icon perhaps recalls the Tree of Life, and also the trunk indicates clearly the entrance to the labyrinth. On the other hand, the Zaldu labyrinth has a topological characteristic that makes it in some sense 'baroque' in its design.



Here the entrance to the labyrinth is not clear, because there is a line that cuts the cross of the generative pattern perpendicularly at its base, so the person that intends to start walking the path is presented with a choice between starting from the left or the right side, producing the effect of a bivium. This practice of introducing slight variations into classical type labyrinth designs was noticed by Kerényi, referring to the stone labyrinths of Northern Europe (Scandinavia and Finland).¹⁰ Whatever the interpretation of the biviums, this sort of design can be an allusion to dual moral choices (good or evil, heaven or hell) and/or the starting point of competitive play practices using the floor labyrinth as a playground, or only as a guessing game.

By analysing the classical labyrinths appearing in the Biscayan churches we can draw some provisional conclusions. On one hand it can be both the oldest and the newest design. The oldest because it is the 'most popular' of the labyrinth designs and its figure is easiest to draw, starting with the generative scheme of one cross, four L's, and four dots. Even without archaeological evidence, we think that this design may be the earliest, because it appears in other churches, damaged and in a very poor condition: the churches of Santa María de Zaloa (already in existence in 1375) and of San Miguel de Mugarraga (reputed as one of the oldest churches in the valley of Orozko). It also appears, albeit deteriorated, in Santa Agueda de Bikarregi, and replaced more recently by a design of eight concentric rings in Santa María de Bakio.

This is also the design most clearly associated with the main door of the churches. Along with the two cases mentioned, in all the others the figure is a sort of doormat for the main entrance. The pattern at Zaloa (figure 4) shows two labyrinths. The largest by the main door is damaged, but can be identified by the evidence of seven circuits and associated turns. The smaller example has been repaired and replaced by a design of eight concentric circuits. Both labyrinths have the form of the section of a chapel (squared in its base and circular at the top).

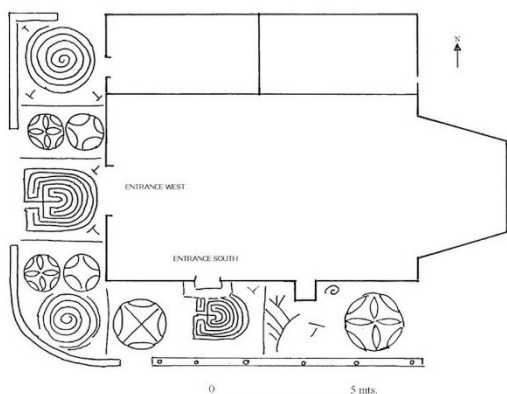


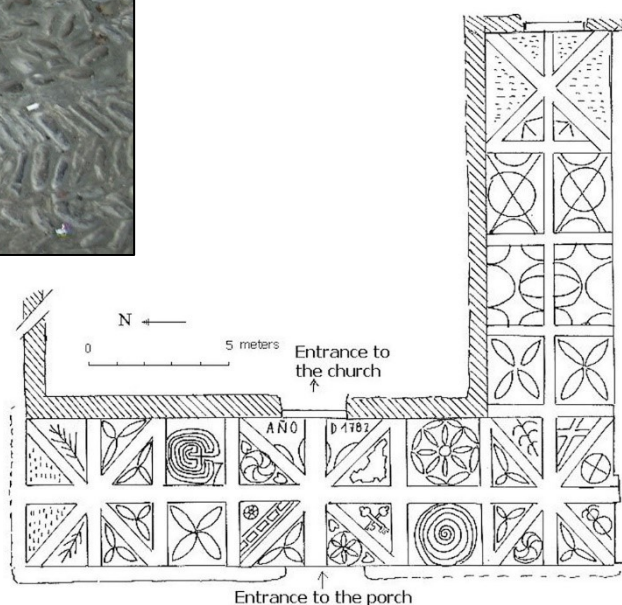
Figure 4: Reconstructed plan of the pavement of Santa María de Zaloa and the current condition of the pavement

The most recent of the classical-type labyrinths are the previously mentioned San Nicolás de Zaldu (dated 1792), and at Santa María de Arrankudiaga, dated 1782 with tiles embedded in the pebble floor. But in this example the labyrinth is very small, it is placed on the left side of the door, and in the context of the associated iconography it is just another symbol, mixed with geometric and Christian icons (the Cross, the ladder, and St. Peter's keys). This labyrinth is an erroneous version of the classical model (see figures 5 and 6).



Left: Figure 5: Detail of the labyrinth of Santa María de Arrankudiaga

Below: Figure 6: Plan of the pavement of Santa María de Arrankudiaga



The Otrfid Type

The Otrfid labyrinth appears in two churches, both with the pebble floors in a good state of preservation. Both pavements are well dated, and we have documents that tell us about the circumstances in which they were built. Here the labyrinth is one figure amongst other symbols.

As we know, the Otrfid model can be constructed from the classical form by adding four extra turns to the outer perimeter. The additional level sequence 0-3-2-1-4, produces an 11-circuit labyrinth with a full sequence of 0-3-2-1-4-7-6-5-8-11-10-9-12. In the labyrinths found in these two churches, the builders made a further modification in order to convert the unicursal pattern to a multicursal form. This modification was created by simply erasing a short segment in the main axis of the labyrinth, the line marked 'a-b' in figure 7.

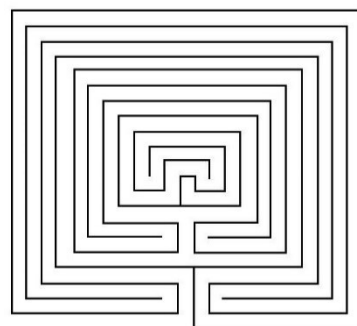
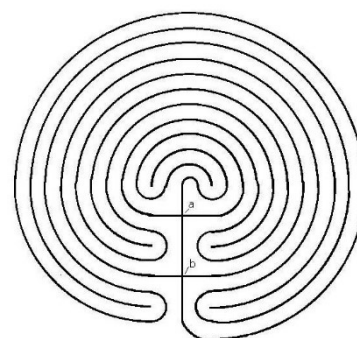


Figure 7: The Otrfid labyrinth modified

This modified version of the Otrfrid labyrinth is repeated at three labyrinths, one in San Pedro de Murueta and two in Santo Tomás de Olabarrieta, so we can assume that it is not a mistaken design, but a deliberate one, with the intention to produce a bivism. The interpretation of this has been outlined above, and we think that it is a feature of the baroque mystic style.

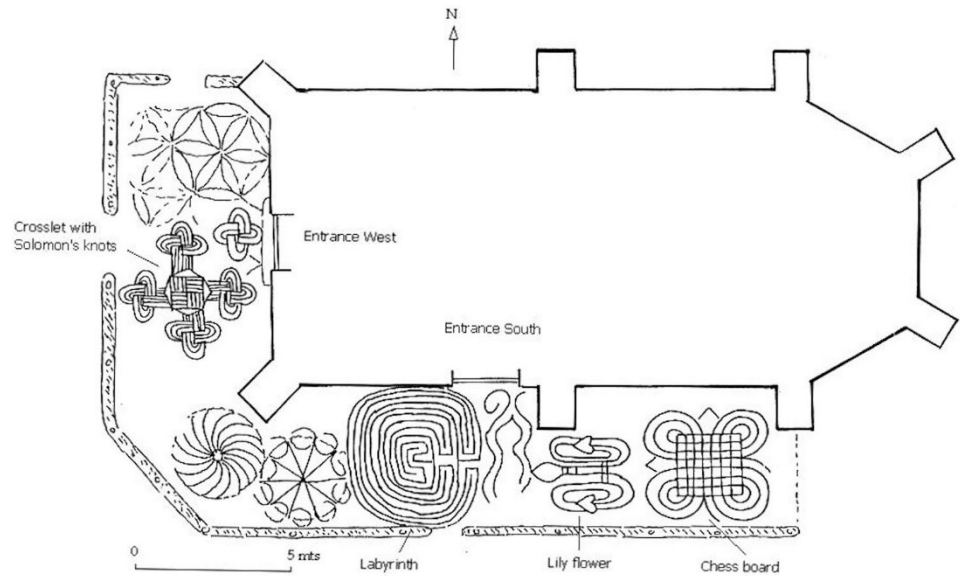


Figure 8: Plan of the pavement of San Pedro de Murueta

In the Church of San Pedro de Murueta there is only one labyrinth, placed close to a secondary door (although, in fact, this is the door more frequently used). The plan of the designs in the porch is displayed in figure 8. Along with the labyrinth we can identify other figures: a chess board, a lily flower, a rose window of ten sectors, a millstone, two small Solomon's knots and a crosslet made with Solomon's knots centred in front of the main door. Other circular geometrical figures fill the space near the main entrance. We know that this pavement was made by a local craftsman, Juan de Pagazaurtundua, in the year 1604.¹¹



Figure 9: Pavement of San Pedro de Murueta

The church of Santo Tomás de Olabarrieta, in the municipality of Zeberio, no more than 20 km from San Pedro de Murueta, is surrounded by a covered porch of nearly six hundred square meters in area, in which there is a pebble floor with many figures (figure 10) including three labyrinths, two of them of the modified Otrfid-type and another best described as a 'pseudo-labyrinth' (figure 11). As with the modified Otrfid labyrinths, the pseudo-labyrinth could be a deliberate design, trying to explain the security of the way to the centre, between the confusion of the maze that surrounds it, perhaps a symbol of the security of the faith. Unfortunately, there is no certain way to interpret the intentions of the floor builders.

However, we do know when the floor was built, the year 1628, and the designer, the bricklayer Martin de Gorostiça. His signature is written on the floor, just beside the labyrinth placed in the north-eastern corner. Through other sources of documentation, we also know some of the circumstances concerning the construction of this pavement.¹²

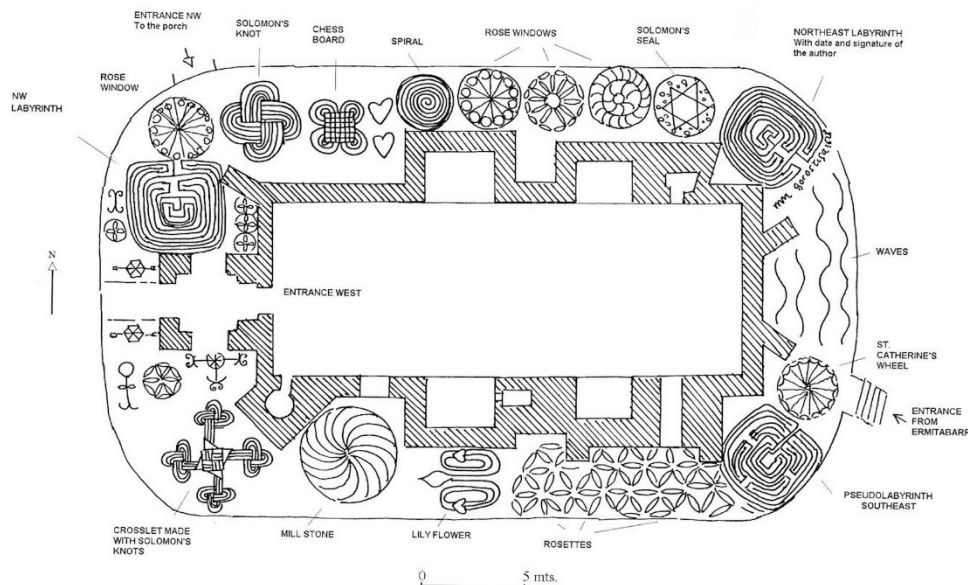


Figure 10: Plan of the pavement of Santo Tomás de Olabarrieta (Zeberio)

These documents can be summarised as follows. After an inspection of the church by ecclesiastic officials, they ordered a pavement to be built around it. In the year 1628, the administrators of the properties of the church put out to tender the construction of the pavement, under certain specified conditions. The conditions established that the pavement must be levelled the length and width of the porch, it must contain a lot of decorative motifs (*labores*), and the resultant floor had to be durable. After completion the work should be examined by masters of the art, and if the work was not acceptable, the bricklayer would be responsible for rebuilding the work at his own expense.

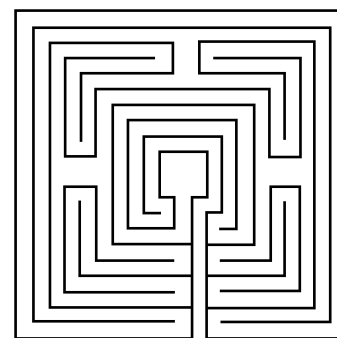


Figure 11: Plan of the pseudo-labyrinth

Because the church owned a lot of woodland and a great amount of money was to be invested in the pavement, a number of master bricklayers bid for the tender and the names of four are recorded. The master that finally made the floor was Martín de Gorostiça, but the most interesting information comes from another applicant, Juan de Escalante, who specifies the decorative motifs that he intended to make if he won the commission, and writes: "in front of the main doors, one labor de Troya" (an expression that clearly links the symbol of the labyrinth with the doors of the church). He also mentions the names of eight other symbols, such as a double rose window (*claraboya*), a St. Catherine's wheel, a lily flower, a chess board, a drawing of the world, a chapel and a castle. He promises to add rosettes to fill the empty spaces and a double Silisamon [sic], which can be understood as a crosslet made with Solomon's knots. We can see equivalents of some of these designs in the current pavement, shown in figure 10.

This pavement is advertised to tourists, with a sign on the nearby road in the valley, but none of the other pavements in their respective churches are announced as sites of historical or heritage value. Figures 12 and 13 show the labyrinths on the north-western and north-eastern sides of the pavement respectively, figure 14 shows the pseudo-labyrinth.



Figure 12: The north-western labyrinth of Santo Tomás de Olabarrieta



Figure 13: The north-eastern labyrinth of Santo Tomás de Olabarrieta, with the name of the artist



Figure 14: The pseudo-labyrinth of Santo Tomás de Olabarrieta

All photos and diagrams courtesy of Joseba Juaristi & Arantza Gogeoascoechea.

The Gothic Labyrinths of Durango

In the city of Durango there is a pavement in the porch of the church of Santa María that has two Gothic-style labyrinths, created from pebbles of various colours. This is somewhat different from the previous examples and it is of relatively recent origin, dating from 1938, designed by Francisco de Eguía, the head of public works in the city at that time. The work of Eguía was part of the reconstruction of the porch, after its destruction in the bombing of the city by the German air force during the Spanish Civil War. Before this incident the floor was paved with flat slab stones, and at the time of this reconstruction, stonework was perhaps very expensive for this purpose. So, the floor was repaired with cement, but inserted in it is a decoration made with pebbles of different colours. The pebbles were brought from San Vicente de la Sonsierra, a town in the middle of the Ebro valley, with extensive alluvial deposits from where it is possible to select a range of stones of various sizes and colours.

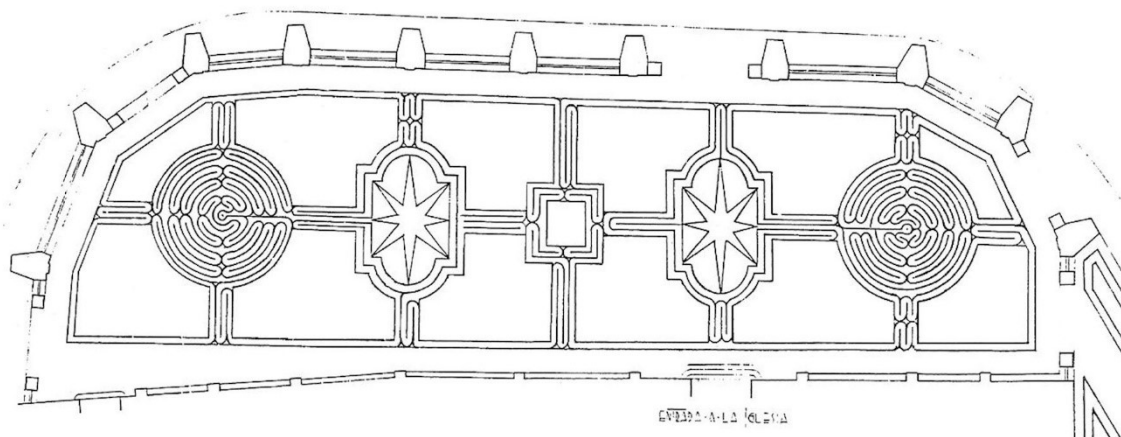


Figure 15: Plan of the pavement of Santa María de Uribarri (Durango) made by Francisco de Eguía in 1938

We don't know much about the designer or why he decided to put labyrinths in the porch.¹³ The complete design consists of two independent unicursal routes, placed symmetrically. Each surrounds half of the porch, passing around a central square and the frame of an eight-pointed star, as well as entering the respective labyrinth. One of the labyrinths is clearly a copy of the Chartres-style medieval design, the other is a sophisticated original variant created by the designer. Both have twelve circuits, as in order for the labyrinths to link into the overall design, an extra circuit has been added around the outer perimeter. The pavement was built by bricklayers, who at the time were prisoners of war, and some mistakes can be seen in the current pavement when compared with the original plan. Although it is impossible to know Eguía's intentions, these labyrinths are in the tradition of other church labyrinths that he surely knew; they also show his ability in solving topological puzzles.



**Figure 16:
One of the labyrinths
in the porch of
Santa María de Uribarri.
Photo: Jeff Saward, 2009**

Some clues for the interpretation of the Bizkaia church labyrinths

There is never a complete explanation for labyrinths. In this particular case, there are many features in common with other labyrinths found in religious contexts, as pointed out by many scholars, but there are also specific differences that we need to highlight, in order to obtain sounder conclusions.¹⁴ As church labyrinths, they are rather different from the more familiar medieval labyrinths placed inside the cathedrals, i.e., those of Chartres, Amiens, etc.

One of the important differences is the position of these labyrinths in relation to the church, and especially with the doors. The labyrinths are placed outside, and in the case of the churches that exhibit one classical-type labyrinth, in front of the main door, suggesting this figure is announcing the respectability of the sacred space inside. Considered with the doorway, the labyrinth acts as a key, a permission to enter after the fulfilment of a requirement, i.e., to follow the turns until the centre is reached. It symbolizes a question, as in many mythological tales. A labyrinth in front of a door repeats one of the topics of religiosity and of ancient mythology: the monster that proposed a dilemma to the hero. In order to continue on his way, the hero must show that he knows the labyrinth, that he has the key.

The doors themselves have great symbolic potential and many doors of Christian churches and cathedrals (especially those of the Romanesque and Gothic styles) are profusely ornate, with many decorative symbols, some for protection and others dissuasive. The dissuasive or discouraging symbols sometimes take the form of animals or monsters, but also panels with knots and intertwined ribbons, carved on capitals to fool the evil spirits.

Another function of these labyrinths is related with the idea of walking around something before reaching the goal. In many cases there are a given number of rounds, as in the paradigmatic case of Joshua in Jericho (seven circuits). As an example of this, the Spanish *Romancero* (a collection of ballads from the time of the Middle Ages onwards) repeats in many poems the formula of "from seven to eight."¹⁵ So, in the verses of Segundo Romance de Gaiferos, according with a text printed in Barcelona at the end of 16th century, this rite is expressed as follows:

Walking during three days, to Paris they have arrived, they find the doors closed, where to enter they cannot find. Seven rounds they walk around, looking for entry downtown, and when they make the eighth round, a shutter fails and they get into town.¹⁶

In relation with these 'rounds', perhaps the church labyrinths depicted here have been used to make some ritual journey through their circuits, spontaneous and without any liturgical formalisation, before entering into the church, or for asking any special favour. Regarding the rural chapels of Bizkaia, one author has gathered some proof of the custom of walking around the church and other sacred objects.¹⁷

This evidence does not say anything about labyrinths, or other kinds of prefabricated devices to make such circumambulations, but there are enough cases to show that the custom of ritual circling of churches and chapels was widespread in the past, and there is continuity in the present. And there are differences in relation with the number of turns made; this author only quotes seven rounds in one case, at the chapel of Santa Apolonia in Urkiola (Bizkaia), when seeking for relief of toothache.

Another feature that distinguishes the labyrinths of Bizkaia from other church labyrinths is the time period in which they were built. This means that we must make some consideration (or, perhaps only speculate) on Baroque religious expression, as manifested by the message that the labyrinths with bifurcations or biviums may transmit.

After the Council of Trento (1545 CE), there appears in Baroque art a stubborn obsession with the representation of Death. This fixation is evident in the gloomy iconography of tombstones, used as a warning to the living, in contrast with the more peaceful aspect of Renaissance tombstones.¹⁸

This Baroque religiosity stresses the certitude of death (in Latin, *securitas*), as well the uncertainty of the wayfarer's passage through life, as Bouza Alvarez has pointed out.¹⁹ Therefore, as a mirror of this idea, the pavement labyrinths containing a few bifurcations represent this uncertainty in their topology. The labyrinths of the modified Otfrid-type have one bifurcation, and the so-called pseudo-labyrinth represents both the baroque *securitas* of Death (the way from the entrance to the centre is unicursal) and the uncertainty of life (the labyrinth is surrounded by a maze, without entrance or goal).

Unlike other labyrinths in European churches, we have no testimonies of Easter ceremonies in Bizkaia, using the labyrinth as a symbol of regeneration. After the Council of Trento, the Catholic liturgy was relatively homogeneous across Europe.

Now we should consider the use and meaning that church porches have in Bizkaia, as this suggests that the labyrinths placed here could have had various uses.

In the north of Spain there are many rainy days in the year, and the church porch is normally a wide-open space used for many purposes, at the same time a religious enclosure and a space for social interaction. Often used as a meeting place for people that live in the neighbourhood, in these rural areas the main civil institution is called *anteiglesia* (in front of the church). The regular council meetings of neighbouring peasants and the local authorities were often held under the roof of the porches, and, in many places a stone table still exists for writing down the decisions and agreements reached in the meetings.

Furthermore, the porch is also used as a place of informal meetings, as a playground for the children, and sometimes it can also be used as a marketplace.

But the space under the porch roof is mainly a sacred space, and, in some churches has been used as a cemetery. Another name by which it is known is *cimiterio*, a word that recalls this previous purpose. Nevertheless, in the past, the function as graveyard was not the main one and it would take place only if it was necessary. The main burial place until the nineteenth century was inside the church, but only in churches that had the status of parishes. Each family owned a grave below the floor of the church, but in certain circumstances, with the coming of new families to the village, or if the existing burial places were all occupied, then new graves could be opened in the porch. A common expression for a Christian burial in this region says "to be buried under the tile of the church," and the tiles of the roof of the porch are also tiles of the church.

So, the porch is a place that binds the living and the dead, the families with their ancestors, and so the labyrinth with its references to the underworld is also a symbol that links these two worlds, as in the classic myths.²⁰

Finally, we can also take into account the other figures that appear in the pebble floors alongside the labyrinths. One of them, the Solomon's Knot, is likewise first represented in prehistory, profusely used in Roman mosaics and is assimilated into Christian iconography as a cross. Others are geometrical entertainments showing the skill and ability of their builders, including the labyrinth, but also the depictions of rose windows, spirals, crosslets, etc. Others, such as the chess boards, can be used for playing games on the floor with pebbles or clay pieces.

So, we can think about some of the pavements described here (at least, those that have many figures), that they have been used both for didactic, catechetical purposes and also as play grounds. These pavement labyrinths are contemporary with Shakespeare's description of turf mazes and the game of nine men's morris, situated alongside each other, in his often-quoted verses from Act II, scene i of *A Midsummer-night's Dream*:

The nine men's morris is fill'd up with mud,
And the quaint mazes in the wanton green,
For lack of tread, are indistinguishable.

Conclusions

The church labyrinths of Bizkaia are a proof of the continuity of the use of this symbol during the Renaissance and Baroque times. The chronology of these labyrinths covers a time span of nearly three centuries.

These labyrinths constitute a 'new' type of historical church labyrinth that can be defined as floor labyrinths outside the churches. They must be studied taking into account their historical and regional characteristics.

The designs of the labyrinths include both seven and eleven circuit models. In some of these, the designer has introduced modifications in order to produce biviums or bifurcations of the pathway. These designs can be compared with other models found in the New World, sometimes attributed to pre-Columbian times. In fact, one of the Hopi models, the so called *Tápu'at* (mother and child), is a modification of the classical seven-circuit type. Because many priests and friars that went to evangelize the natives of Arizona (via Mexico) came from these regions in the north of Spain, new diffusion paths for the symbol might be considered. This might reinforce the thesis of W.H. Mathews that such designs were introduced to the New World by the Spaniards.²¹

It is possible to continue this investigation along two fronts. One is via archaeological research, looking for more examples in a wider area, especially in rural and marginal areas. Another is the search of written sources, such as ecclesiastical and religious documents of the time span considered here.

Unfortunately pebble floors are generally considered of limited artistic value by art scholars and heritage authorities; it is important therefore to make detailed plans and well documented inventories of these remarkable constructions before they are damaged by acts of 'creative destruction.' Such damage can occur in a variety of ways, by those unaware of their value. A pavement might be carelessly covered with cement, or the stones recycled, but an ambitious and tireless archaeologist might also accidentally destroy them, with the pretext to find the 'treasures' buried beneath.

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The labyrinth of San Pedro de Mendexa. Photo: Jeff Saward, 2009

Editor's note: This article is a translated and abridged version of Juaristi, J. & Gogeoascoechea, A. "Labores de Troya. Los Laberintos de Iglesia en Bizkaia" in Alonso Aldama, J. et al. (eds): *ΣΤΙΣ ΑΜΜΟΥΔΙΕΣ ΤΟΥ ΟΜΗΡΟΥ. Homenaje a la Profesora Olga Omatos*. Bilbao: Universidad del País Vasco, 2007, pp.391-416. My thanks go to the authors and original publishers for permission to reproduce this important material in the pages of *Caerdroia*. Since this paper was originally published a further three pebble pavement labyrinths have been reported in southeast Spain, in the floors of hermitages to the north of Valencia and another, now destroyed, in northeast Spain at Siresa. A report on these will be published in *Caerdroia* 51 during 2022.

Notes & References:

1. We suppose that the readers of *Caerdroia* will be familiar with these designs.
2. A fine picture of the Renaissance and Baroque Periods and of the meaning of the labyrinth in the context of Spain is given in Aracil, A. *Juego y Artificio. Autómatas y otras ficciones de la cultura del Renacimiento a la Ilustración*. Madrid, 1998.
3. Matthews, W.H. *Mazes and Labyrinths: their history and development*. New York: Dover Publications, 1970. (1st edition, London, 1922). Santarcangeli, P. *El Libro de los Laberintos: Historia de un mito y un símbolo*. Madrid: Siruela, 1997. (1st edition, Italy, 1967). Kern, H. *Through the Labyrinth: Designs and Meanings over 5000 years*. Munich, London & New York: Prestel, 2000.
4. The document contains an account of incidents that happened in Bilbao in 1634, known as “The Revolt of the Salt Taxes” (Estanco de la Sal). The chronicler was probably a servant of the Duke of Ciudad Real and says that a person (Francisco de Velasco) was dragged by the rebellious crowd to the centre of the square and was put “...in a [pebble] work called troya where usually is placed the people condemned to public shame...” Labayru y Goicoechea, E.J. *Historia General del Señorío de Bizcaya*. vol. V, 1895, Appendix 33, p.683.
5. Seward, J. & D. “Labyrinths of Ireland” *Caerdroia* 14 (1984), pp.4-10.
6. Kern (2000), *Through the Labyrinth*. Cat. no.154, p.96.
7. *Ibid.*, p.103. Addendum B.
8. *Ibid.*, p.74. Addendum A.
Editor’s note: A labyrinth graffito on a pillar from the Romanesque church of Santa Maria de Taüll at Barruera, in Catalonia (see Soreto, C. “A Labyrinth Graffito in Spain” *Caerdroia* 33 (2003), p.13), is of the classical form and tentatively dated to the 12th century CE, but is unlikely to have provided any direct influence for the pebble pavement labyrinths in Bizkaia.
9. *Ibid.*, p.105.
10. Kerényi, K. *Nel Labirinto*. Torino, 1997, (1st edition, 1983), p. 46.
11. Archivo Histórico Eclesiástico de Bizkaia. Orozko. S. Pedro Apóstol de Murueta. Fábrica, cuentas, inventarios y visitas. Años 1601-1716. Sig.3-1; Años 1716-1796. Sig.4-3.
12. The document sources are: Archivo Municipal de Zeberio. Carpeta 10. Escribano: Juan de Guesala, años 1628-1629-1630. Archivo Histórico Eclesiástico de Bizkaia. Zeberio. Santo Tomás de Olabarrieta. Libro de fábrica, años 1753-1802. Sig.5-3; Papeles varios. M.A.736.
13. The designer had an agricultural technician degree, and he also created other pavements in the town, banisters, gardens, etc. Jesús Astigarraga, who occupied the position after Eguía’s retirement, describes him as a person interested in the designs of nature, an educated person, but also somewhat introverted; it was often difficult to guess what he was thinking.
14. Doob P.R. *The idea of the labyrinth. From Classical Antiquity through the Middle Ages*. Ithaca & London: Cornell University Press, 1990.
15. Devoto, D. “Entre las siete y las ocho” *De Filología*. Facultad de Filosofía y Letras. Universidad de Buenos Aires, vol V, 1959, No.1-2, pp.65-80.
16. “Andando por tres jornadas/ a París llegado han/ las puertas hallan cerradas/no hallan por dónde entrar./Siete vueltas la rodean/por ver si podrán entrar/ y al cabo de las ocho/un postigo van a fallar” From: Díaz Roig, M. *El Romancero Viejo*. Madrid: Cátedra, 1999.
17. Arregui Azpeitia, G. *Origen y significado de las ermitas en Bizkaia*. Bilbao: Etniker Bizkaia, 1999.
18. Mâle, E. *El barroco: arte religioso del siglo XVIII: Italia, Francia, España, Flandes*. Madrid: Ed. Encuentro, 1985.
19. Bouza Álvarez, J.L. *Religiosidad contrarreformista y cultura simbólica del Barroco*. Madrid: CSIC 1990.
20. Knight, W.F. Jackson. *Cumean Gates. A reference of the Sixth Aeneid to the Initiation Pattern*. Oxford: Blackwell, 1936.
21. Mathews, W.H. *Mazes & Labyrinths*. p.154.

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