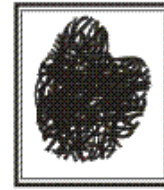


**THE SERIES: FROM THE FROG'S PERSPECTIVE**



## ***PUNTO STABILE* RESITUTION OF RISING OF THE HOLY CROSS CHURCH IN BRZEG**

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**Abstract.** Researches of illusionary and architectural paintings carried out by the author, showed that in none of sacral interiors in Poland a characteristic mark of observer's stand called punto stabile has been preserved. In the article punto stabile restitution carried out on the basis of archival photography has been described.

**Keywords:** baroque, perspective, quadrature, restitution, punto stabile, Joseph Langer, Silesia, Brzeg.

### **1. Introduction**

In literature we may find information that the essential element of the perception of illusionary and architectural paintings called quadratures was punto stabile. It was floor-fixed 'marble ring' [3]. From the geometric point of view it was a marking of the observer's post on the floor. It assured better painting exposure on the vault, that is the lack of crucial view elements for the composition distortions of perspective. The observer should stand in this point to succumb the illusion of full unification of real architectural floors with the illusionary architectural floors and illusionary views of heavens painted on the vault. Punto stabile in the sacral interior develops deeper philosophical meaning. Henryk Dziurla writes about the unity of painted and real architectural elements: 'Such sensual presentation of the unity of ideal and real world (spiritual with material) finds the justification in Aristotle's doctrine of Centre, in which only perfection realizes the unity of dualistic understood world.' [1]. One of Silesian religious poets wrote beautifully about the centre meaning, a baroque mystic Johannes Scheffer (1624-1677) known as Angelus Silesius (Silesian Angel) in the epigram number 183 [5]:

*“Stand in the middle point, you'll see everything altogether,  
Here and in heavens, what is and what will be”.*



Fig. 1: The view on the nave floor in Raising of the Holy Cross Church in Brzeg, around the year 1906

During the researches on the quadratures carried out in sacral objects in Poland, the author did not find *punto stabile*. In many cases, church floors were exchanged, whereas in the places where original floors were found, there were no characteristic points. In the Household Equipment Museum in Ziębice, pictures presenting *punto stabile* were found. They are from the extensive pictures collection of a well-known Silesian artist, painter, works of art conservator, collector and traveller, Joseph Langer (1856-1918). As the conservator, Langer dealt with, e.g. baroque mural paintings in Silesia. One of the objects which the artist preserved was Raising of the Holy Cross Church in Brzeg. In two pictures taken during the church preservation, elements of nave floor with central placed 'star' were registered. For the restitution of its shape and size a picture made from the eastern empora was chosen (Fig.1 and 2). Picture of 37.4 x 45.4 cm size was stuck on the cardboard of 38.3 x 50 cm size. On the avers an address was given 'Atelier parterre' Ed. Van Delden – Hof-photograph from Breslau, where the picture was made. On the reverse there is information that the picture concerns 'Pharkirche Brieg' (presently Raising of the Holy Cross Church in Brzeg) and inventory numbers Mz-41-23/3 (No. 19.LIV and G VII 3/15) and MZ-47-32/2 (No. 18 LIV). Adam Organisty [4] proved that the picture was taken in 1906.

To make the 'stars' picture more readable a fragment of the picture was magnified and deeply sharpened (Fig. 2).

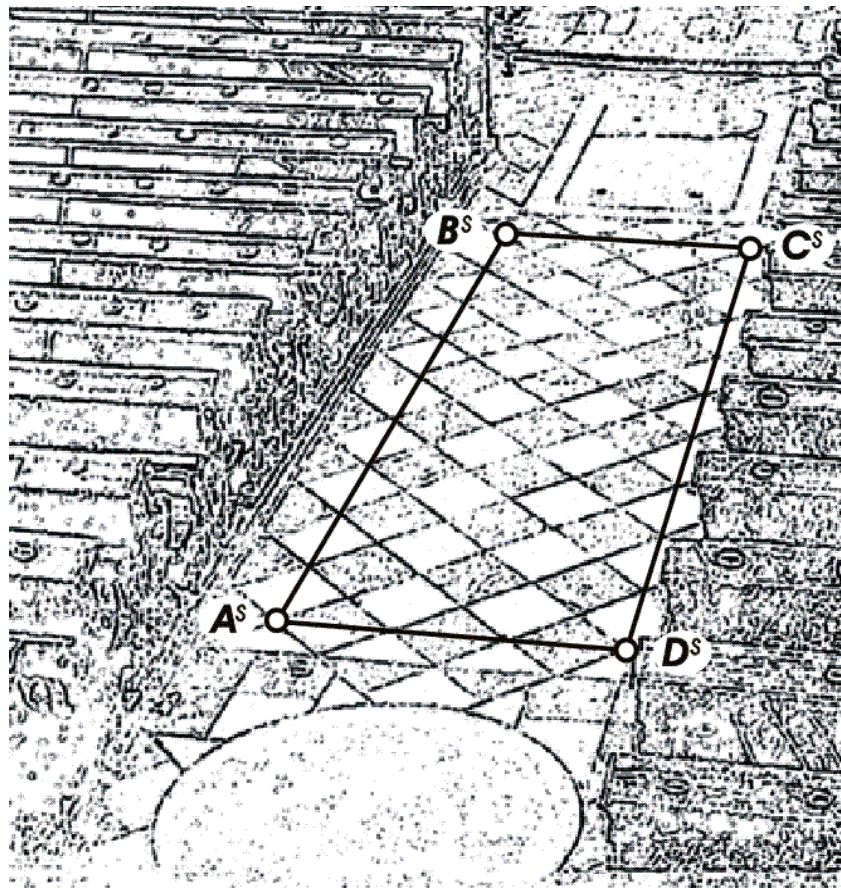


Fig. 2: Fragment of nave floor (sharpen fragment of the picture from J. Langer's collection)

## 2. Resitution

For the restitution of floor elements, a method of surface collineation transformation was chosen. The picture was scanned with the definition of 300 dpi, sharpened and adjusted the contrast. To compile the picture fragment a Kolimbit program was used.

Supposing that:

- the floor is the surface,
- floor tiles are squares,
- restitution metric base is a plate covering the crypt; characteristic plate fracture allows to state that the plate in the picture is still in the church, which allows to measure it directly.

Because of:

- non-metric pictures (potentially picture geometric distortions are due to camera distortion),
- deformation of picture basis is due to the use of bookbinding glue and the lack of bookbinding cardboard counteracting,
- variety in size of hand-made tiles

to check the restitution results, two independent transformations were made.

### 2.1. Restitution I

For the transformation a quadrangle  $A^S, B^S, C^S, D^S$  was chosen (in the article, it is defined on the sharpen fragment of the picture presented in Fig. 2). It is a quadrangle mapping of size of 3 x 9 of diagonal tiles placed between crypt plate and 'star'. Quadrangle was transformed into rectangle  $A^O, B^O, C^O, D^O$  (Fig. 3), which sides have 3:9 proportion.

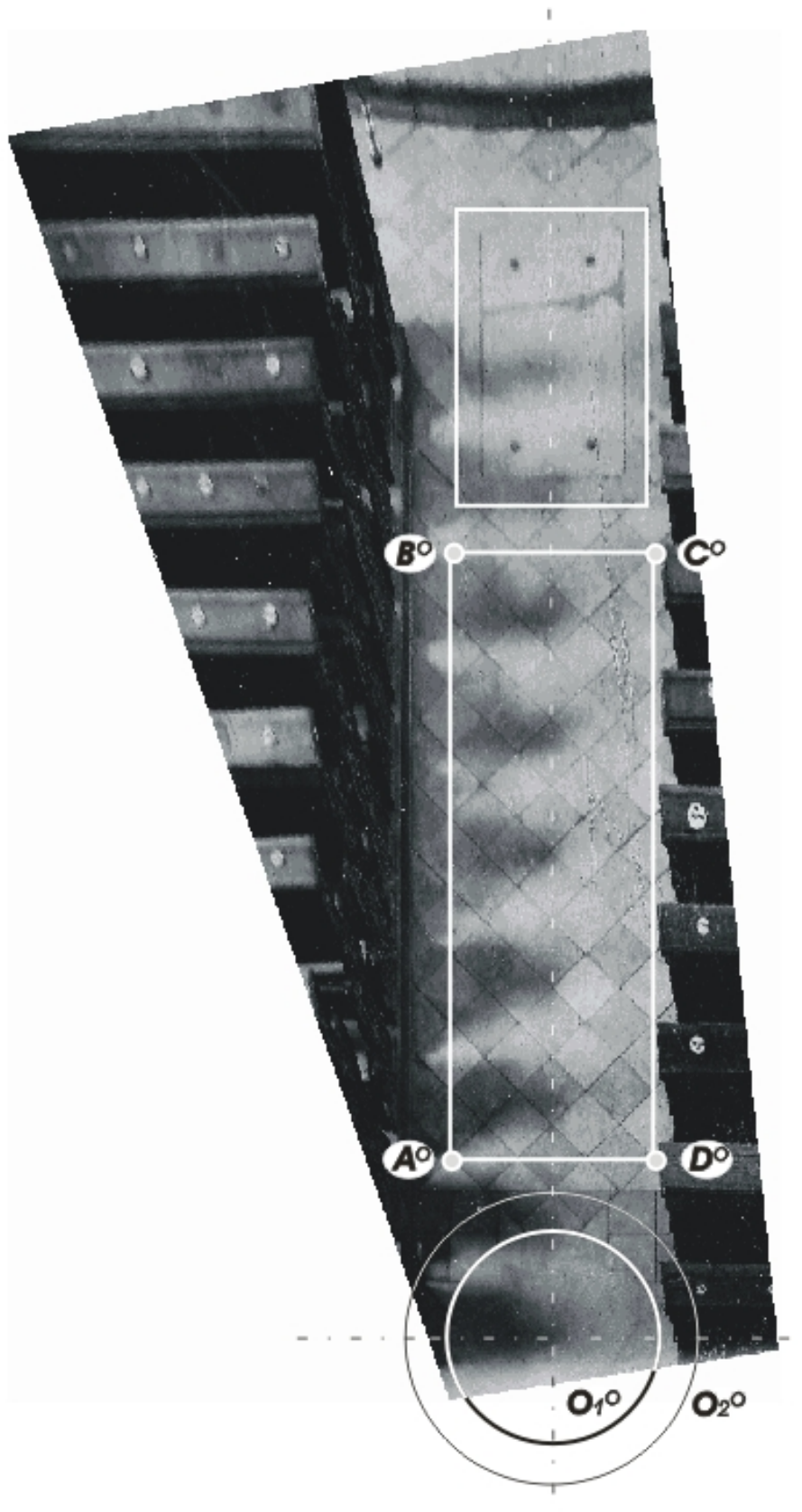


Fig. 3: Fragment of floor picture after collinear transformation. Reconstruction I

After transformation it was established that ‘star’ construction is based on two circles. Circle  $O_1$  is a circle visible in the picture (basic). Second circle  $O_2$  is an auxiliary circle, in which the ‘star’ is inscribed.



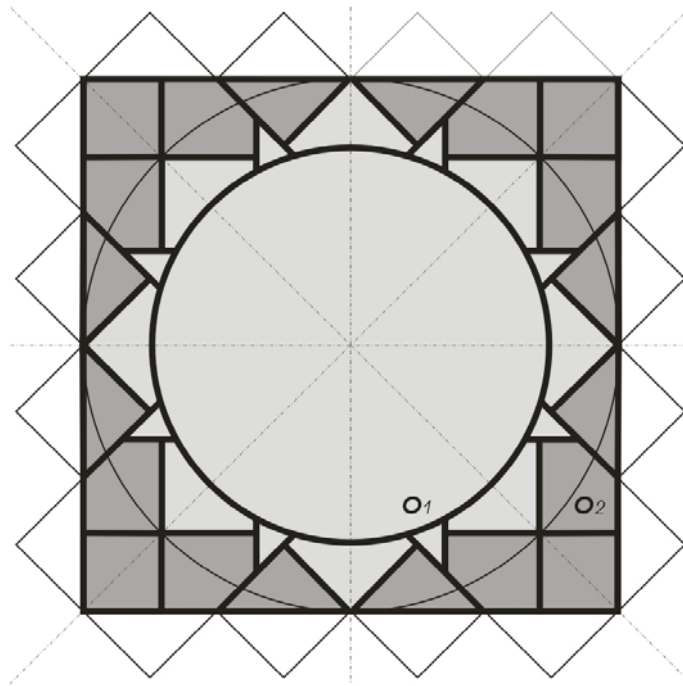


Fig. 4: Restitution of 'star' shape

Transformed picture was scaled (on the basis of actual sizes of crypt plate). The size of circles  $O_1$  and  $O_2$  were measured. The results can be found in table 1 (position 1-4). The size of tile I's diagonal and side (restitution I) was established on the basis of calculation (Tab. 1, position 5-6). Starting point for the calculation was an assumption, that the tile I's diagonal is equal to  $\frac{1}{4}$  of  $O_2$  circle's diameter ( $p_5=d_4/4$ ).

## 2.2. Restitution II

A picture fragment was scanned embracing the crypt plate and its surrounding. The picture was collinearly transformed with the consideration of real sizes of crypt's plate (Fig. 5). The size of diagonals and sides of tiles II were measured (Tab. 1, position 7-8).

Next, a trial of verification of received tile sizes during the restitution was made. For such a purpose, the tiles in the church underwent an inspection. It was established that in two side-chapels, square tiles III were re-fitted (Tab. 1, position 9-10), of sizes closed to the restitutions II ones (Tab. 1, position 7-8). Tiles III were made from the same material as other fragments of original floors in Brzeg church. Probably, they were fitted in the nave before. Therefore, on the basis of tiles III sizes, the size of  $O_1$  and  $O_2$  circles diameters were measured (Tab. 1, position 11-12).

## 3. Comparison of the results

The difference between the sides sizes of tiles I and II is 29,3 mm ( $b_6-b_8$ ), which is 7 % of tile I side's length (bigger).

The difference between the tiles side sizes:

- I and III is 32 mm ( $b_6-b_{10}$ ), which makes up 8,2 % of tile III size,
- II and III is 2,7 mm ( $b_8-b_{10}$ ), which makes up 0,7 % of tile III size.

The discrepancy in the tiles sizes received as a result of I and II restitutions may come from the earlier mentioned picture features and not too precise placement of the tiles due to slight differences in their sizes (Fig. 6).

ELEMENT	Position	Detail	Measurement		Inventory proportion /photo.	Measured sizes [mm]
			inventory [mm]	photo. [mm]		
CRYPT'S PLATE	1.	Side a	1 560	99,51	15,68	
	2.	Side b	2 430	155,27	15,65	
CIRCLES I	3.	Circle O <sub>1</sub> diameter		110,5	15,7	d <sub>3</sub> =1735
	4.	Circle O <sub>2</sub> diameter		151,13	15,7	d <sub>4</sub> = 2373
TILE I	5.	Diagonal				p <sub>5</sub> =593
	6.	Side				b <sub>6</sub> =420
TILE II	7.	Diagonal		p <sub>7</sub> =552,5		
	8.	Side		b <sub>8</sub> =390.7		
TILE III	9.	Diagonal (diam.)	p <sub>9</sub> =547			
	10.	Side (diam.)	b <sub>10</sub> =388			
CIRCLES III	11.	Circle O <sub>1</sub> diameter				d <sub>11</sub> =1600
	12.	Circle O <sub>2</sub> diameter				d <sub>12</sub> =2 188

Table 1: Configuration of the floor element sizes



Fig. 5: Fragment of floor picture. Reconstruction II

A localization of 'star' was also checked in all tiles' sizes. Placement close to the central one are assured by the II and III tiles.

The rule of 'star' construction form of the square tiles is presented in Fig. 7.



Fig. 6: The floor in the chapel from re-fitted III tiles

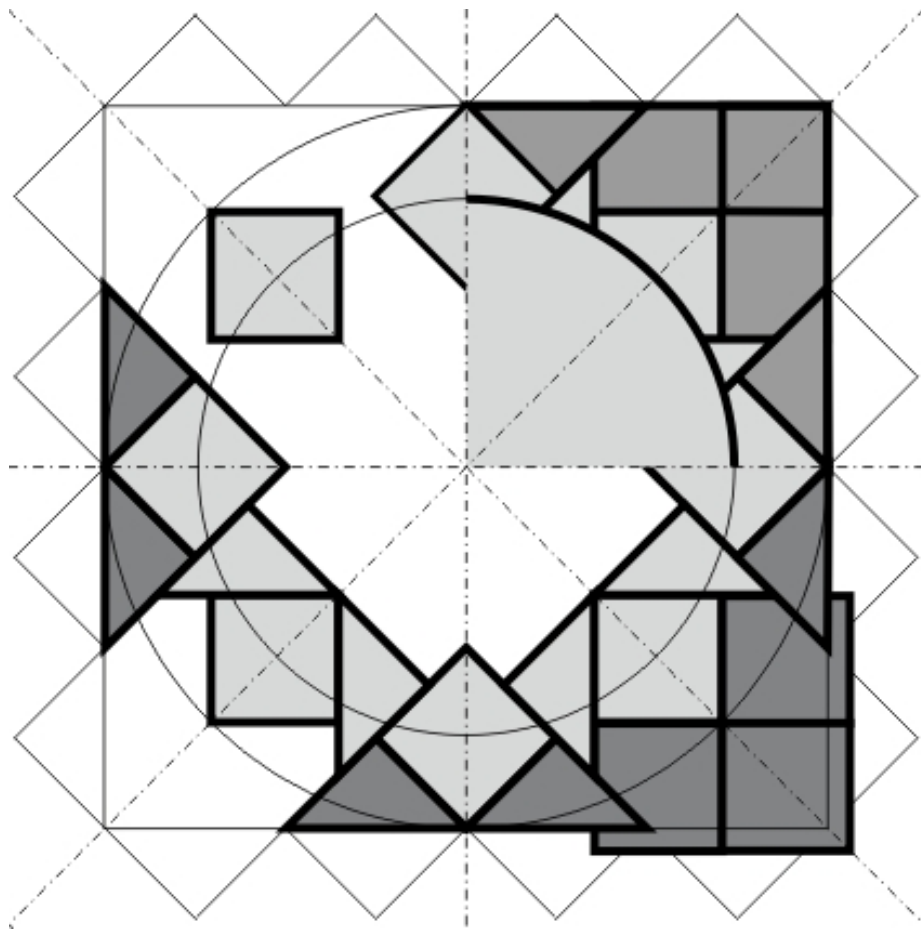


Fig. 7: The rules of 'star' construction for square tiles

#### 4. Conclusion

After finishing the last conservation of the nave frescos carried out in 1990-2000, the author of the works of art conservator, Jerzy Czajor (1954-2003), planned to find and fix in *punto stabile* church floor his own project. However, his planned was not realized. The author made the observations that the church visitors only watch what the guide points to. People, who visit the church individually, go around the nave. They do not know that they should also stand in the centre, that is *punto stabile* therefore, 'star' reconstruction would solve this problem.

In the church nave in Brzeg, a ceramic floor probably from the beginning of XX century can be found. It is in a good state. Possible reconstruction of *punto stabile* would be probably limited only to mill 'star' picture in the existing floor or the exchange of the floor fragment which surface equals the one of the 'star'. The exchange of the whole floor would be economically justified in case of the exchange of church heating on the floor. Original tiles were made from marble in two colours (white and grey). Due to large nave floor surface and high costs it would be probably limited to ceramic tiles with proper sizes and colours.

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### **RESTITUCJA PUNTO STABILE Z KOŚCIOŁA PW. PODWYŻSZENIA KRZYŻA ŚWIETEGO W BRZEGU**

Prowadzone przez autorkę badania malowideł iluzjonistyczno-architektonicznych wykazały, że w żadnym z wnętrz sakralnych w Polsce nie zachowało się charakterystyczne oznaczenie stanowiska obserwatora nazywane *punto stabile*.

W artykule opisano restytucję *punto stabile* przeprowadzoną na podstawie archiwalnej fotografii.