

# Christus Triumphator Church A Dutch Postwar Reclamation

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## Abstract

National Monument Christus Triumphator church in Bezuidenhout, the Hague was designed by the team D.S.B.V.<sup>1</sup> under Geert Drexhage in 1959-1962, however, among three churches under Drexhage's, only Christus Triumphator church survives in the secularization and shrinking religious community in the Netherlands. The design of Christus Triumphator church reflects a time of Dutch postwar modern architectural profession shifting into competition-based firms, trends of new theories, group standardized design for mass clients, and professional consultants. The research aims to point out the linkages between Christus Triumphator church and its postwar modern architectural theories and traditions background for a redesign proposal.

## Introduction

D.S.B.V. was a Rotterdam-based architectural firm<sup>2</sup> participating mainly in public projects before and after the Second World War. During the founder van der Steur's time, they designed buildings following craftsmanship, traditional form, and material norm of Dutch architectures. Geert Drexhage joined the firm at a critical postwar time when the reconstruction needs and competition requirements increased for the growing mass. Meanwhile, the new demands for modern buildings urged the profession to develop new business working models and consultancy. And locally at a theoretical aspect, a new Forum group was maturing to substitute the shrinking Traditionalist

school, embracing a standardized and globalized architectural environment. At this point, Drexhage and the team started the Bezuidenhout church rebuild project competition in 1959. As Drexhage's word, the design strictly followed the Reformed church council's guidelines that eventually the team successfully won the judges. The church was then built and inaugurated in 1962. As the existing literatures and monumental announcements<sup>3</sup> mostly only address the tangible qualities of the church, the research focuses on linking the design to its intangible background through analysis, descriptions, and theoretical references for a starting point of the sustainable redesign proposal.

## Theoretical framework and method

As an integrated church design done by a sophisticated team to win a competition for judges, church council, and the mass, the design was innated with multiple complex clues. Based on this framework, the research paralleled four main features of the church from facts of archive materials scaled from the urban relationship, the order system, space elements and use, to the materiality. And after each result of findings, a sector of discussion concluded and linked the facts to theoretical contexts so that in all they can be cross-interpreted interrelatedly to narrate together. The research goal was to point out those already structured in the church for a starting point of the sustainable redesign proposal as a conclusion .

<sup>1</sup> Architectenbureau Drexhage, Sterkenburg, Bodon & Venstra.

<sup>2</sup> Architectenbureau Drexhage, Sterkenburg, Bodon & Venstra Archief brief, 2000. p7. Het Nieuwe Instituut: Rotterdam.

<sup>3</sup> Christus Triumphatorkerk besluitmotivering monument, Rijksdienst voor het Cultureel Erfgoed.

## Observation 01:

### Sequence and urban relationship

In the D.S.B.V. archive<sup>1</sup>, a photographer of Publicum, Philips captured the process architects created of entering Christus Triumfatorkerk for documentation and propaganda of the faith. The sequence started with crossing the street traffic light and seeing the two volumes and two towers of the church. The front pair of volume and tower is on a larger scale, and the larger volume, floating with brick lamella facade, half showing the main gathering space inside on the first floor. Underneath it, staircases to the first floor were visible down under the floating volume behind transparent glass panels and columns. And the smaller volume, with a tower-like chimney on it, resembling a house or a factory, was attached behind the main chapel. The series continued with passing two only open-from-inside wooden doors with staircases inside and turned into a courtyard formed by the wings of the church and the neighboring building. In the courtyard, the building scale was reduced and the two towers of the church became similar in height through eye level.



The sequence

Figure 1: Exterior photo of Christus Triumfator church.  
Figure 2: Art piece designed on main wall by artist HA Bal.  
DSBVf130 foto's gemaakt van het exterieur en interieur door Publicum, Philips  
Figure 3,4,5: Urban analysis of Drexhage's 1962, 1965, 1969 churches in mass produced community .

<sup>1</sup> Architectenbureau Drexhage, Sterkenburg, Bodon & Venstra Archief brief, 2000, Het Nieuwe Instituut: Rotterdam.

<sup>2</sup> Provoost, M., 2013, *Hugh Maaskant: architect of progress*, p15, In *Other Words*: Rotterdam. 'Dutch society in 1950s and 1960s evolved from the sober reconstruction period into a wealthy consumer society. Whiting(1998): 'from utopian ideology to quotidian development, from social ideas to mass consumption, in short: from theory to production'.

<sup>3</sup> Hammer, W., 1995, *de Architect Drexhage*. p43. Delft University of Technology: Delft.

The sequence came to a lowly door under the floating brick volume next to the courtyard, a continuous and transparent hallway was laid and turned the route to a spacious atrium with a staircase in the smaller volume of the church, rooms, and circulations were organized to surround this heart of the church. And finally, after moving vertically through the atrium, the sequence ended with a forward view from the main entrance and a diagonal view from the side stair entrance to the main chapel. Seats in the chapel were arranged around the center so that every direction got an equal distance to where the word is preached. The tilted brick pillar facade allowed light to be filled in the space and at the same time making an indirect contact with the world, introducing movements around the chapel.

### Artworks for the people

In a postwar time of quotidian developments, mass consumption, and production<sup>2</sup>, Drexhage's works reflect a common motif of sequential space art that plays between new urban communities, building volumes with traditional and new textures, and ambiguous voids, combining trends and traditions. Initially, it can be observed in his first work with his D.S.B.V. mentor van der Steur<sup>3</sup> in the Maritime department(1953) at the Technology University of Delft where auditoriums are linked by a continuous open space with large curtain wall openings connecting the outside yard, and the form and space in the department was in a slightly diagonal shape according to sightlines and moving experience. In the following Dordrecht church(1965) and the meeting church in Loosduinen(1969), Drexhage kept creating new expressions with adding spatial depth and simplifying volumes for more a sense of vacancy and abstractness.

In these sequences, the entrances to the interior of the buildings were usually carefully planned. For Christus Triumfator church, the entrances are on the

side corners of the "stylobate" (the raised level named in Greek by the architect) which could not be easily found to hint at a reversed and re-devised route. As a result, visitors could almost surround the building one time on their first visit to read its T shape figure in the ground to find the correct door and at last, enter a rotated indoor courtyard that resembles a traditional monastery composition in a basilica. In Dordrecht church, the entrance was located in a subtraction-shaped courtyard that the visitors had to pass by the grove yard and the surreal tower gate to enter the church. In the Loosduinen meeting church, the main entrances were also arranged to the side that a silent vacant courtyard towards the street intersection was created, and the side wing of the church was lowered down into the ground so that a spacious background was left to the main symbol of the cross, visually dialoguing with a small confession room in the side wing along.

And interestingly, these sequences and arrangements of site plans resemble ancient or exotic patterns when compared with traditional Christian churches' figure-ground, or sequential body and sight movements of entering a Greek acropolis, or the enter-from-the-corner courtyard relationship of Katsura Rikyu. As the building composition was freed from the traditional compositions developed from load-bearing wall system, Drexhage's designs verified multiple experiments with their overlapping volumes, footprints, and voids in urban situations and linked audiences to familiar and unexpected new experiences.

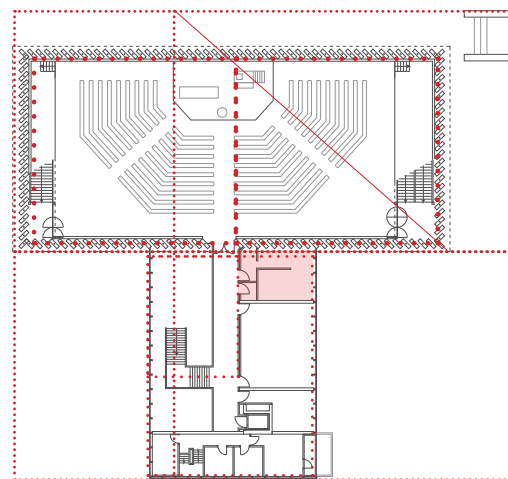
On the other hand, the serial scenes in the sequence by Drexhage also kept the visitors moving forward, time was sliced into each fragment of space and overlapped together to become loops. In Christus Triumphator church, there are two staircases on both edges of the chapel leading the visitors from the sanctuary back to the world. The whole sequence was almost like a serial TV production with thriving sections and carefully planned moves of the camera for vivid

pictures. An artwork collaborated between the firm and an artist hung in Christus Triumphator church illustrated it well: serial keep-producing cells overlapped and linked symbols together to form many houses of the Lord. "The fish symbol in it symbolized the tower of Christus Triumphator church"<sup>1</sup>, and some other symbols also exactly matched the following two Drexhage's churches in collaboration with the Reformed church council. Christus Triumphator church was a smart design starting the following church series, the church design team successfully captured the needs and dreams of the community and produced matched pieces.

Observation 02:

### Order in the composition

In the plan and section drawings of Christus Triumphator church, the silver ratio plays a significant role in organizing the space. In the section, the height and width of towers and volumes were set in root ratio dimension, and each floor height was designed in accordance. The main chapel's height is double to the height of the smaller volume, and the subdivision levels of the pastor's house are also according to the module with half and rooted numbers. The chimney tower is at the same height as the floating volume, and a rooted triangle can be drawn on the elevation to conclude their relationship.



The root ratio

Figure 6: Study on proportion of the church first floor plan.  
plan source: DSBVd199 constructietekeningen

<sup>1</sup> The history of Christus Triumphator church, 2022, *Onder Ons*.

On the plan, the church can be circled in a square and divided into two equal sections so that the footprint of the main volume and tower is equal to its wing. The wing building was shifted to the center to form two yards on the side. On a smaller scale, the atrium on the ground floor with its staircase was in a rooted dimension, and again, it was shifted out of the square on the plan to create movements. These shifts create new time-space, servant-served, space-solid relationship, as Kahn's Adler house(1953)<sup>1</sup>. The dimension of the main chapel is a combination of a double square with a main central axis pointing to the liturgy center and the cross, and aisles of 45 degrees in between benches together with the light and tilted brick pillars of 45 degrees in harmony with the use of the root ratio. The space ratio as well appears in the scale of the fundamental elements of the church, the brick and its dimension that shifted, doubled, and tilted 45 degrees to generate larger scale surfaces which pointed out to the view of the greater city scale — the same 45 degrees appearing in the Baroque city plan of Bezuidenhout with a same diagonal axis.

### **New tradition of mass production**

In the classic architectural tradition, ratios were often executed as an ultimate mean to pursue order and aesthetics. Among them, the golden ratio was applied in masterpieces throughout classic history and inherited by Le Corbusier<sup>2</sup> with his modular theory in the 20th century. In these masterpieces, the prime numbers created by the golden ratio were so unique that each building and the elements within became inseparable art pieces, and the ratio as well made the space into a fraction that defined hierarchy. Thus, when it came to the building in materiality, the golden ratio could only be easily made by ways of molding and sculpting stones and concrete which as well added to the timelessness of the results. In the 20th century, Dutch architect Berlage proposed to embrace the mass production of architectural elements<sup>3</sup> for creating beauty, and he also attempted to reach the aesthetic

of the classic golden ratio by using bricks. However, he turned out with a complex tectonic system of limited applicable use<sup>4</sup>. On the other hand, the silver ratio which consists of multiplying the same or rooted elements has been commonly applied for efficiency and aesthetic in mass production or modular-based wooden tectonics, for example, the timber classic buildings and furnitures in the Orient and the ISO paper dimension originated from Germany.

In Christus Triumfator church, the application of the silver ratio could be seen as a statement to integrate and embrace the Dutch material production tradition and the theoretical pursuit laid by Berlage for the already ongoing industrial standardized building trend. Furthermore, the equal spaces created by the ratio and modularized elements enabled by the ratio system could strengthen the Protestant morals of equality and productivity in the layout of Christus Triumfator church which highlighted the inseparable and dialectic relationship between pairs of church and community, secular and sacred, building and urban, space and solid elements, etc, as well making the design an attempt to respond to searchings of new modern architecture in the postwar time.

Observation 03:

### **Space elements and use**

Christus Triumfator church is an early prototype of a mat-building<sup>5</sup>. An ambiguity in boundaries defined by spatial structure with building elements drives dynamic uses and unfixed spatial meanings. Throughout time, users become subjects in the space and generate meanings rather than merely passive receivers.

The boundaries of the church with the outside world are not clearly defined. From the site plan scale, column elements form a gray urban area on the stylobate, the brick volume half transparent with a textural movement, and the courtyard not clearly defined that it is as an open shortcut in the block. And

<sup>1</sup> Eisenman, P., (2008) *Ten Canonical Buildings 1950-2000*, Rizzoli International Publications: New York.

<sup>2</sup> In Christ Triumfator kerk viert jubileum, 2022, Huub van der Linden, the architect of the church concil took the church as a nod to the great Le Corbusier, fell under 'Brutalism'.

<sup>3</sup> Molema, J., 2000. Proportion and measurement in early twentieth century Dutch building practice, p117. Delft University of Technology: Delft.

<sup>4</sup> Wiedenhöver, L., 2021. Belarge's tectonics, p30. Delft University of Technology: Delft.

<sup>5</sup> Alison Smithson (1974) 'Mat-building can be said to epitomise the anonymous collective; where the functions come to enrich the fabric, and the individual gains new freedoms of action through a new and shuffled order, based on interconnection, close-knit patterns of association, and possibilities for growth, diminution, and change.'

in the building scale, sub-columns, curtain walls, and pavements keep the hallway and the atrium a semi-outdoor feeling. And in the chapel, when looking back from the liturgy center, the shadow of the wing building from the tilted brick facade could even be seen and felt.

From a perspective of function and use of the building, user groups and their spatial realms were designed to be overlapped. The use of the atrium is the most obvious fact, and on the ground floor, the dividable sectors in the community hall that can be flexibly open to the front street is another example. Originally, a small kitchen was set as an overlapped threshold between the atrium and the sexton house, and in the basement, the youth center right beneath the burse room can be read as an extension of both the sexton house and the community center to form another loop. In all, the clusters in the church form an 'archaic' relationship of a village, and the community living was studied and left open in the in-between space.

The building elements also tell a similar idea of ambiguity, they do not merely serve as servants for the completion of the space but with more active roles. For example, in the detail level, the way two building volumes strangely joined references the meaning out of the building itself and hints time and changes. Similarly, the moveable walls that include time and users in Drexhage's design as well were first used in Christus Triumfator church's community center and were further improved to even separate the chapel space in the following churches. And the most significant feature should be the symmetry of the church grid that falls on a bay of central columns and a white-painted brick wall where the ambiguous relationship between the space and the solid is sharpened into dialogues. The roles the central column and the bare wall plays are "both", they become elements with spiritual meanings while also remaining a part of the space. And it was done intentionally as the architect addressed<sup>1</sup>: 'bare walls have something to say'. Finally, in the chapel, the

conflict between the grid and elements is substituted into a complete focus on light, the texture of the tilted walls, and the movements of visitors' bodies.



The movable wall and use pattern in Noordwijk the Hague meeting church (1969).  
 Figure 7: Hearing about the sketch plan for community center of Loosduinen in the Hague meeting church. *Haagsche Courant*, 20.2.1975, p.4  
 Figure 8: Public meeting of residents of Loosduinen in the Hague meeting church. *Haagsche Courant*, 7.3.1973, p.5

## The dialectic relationship

Even before the modern architecture movement, the Protestant churches already had a long tradition of showing dialectic relationships in the church buildings. The refocus on the word of the Bible between personal means, and searching for a reconciliation between religious life and secular life transformed the churches by ways of de-decorations to materiality, introducing a new gathering axis, or inventing new sequences upon the traditional Catholic form. The Nieuwkerk in the Hague might be a reference project of Drexhage; its rooted proportion, redefinition of the axis, and the roles solid elements act in the dual space.

Another way to further expound the dialectic relationships in Drexhage's church could be from the same time theorist Aldo van Eyck's Waterloo cycle (1959). The diagram depicts a new loop of architectural production between the new world, the old continent, and the exotic, also shows ambitions for reconciling contradictions in the modern environment for a

<sup>1</sup> Hoe Christus Triumfator kerk tot stand, 1987, 25 jaar Christus Triumfator kerk 1962-1987.

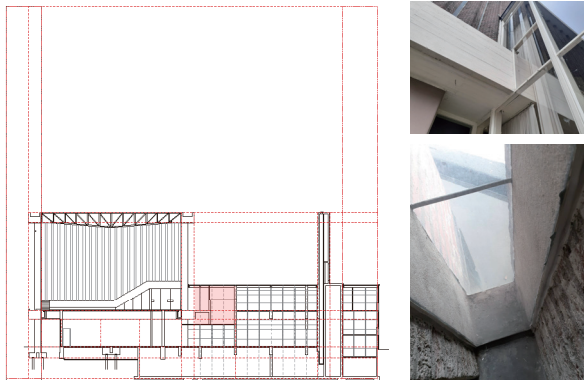


'complete reality of a coming contemporary'<sup>1</sup>. Taking a direct approach, if the chapel volume (with traditional brick, advanced concrete and steel techniques) is simply categorized in the classic left circle, and the wing volume (with a 135 grid and Italian facade system) in the right circle, or if the central column and the central wall are being read with the in-between meaning generating questions of the diagram, the dialectic relationship in the layout is shown.

#### Observation 04:

#### **Materiality and integrated systems**

The church was an experiment on integrating different uses, systems, and materials by a sophisticated office of more than 100 people under 4 partners of architects, civil engineers, and professional consultants. The engineered design with an order system reflected efficient cooperations throughout the process.



When different materials meet.

Figure 9: A brick, served-servant space, and the order system. Space (upper) equal to the solid (lower). Church volume (left) equals to secular volume (right). Servant zones appear as stripes (i.e. the storage attic in between chapel roof trusses ).

Figure 10: Two building volumes meet in the margin.

Figure 11: Pragmatic detail of gable beam and brick pillars with double glasses.

The design process started with a silver ratio grid, and the more public function went to the front street and the private part went to the back; then the atrium was set in between the neighborhood and the functional sectors. Part of the building was sunken into the basement to diminish the height, and the chapel was made floating for extra serenity as well allowing more public flows on its ground floor. The circulation would make the most efficiency by attaching the chapel from

both sides to maximize the floor area for excavating diagonally on the plan. A fan room was strategically planned<sup>2</sup> beside the chapel on the first floor so that it disturbed the ground floor open space the least and provided the chapel the nearest. The mechanical room was placed in the basement with a chimney up to the roof combined with the elevator shaft.

The front volume was realized with a deep pole foundation and concrete structural frame to hold the chapel's concrete gable beams. The brick pillars in between the beams were designed with a cement and steel core for adding post-tension<sup>3</sup> to the beams and making the pillars stacked firmly, and horizontally they were linked with steel anchors for stabilizing. The roof trusses were optimized with standardized thin steel elements lightly set on the gable beams. The floors and the roofs were then applied with prefabricated concrete panels. The wing volume on the other hand was practically reduced into a shallow concrete box foundation and reinforced concrete frame as the main system, standardized steel frame as sub-structures, and wooden finishes and panels as the facade. The logic remained the same; the higher the design went, the lighter the elements became.

The combination of the chapel facade elements was simple but effective. A diagonal brick grid was put on the main rooted grid so that the brickwork can be integrated into the gable beams. At each corner of the volume, the pillars turned 90 degrees and formed special L corners to integrate the roof pipes. In between the pillars, two layers of frosted glass were attached on steel frames and sealed so that the view outside was blurred, the sound and temperature insulated. The tilted form could be referenced to brises- soleil which Le Corbusier also designed concrete ones<sup>4</sup>, however, the double glasses considering the thermal and acoustic values was an innovation concerning the thermal properties. Besides the use of bricks on the chapel load-bearing facade, in the wing volume, brick walls mainly were

<sup>1</sup> Pedret, A., 2012, *Team10: an archival history*, p140. Routledge: London.

<sup>2</sup> De verwarmingsinstallatie van de Christus Triumfatorkerk te Den Haag , *Verwarming en Ventilatie*, December 1962, no.12 p527.

<sup>3</sup> Toelichting van de heer D. van Rijn , *Bouw*, 29 December 1962, no.52 p1876.

<sup>4</sup> Powell, K., 2021, In concrete or stone, wood or metal?, *The Great Builders*. London:Thames Hudson.

used as infilled division walls. They were arranged with their properties to match the needs of different spaces. In the more important space like the atrium wall, a higher quality of facing bricks was used, and the wall consisted of another layer of concrete inside for insulating the cold from the atrium. Gray bricks were used as subdivision walls on the ground and basement floor, and for the surface of the basement hallway, a higher quality of gray bricks was used. In restrooms and the Sexton house, poriso bricks were used as they were with higher thermal value and were lighter for pipes and wires to be added in. And ultimately, reclaimed bricks in Bezuidenhout were reused on the top floor subdivisions for the church high council room.

### **From parts to whole**

By examining the use of the root ratio in integrating diverse standardized material, the ratio acted not only the aesthetic pursuit and human scale module in space form but also a tectonic norm of materials for a part-to-whole integrated material system. In section, the controlling dimension of the order was a brick of 5cm, 10cm, 20cm with mortar of 1cm in the chapel pillars, and this unit times to a pillar of 10 meters that falls on the root ratio, generating and governing dimensions of other materials. A matrix of a Tartan or a plaid grid<sup>1</sup> inherited from a classic architectural tradition with served-servant zones was planned in the section as interfaces for different materials to meet that they could act their characteristics independently. In the servant zones different materials meet, and the brick grid was tactically only either on clear concrete gable beams or infilled in the concrete frames so that the module could be reached by adjusting the dimensions of steel and concrete. And the sophisticated combination of materials could be more evidently seen in the detail where two volumes met together: the steel frame of the wing volume was set back from the margin zone so that an infilled timber frame could fit into the tilted edges of the brick facade that each material acted independently.

### **Conclusion**

The design of Christus Triumphator church reflects a time of Dutch postwar modern architectural profession shifting into a capitalized environment, confrontation between new theories and old tradition, group standardized design for mass clients, and cooperations of professional consultants. Despite the complexity of the background, the church was given with an order that harmonized materials, space, and meanings into the postwar urban environment and society as well reclaimed a Dutch building and religious tradition. As a result, rather than posing personal declarations of an architect, it shows a composited picture of the time and the group of people. In such a way, they together did 'get close to the meanings and build'.

For a contemporary redesign and intervention to respond to that from the 1960s, one of the subjects is to treat carefully in the sequence, space order, and materiality in the Christus Triumphator church by understanding the facts and meanings behind, and another one is to react to the mass production pattern matured in the era. A new zero-waste design challenge might be to set away from the producing loop, reduce and revitalize the form to that just meet the need, and reclaim from the past production in a tangible or intangible way that triggers reflections of the past and the future.

<sup>1</sup> Calabuig, D., The Strategies of Mat-building, *The Architectural Review*, August 2013.