

A Monument of Dutch Clarity

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1 Introduction

The Netherlands Pavilion at the Biennale of Venice was called by the Italian contractor who was assigned the task of executing Rietveld's design in 1953 "exceptionally beautiful, the most beautiful even of all the other pavilions". A certain measure of partiality can of course be expected of a contractor, but it is true that the confident simplicity of the spatial composition made the building in the Giardini di Castello into a very special phenomenon. The architectural clarity seems to evoke a striking portrait of the Netherlands in the postwar period. However, it is not to be hoped that recent visitors on the basis of this pavilion have tried to form an idea of the Netherlands as it is today. In the early nineties the building was only a shadow of Rietveld's original design. Its general subsidence and its hardly concealable dry rot would most certainly have left an undesirable impression, quite different from the impression the first visitors in 1954 must have had.

In the course of time the architectural character of the building was seriously affected. Thus, the interior special concept was weakened by later interventions, while a number of elements characteristic of Rietveld, such as the casing details, the layout and graduation of the facades and the narrow edges of the roof had been radically altered. Also in a constructional sense there were a number of problems, which constituted a hazard to both the beauty of the building and its proper maintenance. That damp in the Venetian lagune plays a devastating role is common knowledge. The inner walls showed a persistent salt efflorescence as a result of which the plasterwork had to be repaired every other year. During the frequent downpours in the area serious leakages occurred. The edges of the roof and the casings had rotted through and the roofing had seriously blistered. The degeneration of this 'showpiece of the Netherlands' must be partly attributed to the way in which until roughly a decade ago the stewardship was almost exclusively seen as a problem of upkeep. The architect Lieuwe Op 't Land who, from Milan, was in charge of the constructional guardianship of the pavilion from the mid sixties onwards, did try to include more architectonic arguments in the way the building was run, but this met with little response from the Ministry in The Hague. The fact that both the stewardship and the use of the building were the province of one and the same government department did presumably nothing to arrive at a clear policy.

The changing views with respect to the conservation of more recent architecture, which, after all, has really been taken seriously as a cultural heritage only since a few years ago, have resulted in the stewardship of Rietveld's pavilion having to change tack. The time was ripe for no longer considering the running of a technically imperfect building in foreign parts a problem, but a challenge in the form of an integral restoration of a special example of younger architecture. After an initial phase of two years the commission to put the restoration into effect was given early in 1994.

On the basis of previous research a number of points of departure for the restoration plan have been formulated.

The numerous interventions in the building in the course of time did not concern the architectonic aspect but rather technical measures to counter maintenance problems. In contrast to some older monuments, which allow themselves to be read as constructed history books, nothing stood in the way of a complete restoration back in time. Unlike the work by some of his contemporaries such as the innovative architects Duiker and Van der Vlugt, Rietveld's work does not in the first place stand out as regards constructional ingenuity but rather because of its originality in the area of esthetics. The pavilion is a clear example of this. It is understandable that when in the past the technically inadequate parts of the pavilion were removed, usually an alternative solution was chosen, although some changes to the exterior could have been avoided. At the restoration non-authentic parts and details have been redesigned on the basis of the original design.

Details that led to early damage or extravagant cost of maintenance have been improved technically, but only if that could be done without disturbing consequences for the exterior. What is experienced as disturbing and what is not inevitable, remains for the restoring architect to judge. Original parts, which are in good condition, have been kept and used again, such as most of the stucco and the terrazzo tabletop in the office. As on balance only the walls, some parts of the roof, the concrete floor and a mezzanine floor were still of the original composition, the question of material authenticity has hardly played a role in this case.

2. History

The Netherlands participation in the Venice Biennale dates from long before the building of the Rietveld Pavilion. In 1916 the Netherlands Government bought the Swedish Pavilion in the Biennale grounds in Venice. This building was favorably situated, immediately left of the Italian Pavilion at the main axis of the Giardini di Castello, where since 1895 the biannual Art Exhibition has been organized. The pavilion had only shortly before 1916 been realized by the Swedish architect Ferdinand Boberg on the occasion of the tenth Biennale in 1912. It was appreciated because of its characteristic design, notably its refined appearance as a whole. A characteristic round tympanum supported by four columns dominated the facade with its rounded corners and especially the horizontal cannelures in the stucco caught the eye. As a result of an alteration in 1932 this balanced composition was largely lost so that soon the idea came up to alter the facade because it was "in no way in keeping with the character and the significance of present day Netherlands architecture" and also because on the part of the Italians there were urgent suggestions to improve on the building. To this end the presumably local architect I. Banzui, which, however, was not realized, made a first draft.

After the Depression, the War and the Reconstruction, the bad condition of the pavilion became topical in the fifties; the upkeep of a building in a foreign country turned out to be no sinecure. The architect Gerrit Rietveld was invited to think of a solution to this problem. Late January 1953 he visited Venice with his assistant Jaap van Grunsven in order to form a picture of the local circumstances and the condition of the badly founded little building. The travel report reads: "Taken all in all we are of the opinion that the

safest and in the long run (but highly probably also now) cheapest mode of operation will be: pulling down everything and only using the old stones for the foundation and for the back wall (against existing garden wall)".

Time pressed, because before the 1954 Biennale an effective solution should have been arrived at. A lot of energy was put into it and on the spot Rietveld sketched a new plan in the margin of a drawing of the existing building. In less than three weeks the specifications of the design were finished and by the end of March the rather disappointing estimate was submitted.

Rietveld's design was developed on a screen derived from the existing foundation with the intention of reusing it. The module of 4m derived from this was not only applied on the flat surface but was also chosen as a guideline for the entire spatial construction. It turned out to be a daylight pavilion providing an undivided space that measures 16 x 16m and is 6m high, on the inside. Three short cross walls somehow divide the space available into three compartments: a small room, in direct relation to the transparent entrance, a medium sized room left of the entrance and a main room at the back. A square stuccoed ceiling of 8m has been kept detached from the walls on all sides. This seemingly floating surface in the middle subtly emphasizes, as it were, the space in its entirety. The interior is thus alternatively experienced both as a whole and in its parts, with both asymmetrical space accentuation and a perceptible centre. Around the ceiling in the middle the volume has been raised and vertical skylights applied through which natural light falls on the walls of the pavilion. Horizontal Venetian blinds, usually referred to by Rietveld as 'shutters', were to keep out the sun and focus the natural light on the walls at eyelevel. From the outside one gets the impression of a number of volumes grouped at some distance away from each other. The windows, which are kept 2m lower, are in between. The independence of the cubical masses has been further emphasized by the contrast between the black rear block and the lightly colored volumes in the foreground. In the building as it is realized this contrastive effect has been slightly toned down by finishing the rear part in smooth natural stucco, whereas the other blocks have been stuccoed with a rough surface, right of the entrance in pale grey, and to the left in mellow yellow. The black skirting board so characteristic of Rietveld's work of this period makes the masses float in the air. After some puzzling about how the new walls should be positioned on the old foundation, the architect finally decided to move back the skirting board a little. The graphic interplay of squares and rectangles in the surfaces of the walls and the plan makes a comparison with the Sonsbeek Pavilion of 1955 seems obvious. Here the spatial continuity achieved by the freely positioned surfaces and lines can be experienced much more strongly, as it is also a physical reality in this open building. It is remarkable that also Rietveld's exhibition building of 1958, 'De Zonnehof' in Amersfoort has a composition that is more obviously based on the relation between the surfaces than is the case with his Biennale Pavilion with its cubical masses.

The most striking difference between the plan and the realized building is the role played in the whole composition by the small office to the right. The existing garden wall has been built up further and forms the rear wall of the pavilion and the extension. In the plan the rear volume had been fully extended to beyond the main block of the pavilion proper. The office with the storage room on top of it thus formed an integral unit with the

pavilion and gave a certain tension to the whole through its asymmetrical position. Due to the disappointingly high amount contracted for it was decided to pass the building of the office on to the next financial year and its construction was unlinked from the pavilion both with regard to its commission and its realization. With an eye toward economizing it was decided to reduce the extension in height as a result of which it got an independent position in the composition. In the office a mezzanine floor was constructed for the purpose of storage. Below a wooden bench along two sides had initially been constructed but this was removed later, together with the closet around the washbasin.

The floor, just like the tabletop, had been finished in a pale grey terrazzo. The same floor finish was chosen for the exhibition space. Here, however, the terrazzo was put in against the wall with a beveled off skirting board. The linen paneling included in the plan did not materialize in the end. Instead a 'nailable' layer of stucco mixed with sawdust was applied. In practice this did not turn out to be a success.

Through the large glass fronts natural light falls into the hall, which can be agreeable for the exhibition of some pieces, while at the same time some view from the inside is offered. A remarkable aspect of the big fronts is the use of the colors white for the thresholds and black for the jambs. The result of also choosing white for the window frames in the end was a strong pattern, which also in this case emphasizes the consistently adhered to screen. In the beginning, however, the intention had been to paint all the woodwork pale grey. The lower half of the entrance front was moved back. Above the entrance section an ingenious coffered ceiling of diagonal latticework of wooden boards was devised, in between which glass was fitted. The contrasting color scheme between the black rails and the white frames produced here a fascinating graphic effect. The entrance doors which originally had been designed in safety glass turned out not to be available in the right sizes and were made of normal glass in a steel frame. As a result of a large window placed diagonally beside the entrance doors a line of vision was created from the avenue to the main wall of the first room. A series of preliminary sketches shows how on the steps in front of the entrance the play with the diagonal patterns was continued. At the suggestion of the contractor white carrara marble was chosen as paneling instead of 'travertin' because the former was somewhat more suitable for this purpose. Together with the base of the flagpole, on which a mosaic of the Netherlands Lion designed by Luigi de Lerma was fitted, the entrance forms the playful element in the somewhat austere design of the pavilion.

The tender for the building turned out to be rather high, according to consul Breman, because the contractor had had so much respect for Rietveld's design that he had not dared to quote alterations to the design on his own initiative. After a few suggestions on the part of contractor Di Marchi that would not negatively affect the design, agreement was reached and so the building contract could be signed on 13 May 1953.

With the office excepted the work was contracted for 7.5 million lire, 30% less than the original quotation, but still 8.5% above the budget of forty thousand guilders. The agreement was supplemented with a number of drawings and a scale model, the latter with a view to the confusion that had arisen earlier at the time of tender about the place of the 'shutters'.

3 The Restoration of 1995

The office was outside the original volume and had to be founded separately. A fist sized tree root seemed to thwart the construction in the beginning, but it was sawn off in the end and encased by the brickwork of the foundation. The eventual results appeared to be serious: the outside corner of the office showed serious subsidence and the extension had come away both from the garden wall and the pavilion. There were cracks of more than a centimeter in the floor. Apart from the probable setting phenomena, the role of the root, just there where the heavy terrazzo table is an extra burden to the foundation, must not be underestimated: in Italian this type of tree is also known as 'stonebreaker'.

Within the framework of the restoration there was no other choice than to pull down and rebuild the extension. Thus, with a view to the changed requirements for use, at the same time the possibility arose to realize the required additional facilities in the new construction. A small bathroom was built underneath the mezzanine floor and provisions were installed for electrical and audiovisual installations. When the Biennale grounds themselves are closed the building can be entered through a new door from an alley just behind the pavilion. The original idea to put in a 'hidden' door between the exhibition space and the office was not adopted in the restoration plan. A facility like that, however well disguised, would have remained a disturbing element in the wall spaces. Remarkably enough it appeared later that a similar proposal on the part of Consul Breman was at the time rejected on the same grounds by Rietveld himself. As the Giardini di Castello are a nineteenth century formal park, the numerous beautiful old trees are legally protected. As is also the case with the spontaneously sprung up specimen that has become one with the foundation of the office, and which still forms a potential danger to the pavilion. In a months long Kafkaesque legal procedure to get exemption from the tree preservation order the local civil service could only bring forward that on the other hand it was the building that prevents the tree from growing freely. In order not to delay the building any longer it was decided to bridge the root with a concrete beam in anticipation of the in the long run necessary felling of the tree.

The most fundamental problem that had to be solved during the restoration was what to do with the lower part of the roof and its relation to the large glass fronts. The termination of the facades, the edges of the roof, was designed to be very slim, so that the roof elevation remained slight. In the three dimensional graduation of Rietveld's overall composition, moreover, the roof was completely horizontal and so without any slope. In Venice, where it can often pour with rain, there was already a serious leakage in the first season. As the roof construction had been economized on the roof sagged strongly, so that often water was left on it. In the early seventies the architect Op 't Land, who was then involved in the upkeep of the building, repeatedly reported to the Ministry of CRM that the problem could only be solved by an adequate slope and a therefore necessary lowering of the eaves with the inevitable result of disturbing the external lines of the building. After much consideration and on the advice of the 'Rijksgebouwendienst' (Government Building Agency) it was decided in 1974 to do this. As a result the dimensions of the edges of the roof were now much more pronounced. Moreover, the extent to which the edges were lowered was twice as great as a result of problems with the realization. Another result was that in the interior the independence of the central

ceiling had been encroached on because those parts of the ceiling that went up to the glass fronts had had to be pulled flush with the central part, with the resulting loss of definition of the square. At the restoration the low roof was again replaced, this time by profiled, light steel sheets, with thermal insulation. The construction of the slope from the centre of the roof results in the possibility of again making the facades to the original measure of 4m to 6m and of restoring the ceiling again in accordance with Rietveld's idea. A special Swiss drainage system guarantees a speedy removal of the rainwater. The former drainages along the glass fronts now serve as overflow and detector in case the drainage stagnates.

In the design phase Rietveld had made a few sketches in which the outside window frames of the large glass fronts were placed on black-stuccoed dies. As these had by choice the same diameter as the frames themselves the suggestion was created that the frames went on into the ground, whereas the wood would remain clear of the wet soil. In reality the levels of the ground turned out to be slightly higher than expected and in nine years the earth-covered base of the frames had completely rotted away. With this in mind, during maintenance work in the seventies, the frames were shortened and kept free from the ground. Splashing water again did its destructive work and the habit of attaching wooden shutters to the frames with wire nails made things even worse. The other frame details were also altered because the lower fronts became soaked. During these alterations the original graphic use of color was ignored: the frames were painted black on the inside as well, which has a disturbing effect on the interior. Besides, the frames of the transom windows were fitted with windowpanes on the outside as a result of which the prominent heavy contours on the outside found themselves on the inside. At the restoration Rietveld's original idea was revived. The taut effect of the design of the original fronts, in which the window frames form a seemingly seamless whole with the frames and thresholds, will remain intact in spite of small structural improvements and the original contrasting color scheme is brought back. The window frames are placed on the outside, on polished granite dies, which, however, are slightly higher than was the case originally. By placing a thin slab of granite underneath the overhanging lower threshold, the taut outlines have been restored. The alternately matt and shiny finish of the granite enhances the distinction between frames and skirting board. The decision not to allow an extensive space around the fronts, and to link up the frames as much as possible with the plaster walls took a lot of thought in the realization. As a result of the close fit it has become all the more apparent that some walls were not made too plumb at the time.

The original profile diameter for the new steel doors has been kept. The characteristic glass handles on the main doors have been reconstructed on the basis of old photographs. The fire exit door in the west wall added by order of the Fire Brigade has received the same details as the other side door. The ingenious glass coffered ceiling above the entrance, poetically described in Italian documents of the fifties as 'canopy', has been replaced at the restoration. The renewed marble slabs of the steps follow the pattern of the ceiling. During the restoration some parts of the mosaic floor of Boberg's pavilion was found back underneath the old covering.

The base of the flagpole will also be renewed and the search is for a contemporary replacement of De Lerma's mosaic. Although Rietveld had intended to attach the top of the trapezoid coffered ceiling to one of the roof beams with a steel draw bar it appears that the construction must have rested on the diagonally placed windowpane beside the entrance. This large windowpane, which was fastened on three sides by invisible profiles, with a free rim on the side of the door, has occasioned problems from the very beginning. Even as a result of relatively slight forces, e.g. when the door touched the free rim, the glass could break. Even before the opening the free rim was provided with a painted steel tubular profile. This did not really help, and, moreover, the windowpane remained insufficiently visible. Presumably after a number of bloody noses, already at the opening a few flower tubs had been positioned as markers in front of it, a solution that must not have pleased the architect. In view of this problem in the sixties the windowpane was provided with a heavy bronze colored aluminum rail, which was of course highly conspicuous. Now that in the meantime hard glass in these and similar sizes has become available, the design can be restored to its original transparency. A simple matted pattern on the glass should prevent accidents.

In accordance with Venetian custom the walls of the pavilion were fitted out with a protective layer of bitumen at 15cm above the floor to check saliferous dampness. This layer was extended down the brickwork. Yet it was exactly here that the plasterwork showed marked salt efflorescence. That this measure has to some extent had contrary effects was caused by the fact that the bitumen layer did not close the joint between the wall and the floor and, moreover, probably because that layer itself had in time become poreous as well. Rising damp positioned itself therefore exactly in the thin layer between bitumen and the wall surface with escalated salt formations as a result. Above the protective layer, where the damp could spread in the wall and could evaporate on the outside, this phenomenon did not occur. At the restoration this problem of damp was vigorously dealt with by a method that has shown its effectiveness in the damp Dutch cellars.

After an injection of the walls so that all the pores are filled, the base of the wall surface is provided with a number of layers of water-based epoxy. Consequently the damp remains confined in the walls and the newly applied stucco remains intact. In addition to this a strategy has been developed to lower the general humidity level in the interior. The pavilion usually remained chilly and damp in summer under the foliage of the Giardini, in spite of the agreeable sunny conditions outside.

By means of an electric under floor heating device which can be controlled through thermometers and a hygrometer, the temperature inside remains a few degrees higher than outside, when it is cold. Because of this the relative humidity in the building is lowered and the constructions suffer less from damp and condensation. Along the transom windows narrow slits were kept open, so that the somewhat warmed up humid air can escape from the building. When the building is in use the heating can simply be turned up a little to create a pleasant climate.

After some initial hesitation Rietveld chose a "simple floor of Venetian terrazzo". The originally applied floor finish was on the basis of pale grey concrete with an addition of fine carrarra mixed with little craggy silver grey stones with a diameter of about 15mm

and round pieces of carrarra of the same size. The whole gave a softly glowing, pale grey impression. A beveled skirting board formed the transition to the plastered surfaces of the wall. The quality of the floor, however, seemed to have left much to be desired and the finish soon showed many cracks, especially at the entrance.

Attempts to remove paint stains with naphtha made the matter only worse. The entire floor had been ruined and at a certain moment it was removed completely.

Because the terrazzo floor lies flush with the steps, the available height of the whole package to be applied was limited to 70mm, so that a very thin floor heating type was required. As insulation a 10mm thin layer of compressed cork was fitted. The thin surface floor was reinforced with an artificial fiber, because not enough room was left for steel reinforcement.

The new terrazzo floor finish is fitted with metal strips as dilatations. It is highly probable that these were also present in the original floor, but the pattern has not become completely clear. At the restoration the sail arm pattern belonging to the ground plan was chosen, with the square in the middle corresponding to the central part of the ceiling. As a result of the by Dutch standards exceptionally high costs, it was decided not to construct the skirting boards in unity with the floor and prefabricated parts were chosen.

Rietveld's design was completely based on the use of natural light; there was not even electric light in the building. In view of this, it must be concluded that Rietveld was too optimistic about the local climatic circumstances. Although the daily changing incidence of light can be very attractive in an exhibition room, in the Biennale pavilion these strong light contrasts are often quite inconvenient in many situations. This detail is typical of the overall idea of Rietveld's design and cannot be changed without very radical interventions. At the restoration, therefore, efforts have been made to soften this phenomenon as much as possible. To dim the incidence of light through the transom windows, Rietveld had thought up the radially placed 'shutters', but, this solution did not appear to be without its difficulties. At some moments during the day the direct sunlight fell through the dormer windows, and the shadow of the slats caused disturbing line patterns on the walls. In the spring of 1954 Rietveld asked the contractor to sketch on a plan how the natural light developed during the day, but because of bad weather lasting several weeks, this request could not be met until the end of May. It then appeared that the architect's initially proposed method of simply covering the slats with cloth, did not work. Photographs showed that the shadows caused by the covering became even more messy, and the report from Italy made clear, moreover, that the cloths had to be fitted in many places, which again on cloudy days would have given the interior not enough daylight.

The contractor even proposed to whitewash the skylight windows, but in the end the problem was solved by means of curtains with a pulley system. In the hectic days before the approaching opening day the curtains were ordered by the consulate in Italy, while Rietveld as was the idea brought them himself from Holland. This double delivery caused extra expenses right at the last moment.

Because of constant breakage of glass due to vandalism, the transom windows had been replaced during the maintenance work in 1969 by polyester panels, which yellowed in the course of time, however, and had a bad influence on the quality of the light in the interior. Some parts of the pavilion remained so dark that they did not anymore serve the purpose

of exhibiting works of art. These panels were replaced by layered glass covered with opal foil at the restoration. In the long run the plywood slats themselves did not turn out to be a very happy choice either. The unpainted tops reflected the natural light with a pink glow. Also in time the slats became warped in the always-damp conditions of the room. The slat ceilings were therefore rightly changed at the big maintenance works and were fitted with white perspex, which, however, was very inflammable. The radial setting of the slats was respected.

However, concentrating rays of natural light on relatively thin strips on the walls is now not anymore considered suitable in the case of exhibiting visual art. It is rare for a modern exhibition to consist only of a series of paintings hanging on a wall.

Within the framework of a respectful restoration it has never been considered to leave out the slats because it would have radically changed the entire spatial impression. In order to meet with the strict demands of the Fire Brigade, white polycarbonate slats were chosen at the restoration. The opal like character was chosen to get a more diffuse light, in keeping with present day requirements. At the restoration the pavilion was also provided with an electrical system, with which it is possible to increase the level of natural light or to realize specific lighting, according to need.

The starting point during the development of the restoration plan was that the approach wherever possible, should be in harmony with Italian building practice. On the one hand an effort was made to anticipate local legislation and rules, while on the other hand the possibility was left open to call in a local construction company, just as in 1953.

For retrieving details from the past and the elaboration of the bilingual plans, the information provided by Lieuwe Op 't Land has proved to be very useful. The work was put out to tender frequently and privately and the contract was finally awarded to the constructing company ICCEM from Venice Marghera. In spite of the inevitable communication problems because of the language difference, this firm has made an all out effort to complete the work.

Maria Caterina Redini acted as executive architect. Her dedication during the permit procedures and during the building activities, and certainly also her remarkable personality, has been absolutely indispensable.

Thanks to the contribution of many people, the Rietveld Pavilion will now be able serve again for quite a number of years. The 1995 Netherlands contribution to the Biennale can be presented in a pavilion that once again exudes the atmosphere that Rietveld realized in 1954. Methodical stewardship and systematic maintenance will have to ensure that this representative little building will not again arrive in a downward spiral of decay and undervaluation.