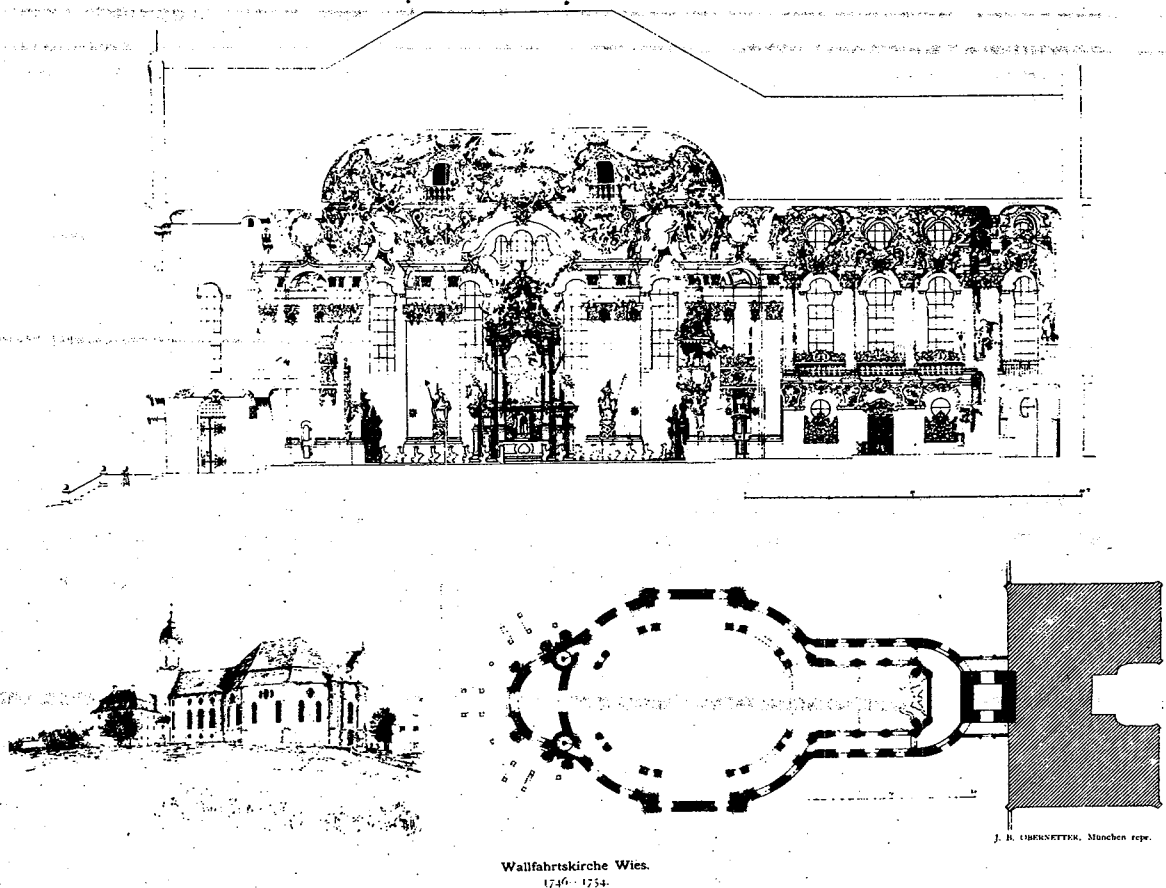


Preliminary Investigations for the Restoration of the Wies Church
by Michael Petzet (Bavarian State Conservation Office)

It is no mere accident that the Wies Church in Upper Bavaria's "Pfaffenwinkel" is recorded on the World Heritage List compiled by UNESCO. Built by Dominikus Zimmermann between 1746 and 1754, this pilgrimage church in its special setting at the foot of the Alps represents the culmination of Bavarian Rococo: a unique "Gesamtkunstwerk" that attracts more than a million visitors a year. In 1984 the Wies Church had to be closed because of serious deterioration of the interior shell of the domed, centrally-planned building: sections of plaster and stucco are dangerously loose and even the famous ceiling frescoes by Johann Baptist Zimmermann have cracks and cavities.

Extensive preliminary investigations by the Bavarian State Conservation Office, summarized below, laid the groundwork for the restoration. The work began a short time ago and probably will take three years.

As the basis for a comprehensive documentation of the deterioration, photogrammetric records were made of the church and specific areas of damage, such as the large cartouches on the vault of the central space, were measured. The resulting measured drawings, which document the damages precisely, can also provide important information in the future, if restoration work again becomes necessary. Using geodetic measurements, an attempt was also made to obtain information on



Wallfahrtskirche Wies.
1746-1754.

movements within the complicated wooden structure of the vaulting. The damages, which among other things are to be traced back to vibrations caused by supersonic flights over the church, occur above all in the area above the impost zone, where the low-reaching wooden structure joins the masonry work of the outer walls. The investigations showed that the structural framework of the Wies Church is in order, but that the labile wooden structure reacts to wind pressure and vibrations. Moreover, the lath framing that supports the decoration in the vaulting has aged, and the nails and wires that secure the stucco elements are corroded. The overall deterioration also includes the consequences of earlier restorations: relatively limited repairs in the 19th century were followed by an interior restoration in 1903/07 and by partial renovations since 1950, especially above the side altars in the central space.

The restoration plan from 1903/07, developed by the Royal Bavarian General "Conservancy" (now the Bavarian State Conservation Office), already aimed at conserving the as-is condition of the space and its finishings, which were practically unaltered since the time of construction. Today, too, a restoration plan based wholly on conservation and stabilization of the historic fabric is, of course, the only conceivable plan. First of all the damages that were responsible for closure of the church in 1984 -- loosened pieces of stucco, plaster surfaces with cavities behind them, dangerous cracks -- must be stabilized. In particular the following deterioration problems were recorded: the effects of earlier water penetration because of roof defects; damages due to previous cleaning of the paint layers; renewed soiling of the outer surfaces, particularly on protruding stucco elements and on architectural components; inappropriate repairs of cracks; inaccurate color selection in over-paintings; repairs and retouchings of the stucco ornament and architectural components; loosened and warped leaf gilding from the 18th century on the stucco; cracked gilding; paint layers with weak adhesion to the primer coat; color changes (blackening) on the original gilding and on the metallic layers.

An analysis of the surfaces in the choir, which had been completely decorated by the time of choir consecration in 1749, was first possible after scaffolding was put up in the entire space. In spite of the damages that also were found here, there was one very positive finding: the altar space has extensively retained its first paint layer, and thus the original scheme from the time of construction as created by Judas Thaddäus Ramis. The essential color accents in the choir are set by gilding on the stucco as well as by the strong green used on the cartouches and on the shell-like stucco elements. Within the stucco ornamentation, green is used in a very painterly fashion; it is accompanied by cool red and green tones with additional soft grays and blue tones that correspond to the ceiling fresco by Johann Baptist Zimmermann.

In contrast to the relatively uniform condition of the choir, the central space appears from first glance -- disregarding the severe

deterioration -- to be less uniform and more intensely re-worked. Places that have been retouched, extended or (after 1950) completely painted over are obvious. Repairs to the original leaf gilding on the stucco, carried out in 1903/07 using mordant and gluing techniques, are very badly damaged in some places; the same is true for the brocade-like surfaces with metallic layers.

Irrespective of the multiple re-workings, the investigations in the central space did not reveal one paint layer, as in the choir, but two layers over one another. The first paint layer is in green, yellow and red tones, without gilding; the second layer, with gilding, is characterized by bluish smalt on the rocaille, which in a way can be seen as the "leitmotif". During the course of the investigations it could be proven that this second paint layer is not a Neo-Rococo scheme dating from the restoration of 1903/07, but rather a "final version" from the 18th century, after the final consecration in 1754. This second paint scheme, covering the more frugal first scheme which was without gilding, was perhaps already carried out by 1756, since this date appears in two places in the interior which even in the 18th century would only have been accessible by means of a scaffold. Numerous indications point to the originality of this second scheme. The old leaf gilding, which was repaired during the restoration of 1903/07 using mordant and glue as a bonding agent, dates from the same time as the smalt paint layer, and the smalt also exhibits clear retouchings and reworkings from later restorations.

Final evidence was provided by comparative scientific investigations of the different paint layers, including clarification of pigment alterations and analysis of the bonding agents and the structure of the materials. The results of the analysis permitted an assessment and ordering of the paint layers, including those from more recent restorations which worked in part with modern pigments. Significantly, various samples did not show even the slightest soiling or patina between the first and second paint schemes. This fact supports the idea that the first scheme was followed very closely by the second, which was then recognized as the "final version". Based on these findings, the second scheme of course must be the one that is valid for the present restoration plan.

The "leitmotif" for the stucco in the central space thus remains the smalt blue, in the same chemical composition as that in the choir. This cobalt glass color, beloved because of its transparency, was "high fashion" in the '50's and '60's of the 18th century. The light blue smalt scheme is richly accented and modeled through the use of a stronger blue and with the help of brush pressure and brush strokes, especially in the shell-like stucco elements. Within the ring of chapels the light blue stucco is contrasted with a cool, light red scheme, whereas in the transverse arches of the chapels a green scheme is used. In addition to gilding and blue stucco, the capitals of the double pillars exhibit putti heads, whose wings (silver on top of metal) have a red or yellow luster.

The preparations for the restoration encompass not only preliminary

investigations but also sample work undertaken by the workshops of the Bavarian State Conservation Office for the conservation and restoration of the stucco and wall surfaces. Such work allows the testing of conservation materials and methods and serves to explore the conditions, the time frame and the degree of difficulty that will confront the team of restorers selected to execute the project. Thus varying techniques were tried out, ranging from dust removal to final retouching, and different materials were applied under varying conditions. The discovery was made, for example, that removal of the repairs made with mordant gold without causing damage to the original fabric was problematic; for this reason these repairs must be retained and stabilized. Also the re-exposure of the original paint layer proved to be difficult in some places. Thus the quality and method of re-exposure must be constantly checked, controlled and brought into harmony with the rest of the fabric, so that the end result will be as free as possible from losses. Where there is danger of losing original fabric, re-exposure is to be foregone.

Given the varying circumstances and the richly differentiated artistic design of the "Gesamtkunstwerk" of the Wies Church, it is not possible to proceed according to one particular model. Rather, the restorers must work with the individually appropriate method of conservation and restoration based on the analysis of the condition and state of the original.

Retouching work demands, moreover, great insight into the details of the paint scheme, as well as an understanding of the overall decorative scheme, in order to avoid misinterpretations.

The results of the work on sample areas were systematically compiled. The outcome is a work program that calls for consistent preservation of the visible paint layers and the existing paint scheme. An essential point in the plan is also the reconstruction and restoration of areas where the original has for some reason been lost. This combination of conservation and restoration by using the appropriate methods and measures has practical application in all areas, from the white walls to the gilding.

The work program encompasses:

- dust removal and cleaning of the surfaces;
- conservation of those areas with metallic layers;
- reconstruction of the places where metallic layers have been destroyed;
- stabilization of the painted surfaces on the stucco ornamentation and on the architectural components;
- re-exposure and retouching of the original paint scheme;
- completion of the paint scheme or partial reconstruction in areas where the color scheme was misinterpreted;
- retouching of damaged areas within the leaf gilding from the 18th century and integration of the gold repairs;
- application of a lime glaze to the white surfaces that were repainted during the restoration of 1903/07 or later.

The methods of work here are essentially the same as those used for the conservation and restoration of wall paintings.

After completion of the documentation of the deterioration problems and of the necessary stabilization measures on the wooden structure, the next steps can follow: removal of dust from the surfaces, stabilization of the plaster surfaces and the stucco ornamentation simultaneous stabilization of the ceiling fresco, completion and reconstruction of a few stucco elements, and, finally, conservation and restoration of the paint scheme. The comprehensive restoration program, also encompassing conservation of the altars, pulpit and statues (for which extensive preliminary investigations not discussed here have likewise been carried out), will be concluded in the coming years.

Michael Petzet

Preliminary Investigations for the Restoration of the Wies Church
(Summary)

Together with the Palace of Würzburg by Balthasar Neumann, the Wies Church is one of two buildings in Bavaria to be recorded on the World Heritage List compiled by UNESCO. Built by Dominikus Zimmermann between 1746 and 1754, this pilgrimage church in its special setting at the foot of the Alps represents the culmination of Bavarian Rococo: a unique "Gesamtkunstwerk" that attracts more than a million visitors a year. In 1984 the Wies Church had to be closed because of serious deterioration of the interior shell of the domed, centrally-planned building: sections of plaster and stucco are dangerously loose and even the famous ceiling frescoes by Johann Baptist Zimmermann have cracks and cavities. The restoration work, which began a short time ago and probably will take three years, was preceded by a documentation of the deterioration problems and by extensive preliminary investigations. The investigations revealed that the original paint scheme from the time of construction is widely preserved in the altar space. The two 18th century paint schemes in the central space, on the other hand, have suffered more from deterioration and were extensively re-worked in the course of restorations in 1903/07 and after 1950.

Michael Petzet

Les examens préliminaires en vue de la restauration de la Wieskirche
(résumé)

La Wieskirche ("l'église aux champs") est - avec la résidence de Würzburg de Balthasar Neumann - le seul monument bavarois représenté dans la liste mondiale du patrimoine culturel et naturel de l'UNESCO: cette église de pèlerinage construite par Dominikus Zimmermann de 1745 à 1754 dans un site unique est l'incarnation même du rococo bavarois, un ensemble artistique merveilleux qui attire plus d'un million de visiteurs chaque année. En 1984 l'église dut être fermée pour cause de dégâts importants concernant les surfaces intérieures de la coupole qui recouvre la nef élevée sur plan central. Les stucs et les crépis se détachent de façon dangereuse et les fresques de Johann Baptist Zimmermann se fissurent et se creusent. La restauration, commencée dernièrement et qui durera probablement trois ans, a été préparée par une documentation des dégradations et des examens préliminaires importants, conduits par les Services des Monuments Historiques de Bavière. Il résulte de ces examens que la coloration d'origine, datant de la période de construction, s'est conservée dans le sanctuaire, alors que la nef, qui présente deux colorations du 18-ème siècle, a subi des dommages plus accentués et a été fortement remaniée lors des campagnes de restauration des années 1903/07 et 1950.