

## Transformative projects – Fermi's *Chicago Pile* and Mies van der Rohe's *Concert Hall*

In the late afternoon of December 2, 1942 CP-1 went critical. Drawing on research conducted in Berlin, Copenhagen, Rome and the Cavendish Laboratory at Cambridge a group of international scientists achieved what previously had been dismissed as “moonshine” – the first controlled nuclear chain reaction, a decisive step towards harnessing nuclear power and building the atomic bomb. Their experimental reactor was housed beneath the West Stands of Stagg Field at the University of Chicago; a disused sports court had been adapted for the war effort. The secret operation led by émigré physicist Enrico Fermi was code-named “Metallurgical Laboratory.”

Just weeks later, the Illinois Institute of Technology dedicated the Minerals and Metals Building, its research programme also committed to the war effort. It was the first laboratory on the new State Street campus, designed by German architect Mies van der Rohe. He, too, had recently immigrated to Chicago. Noted for its expressive steel structure, the Minerals and Metals Building is often linked to factories by American architect Albert Kahn. Parallel to the building's design Mies completed a collage, *Concert Hall*. In it, he appropriated the interior photograph of one of Kahn's buildings, the Glenn L. Martin assembly plant, designed to house the production of flying boats to protect trans-Atlantic routes from submarine attack. Drawing in the work of one of his graduate students, Mies' collage proposed the conversion of the space from armament production to artistic performance.

While the mirror image of events in Chicago of 1942 may be incidental, parallels are found in the approaches taken by scientists and architects alike. Modern architects early on acknowledged the new scientific paradigms and sought to emulate them. Aware of the transformative nature of their respective projects, both the scientific and the architectural communities forged strong bonds amongst its members. Allegiances extended well into research programmes and pedagogy. This study of Mies' early projects after arriving to the United States makes tangible the interwoven nature of fact, power relations and interpretation. Interrogating *Concert Hall* in detail strips Modernism's customary filters from this particular project as well as Mies van der Rohe's oeuvre in general.

This presentation is related to early-stage PhD research under the supervision of Kathleen James-Chakraborty, Professor of Art History at University College Dublin.

### Author

Jan Frohburg studied architecture in Weimar, London, Zurich and Chicago. Practicing architect in Weimar. Assistant lecturer at the Bauhaus University Weimar. Guest lecturer at Virginia Tech's Washington Alexandria Architecture Centre (WAAC). At present, lecturer at the newly established School of Architecture at the University of Limerick (SAUL). Research interests include design education and the spatial expression of Modernity, focusing on concepts characteristic to the work of Mies van der Rohe. – Lives and works in Ireland.

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