

Eindhoven and Escher's Connection with the World of Mathematics

Micky Piller and Kristoffel Lieten

Heemstede, The Netherlands; kenmverweg@gmail.com

To many admirers, M.C. Escher is known for his tessellations, his metamorphoses and his impossible buildings, but he also made illustrations and wall tessellations. This presentation traces the coincidence by which Escher entered the field of crystallography and mathematics and how he used these new insights in his later work, some of which is related to Eindhoven.

One of these was the invitation in 1950 to design a ceiling for the Philips Exhibition hall in Eindhoven. Earlier M.C. Escher had been invited to design a certificate (the print *Tijdelijke Academie Eindhoven*, December 1945), for the staff of the academy functioning in the then already liberated southern part of the country. That invitation in turn was a stepping stone to the 1954 Escher exhibition held during the International Congress of Mathematicians in Amsterdam. The rationale for that exhibition, as the Dutch mathematician N.G. de Bruijn (who had asked Escher for the 1945 memorial print) explained in the catalogue, was that Escher had “the same playfulness which constantly appears in mathematics in general and which, to a great many mathematicians is the peculiar charm of their subject.” Two participants, and visitors to the exhibition, were Donald Coxeter and Roger Penrose. With these famous mathematicians, he developed a close relationship and they inspired him to further develop his art.

In the meantime, in 1950, an old friend of M.C. Escher, had asked him to design the ceiling for the Philips hall, a ceiling “that facilitates playful interaction between light and dark.” This second commission in Eindhoven, and how the ceiling ended up in the Escher Museum in The Hague, will be looked at in more detail.



Figure 1: *Tijdelijke Academie Eindhoven*, woodcut, 1945.



Figure 2: *Philips ceiling*, 1951.