Ludwig Hirschfeld Mack (1893–1965)

German-born artist and educator Ludwig Hirschfeld Mack is an important figure in Australia's cultural history. Hirschfeld Mack was a student and teacher at the revolutionary German art and design school the Bauhaus in Weimar, Germany, from 1920 to 1925. After his arrival in Australia in 1940, he was instrumental in establishing Bauhaus principles and methods of teaching in art education.

At the Bauhaus Hirschfeld Mack undertook ground-breaking experiments, particularly in the areas of colour theory and the use of light to create projected colour effects. He worked alongside Europe's foremost avant-garde artists including Johannes Itten, Paul Klee, Wassily Kandinsky, Lyonel Feininger, Oskar Schlemmer, László Moholy-Nagy and Josef Albers. Hirschfeld Mack's prints and watercolours have a particular affinity with the dynamic lyricism of Paul Klee's work, and many illustrate principles of colour theory taught by Johannes Itten.

Hirschfeld Mack left the Bauhaus in 1925 and taught art to school children at Wickersdorf and later to student teachers in Frankfurt (Oder) and Kiel. As a reaction to the increasingly Fascist government regime in Germany, he moved to London in 1936. Following the outbreak of the Second World War, Hirschfeld Mack was interned as an enemy alien in 1940 and deported to Australia on board the notorious HMT Dunera.

Interned with other German intellectuals, artists and scientists first at Hay and Orange, New South Wales, and then at Tatura, Victoria, Hirschfeld Mack was released in 1942 at the behest of Dr James Darling, headmaster at the Geelong Grammar School. He was employed by Darling as the art master at Geelong Grammar until he retired in 1957.

Hirschfeld Mack soon gained the admiration of Melbourne's intelligentsia; his expertise was widely sought in the field of art education and art history. In 1946 Hirschfeld Mack held his first solo exhibition at the University of Melbourne's Rowden White Library and for several years gave guest lectures in Joseph Burke's art history class at the university. Hirschfeld Mack later held exhibitions at Melbourne's Gallery A in 1960 and in 1963–64 at the Bauhaus Archiv in Darmstadt, Germany.

Artist and innovator

Ludwig Hirschfeld Mack was an inventive and experimental artist. His Bauhaus training established the importance of a deep understanding of materials and their properties. As an art teacher, Hirschfeld Mack avidly promoted that experimentation with materials was the foundation of an art education. Hirschfeld Mack's inventive approach extended to other creative endeavours, such as the design and construction of highly original musical instruments (a number of which are held in the Grainger Museum Collection) and a patented device that he envisaged could be used in illuminated advertising.

At the Weimar Bauhaus from 1920 to 1925 Hirschfeld Mack was employed in the printing workshop where he was an apprentice under Lyonel Feininger. In 1921 Hirschfeld Mack and Paul Klee devised a technique of transfer printing best described by the German term Durchdrückzeichnung. This involves drawing with a pencil, tool or finger on the reverse of a sheet of paper that has been placed over an inked plate. Hirschfeld Mack used this technique extensively throughout his oeuvre often with the addition of watercolour to create delicate, lyrical compositions.

The exhibition comprises a number of paintings on canvas, cardboard and paper made using oil and acrylic paint, watercolour, and calsomine (a builder's product popular in the 1950s that he used to give texture and depth). Hirschfeld Mack often combined several media in the one artwork to produce complex, robust surfaces, as we see in the works on the adjacent long wall. These paintings, mostly made on cardboard, were produced by applying layers of watercolour over calsomine, which had been thickly applied and incised with linear and textural designs. Using this technique, Hirschfeld Mack created works of great visual impact from relatively modest materials.
Colours, like lines, have feeling values of their own. Ludwig Hirschfeld Mack

Ludwig Hirschfeld Mack studied colour theory under Adolf Hölzel at the Stuttgart Academy and Johannes Itten at the Weimar Bauhaus from around 1918 to 1921. The phenomenon of human colour perception—the mechanics of vision and the way our brains process information—as espoused in the theories of Goethe, Schopenhauer and Bezold was of great currency, particularly for the emerging abstractionists who sought to express internal experience through colour and form.

Bauhaus approaches to colour theory were revolutionary. In addition to investigating the physics of how light is absorbed or reflected and the effects of contrasting or complementary colours, Bauhaus classes also included the psychological and physiological effects of colour. Wassily Kandinsky and Paul Klee conducted classes in colour theory at the Bauhaus. Of particular significance to Hirschfeld Mack were Klee's classes, which emphasised using colour to achieve pictorial harmony and dynamism.

In 1922–23 Hirschfeld Mack gave practical seminars in colour theory which complemented Klee's theoretical course. Experiments were conducted on 'colour as light', 'colour as reflected light', 'reaction on the retina of our eye', 'colour psychology', 'colour in relation to health and healing', and 'colour music'. The colour charts included in the exhibition date from this period. The results of Hirschfeld Mack's colour experiments were to find commercial application in the Bauhaus spinning top, comprising seven interchangeable colour wheels, designed by Hirschfeld Mack. The wheel was devised as a teaching tool to illustrate colour blending and is still in production today.

In 1925–26 Hirschfeld Mack developed a theory that linked the primary colours yellow, red and blue to aspects of the human condition: yellow symbolises the intellect, red the material, and blue the spiritual. His theory is an extension of Kandinsky's famous 1923 postcard survey that investigated psychological relationships between colour and form. At the centre of Hirschfeld Mack's colour symbolism is his foundational belief that spirituality was paramount to the peaceful existence of humankind.
Ludwig Hirschfeld Mack’s colour light plays

One of Ludwig Hirschfeld Mack’s most important achievements in the early years of the Weimar Bauhaus was his development of the *Farbenlichtspiele* during 1921–23. Best translated as colour light compositions or plays, these performances comprised projected shapes and shadows of differing colours moving rhythmically across a screen, usually accompanied by music.

*In angular, sharp, pointed shapes; in triangles, squares, polygons, or in circles, curves, and wave shapes. Carried through all possible gradations of rhythmically controlled motion—upward, downward, and sideways—the elements of this composition with colour and light are brought together to form an artistically planned, orchestral representation.*

Ludwig Hirschfeld Mack, 1925

In 1912, Hirschfeld Mack experienced his first cinematic film and the powerful combination of light effects, movement and music had a decisive influence. In the 1920s he began to question the capacity of painting to engage and enthral audiences on a deep emotional level. The development of the colour light plays originated from his desire to convert the illusionistic dynamism of abstract painting into actual movement.

The *Farbenlichtspiele* were presented in public performances in Germany, and in 1923 were presented with Fernand Leger’s experimental films in Vienna. Hirschfeld Mack composed and played on the piano the musical component, which unified the form and rhythm of the composition, while a number of people operated the mechanical light apparatus according to the artist’s manuscript. In 1964 Hirschfeld Mack reconstructed his colour light organ and performed one of the plays at the Bauhaus Archiv, Darmstadt, Germany. A reconstruction was recently made for a retrospective of Hirschfeld Mack’s work held at the Museum für Moderne Kunst, Bolzano, Italy, in 1999.

Hirschfeld Mack’s pioneering work in the generation of light and sound evolved a new artistic genre; his colour light plays are early experiments in multimedia art. His innovations are a precursor to today’s prevalent use of choreographed coloured light and moving images as key elements in music performance.

*With the reflected light compositions we believe we have come closer to a new ‘genre’ of art which, with its powerful physical and psychological effects, is capable of evoking pure and profound tensions from the experience of colour and music.*

Ludwig Hirschfeld Mack, 1925