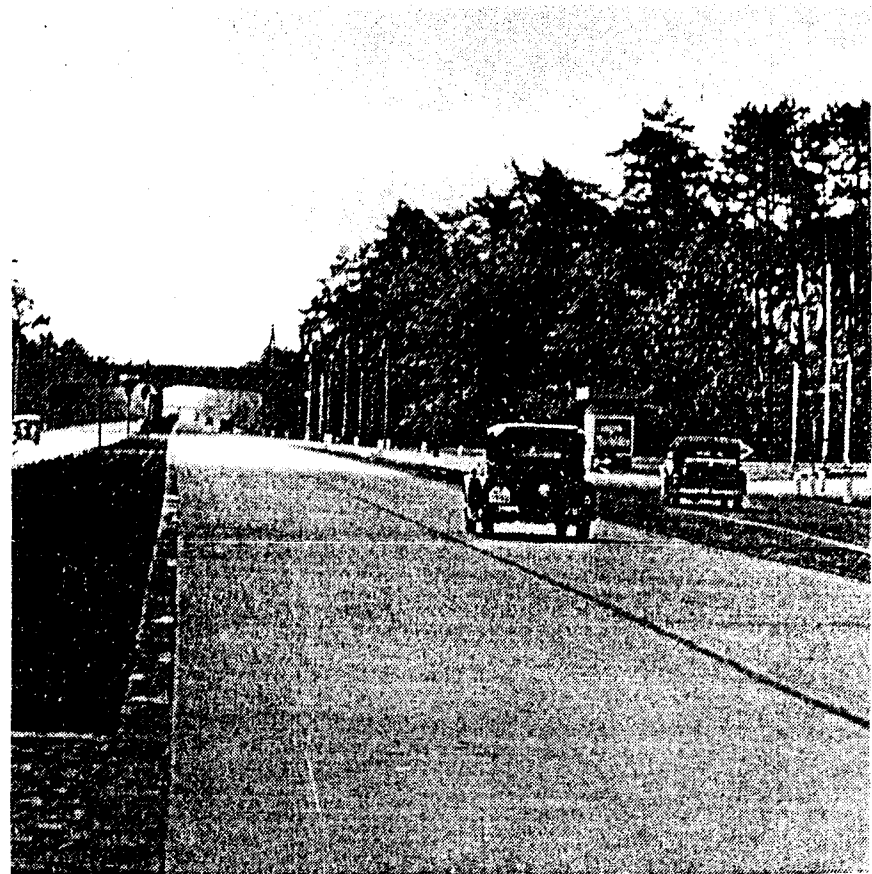


### The European Highway System

In Europe, the current state of highway development suggests that the roadway had been developed on a theoretical level since pre-World War I days. Proposals for superposed highways and cloverleaf intersections existed as early as 1906. By 1913, a private group established an experimental highway which opened to traffic by 1919. The design aesthetic was that of a four-lane, limited access, six mile highway that ran straight as an arrow through the Grünewald forest. By 1935 the *Autobahnen*, the first real freeway, was introduced between Frankfurt and Darmstadt. What characterized the *Autobahnen* was an exceptionally high regard for native landscape values which translated into a freeway conceived of as a work of art and positively integrated into the surrounding landscape.

This particular attitude permeated the rest of the European transportation network. Shortly after World War II, France, Italy, Belgium and the Netherlands instituted freeway projects that followed in a similar artform aesthetic. All of the projects generally followed the German model for roadway technology. The German engineers designed according to strict visual guidelines which gave rise to a concern about the relationship of the highway to the landscape and the visual alignment of the roadway itself. The sculptural qualities of the landscape were

The German Autobahn of the 1930's.



seen as important to the roadway design as it moved from point to point. Bridges, abutments, rest-stops, lookouts and signage were developed to provide an articulation of the micro-landscape of the roadway.

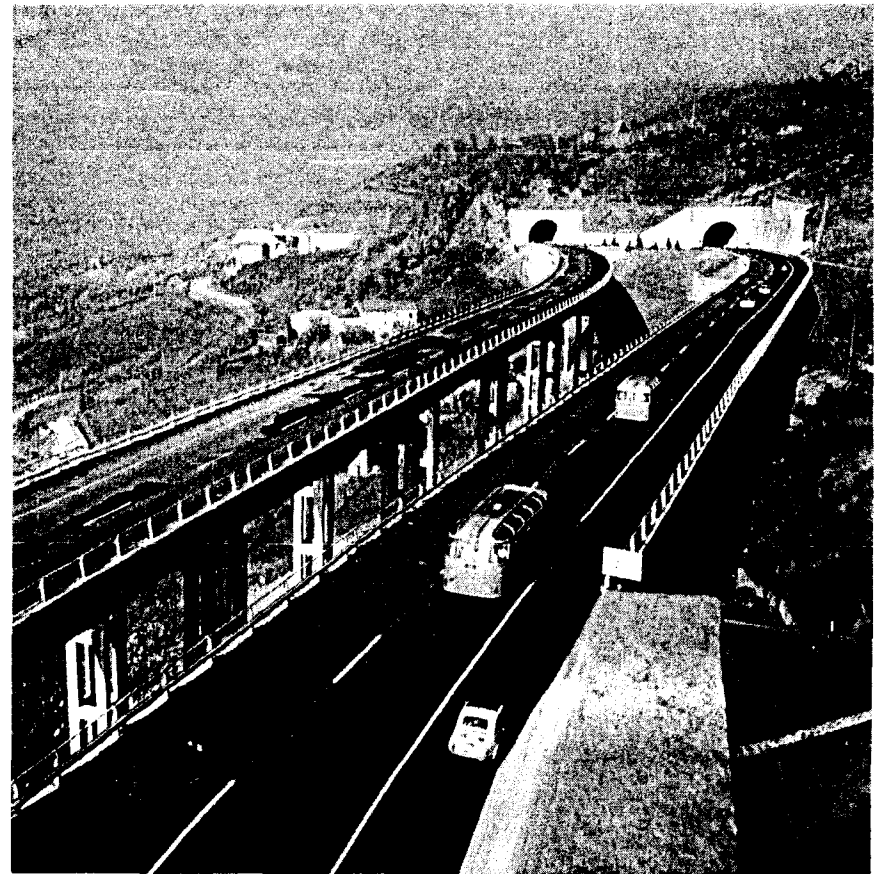
### Italy

In Italy, the modern Autostrade connecting Milan and Rome is a work of art. Tunnels, bridges and overlooks contribute to a heightened visual aesthetic. Unusual overpass designs combined with cantilevered roadways add to the visual and sculptural natural landform. Routes are not chosen based on the expediency of connection but on the expressive content of the roadway experience. In Genoa, large single-masted suspension bridges designed by the engineer Morandi create a landmark in the urban landscape by announcing the "entrance portal" to the city center.

### France

Along the Autoroute A4 connecting Paris to Saarbruchen, the French national transportation agency has commissioned a number of artists to provide sculptural relief to an otherwise flat and unarticulated landscape. The pattern variation of form, color and frequency of platonic elements creates interest and anticipation of another sequence of platonic elements. Studies have shown that the number of accidents were significantly reduced after the sculptural elements were installed.

The Autostrada del Sole between Bologna and Florence, Italy.



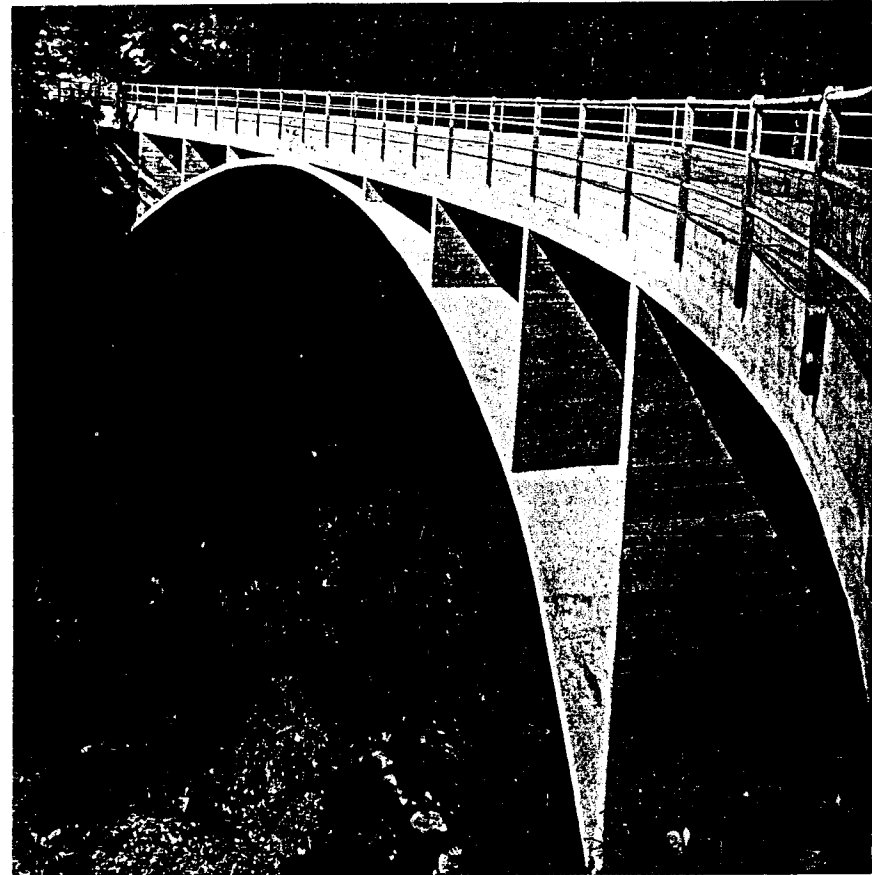
### Switzerland

In Switzerland, the concrete bridges of Maillart far exceed the functional requirements for span. They bring to the micro-landscape unusual and very successful designs in reinforced concrete that visually accentuate the landscape rather than compete against it. The technical articulation of a Maillart bridge is surpassed by its sculptural form. In this sense, the bridge extends the horizontal and lateral qualities of the landscape with a minimum sense of interruption with no sacrifice of the landscape.

The main characteristic of the European roadway is the apparent concern for the visual and formal aspects of the environment. While cities like Paris, Rome, Berlin and London share similar problems of traffic congestion, pollution and deterioration of the infrastructure as their American counterparts, the freeway that encircles or connects the urban centers respect to a far greater degree the land and urban patterns that shape the landform.

The richness of the European highway system emerges from an expression of the ecological value of the landscape as it pertains to vehicular motion. In evaluating the cultural, philosophical, psychological and aesthetic phenomena of the European highway, the dimension of time, as it relates to travel on the motorways, has not been the prime-mover. Instead, a different perceptive basis in respect to the external world that

Schwandbach-Brücke, Canton Bern, Switzerland. 1933. Robert Maillart.



stresses the dynamics of time over that of movement is in evidence. In very few cases have external sculptural experiences been added to enhance the driving experience. It would appear that the highway driving experience is based on a uniformly changing quality that reflects the natural landscape, its applied components and an overall concern for the kinesthetic sense of body movement. The net result is a kinship with the natural landform.