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The Parquet Deformation  
The Mirror-Rotation Symmetry

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THE PARQUET DEFORMATION

The task:

To fashion a continuous series of parquet events into a temporal composition of flowing (rather than static) rhythms; to execute the design with ruling pen and ink.

The principle:

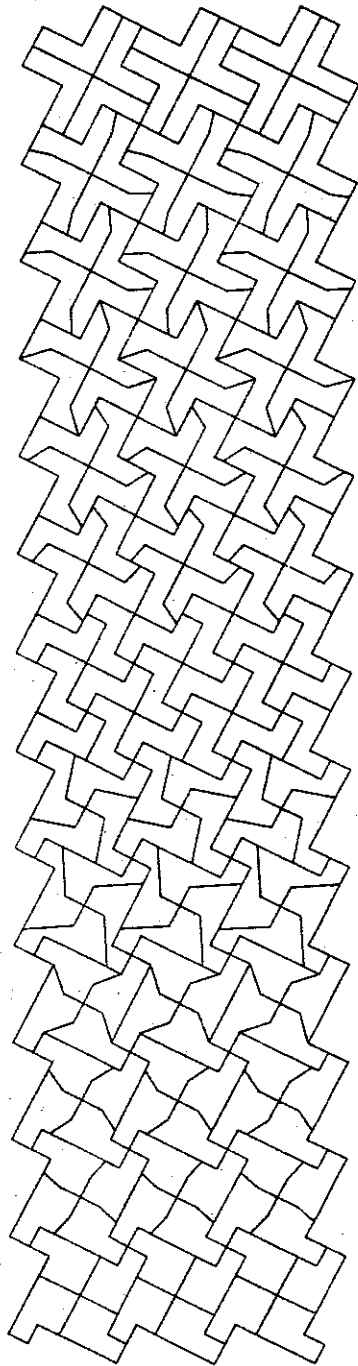
A parquet is an endless configuration of congruent pieces (otherwise called "tiles") that pack the plane -- without overlapping or leaving holes. The best known families of parquets conform to lattices, usually rigidly, occasionally loosely. It is possible to construct a few parquets (e.g., the 1 x 2 brick) with relative randomness; and there are recent identifications of other non-periodic arrangements of congruent tiles.

Each lattice type has its mutation groups and sub-groups and infinite variation possibilities, within the group's limitations. Some of the most interesting parquets are developed on the square lattice and on the special ( $60^\circ - 120^\circ$ ) rhombic lattice -- the latter allowing both equilateral triangular and regular hexagonal tessellations. The more general lattices, especially the parallelogram lattice, are more limiting, since they afford less sub-division possibilities; the parallelogram, in fact, allow only one -- a two-fold rotational subdivision.

In this project, many of the parquet variant shapes of any one lattice system are linked together by subtly deforming one shape into another and then on again into yet another. These continuous deformations are most often developed along syngenometric lines. The total compositions are not intended to be viewed spatially but temporally, as a sort of visual music. The Oriental scroll paintings are of one of the few great traditions of temporal, visual compositions. Viewing them, then, is akin to the manner in which film is seen, poetry read, and music heard.

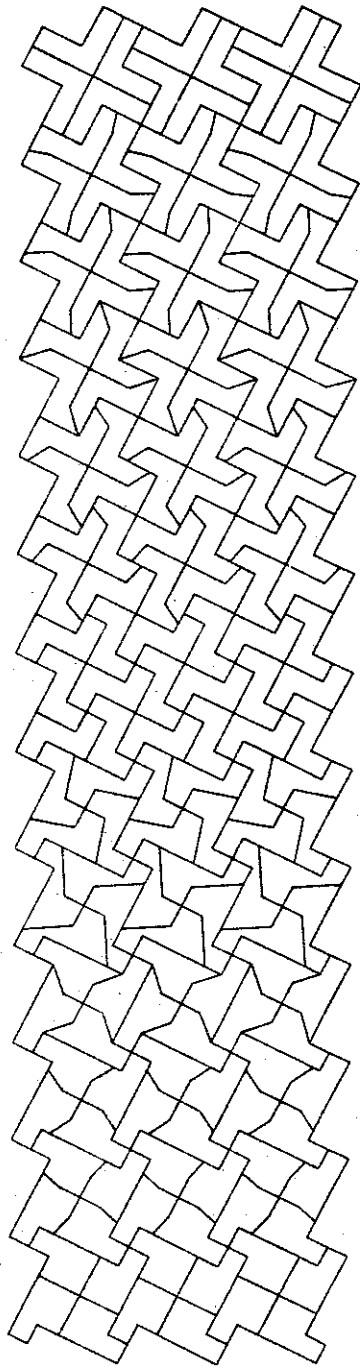
The pedagogic goal:

To have the student become totally familiar not only with the families of congruent figures (tiles, parquets) that fill a plane and their topological relationships, but with the fundamental principle of continuous deformation (after Dürer and D'Arcy Thompson) and to have him design an aesthetically coherent composition that is essentially temporal in contrast to the spatial compositions more familiar of the history of our Western visual culture.

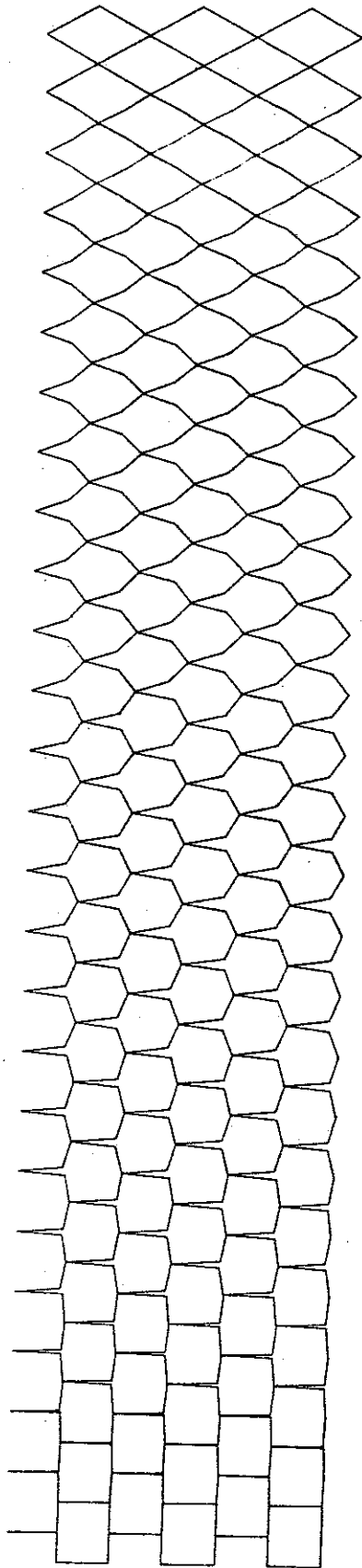


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