

THREE-DIMENSIONAL OPTICAL ILLUSIONS THROUGH LAYERED PLANAR SURFACES

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Abstract

Freely composed interconnected geometric forms (shapes) and repeated constructed linear forms (shapes) become interactive through the layering and spacing of planar transparent surfaces. Through the combination of different surfaces, unrelated in their design, vibrant colors are muted and freely composed geometric forms are organized. These positive/negative forms move in and out of their two and three-dimensional appearance and an optical illusion occurs that leads to infinity.

Introduction

As a non-representational artist I have adopted the vocabulary of math and geometry to create, organize and remember various formations and apply these freely in my art. It is difficult to make a distinction between the already existing knowledge we find in the similarity of other art-forms and the clarity of geometric designs used in various techniques in different parts of the world.

I find myself not only confirming the status quo of the pieces I already have completed, but also encouraged to continue with an art-form that I choose to use as my guideline and philosophy.

I am interested in an art-form in which the viewer has to take a moment to participate in the closer understanding of an image, in what is happening when different planar surfaces are combined into one single piece. Two or more surfaces, consisting of canvas and screen are combined but can be unrelated in their geometric design. The surfaces, as concrete as they are alone, together convey images with constantly changing focus and appearance. In our mind we can imagine what is happening on each surface but through the overlapping a fence-like viewing occurs and we are experiencing an illusion. With the arrangement and order of a repetitive geometric design a three-dimensional optical illusion will occur. The question for the artist of how to generate new ideas never ends. One idea leads to another and one piece nourishes the next.

Kemden

This piece was created in 2000 and was important in the development of my current pieces. Here I have been working with brighter colors applied in a more painterly fashion. I insert layers of tinted gauze, which have the appearance of theatrical jells, between Fiberglas screen. The gauze is barely visible but seems to enhance the moiré phenomenon, which add a layer of brightness to the piece. What was previously more effective with curvilinear shapes to, I could now achieve with rectilinear shapes. I create the illusion of three-dimensional formation while using the triangle at a 45 degree angle moving from right to left or left to right, overlapping the tilted triangles at about 50 to 70 degrees creating a turning point where these triangles meet. The viewer will no longer be able to read the actual order of layers but will experience a three dimensional illusion. Pieces have to be viewed from a distance and also looked at for longer period of time. Time might be seen as a fourth dimension, motion derives where space and time is combined. Just like experiencing the after-image of color, this moment of kinetic feeling will come and go depending on the position of the viewer. The designs are moving now across the planar surfaces from right to left to right; they can visually be continued in either direction. These pieces might appear as if they are woven in space, they interlock and weave in and out of their planar surfaces, which means that they cannot just be seen as framed picture planes.



Figure 1: Kemden, 17" x 89" x 3"

Inspiration

I always liked the separation of spaces which we experience through fences: the different viewpoints we perceive while walking along them and the endless combinations we can encounter while we are moving along a fence and still not able to touch or get to this space behind these obstacles.

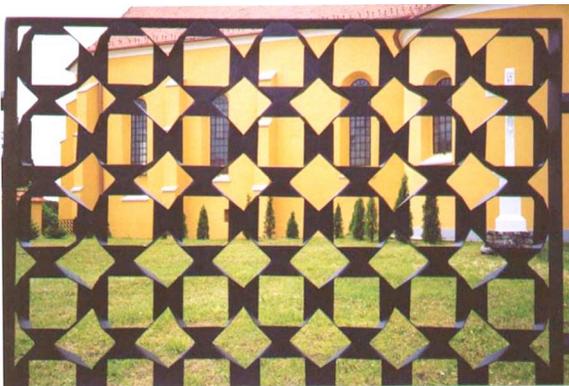


Figure 2: Iron fence, Hungary

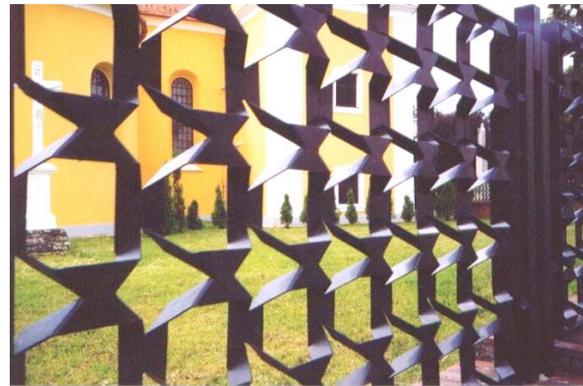


Figure 3: Iron fence, side view, Hungary

My fences are created through linear, rectilinear, or curvilinear designs that move beyond the frame and can be continued in the mind. A geometric pattern is now created which has no boundaries and moves into infinity. One knows what is present but captures, and loses, the optical image in an oscillating phenomenon. Because of the spacing and distance between each planar surface a new formation is created. If we are looking out through a window, we are framing the landscape, we cannot touch the endless view, but imagine the space and the occurrence within the space. The spaces I am trying to create cannot be touched or entered, but we can imagine and change the appearance of these spaces while viewing the pieces from a different angle.

My interest in drawing from the vocabulary of textiles, architecture, fences, pavements, and forms in nature have not changed. What seems to be more important in my new work is the actual usage of textile-material, which I directly apply to the canvas. I no longer use pigment and mix paint, instead I cut and piece together geometric shapes from colored textiles, sew overlap and laminate them freely onto a canvas.



Figure 4: Early stage of collaged painting, “Tranquility”

I hereby collage and recycle ready-made material, which has been a long tradition in creating new art. We are familiar with quilts, patchwork and appliqué as an applied art-form in various cultures. I have always been fascinated by the craftsmanship, and method of this kind of artwork, in which remnants of fabric are reorganized through simple geometric patterns and given a new life.

A collection of Korean textiles and costumes “ **Rapt in Colour**” inspired a series of pieces created over the last two years.



Figure 5: Korean textile, Yibul Po, 19th century



Figure 6: Korean textile, Oppo, 19th century

Tranquility

This piece was painted with ready-made fabric, while bright colored textiles were laminated onto a canvas. Textile pieces were cut into various geometric shapes and randomly and spontaneously organized. On the same surface a freely composed dark grid was applied to give the collaged surface a new order. The second and third layer of this painting consists of diagonal rows of triangles which appear through the layering of the two transparent surfaces as cubes and tetrahedrons which the eye continues beyond the margin (frame).



Figure 7: Tranquility, collaged painting and first layer



Figure 8: Tranquility, 2002 (fully assembled), 45" x 48" x 3"

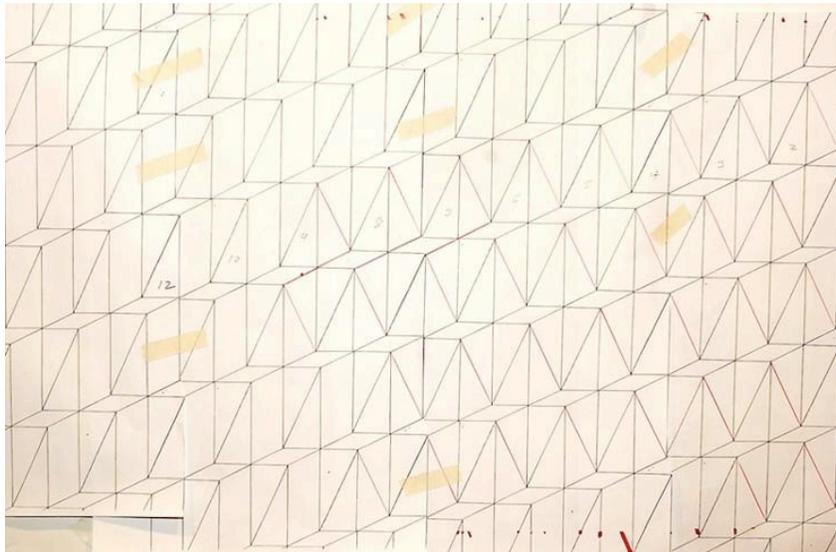


Figure 9: Geometric work-drawing for "Tranquility"

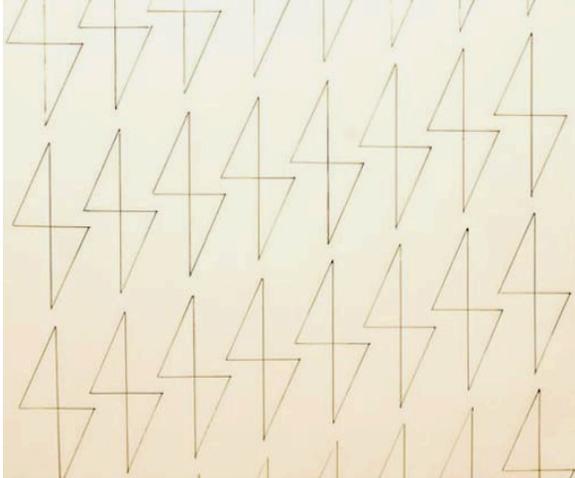


Fig. 10: Work-drawing I for “Tranquility”

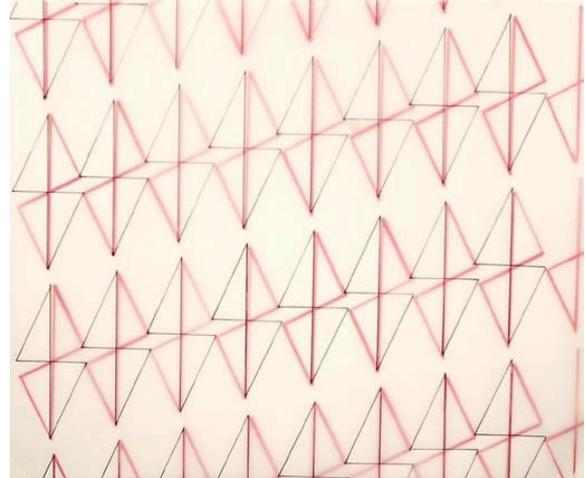


Fig. 11: Work-drawing II for “Tranquility”

References

Chilla, B. Virtual Movement Through Planar Geometry: Fundamental Concepts in Visual Art, Journal for Geometry and Graphics, Volume 1 (1997).

Rapt in Colour, Museum of Applied Arts and Science, Sydney, Australia, 1998, pp.98, 99.

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