# CURVILINEAR LINES IN MOTION: A SURVEY OF PIECES CREATED IN SUPPORT OF AN INSTALLATION WITH PLANAR LAYERED SURFACES 

Benigna Chilla<br>Department of Visual Arts<br>Berkshire Community College<br>1350 West Street<br>Pittsfield, MA 01201, USA<br>Fax:(413) 447-7840<br>bchilla@berkshirecc.edu

Resumen


#### Abstract

Esta presentación explica mi piezas de tres capas, "En Movimiento" expuesta en la VI Conferencia Internacional de Matemática y Diseño M\&D-2010 en Buenos Aires, Argentina. Líneas curvilineas superpuestas se ponen en movimiento a través de diferentes superficies transparentes que se desplazan en espacios de dos y tres dimensiones. Tan concretas como lo son de por sí, juntas estas superficies transmiten imágenes que cambian constantemente en foco y apariencia. Se sabe lo que hay físicamente presente, pero se captura y luego se pierde la imagen óptica en un fenómeno oscilante.


#### Abstract

This presentation is in support of my three-layered installation piece, "In Motion," to be on view at the VI International Mathematics \& Design Conference M\&D-2010 in Buenos Aires. Overlapping curvilinear lines are set into motion through different transparent surfaces moving in and out of two- and three-dimensional spaces. As concrete as they are alone, together these surfaces convey images which constantly change in focus and appearance. One knows what is physically present, but captures and then loses the optical image in an oscillating phenomenon.


## Introduction

The invitation to physically install one of my pieces at the VI International Mathematics \& Design Conference M\&D-2010 in Buenos Aires this summer started with the practical questions: Which piece? What size? How to transport the piece? Where and how could this piece be reinstalled at the conference? It is, of course, easier to virtually show images than to physically install a larger piece.

For my work, it is important to physically engage with the work, to provide the viewer an opportunity to step back and view the piece from various angles and distances and to experience the constantly changing combinations of shapes and formations through the multiplication of planar, layered, and transparent surfaces.

For this conference I chose the three-layered painting, "In Motion," created in 1998 and measuring 3 feet high by 12 feet wide, protruding 6 inches into space.


Figure 1
"In Motion," front view

Figure 2
"In Motion," side view

The canvas of this piece is divided into 6 rectangles, in which equally spaced curvilinear lines are moving diagonally down and up over each panel. The lines on the first screen only move in one direction from the upper left-hand side diagonally over the entire surface. They are parallax on every first, third and fourth panel and cross over the curvilinear lines on the second, fourth, and sixth panels.

The second screen concentrates on the center, left and right, curvilinear lines moving in opposite direction, touching and forming three columns where circle-like spheres are passing through the open loops, resting and then dropping out of the frame.

An important aspect for the development of my work has always been how to move, transport, and reinstall a piece. These questions are just as significant, for me as the artist, as is the actual making of a piece.
In order to transport "In Motion" to Buenos Aires, I rolled up the 3' by 12' piece over a tube, cut the hanging support to the corresponding height of the piece, and created a bag. This new creation could now be checked in as ordinary luggage; so off we went to Argentina.


Figure 3
Installation at Auditorio Ameghino, Buenos Aires

All my pieces require extensive preparation. The process involves preliminary drawings, maquette's, and calculations, especially concerning the design of the overlapping surfaces. Typically, this process will take months to complete and install.

The installation of my piece "In Motion" led me to a survey of those curvilinear pieces created over the last three decades. As a result, endless possibilities continued to evolve. The outcome of resizing and reconsidering the various combinations and interplays of media, places, and objects led to numerous discoveries in support of old and new pieces.


Figure 5
Pavement in Copacabana

Figure 6
Popped Pod

Finding references or similar images in nature or in man-made designs normally occurs for me once a piece has been executed. I freely use the knowledge of math and geometry to create order within various sizes on canvas or paper; new shapes and patterns emerge through a variety of combinations. In order to develop curvilinear lines and shapes, I started with the construction of circles, which were cut, shifted or offset, and
then repeated. A plain circle, as simple and encompassing as this form is, has the limitation of being connected only at one point. Unless circles are overlapped, they do not create a continuous curvilinear line.


Figure 7
Figure 7
Horizontal Undulations $6^{\prime} \times 10^{\prime} \times 6^{\prime \prime}$
This piece was created in 1992 for an international exhibition in Jerusalem, Israel.


Figure 9
Figure 10
Interrupted Möbius, created in 1993 for The Berkshire
Museum in Massachusetts, is a three-layered, 6 feet high by 24 feet wide piece, protruding 1 foot into space. The undulating horizontal lines are equally spaced and repeated on each surface; together they virtually tip and create a three-dimensional illusion.


Figure 11
Encircled, 12" x 78" x $3 "$


Figure 13
Rhombohedrons and Undulating Lines were created in 2000. Here, curvilinear lines are moving across two rows of equilateral triangles, which then can also be visually combined into rhombuses.

## Conclusion

The vocabulary of geometry still gives me the satisfaction to invent, and create, new pieces while changing the combination of shapes and the direction of lines and sizes. Nourished while looking at architecture, textiles and nature, I see what I want to see: When the eye and mind are ready to store more information, I digest and recreate. I still enjoy the physical activity in making, moving, and installing large pieces.

## References

1. Benigna Chilla, Virtual Movement Through Planar Geometry: Fundamental Concepts in Visual Art, Journal of Geometry and Graphics, Volume 1, No.2, (Heldermann Verlag), 1997 pp 169-178
2. Ivars Perterson, Fragments of Infinity,(John Wiley \& Sons, Inc.), 2001, pp152-154
