

About the Artist

Punya Mishra

The visual wordplay designs featured in the exhibit have all been created by Punya Mishra. Punya when not playing with Ambigrams and other forms of visual wordplay, is Professor of Educational Technology at the College of Education at Michigan State University. His current research focuses on teacher creativity, on identifying creative ways of thinking that cut across disciplines and the role that new digital technologies can play in this process. You can find out more about him by going to punyamishra.com.

A special thanks to

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Deep-play

deep-play:
Creativity in
Math & Art
through
Visual Wordplay

An exhibition at the
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-June 30, 2015

Visual wordplay can be a rich arena for exploring the connections between art and mathematics. Ambigrams are a form of creative visual wordplay where words are written such that they can be read or interpreted in more than one way.

More than decoding word puzzles, carefully and intricately crafted ambigrams can illustrate mathematical ideas of symmetry, rotation, translation, reflection and spatial relationships.

Ambigrams bring together the mathematics of symmetry, the elegance of typography, and the psychology of visual perception to create surprising, artistic designs. Creativity is a key ingredient when designing and experimenting with visual wordplay. Creativity is a process and a way of thinking. It is what we do when we create something that is new, and that is valuable, beautiful, or useful, in its own context.

The word "symmetry" with a symmetrical design - will read the same even when rotated 180 degrees.

The word "rotate" reads the same even when rotated 180 degrees.

The word "sine" has translational properties and is similar to the sine curve in trigonometry.

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Creativity is not a "magical" process, but it emerges from combining pre-existing ideas and concepts in unique and new ways. New ideas emerge from permutations, combinations and tweaking of existing ideas. Creativity is pastiche. Creativity does not necessarily lie in the individual pieces themselves but rather in the manner they have been put together, organized and structured.

Up and Down. Left and Right. Space is all around us. This network of the word "space" reads the same even when rotated 180-degrees.

Conventional thinking often portrays subject matters differently. For example, the arts or languages are seen as softer and more subjective, while math or science are seen as logical and rigid. But at higher levels disciplines often intersect, and are connected by bigger ideas. Deep play (or using thinking as play, to play with ideas) is one way that creative people connect between disciplines. *This exhibition focuses on one kind of play across disciplines — combining ideas in mathematics with the art of visual design and typography.*

A design for the word "creativity" that reads the same even when rotated 180-degrees.

A rotationally symmetric design for the Dutch Artist M.C. Escher, created using an impossible font.

An ambigram for the word ambigram

A design for the word "ideas" that has reflection symmetry, i.e. it reads the same when held up in front of a mirror or when seen through the back of the page.

This exhibition will give visitors opportunities to experience these visual designs, develop an understanding of the mathematics underlying the art, as well as interact and engage with the designs.