

# Perception

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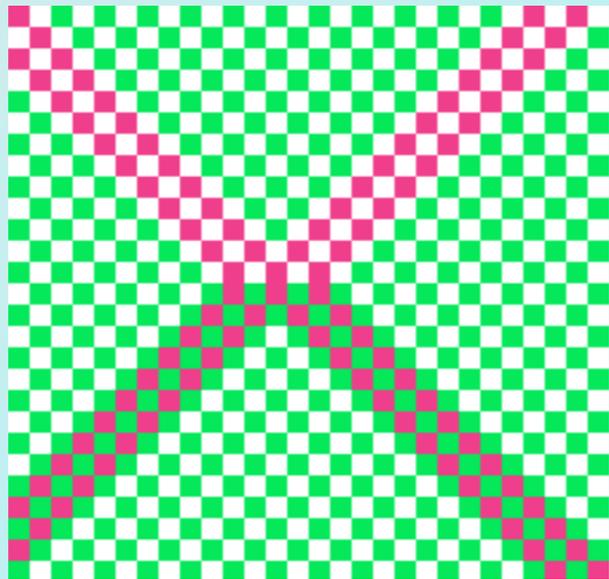
## Chapter 3

# Perception Comments

These slides illustrate that our visual perception cannot always be trusted. The components of an object can distort the perception of the complete object. Our mind is the final arbiter of truth.

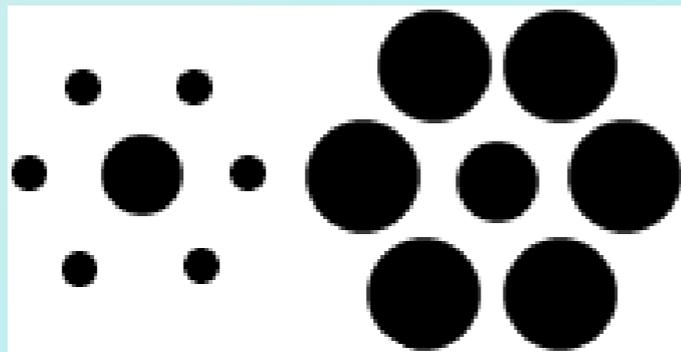
Optical illusions have been studied for millenia. The ancient Greeks used a technique known as *entasis* which incorporates a slight convexity in the columns of the Parthenon to compensate for the illusion of concavity created by parallel lines. Many of the following illusions have been popularized by psychologists and artists like Hering, Ehrenstein, Meyer, Zöllner, Müller-Lyer, Poggendorf, and Escher.

# Things are not as they seem.

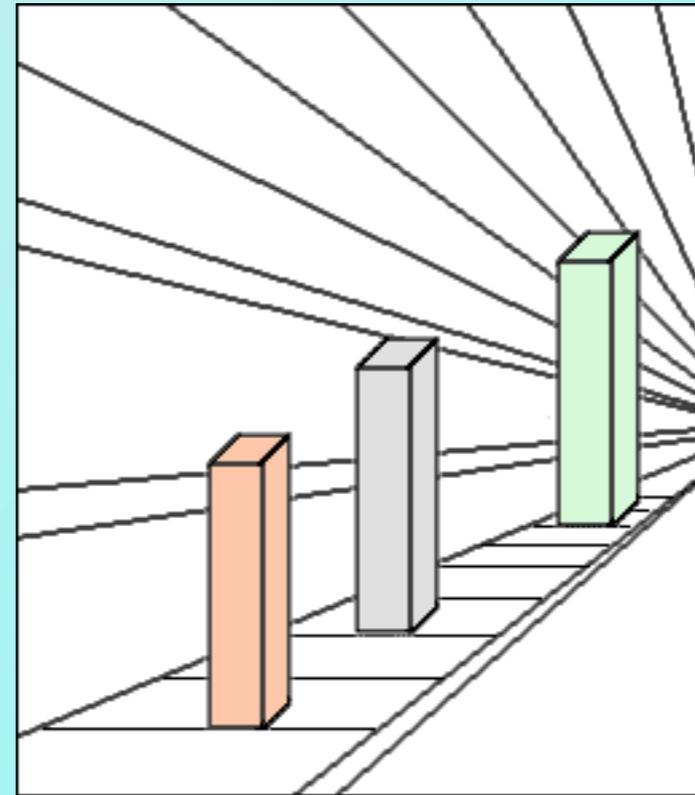


**The red squares  
are the same  
color in the  
upper part  
and in the lower  
part of the "X"**

# Again... illusions

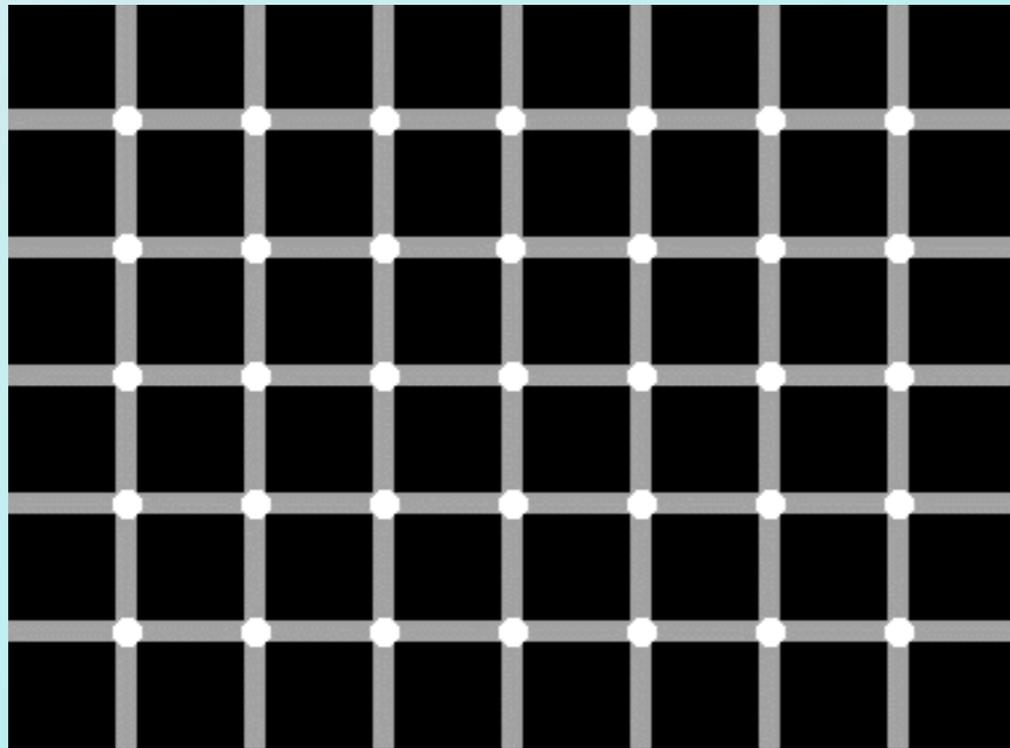


**The center circles are both the same size.**



**The pillars are identical in size.**  
Our intuition about perspective influences what we see.

# and Again... illusions



**There are only  
white circles at  
the intersections**

# A tricky “brain test”

## Word Color Test

In this test **DO NOT READ the words**, say aloud the COLOR of each word.

**YELLOW BLUE ORANGE**  
**BLACK RED GREEN**  
**PURPLE YELLOW RED**  
**ORANGE GREEN BLACK**  
**BLUE RED PURPLE**  
**GREEN BLUE ORANGE**

This test poses some difficulty because the portion of the brain that handles language has the conflicting tasks of verbalizing the color of the written words while ignoring the meaning of words representing colors.

# As you can see

When your audience looks at a page, a picture, a computer screen, they actively organize what they see. As a designer, you can influence their perception and understanding of content.

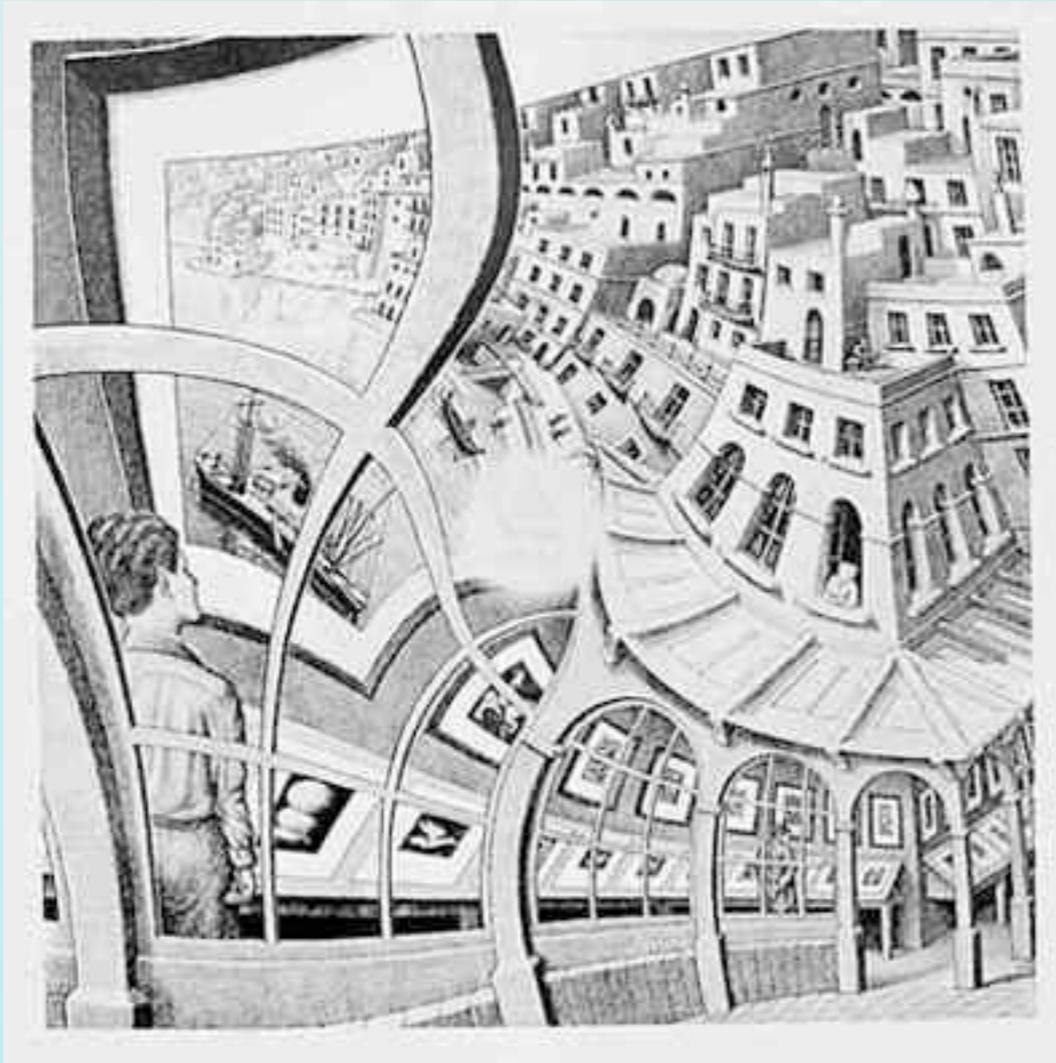
The viewer will resolve ambiguities, impose structure, and make mental connections based on the content and the designer's design. Many of the problems in document design occur because, although the designers want the reader to see the content in one way, the structure of the content leads readers to see it differently.

As a designer... AND as an organizer of content, you must understand HOW people see and perceive and THEN how to design for your audience NOT for yourself!

If as a designer, one is aware how the eye and brain organize content (marks on page), then the message is much more successful and designs will do what they were intended to do.

# M. C. Escher **Figure/Ground** Examples

Figure/Ground is the relationship between the foreground (figure) and the background.



M.C. Escher was a master at creating special effects and visual deception through his art. His designs were primarily for entertainment.

He also was very creative in the use of **figure/ground...** the most fundamental organizational principal of visual communication. (Sometimes referred to positive/negative space.)

For more information about M.C. Escher see: <http://www.nga.gov/collection/gallery/ggescher/ggescher-main1.html>

# Figure / Ground



**Figure-ground perception.** Our visual system simplifies the visual scene into a **figure** that we look at and a **ground** which is everything else and forms the background. Generally when you see one of the perceptions, the other region forms a background and is not seen, so to see both percepts requires switching back and forth.

M. C. Escher, takes advantage of this characteristic of perception in his art. This picture has a central region where both white and dark birds are depicted, but only one of the sets of birds tends to be perceived at a time.