

# ***OPTICAL ILLUSIONS***

***The Art of Seeing***

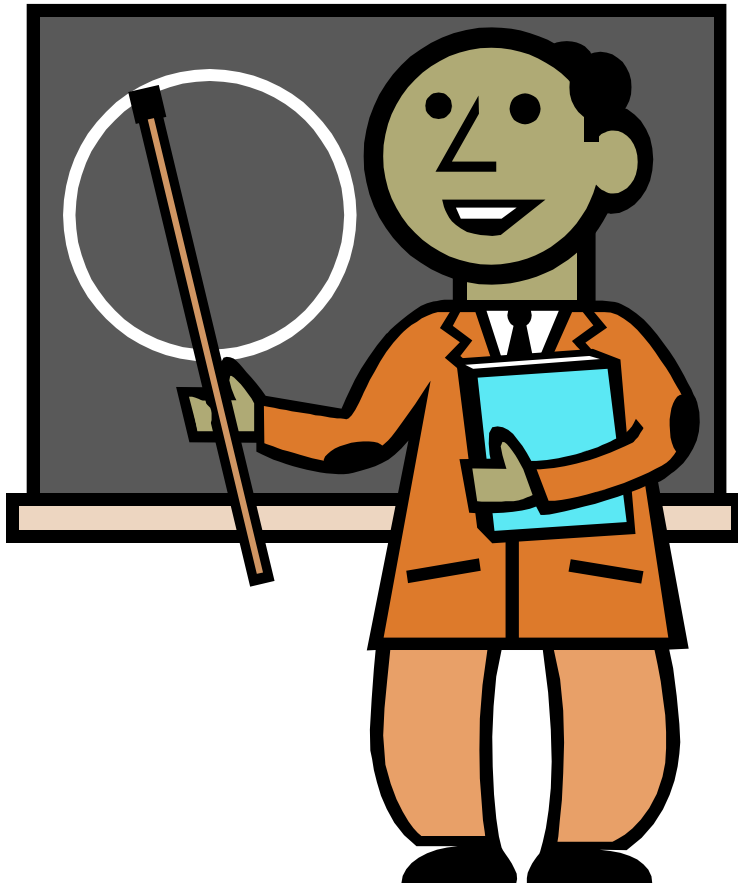
***Instructor: Patricia Sullivan***

# Daily Objective



- Students will explore the art of perception and experience its subjectivity by viewing optical illusions and sharing the effect that they have on them.

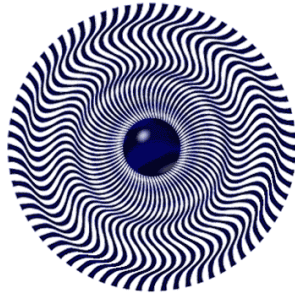
# Instructions



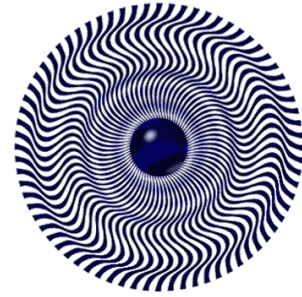
- Read the information included in this PPT presentation.
- Print out the Optical Illusions Worksheet & respond to the drill in your drill notebooks.
- View each of the optical illusions & write your responses on the worksheet. The Homework should be answered on the back, and it will be turned in tomorrow.

# ***What Are Optical Illusions?***

- **Warm-up:** We've all seen them, although you may not have even realized what they are. When you hear the phrase "Optical Illusion," what do you think of?



# Definition



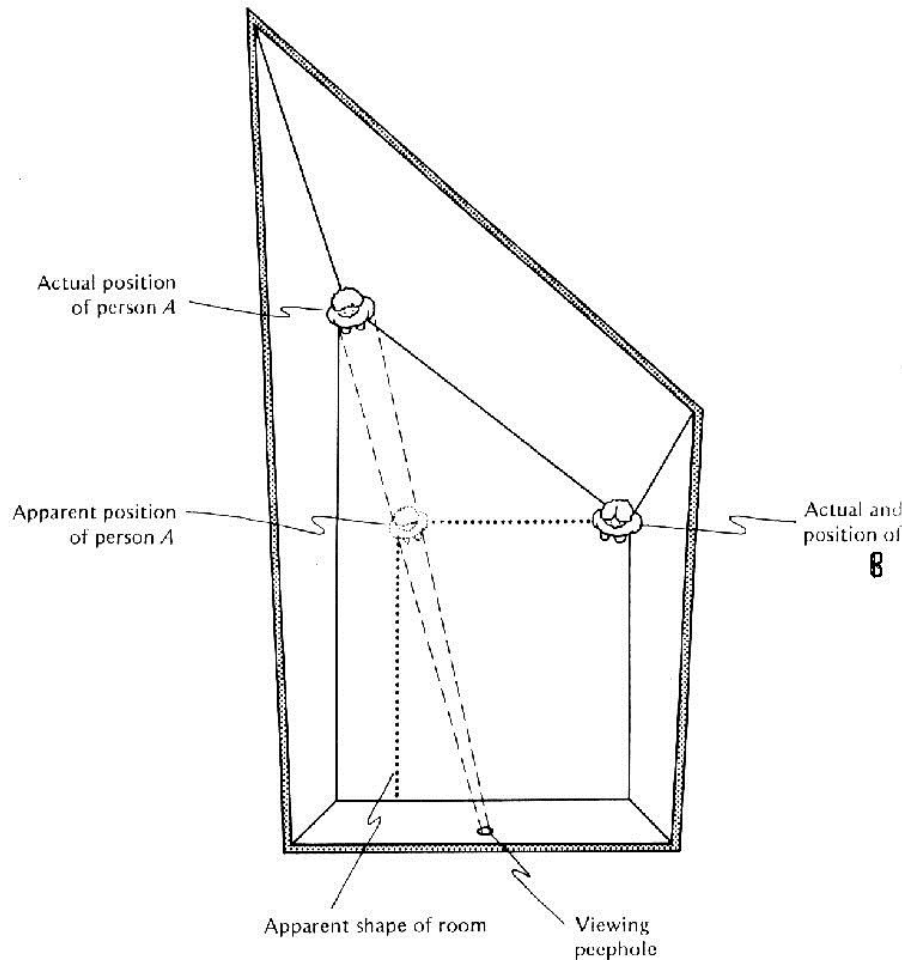
- Involves an apparently inexplicable discrepancy between the appearance of a visual stimulus and its physical reality
- Visually perceived images that are deceptive or misleading

# *The Ames Room*

- Observe this room.  
Take special note of the size, shape, color and details of the room.
- Can one girl really be that much bigger than the other?



# The Ames Room



**Viewer assumes room is rectangular and the image cast onto the retina is consistent with this hypothesis**

- Naïve viewers conclude that one girl is larger, when in fact she is just closer**
- Further Reading:**  
[http://psylux.psych.tu-dresden.de/i1/kaw/diverses%20Material/www.illusionworks.com/html/ames\\_room.html](http://psylux.psych.tu-dresden.de/i1/kaw/diverses%20Material/www.illusionworks.com/html/ames_room.html)

# Optical Illusions

- The perceptual hypotheses that we create become especially striking when they are wrong
- Proximity, Depth Cues, Similarity, and Figure Ground perception affect the hypotheses that we make
- Human perceptions are HIGHLY SUBJECTIVE

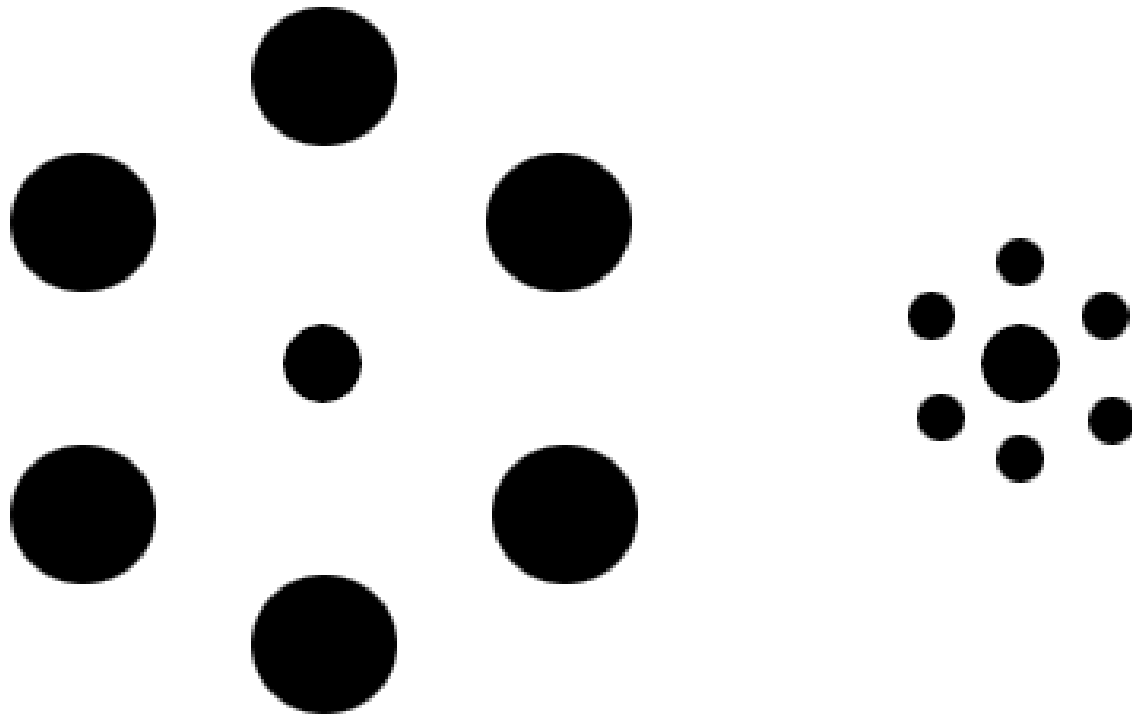


# Let's Try a Few

- On the chart provided for you (see [optical\\_illusion\\_chart.rtf](#)) describe your perceptions for the following illusions. Be sure to submit this form along with your responses to the homework tomorrow at the beginning of class.

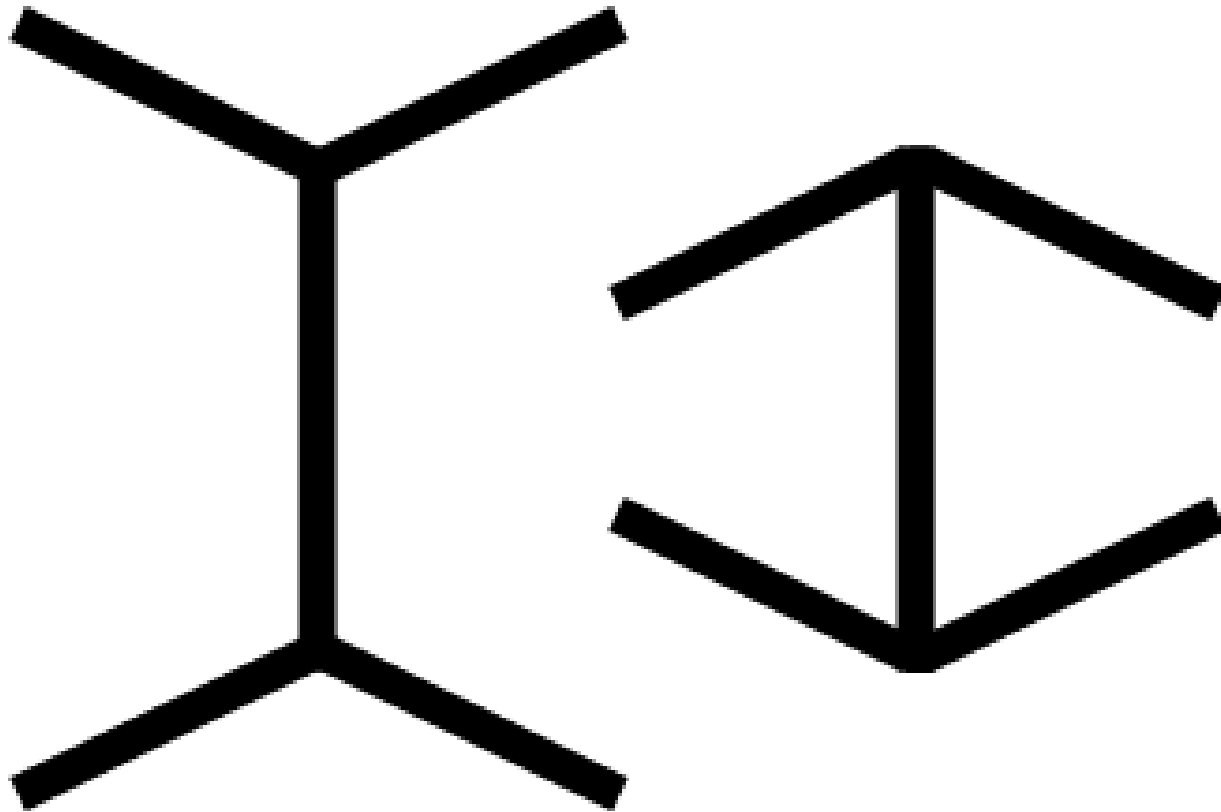
# Illusion #1

Which center circle is bigger?



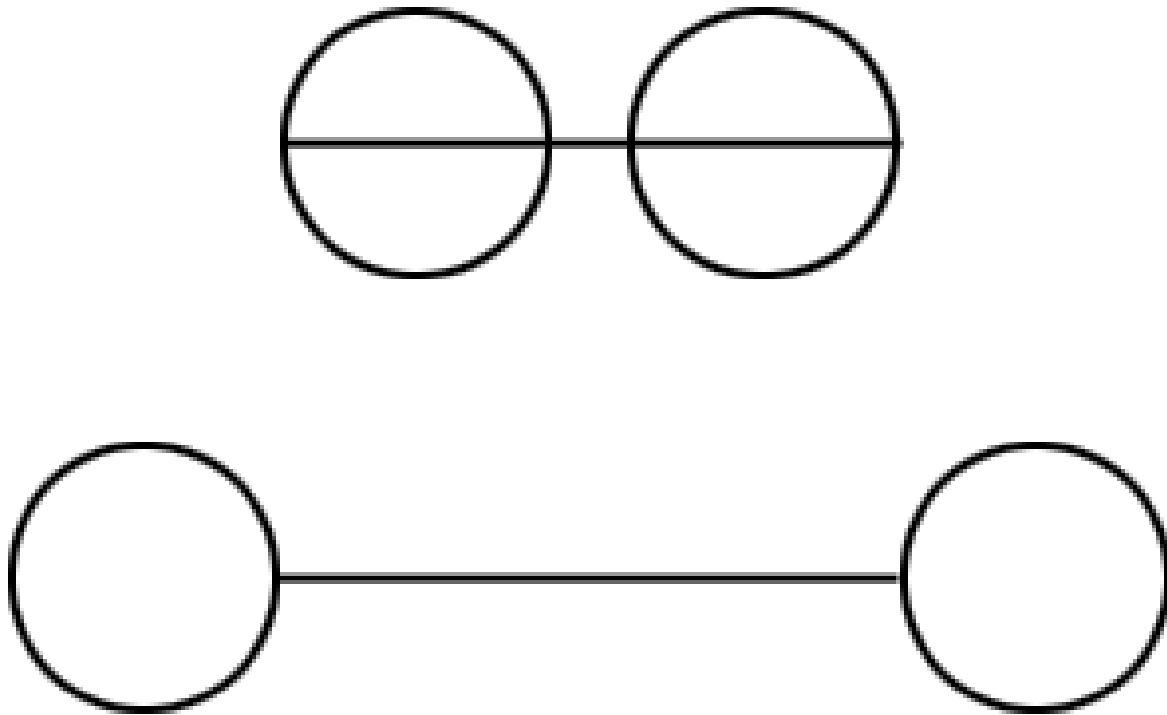
# Illusion #2

Which line is longer?



# Illusion #3

Which line is longer?



# Illusion #4

## Water goblet or two faces?



# Illusion #5

Old woman or young woman?



Another version!



# Illusion #6

## Skull or woman in a mirror?





# Illusion #7

Eskimo or Native American head?



# Illusion #8

## Face or musician?



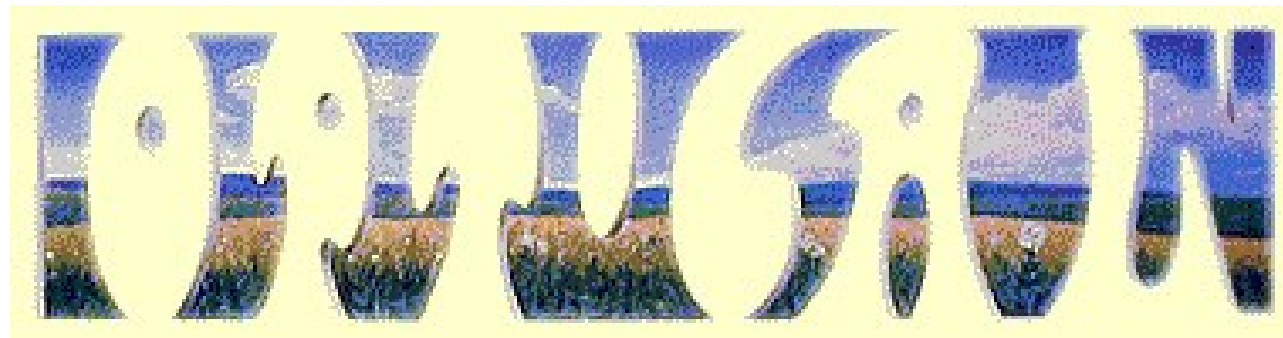
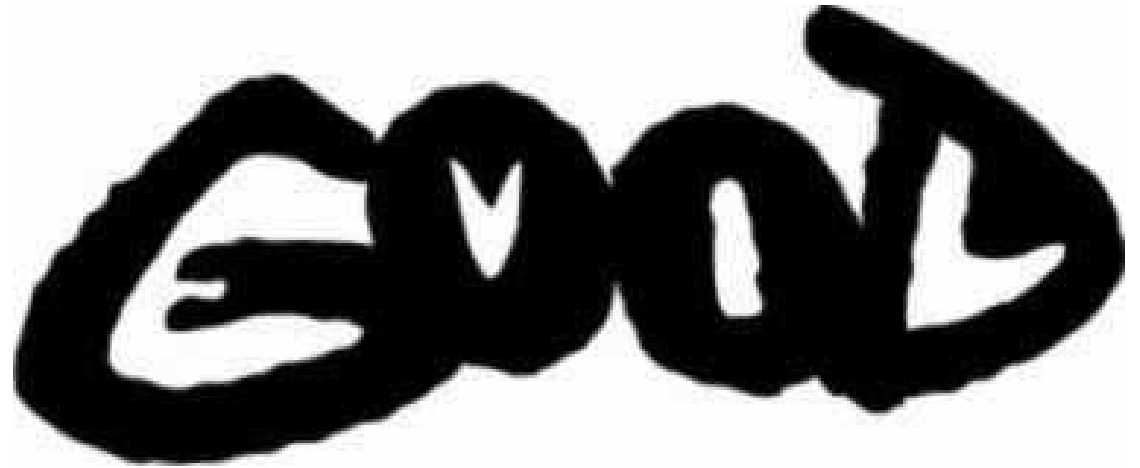
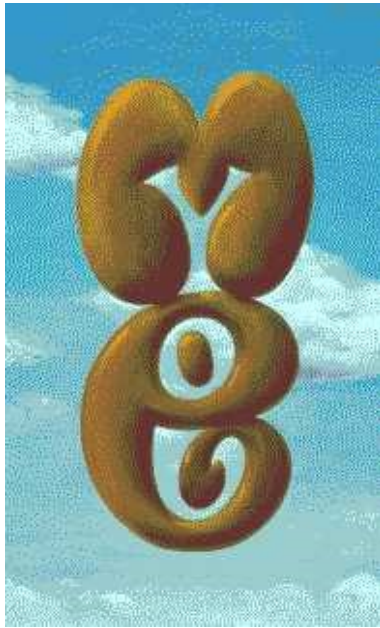
# Illusion #9

A face? A word?



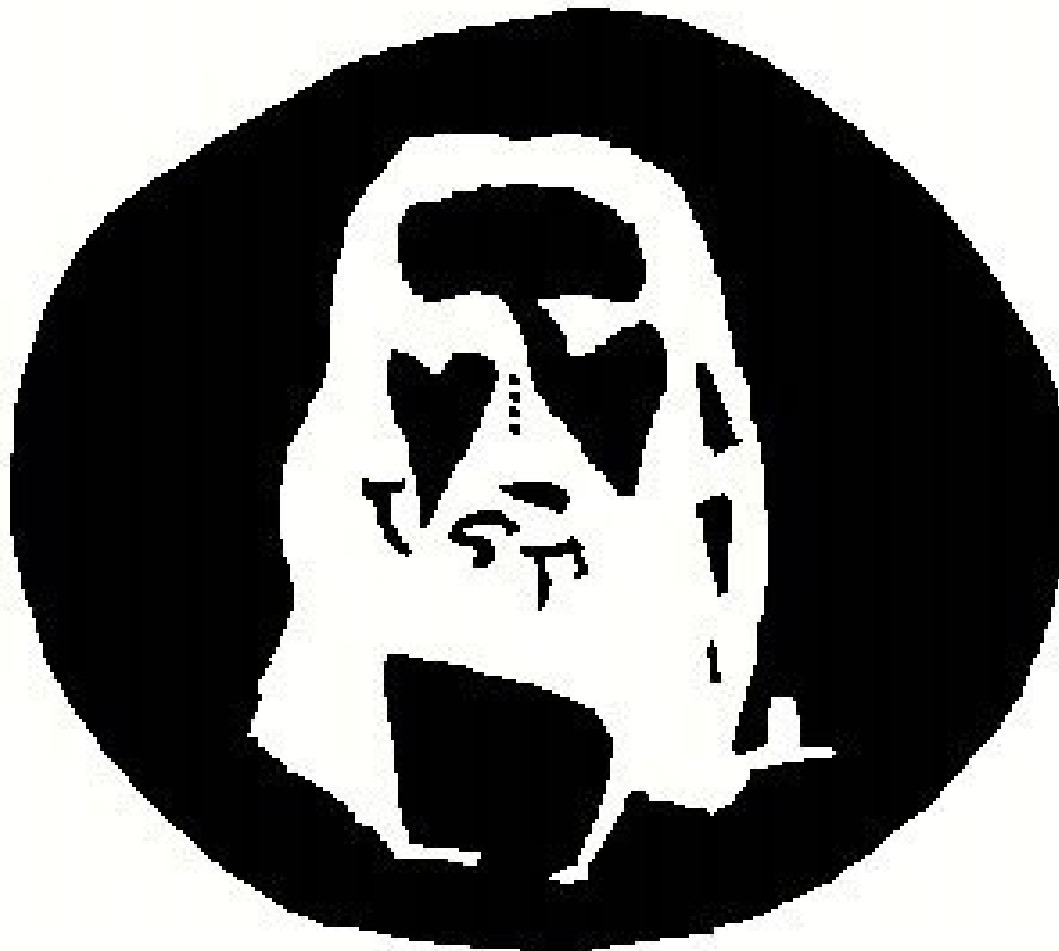
# Illusion #10

(4) Which word do you see first?



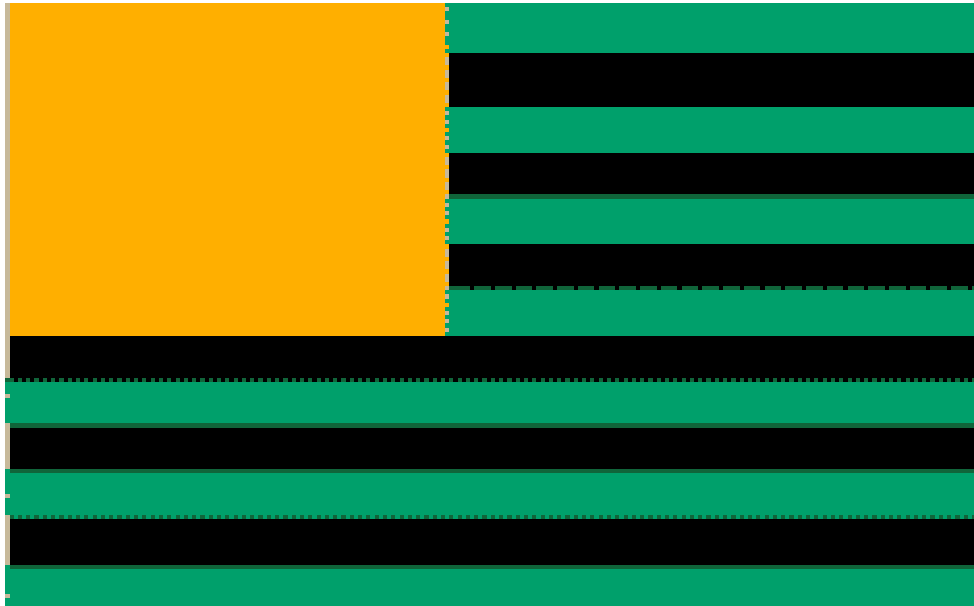
# Illusion #11

Stare at the center for 15 sec and  
then look up – what do you see?



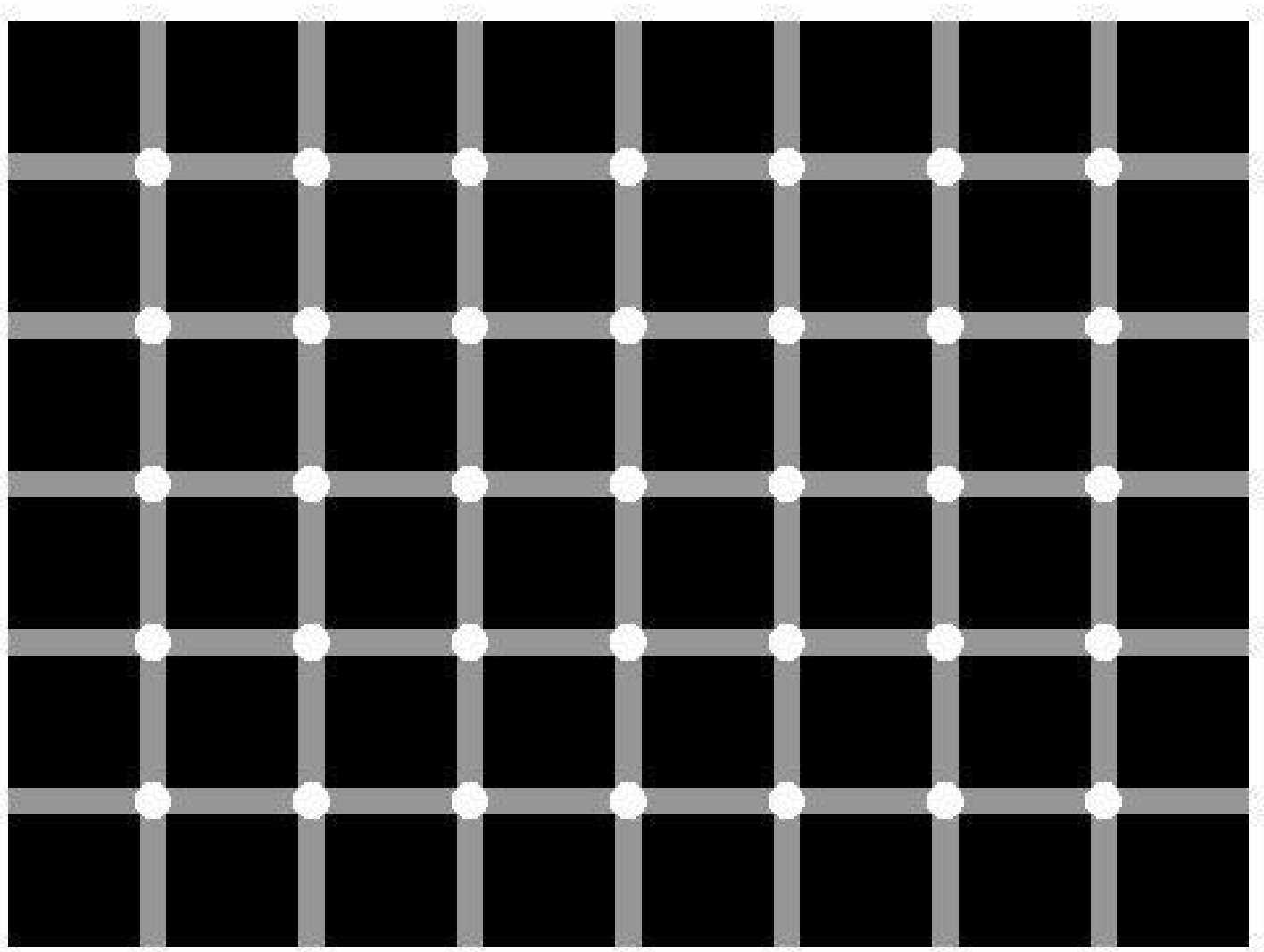
# Illusion #12

**Stare at the center for 15 sec and  
then look up – what do you see?**



# Illusion #13

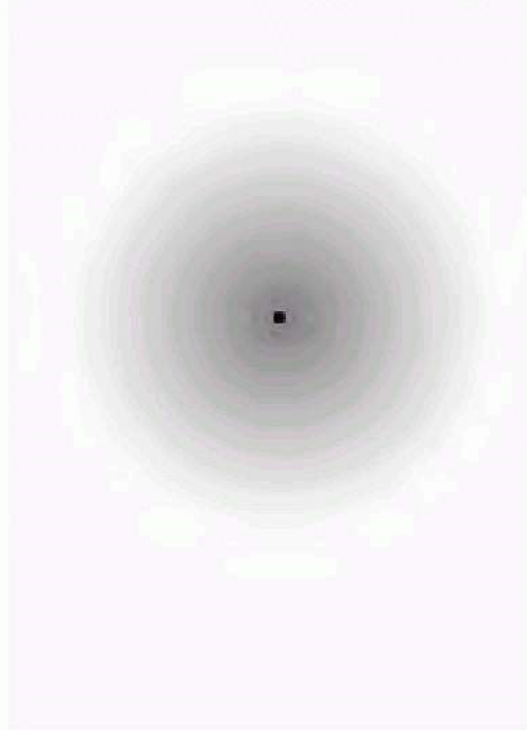
How many black dots are there?



# Illusion #14

## Follow directions below

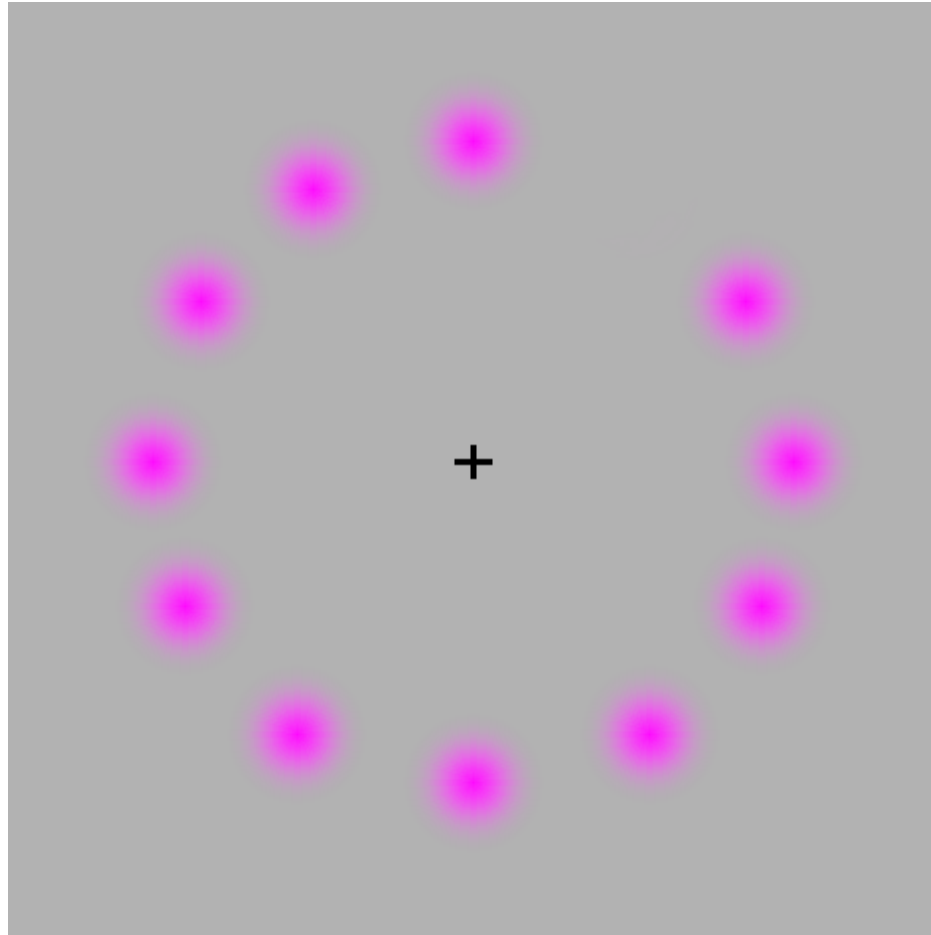
Keep staring at the black dot. After a while the gray haze around it will appear to shrink.





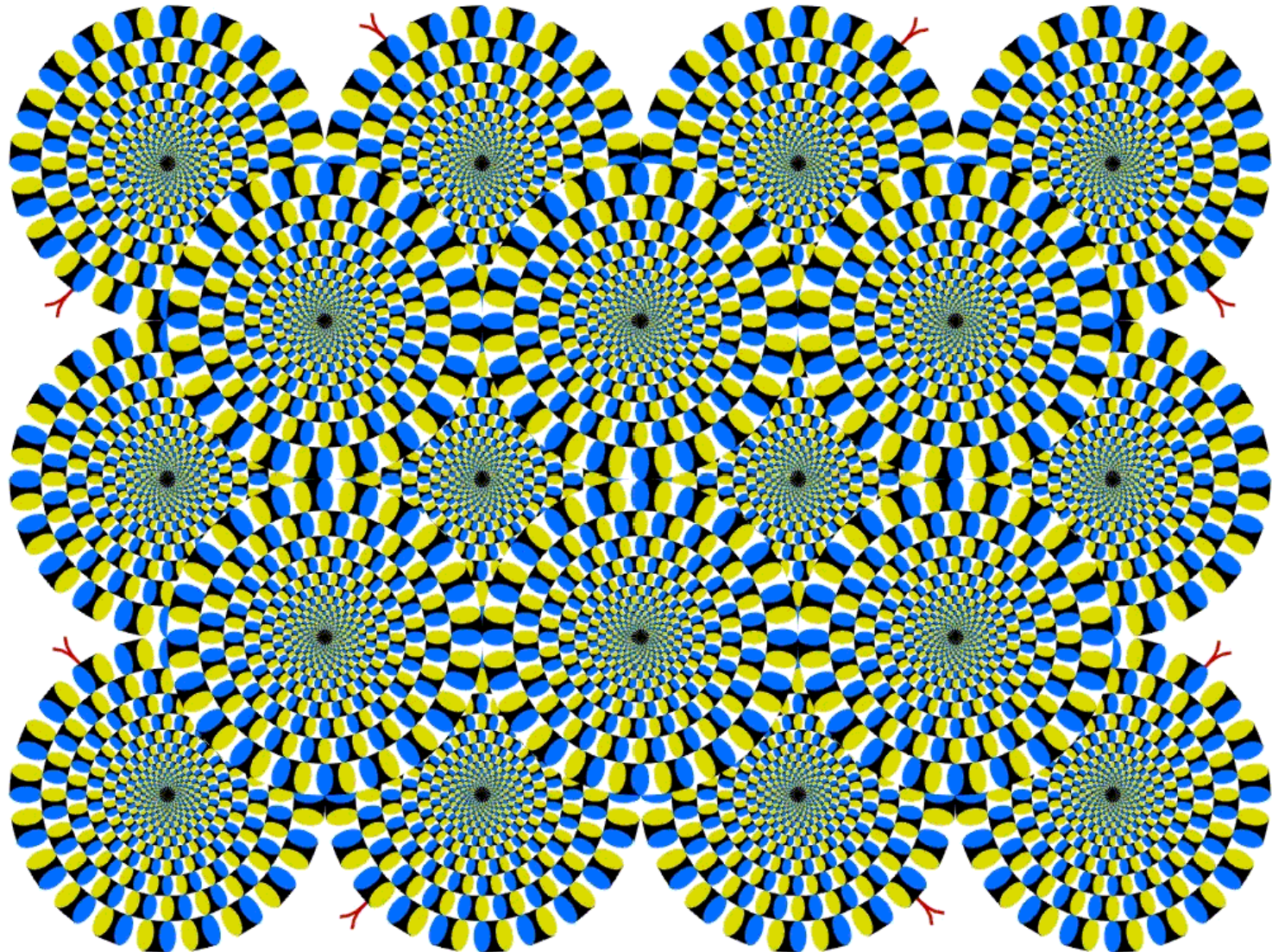
# Illusion #15

Stare at the center – what color do the dots become?



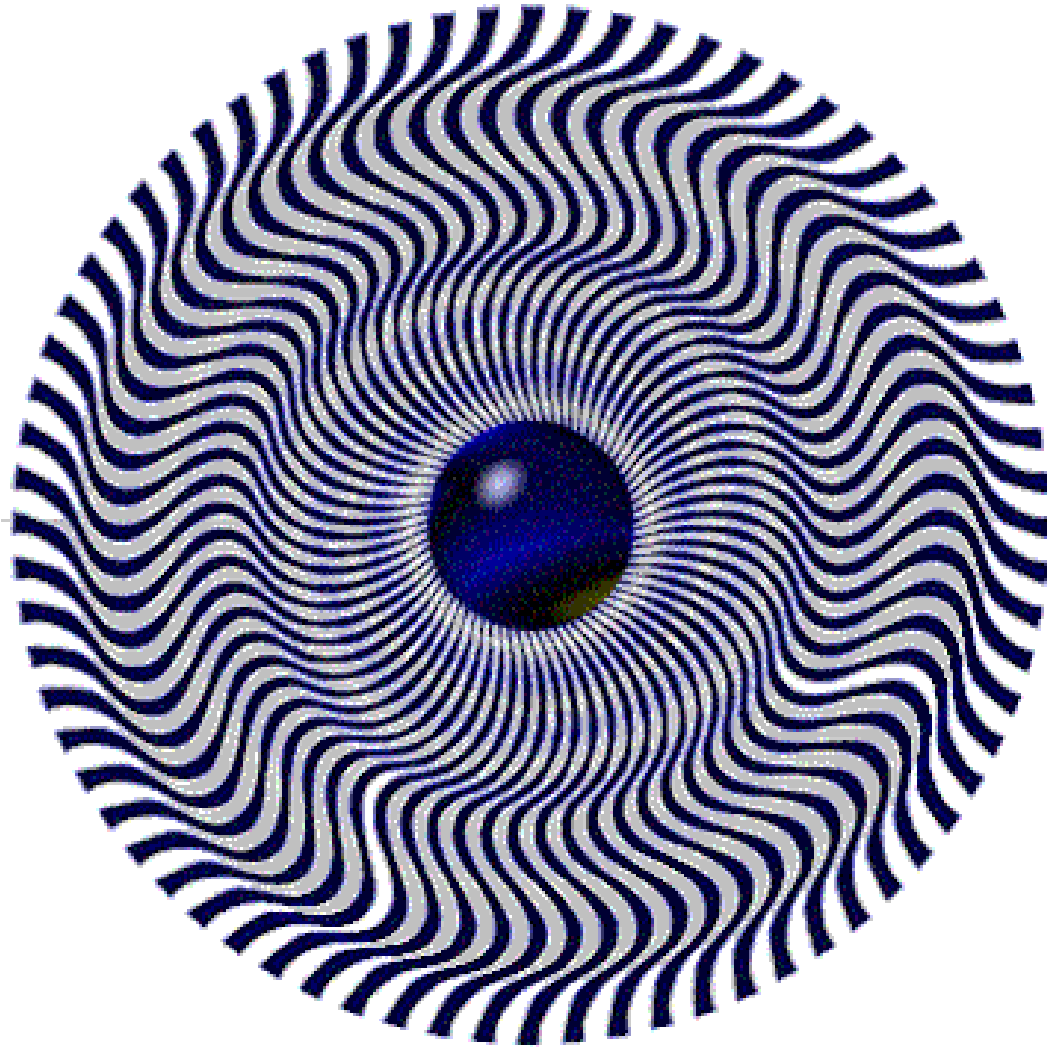
# Illusion #16

## Mind Warp



# Illusion #17

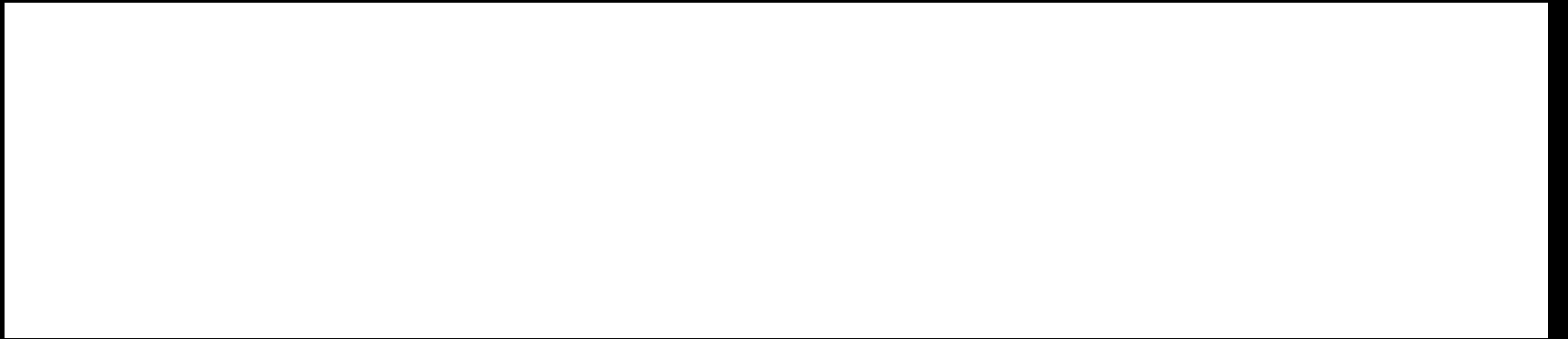
## How does it move?

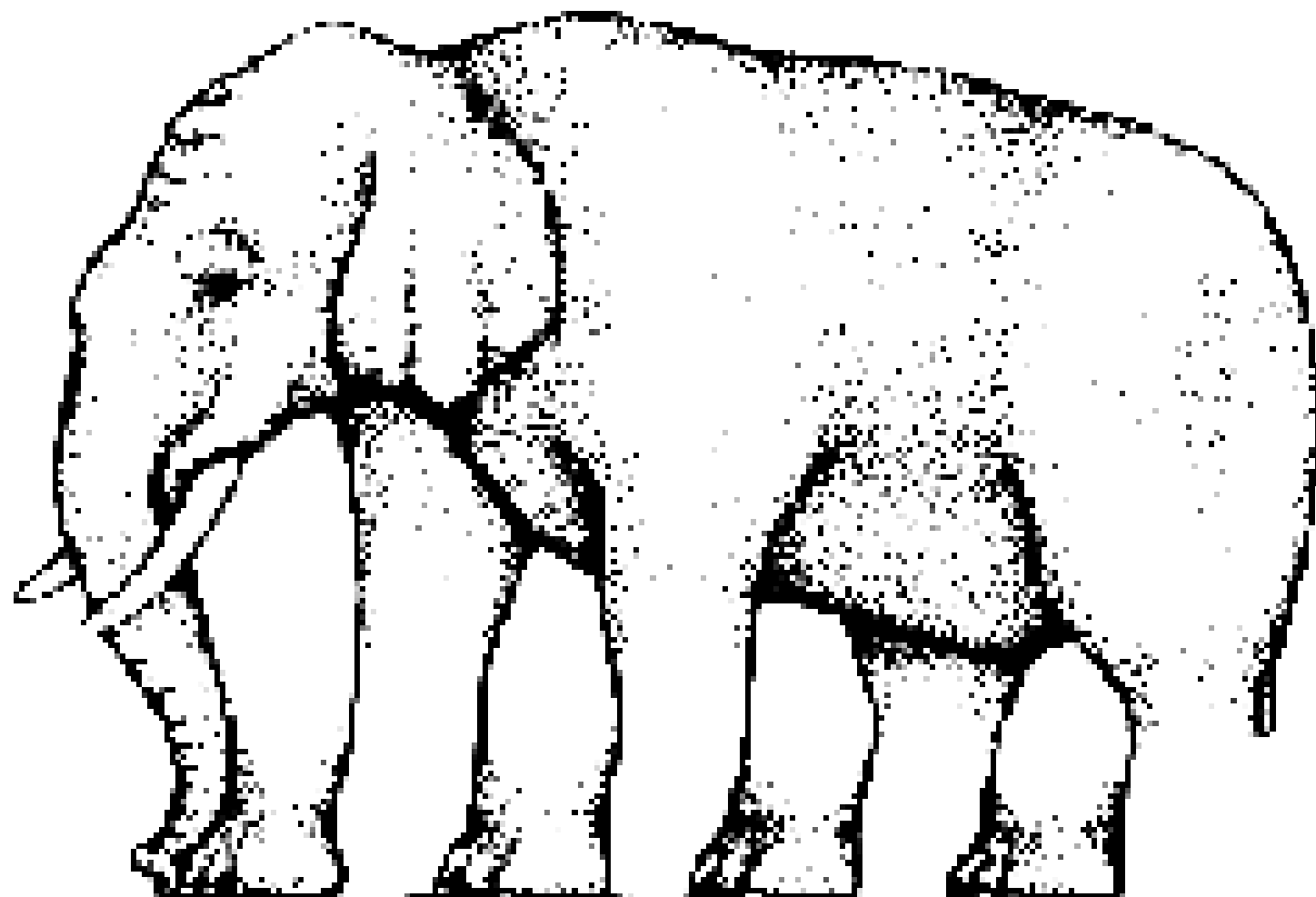


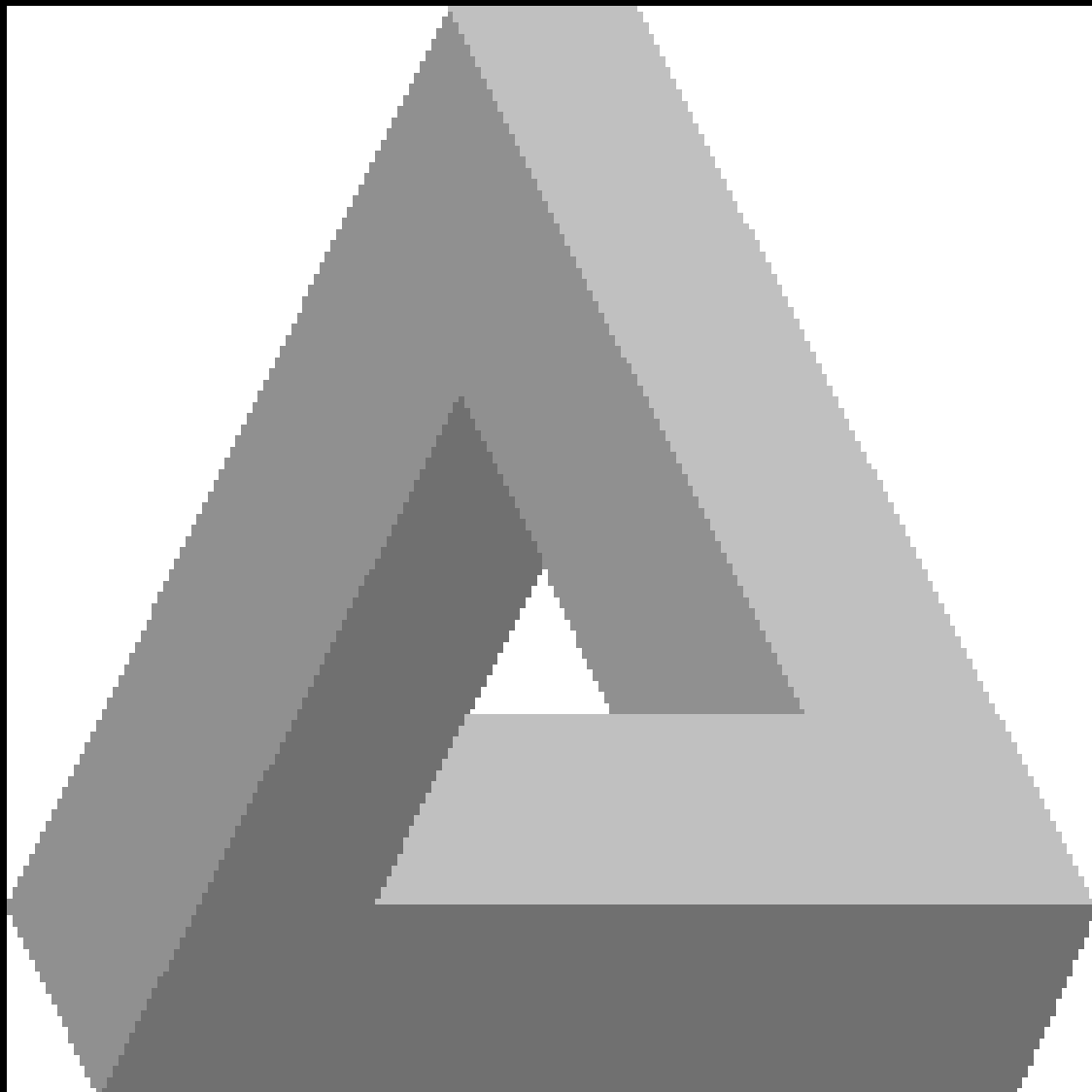
# **Illusion #18**

## **Impossible Figures (3)**

- objects that can be represented in two-dimensional pictures but cannot exist in three-dimensional space







# Playing with Words

Perception of letters, words and  
phrases



## Illusion #19

Read the following out-loud – now read it again slowly and see if you fell for the trick



# Illusion #20

How many F's does the following passage contain?

Finished files are the result  
of years of scientific study  
combined with the experience  
of years...

# Illusion #21

## What do you think?

- According to a research at an English university, it doesn't matter in what order the letters in a word are, the only important thing is that first and last letter is at the right place. The rest can be a total mess and you can still read it without problem. This is because we do not read every letter by itself but the word as a whole.

# **Illusion #22**

## **The Stroop Effect**

Time yourself saying the word – then time yourself saying the color of the ink. What is the difference?

**BLUE**

**GREEN**

**YELLOW**

**PINK**

**RED**

**ORANGE**

**GREY**

**BLACK**

**PURPLE**

**TAN**

**WHITE**

**BROWN**

# The Stroop Effect

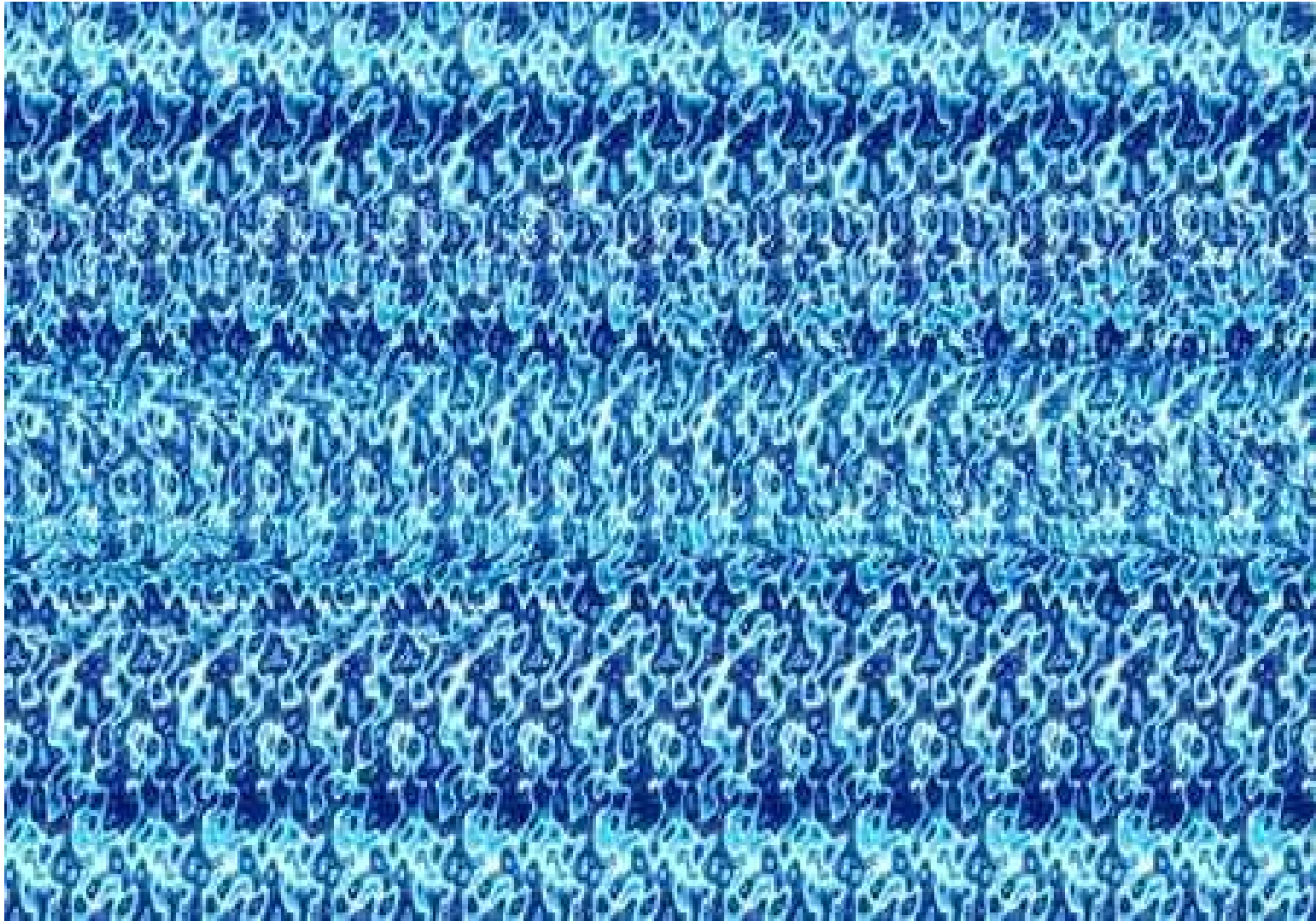
- The words themselves have a strong effect over your ability to say the color
- There is an interference in the information your brain receives - and this causes a problem
- **Speed of Processing Theory**
  - Words read faster than colors are named
- **Selective Attention Theory**
  - Naming colors requires more attention than reading the word
- For Further Reading:  
<http://www.snre.umich.edu/eplab/demos/st0/stroopdesc.html>

# Stereograms

Bring your eyes close to the screen.  
As you slowly move your head away  
from the screen, take your eyes out of  
focus and a picture will pop out.

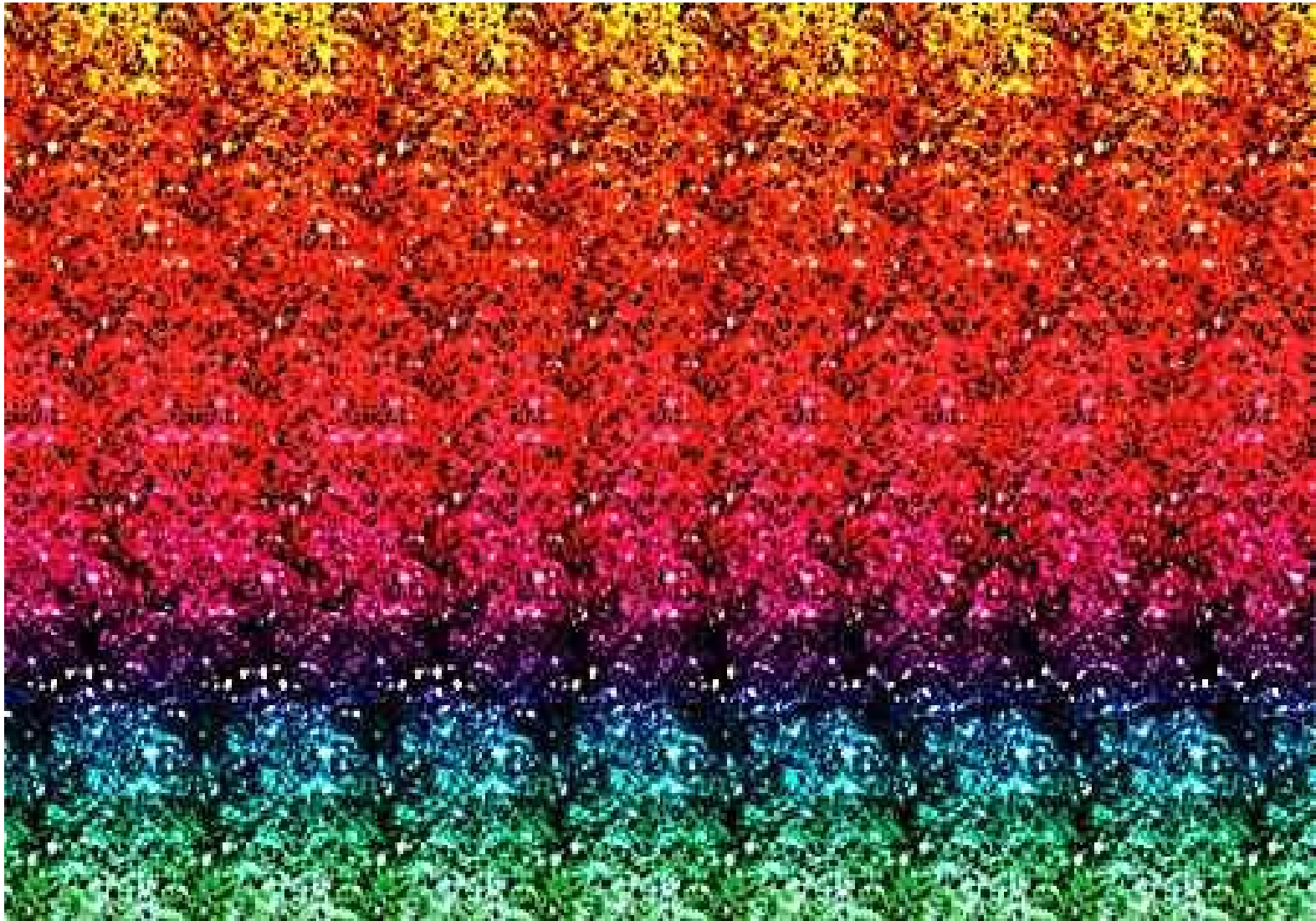
## Illusion #23

Try your best – what do you see?



# Illusion #24

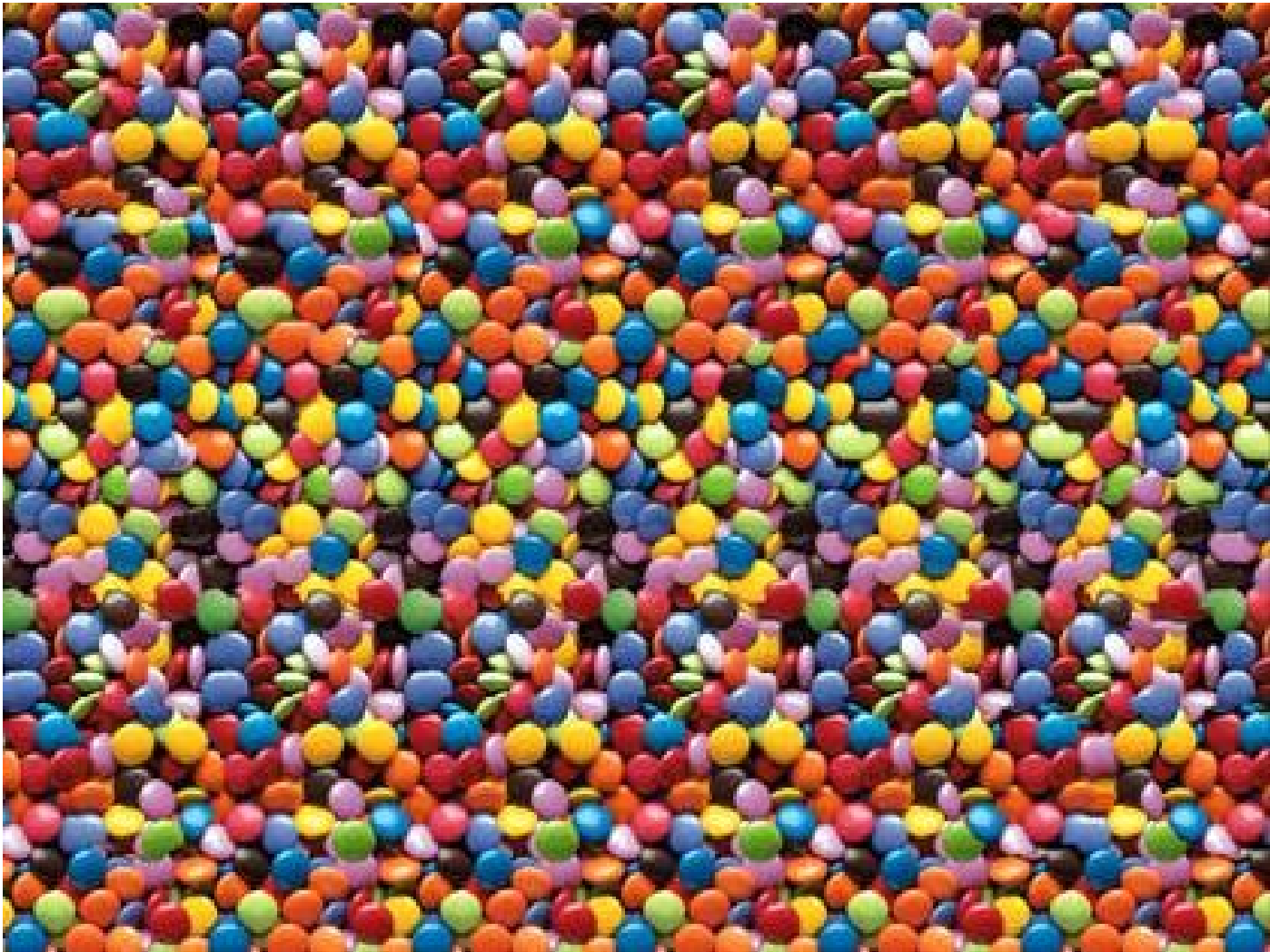
## And another?





## Illusion #25

Do you see something floating?



# Homework

- Describe how a person's perceptions affect that person's point of view. What are some examples of this bias? What role does subjectivity have in your perceptions?