

BEHIND OUR EYES

There is a Chinese proverb that says, 'We see what is behind our eyes'. The manner in which our brains process information causes us to perceive objects the way we do; context or background strongly affects the process.

Write the proverb on the blackboard: 'We see what is behind our eyes.'

Ask the students to explain what they think the proverb means. Don't spend too much time on this. There will be an opportunity in the next step for further discussion.

Distribute 'Ten Figures' to the students. Explain that these figures illustrate one interpretation of the proverb.

Ask the class to look at Figure One and decide which of the two horizontal lines is longer.

Answer: Both lines are the same length. What causes us to be misled is not clearly understood. Psychologists tell us that we are influenced by the other lines in the drawing (context) which lead us to make wrong guesses about what we perceive. Even though we know the answer, our eyes tell us differently.

Have the students look at Figure Two. Are the horizontal lines straight?

Answer: Yes, even though they appear to be bent. The illusion is caused, in part, by our interpretation of the lines in context with the other lines.

Figure Three: Are the horizontal lines straight?

Answer: Yes (Same reason as given for Figure Two)

Figure Four: Does the square have straight sides or are they bowed inward?

Answer: The square has straight sides, even though we perceive them as being bowed.

Figure Five: Is the cube facing left or right?

Answer: Possibly, either way. Our perceptions keep changing!

Figure Six: Which way through the coils – left or right?

Answer: Possibly, either way. Our perceptions continue to keep changing!

Figure Seven: Do you see a flight of stairs or an overhanging cornice?

Answer: Possibly, either.

Figure Eight: Do you perceive movement in this drawing?

Answer: Most people do because of the involuntary movement of the eye.

Figure Nine: Is this a 'possible' figure or an 'impossible' one? Follow the stairs around and try to determine whether they're going up or down.

Figure Ten: Is this a 'possible' figure or an 'impossible' one? Try to imagine what the triangle would look like in a three-dimensional plane.

Ten Figures

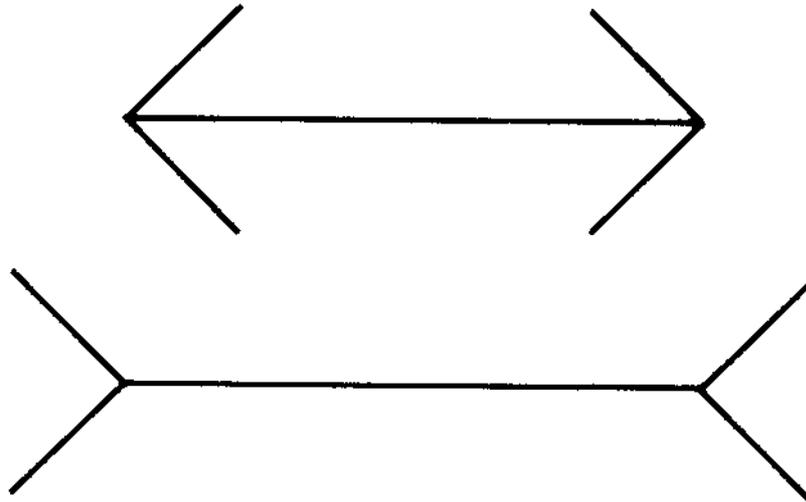


Figure 1

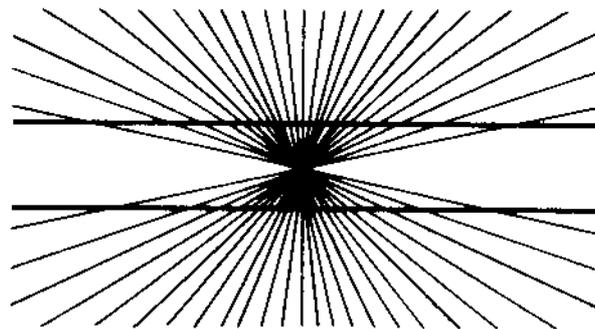


Figure 2

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FOLLOW-UP

- 1 Pick out a few of the drawings and see if you can deduce a central theme about them (perhaps, 'Seeing is not believing').
- 2 How do you explain why you might be fooled by some of the figures, if you had not seen them before or 'gotten the point' of the activity?
- 3 Can you suggest what the Chinese proverb means after having looked at the drawings? (One possible interpretation is that the source of illusions and misperceptions must be sought in the brain, not in the senses.)
- 4 Explain the statement, 'Context or background affects the way we perceive things'.
- 5 Suggest some problems that might arise when you misperceive other people.
- 6 Ask students to create hypotheses about how visual perception might affect cultural understanding. List these hypotheses on the blackboard or butcher paper. (Some hypotheses which might be generated are: what we perceive can be misleading; perceptions depend on context, particularly cultural context; different people have different perceptions of the same stimulus; and all perceptions may be equally valid.)
- 7 Ask students to brainstorm other instances in which perception plays an important part. List these on the blackboard or paper.

FURTHER SUGGESTION

The following activity helps to illustrate that people see what they want or expect to see; items of prominence catch our attention while seemingly less important items may pass on by.

Pass out "count the f's" face down.

Feature films are the result
of years of scientific study
combined with the
experience of years.

WHAT AM I LOOKING AT?

When everyone is ready, ask the class to turn the paper over and simply count how many times the letter f appears on their sheet. Allow only a minute, and then ask, ‘How many of you have the sheet with the three f’s?’ (Roughly half the group can be expected to so indicate.) ‘Who has four f’s on their sheet? . . . How about five? . . . Does anyone have six?’ (About 50% of the group will see only three f’s, and approximately 10% will see all six f’s. The rest see either four or five on the sheet.)

ALTERNATIVE

Ask those with four, five or six f’s on their sheets to raise their hands and let those with three f’s exchange papers so they too can ‘see’ all six f’s. Most will still have a difficult time identifying all six of the f’s.

DISCUSSION QUESTIONS

- Why couldn’t all of us initially see all six f’s? (The f in the word ‘of’ sounds like a v.)
- Have you observed situations where only the important things get attention? Who decides what’s important?
- How can we persuade people to pay more attention to detail? Is it always important?