

# ILLUSIONS: Experiential Exercises

James Neill, 2002

*“Whilst part of what we perceive comes through our senses from the object before us, another part (and it may be the larger part) always comes out of our own mind”*

- William James

*“Man is a credulous animal and must believe something. In the absence of good grounds for belief, he will be satisfied with bad ones.”*

- Bertrand Russell

## Introduction

Optical illusions and cognitive deceptions can be used as experiential exercises to:

- provide convenient windows into how the brain works;
- help people become aware of the hidden constraints of the visual system in a way that normal perception fails to do
- show how psychology can be a fun tool to help people learn about themselves

✳ For more information on the psychology of perception see Chapter 2 “What gets in our minds? Perception” of Butler and McManus’ “Psychology: A Very Short Introduction”

✳ For more information on the psychology of optical illusions see:  
[http://www.illusionworks.com/html/introduction\\_to\\_perception.html](http://www.illusionworks.com/html/introduction_to_perception.html)

## Discussion

Why are human beings so often irrational (see Hugh Mackay’s (2000) READING on irrationality)?

One reason, as we have seen from the optical illusions exercises, is that in order to achieve its incredible efficiency, the human brain has been designed to take lots of short-cuts. Most of the time these short-cuts work pretty well – the world fits the automated perceptions – and we don’t notice anything. However, there are also many times, most of which we are completely unaware, when we misperceive reality and think and act irrationally.

Stuart Sutherland, in his book “Irrationality: The Enemy Within” defines irrationality as “coming to a conclusion or decision that is not the best that could have been achieved in the light of the evidence” and he suggests five key reasons that irrationality occurs:

1. LACK OF TIME: Irrationality sometimes arises from not taking enough time to think things through
2. COMPLEXITY: Sometimes we make poor decisions because we can only hold a small number of ideas in our minds at any one time. Often when making complex decisions we do not consider all relevant factors.
3. ELEMENTARY STATISTICS: decisions are often made because we do not involve the use of concepts from elementary statistics (e.g., hopeful gambling, credit card debt, etc.).
4. ORGANIZATIONAL STRUCTURE: Organizations which do not achieve their goals are often structured in ways that encourage selfish behaviors in members.
5. REALITY DISTORTION FOR PLEASURE: People often distort their thoughts about reality in order to make themselves more comfortable or happy.

One of the interesting features of outdoor education settings is the immediate, reality-testing nature of the environment and the activities. Participants' misperceptions and misunderstandings are reflected back to them in several ways which are more immediate and clear than is often the case in everyday life. Thus, there is much potential for helping participants develop more reality conceptions and understandings about themselves. However, it is debatable as to whether this is an automatic, natural aspect of traditional outdoor education methodologies, or whether it requires special training and awareness on the part of the facilitator to guide such a process. This issue leads us into deeper psychological issues about the nature of groups and leaders, and two readings for next week pursue these issues. One is a series of three in progress papers on "Instructor Effectiveness" and the second is a chapter from a new book by Martin Ringer called "A Psychodynamic View of Experiential Learning in Groups". Important background to these papers, however, is an understanding of the psychodynamic theory developed by Sigmund Freud. Thus, you are strongly advised to undertake the psychological background reading, "Freud for Beginners" and "The First Psychoanalyst".

## References

- McKay, H. (2000). We like to think we're 'wired'. But, really, we're just plain weird. *The Age*, 4 November, <http://www.theage.com.au/news/20001104/A24960-2000Nov3.html>
- Sutherland, S. (1992). *Irrationality: The Enemy Within*. London: Penguin.

## Experiential Exercise

### WRITE YOUR ANSWERS TO THE EXERCISES BELOW

(you will have approx. 45 to 60 seconds for each exercise)

#### 1. Reversible Image

A.

B.

C.

D.

#### 2. Camouflage

A.

B.

#### 3. Identical Twins

A.

#### 4. After-Image

A.

#### 5. Crater or Mountain?

A.

B.

6. Imagination

A.

B.

7. Circles

A.

8. What Do You See?

A.

B.

9. Old Man and Young Man

A.

B.

C.

10. Sailors

A.

11. Squares

A.

## 12. Word Frequency

A.

B.

C.

## 13. Self-Evaluation

A.

B.

C.

## 14. Tin Can

A.

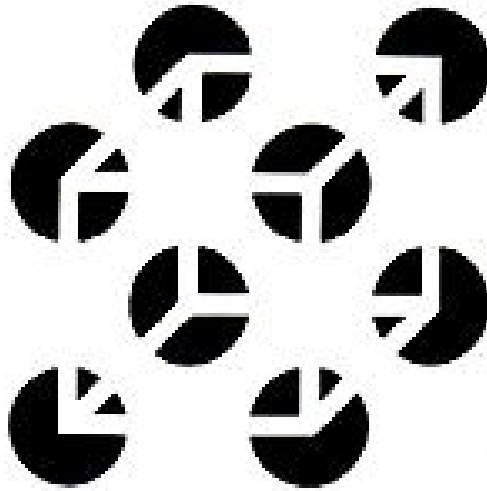
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James Neill  
University of New Hampshire  
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## 1. Reversible Image



- A. Can you see a cube?
- B. Can you see a cube from another perspective?
- C. Imagine that the circular areas are actually holes in the page.  
Can you see a cube suspended behind the surface of the page?
- D. Can you see a cube from another perspective behind the page?

## 2. Camouflage



A. What do you see in this picture? If you see 'nothing', keep looking.

B. If you see 'something', then try to see 'nothing'. Can you do this?



### 3. Identical Twins



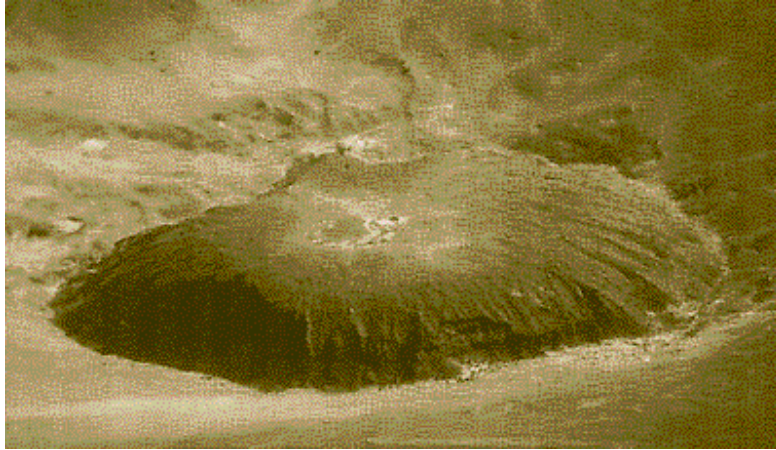
A. Why do the identical twins in this room appear to be drastically different in size?

## 4. After-Image



A. Steadily fixate on the black lightbulb for 30 seconds. Try not to avert your gaze. Then turn your gaze to the white area on the right of the bulb. You should see a glowing light bulb! Why?

## 5. Crater or Mountain?



A. What do you see here – crater or mountain?

B. Can you see both?

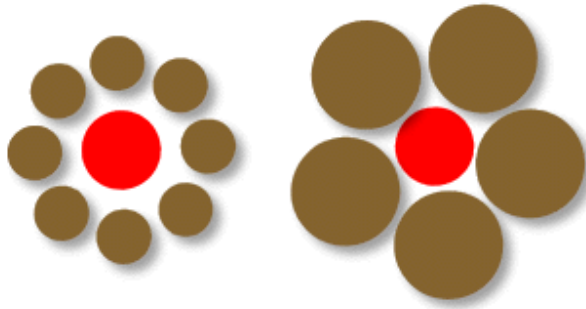
## **6. Imagination**

### **Task:**

A. Close your eyes for 30 seconds and try not to imagine a Pink Elephant. Could you do it?

B. Why or why not?

## 7. Circles



A. Compare the central circles. Which one is larger?

## 8. What Do You See?



A. What do you see?

B. Can see anything else? If not, there's a clue over the page!

Clue:

The picture contains a word.

## 9. Old Man and Young Man



### Task

- A. Can you the old man?
- B. Can you see young man?
- C. Can you see them both at the same time?

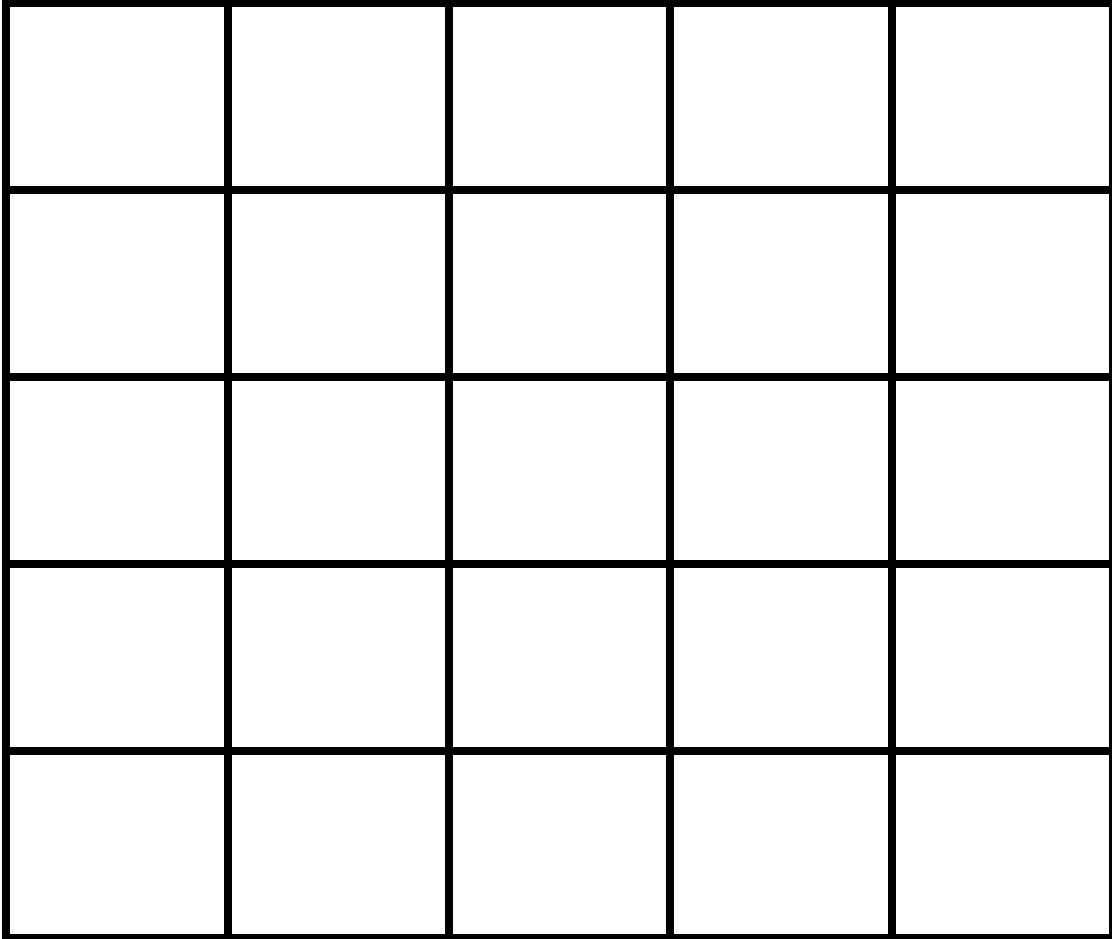


## 10. Sailors

The sailors of the first fleet were brave and fearless as they fought all of the forces of nature when facing the fierce storm off the coast.

A. Read the passage up and count how many times the letter f is used?

## 11. Squares



A. How many squares are there above?

## 12. Word Frequency

A. Are there more words with “r” as the first letter than with “r” in the third position?

B. Are there more words with “k” as the first letter than with “k” in the third position?

C. How did you decide your answers to these questions?

### 13. Self-Evaluation

A. How do you rate your ability as a graduate student?

Well above average  
Above average  
Average  
Below average  
Well below average

B. Compared to other students in this class,  
how would you rate your ability to get along with others?

Well above average  
Above average  
Average  
Below average  
Well below average

C. How confident are you in the accuracy of your ratings?

100%  
80%  
60%  
40%  
20%  
0%

"A survey of university professors found that 94% thought they were better at their jobs than their average colleague"

"A survey of one million high school seniors found that *all* students thought they were above average" in their "ability to get along with others . . . and 25% thought they were in the top 1%".

<http://pup.princeton.edu/chapters/s6983.html>

## **14. Tin Can**

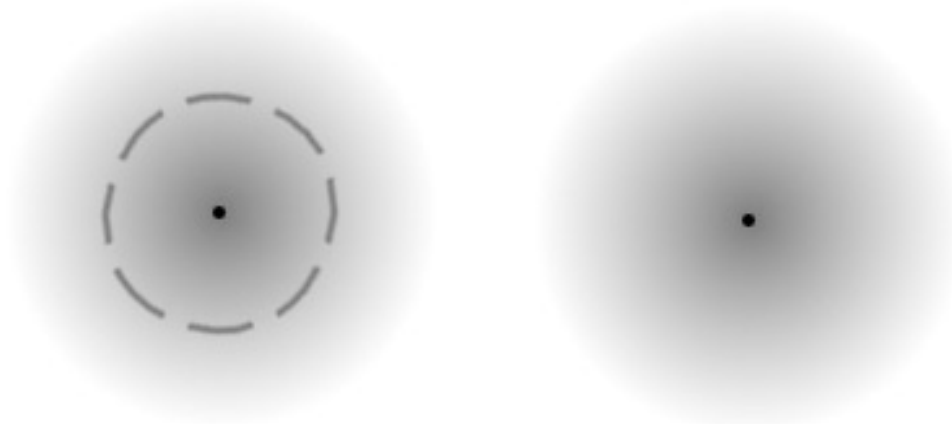
A. Drawn the inside contents of the tin can as accurately as you can (without opening the lid).

## 15. Sign



- A. What does this sign say?
- B. Are you sure? Read it carefully.
- C. Why did you misread the sign initially?

## 16. Smudge Illusion



A. Look at the figure on the right.

Stare at the black dot without moving your eyes.

The smudge will miraculously disappear!

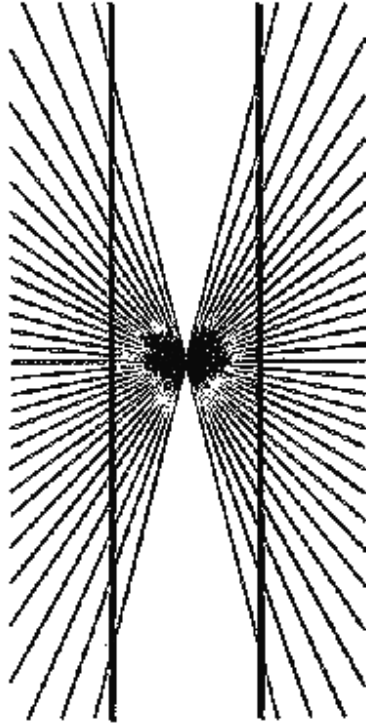
Try the same experiment again with the smudge on the left.

This time the smudge does not disappear.

What is going on here? Why does the smudge disappear in one instance and not the other?



## 17. Parallel Lines?



A. The vertical lines above are parallel. So why do they appear to bow?