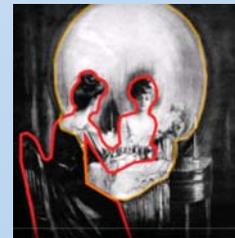


# 视觉知觉



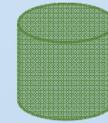
Charles Allan Gilbert (1873–1929)  
*All Is Vanity*

# 错觉?

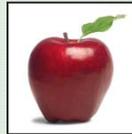
知觉: 我看见了



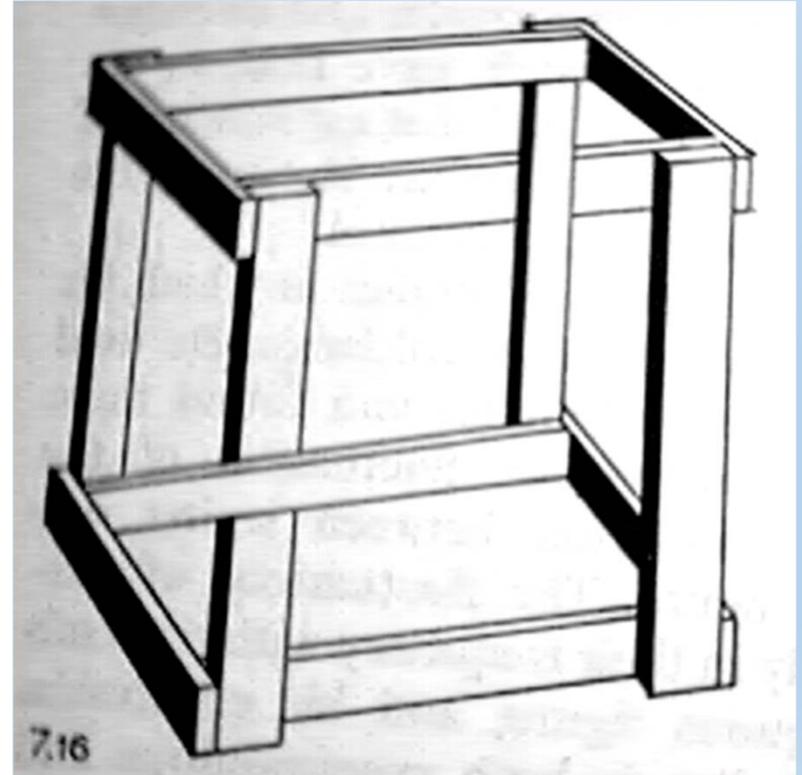
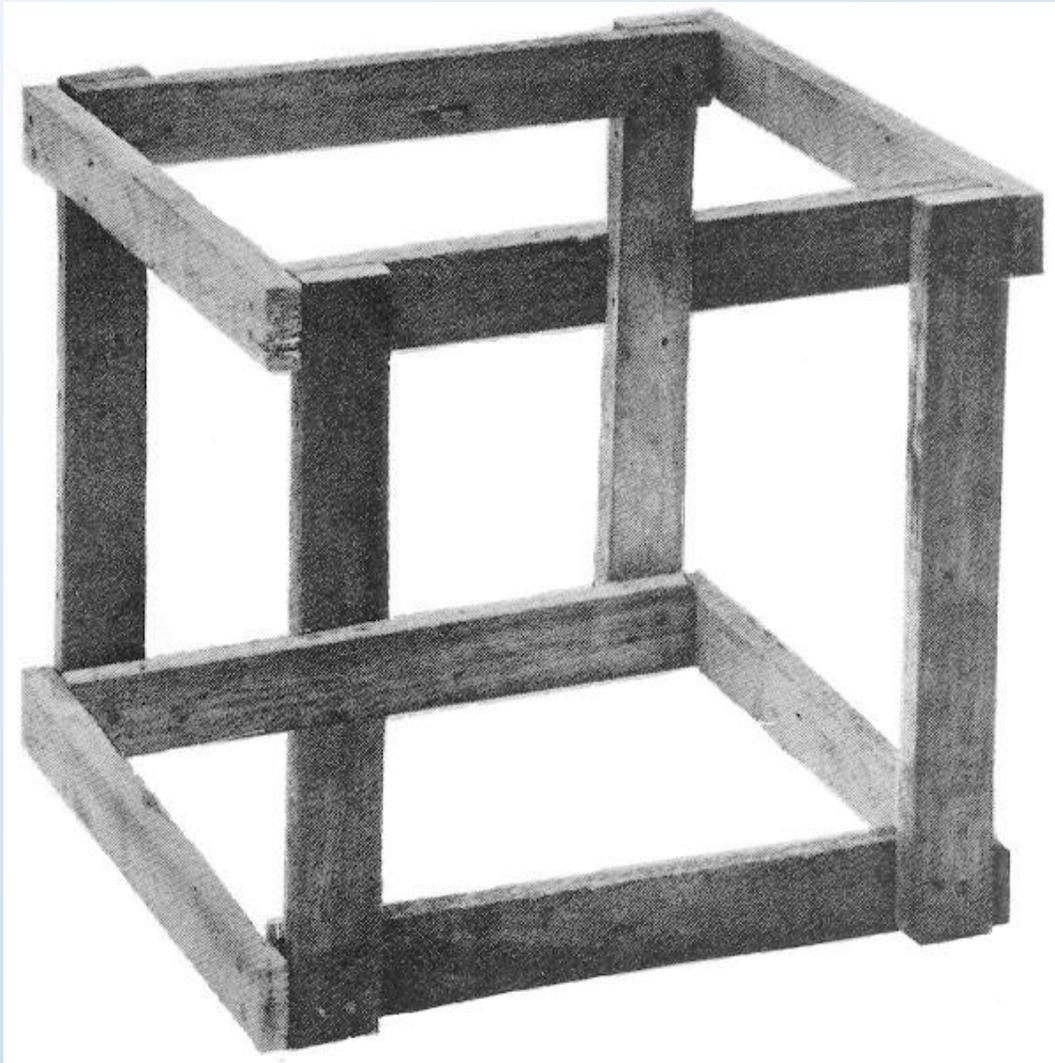
光线 (感觉)



事实:

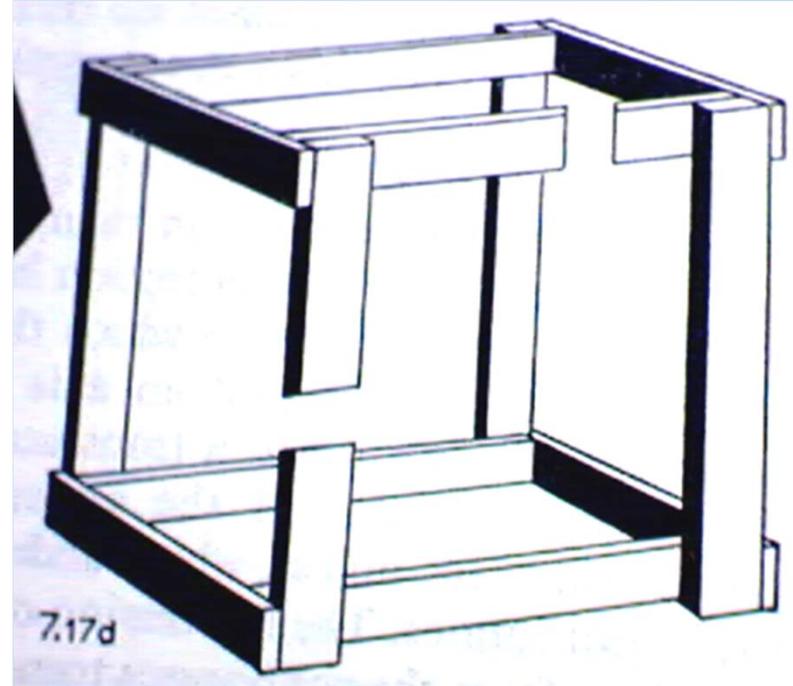
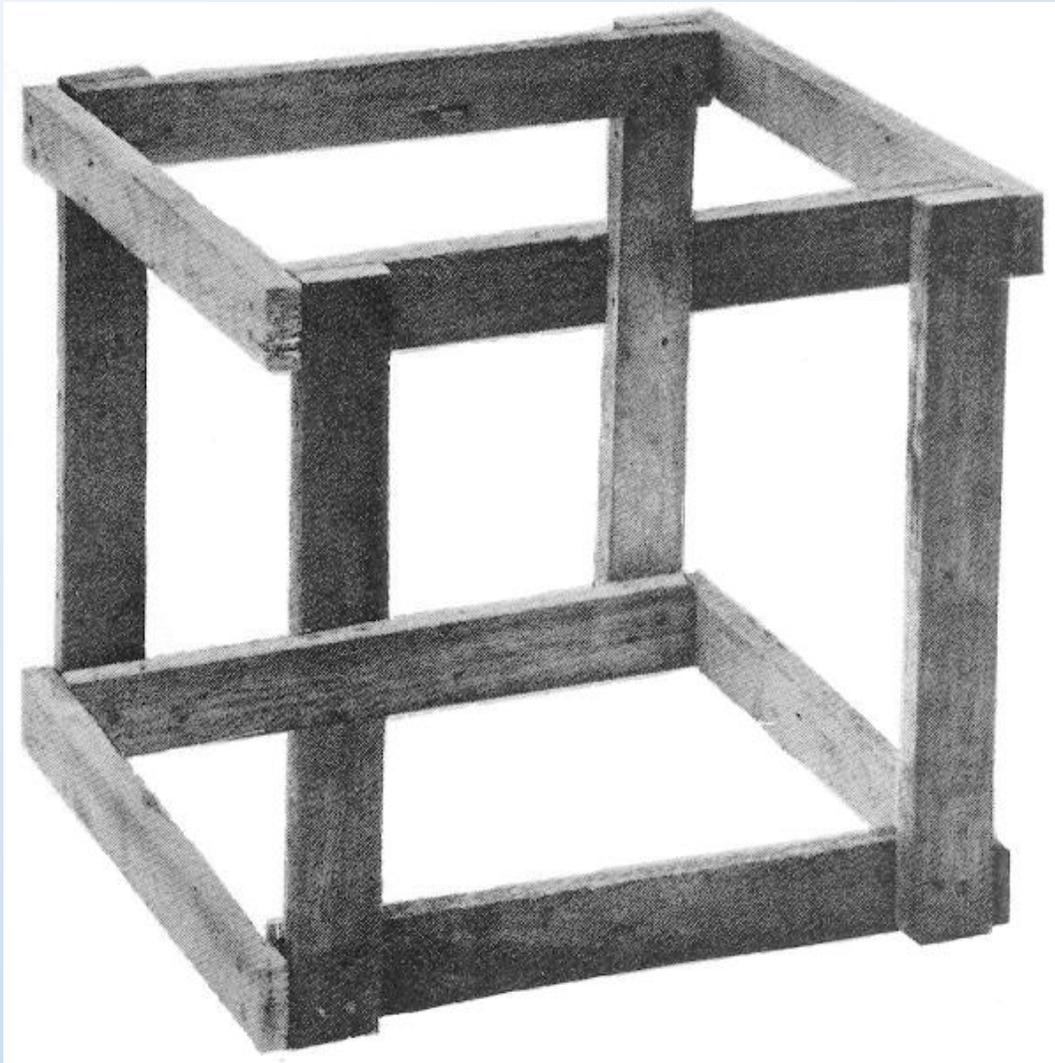


# 不可能的箱子



- Cochran (1966).

# 不可能的箱子



- Cochran (1966).



The face of Jules Verne appears as a distorted reflection in the mirror of the *Mysterious Island*. Jules Verne, famous for *World in Eighty Days*, published *Mysterious Island* in 1874.

The word *anamorph* is from the Greek *an* (again) and *morphe* (form). It is a distorted image that can only be seen again with the aid of a cylinder (an *anamorphoscope*).

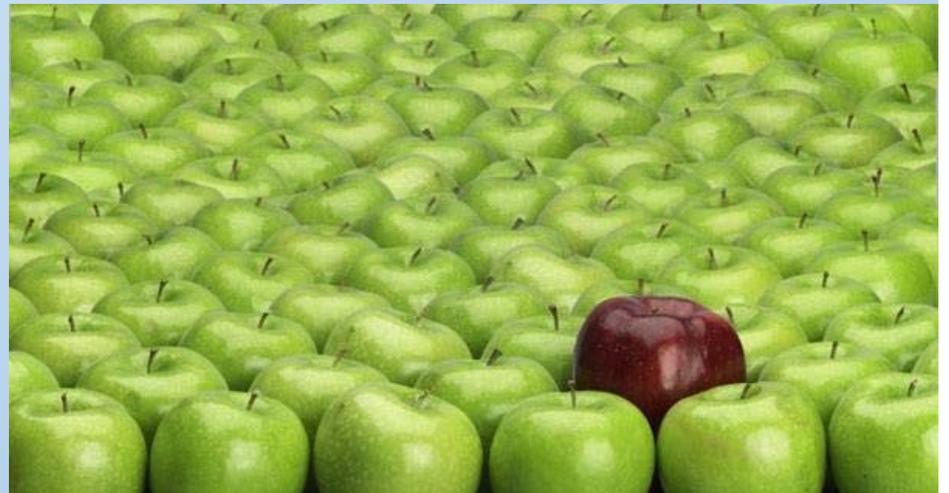
Anamorphs have been popular since the time of Leonardo da Vinci.

# 感觉到知觉

- 1967, R.L. Gregory – 所有的照片都是“不可能物体”
- 重建这些物体，需要认知的知识
- 我们从来没有获得过足够的信息
- 世界是认知的产物，而不是认知的来源

# 视觉的主要挑战

- 高精度与高速度的平衡
- 维持物体的恒常性
- 视觉是一个自治系统







# 层次

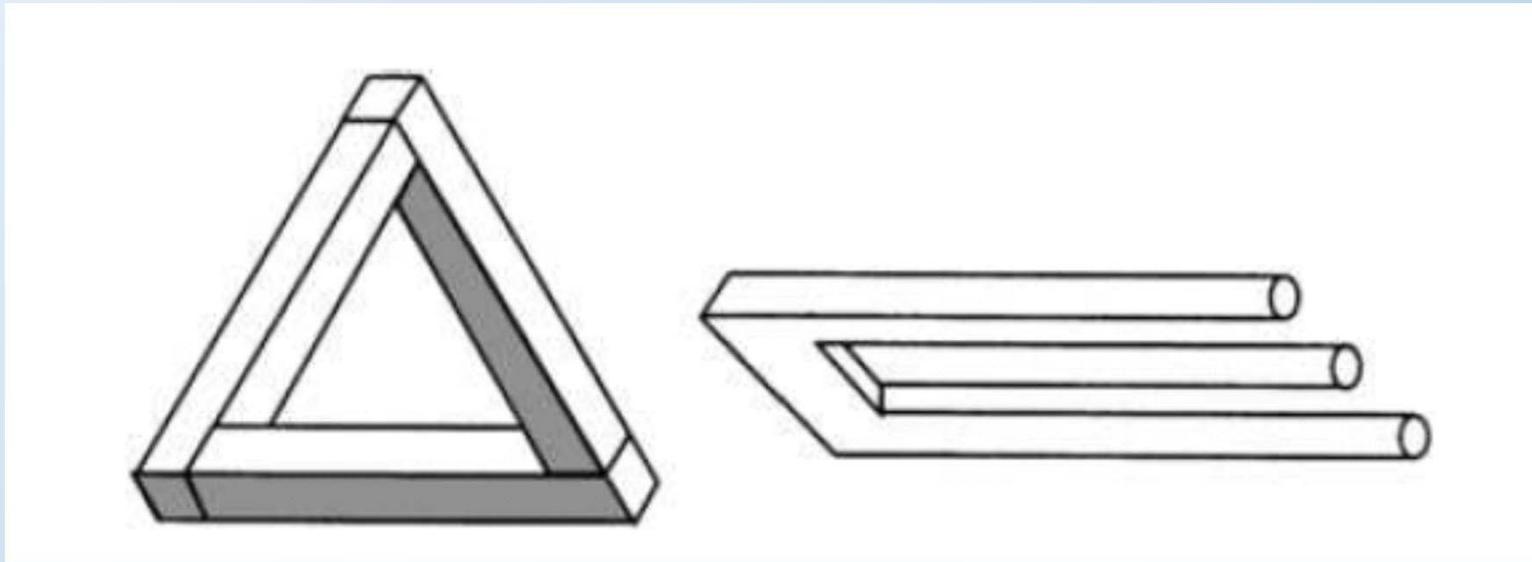
眼睛的运动

视网膜

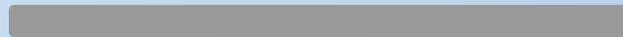
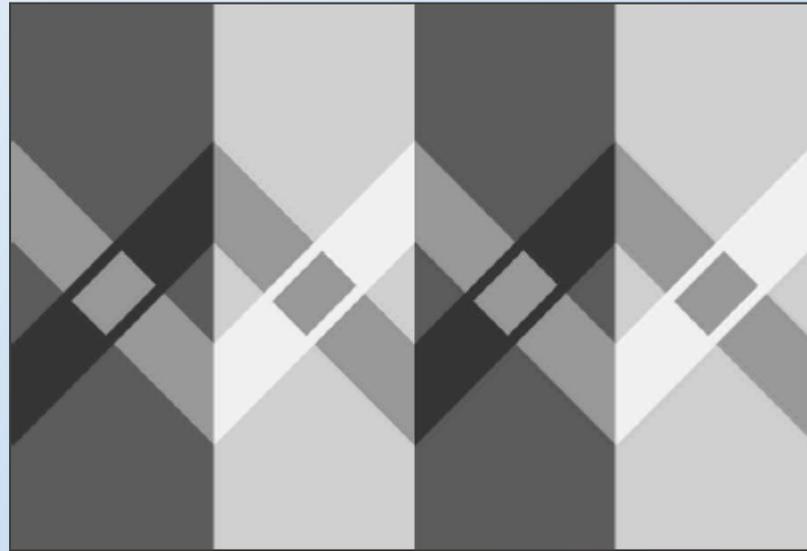
传输时间

大脑处理 a b c

# 眼动错觉

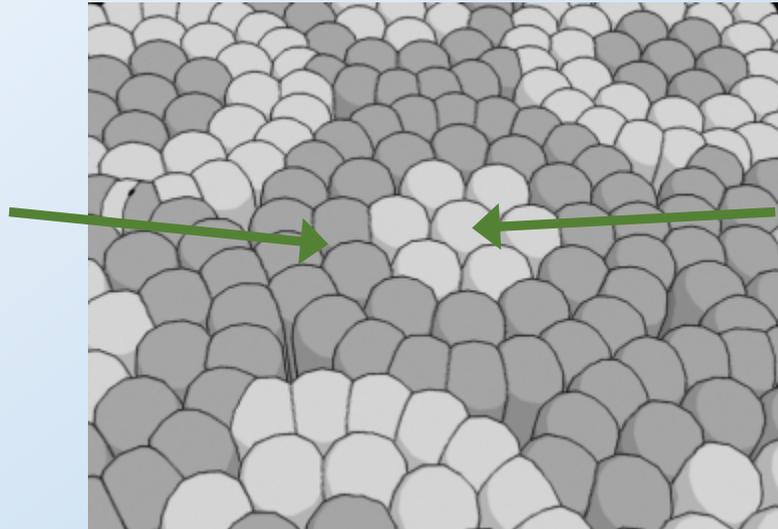


# 亮度



# 底层视觉

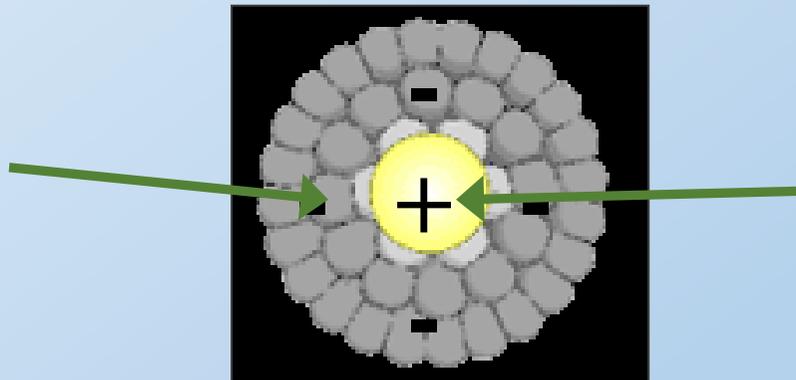
负感受器



正感受器

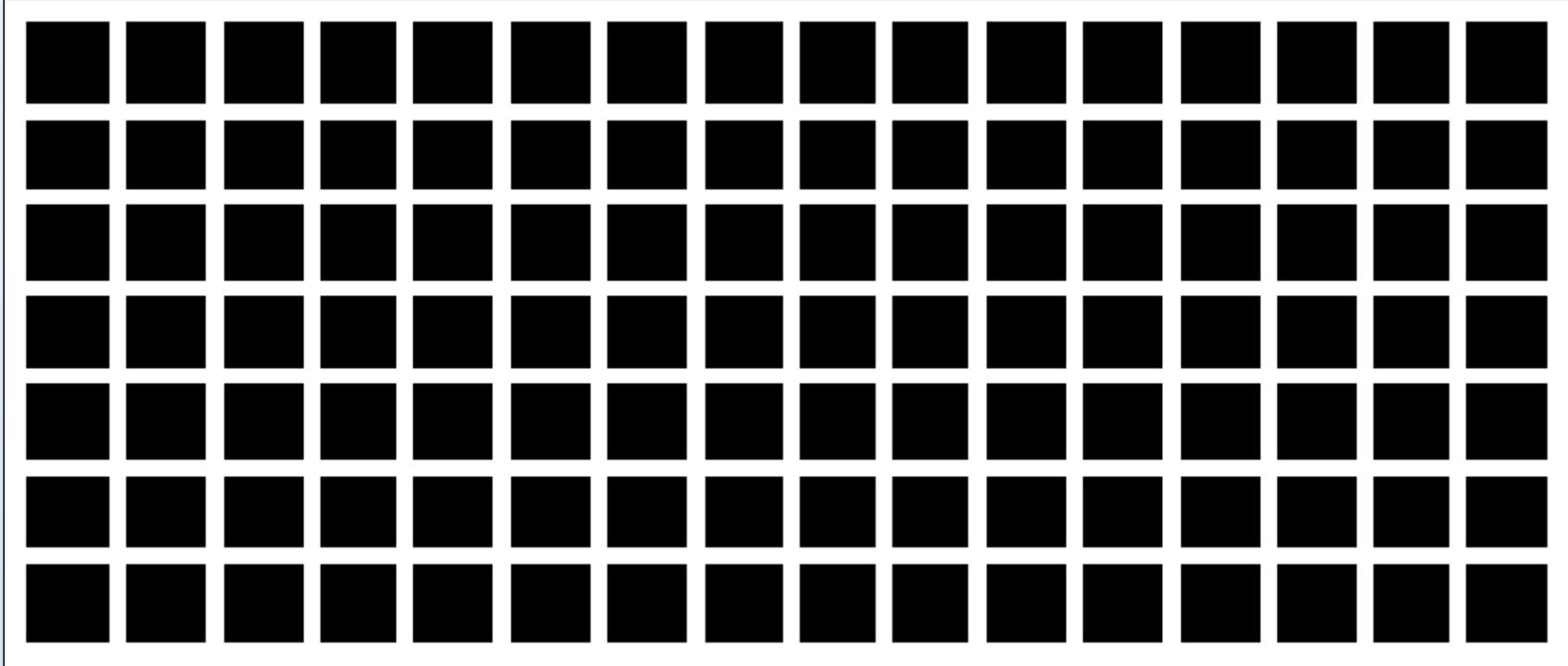
视网膜的视野

抑制

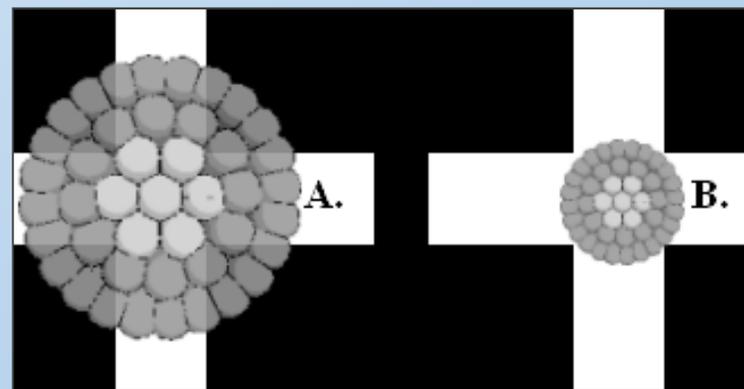
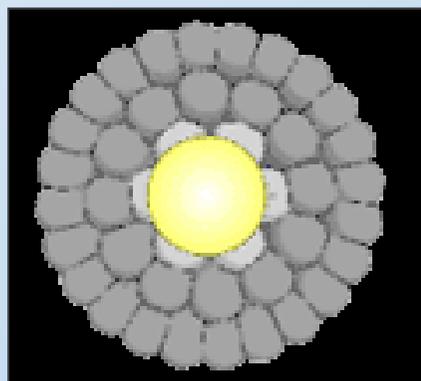
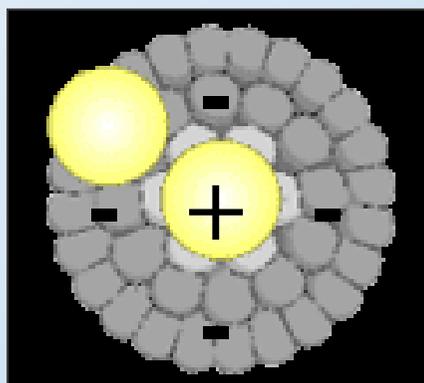
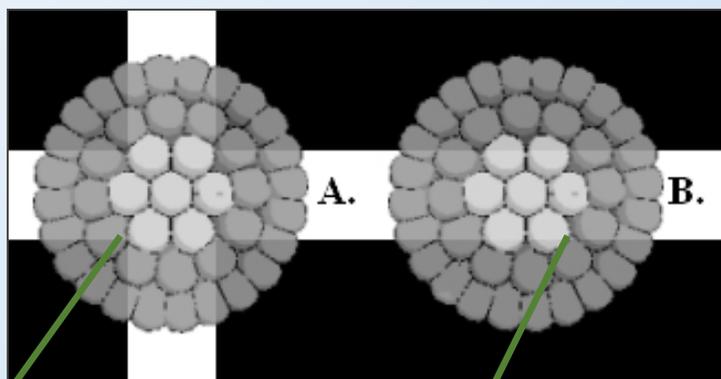


兴奋

# 赫尔曼珊格



# 底层视觉



# 形态

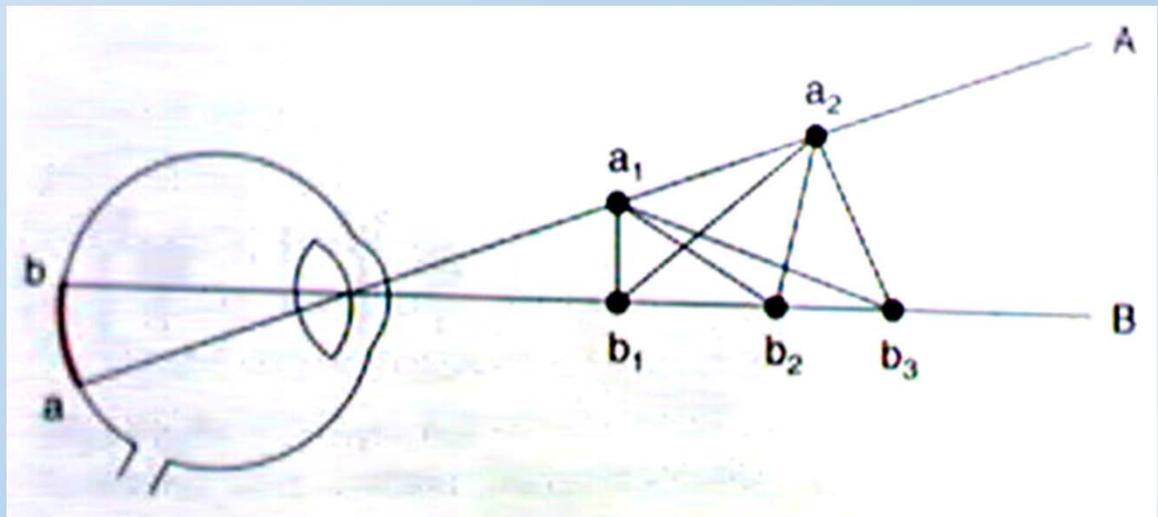
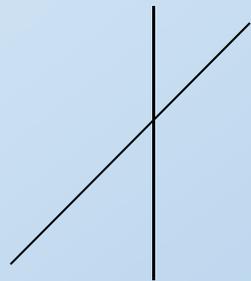
Be Aware !



This video may cause temporary hallucinogenic effects. But please do not be afraid, these effects usually last a few seconds.

# 认知的决策

- 我们努力的把感知到的信息合理化。
  - 对于有多种合理化可能的情况
  - 我们会择其一
  - 但也改变
  
- 物体是重建出来的。



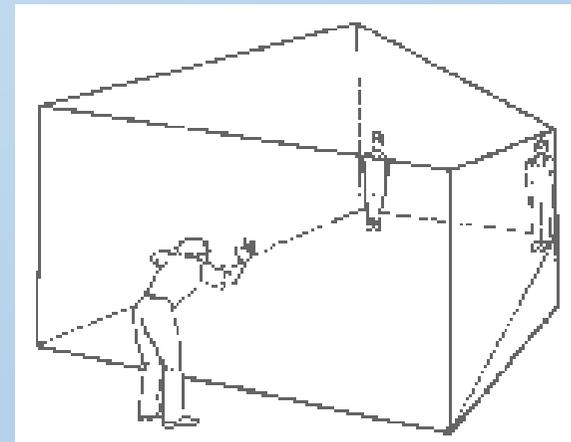
# 距离知觉， 大小知觉



# The Ames Room



# The Ames Room



© 1994, The Exploratorium

# 双眼视觉

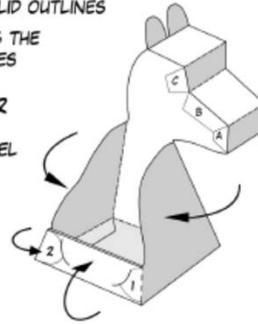
- 只用一只眼睛，会有更多的错觉
- 作业：
  - 制作一个错觉



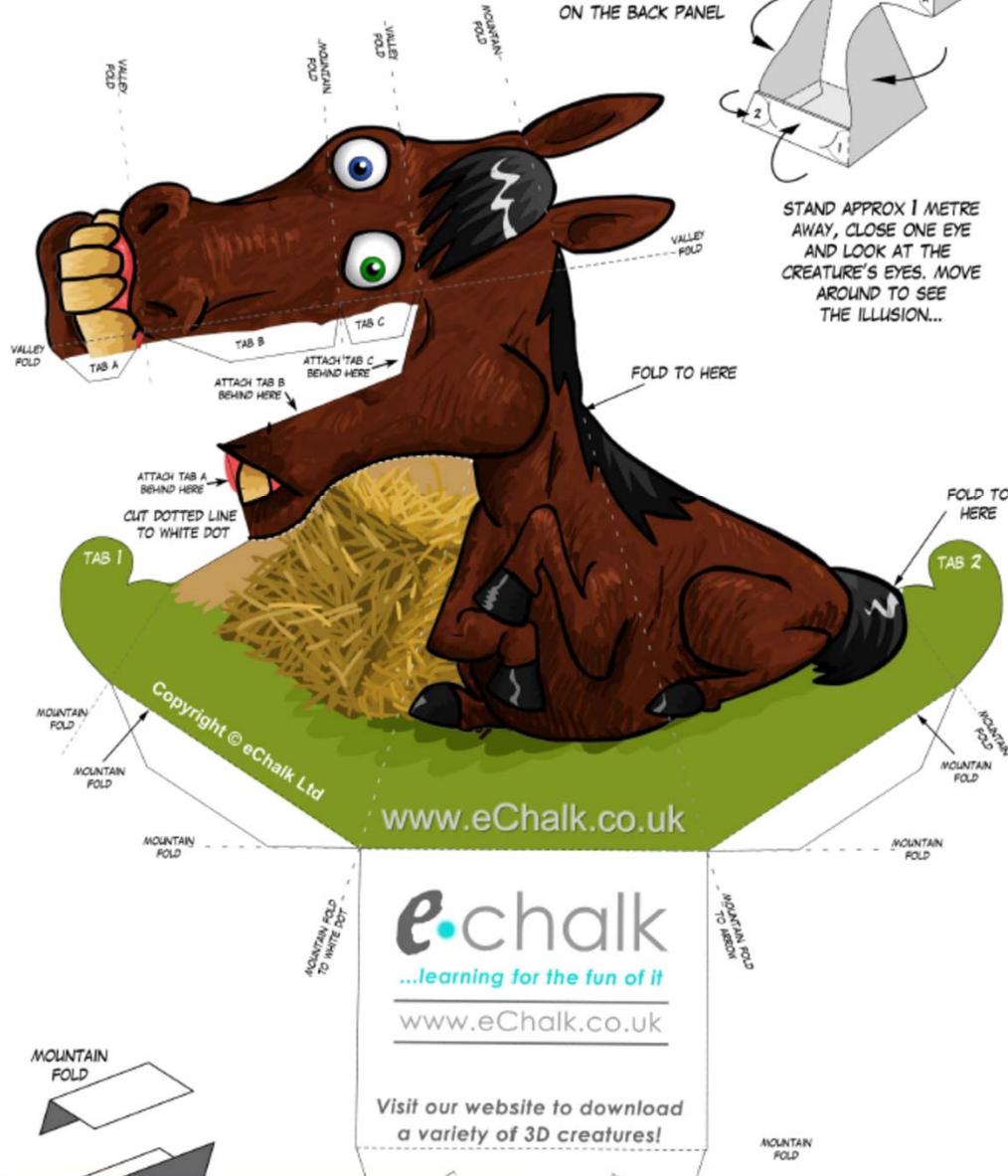
# 3D HORSE ILLUSION

CUT OUT, FOLD AND ASSEMBLE (SEE DIAGRAM)

- CUT ALONG THE SOLID OUTLINES
- FOLD ALONG THE DOTTED LINES
- INSERT TABS 1 & 2 INTO THE SLOTS ON THE BACK PANEL



STAND APPROX 1 METRE AWAY, CLOSE ONE EYE AND LOOK AT THE CREATURE'S EYES. MOVE AROUND TO SEE THE ILLUSION..



# 作业：

任择其一

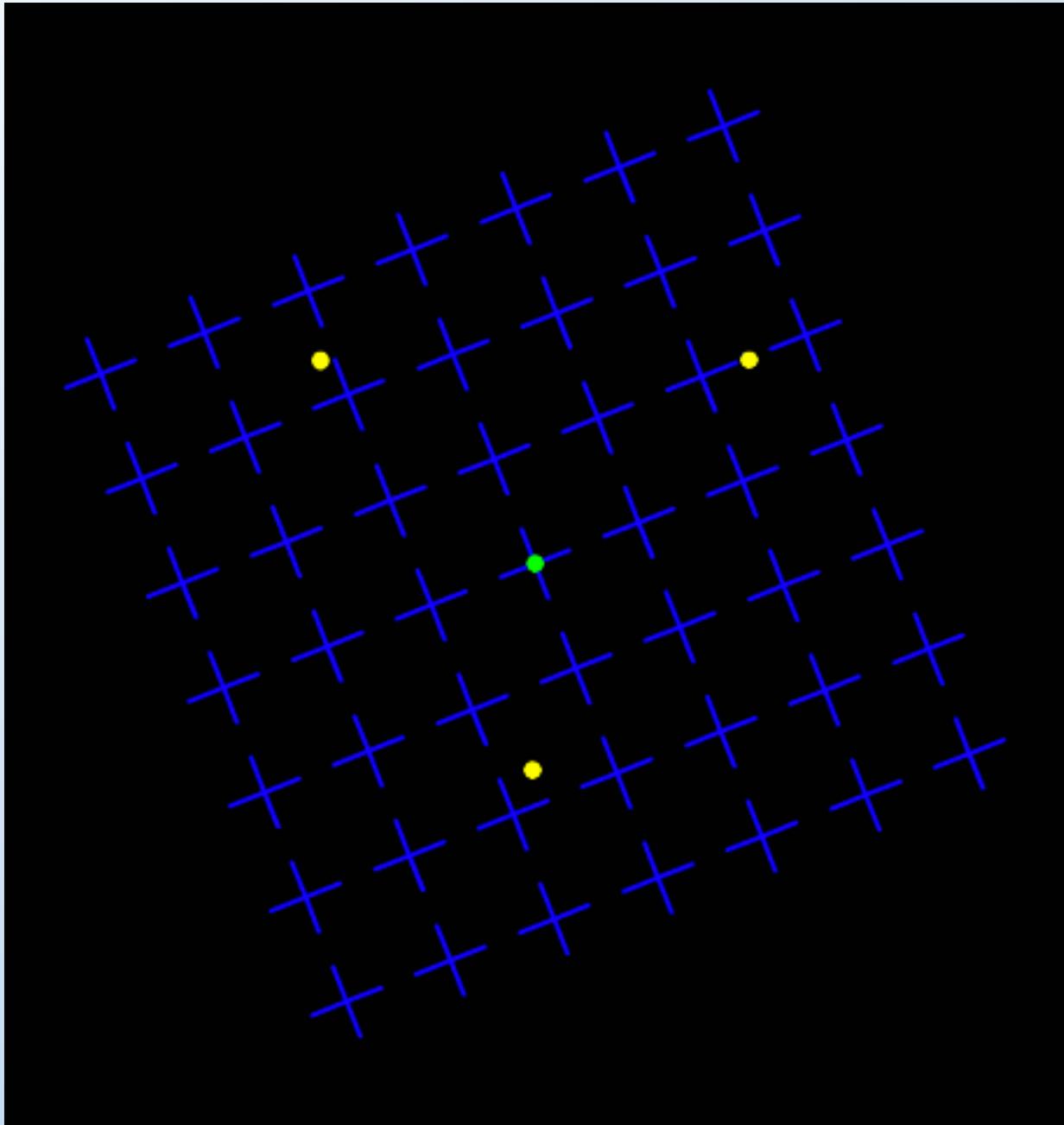
制作一个



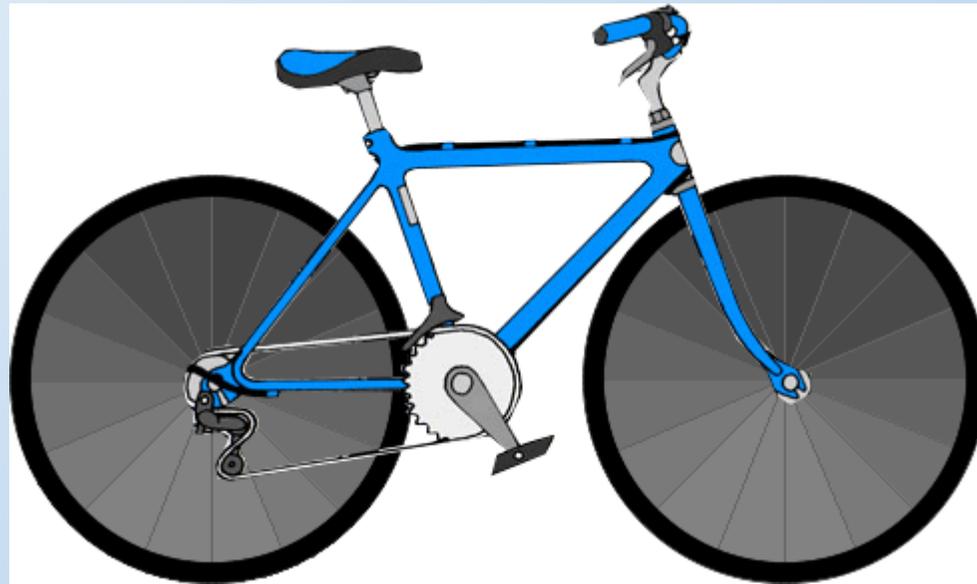
# 视觉知觉的时间

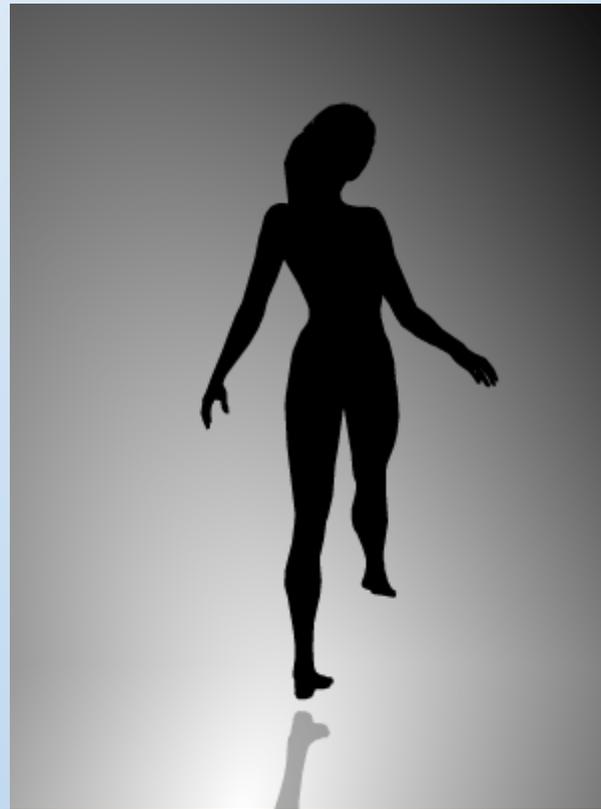
- <https://michaelbach.de/ot/mot-flashLag/index.html>

# Motion-induced blindness



# 视觉与时间





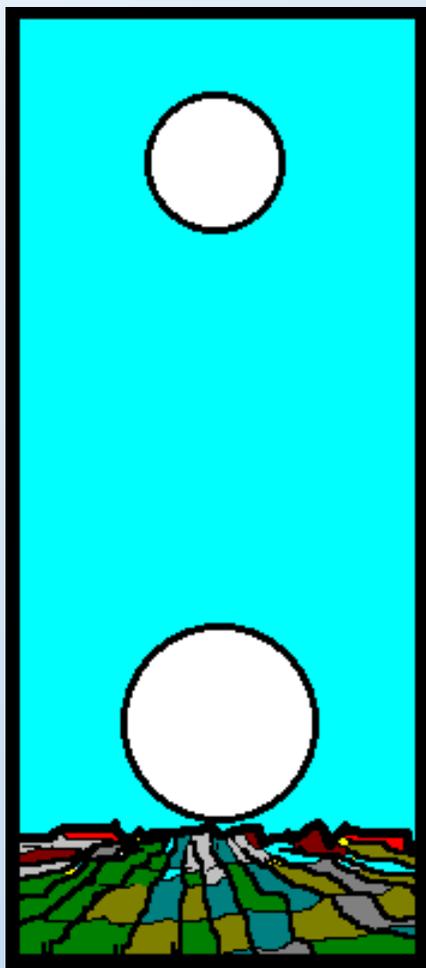
# 深度知觉



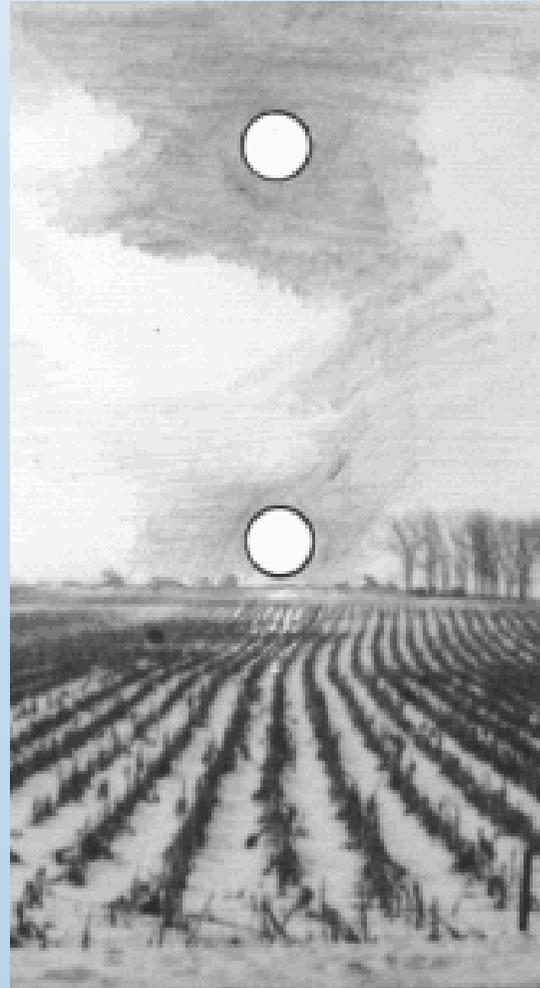
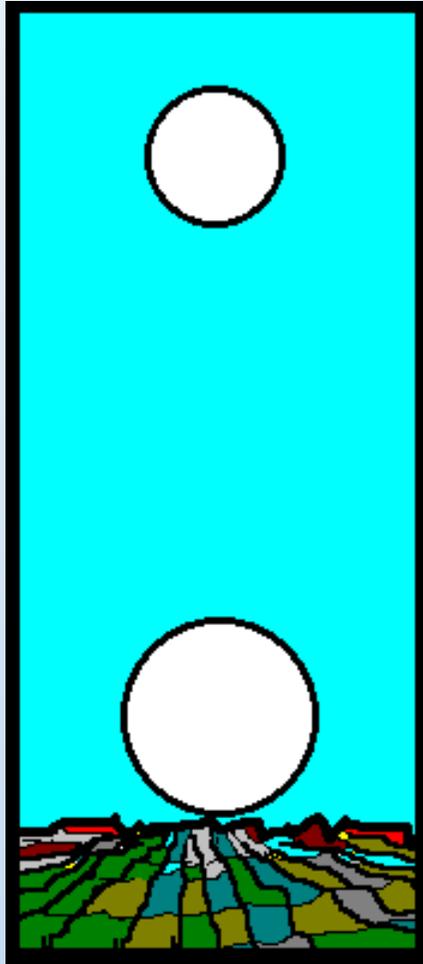
# 深度知觉



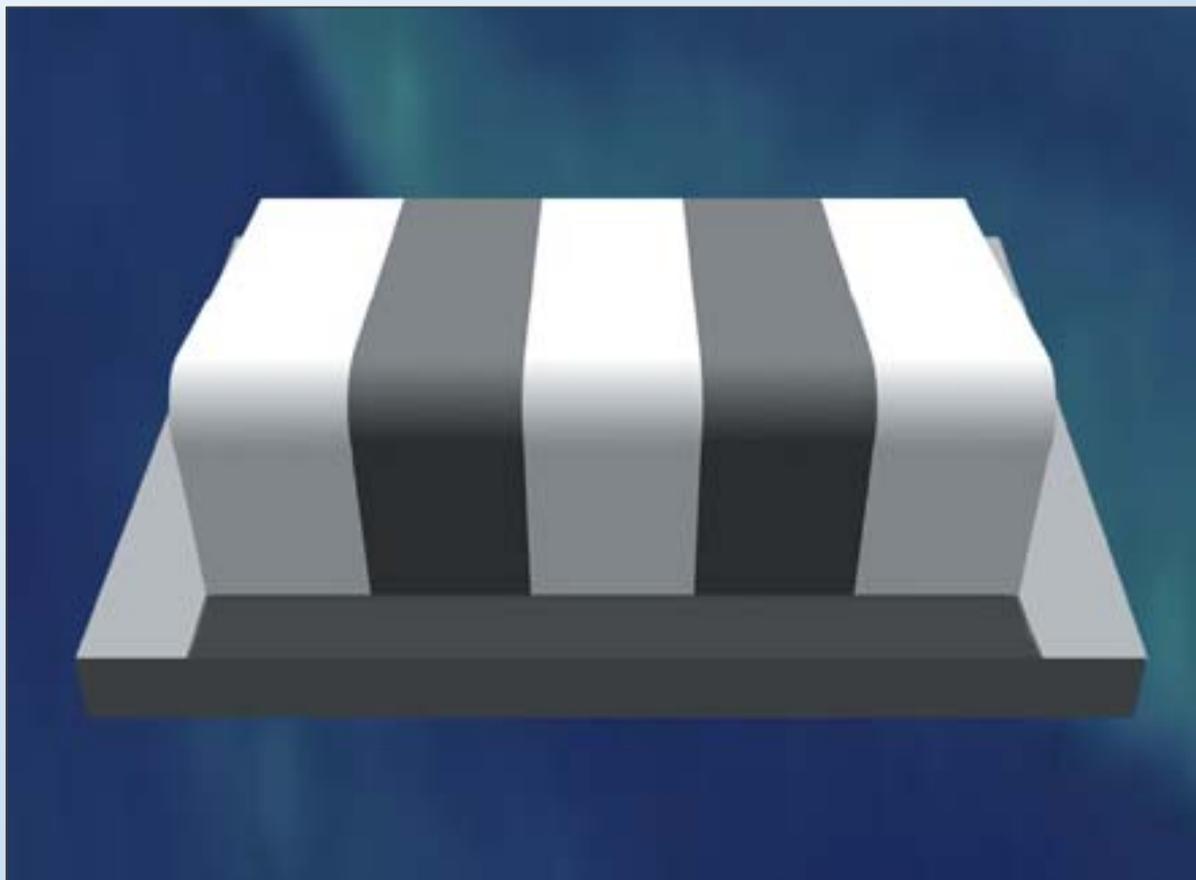
# 两小儿辩日



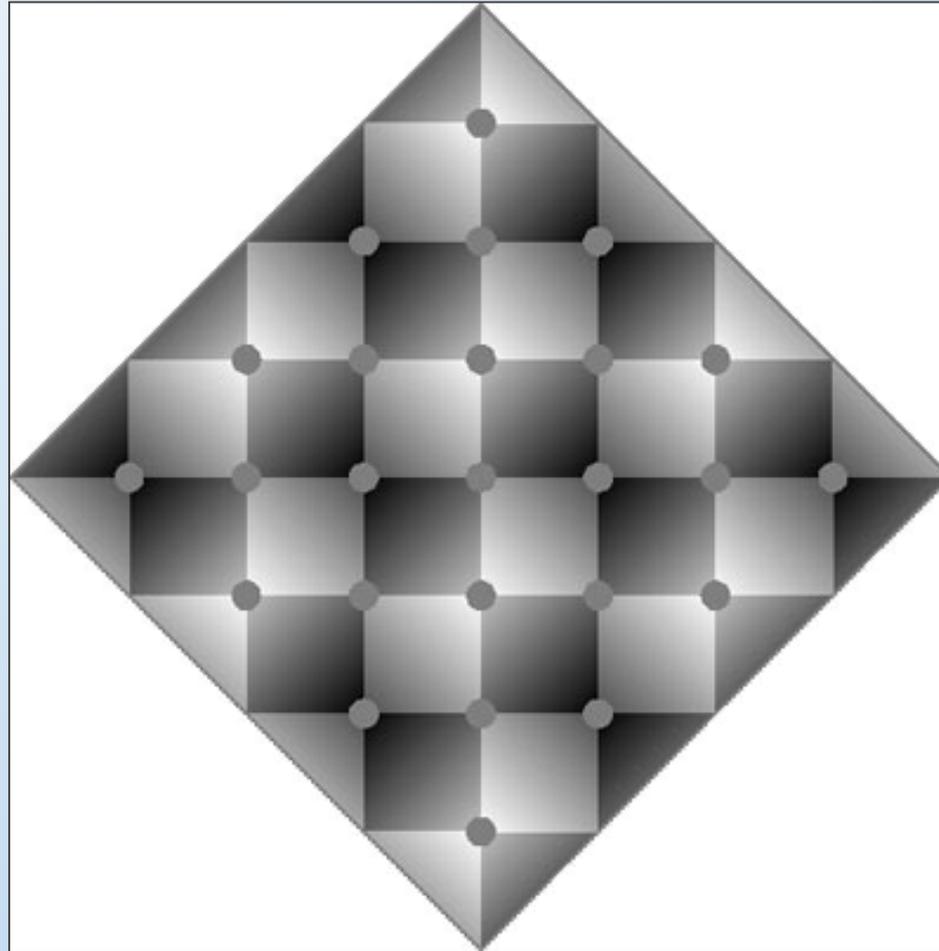
# 两小儿辩日



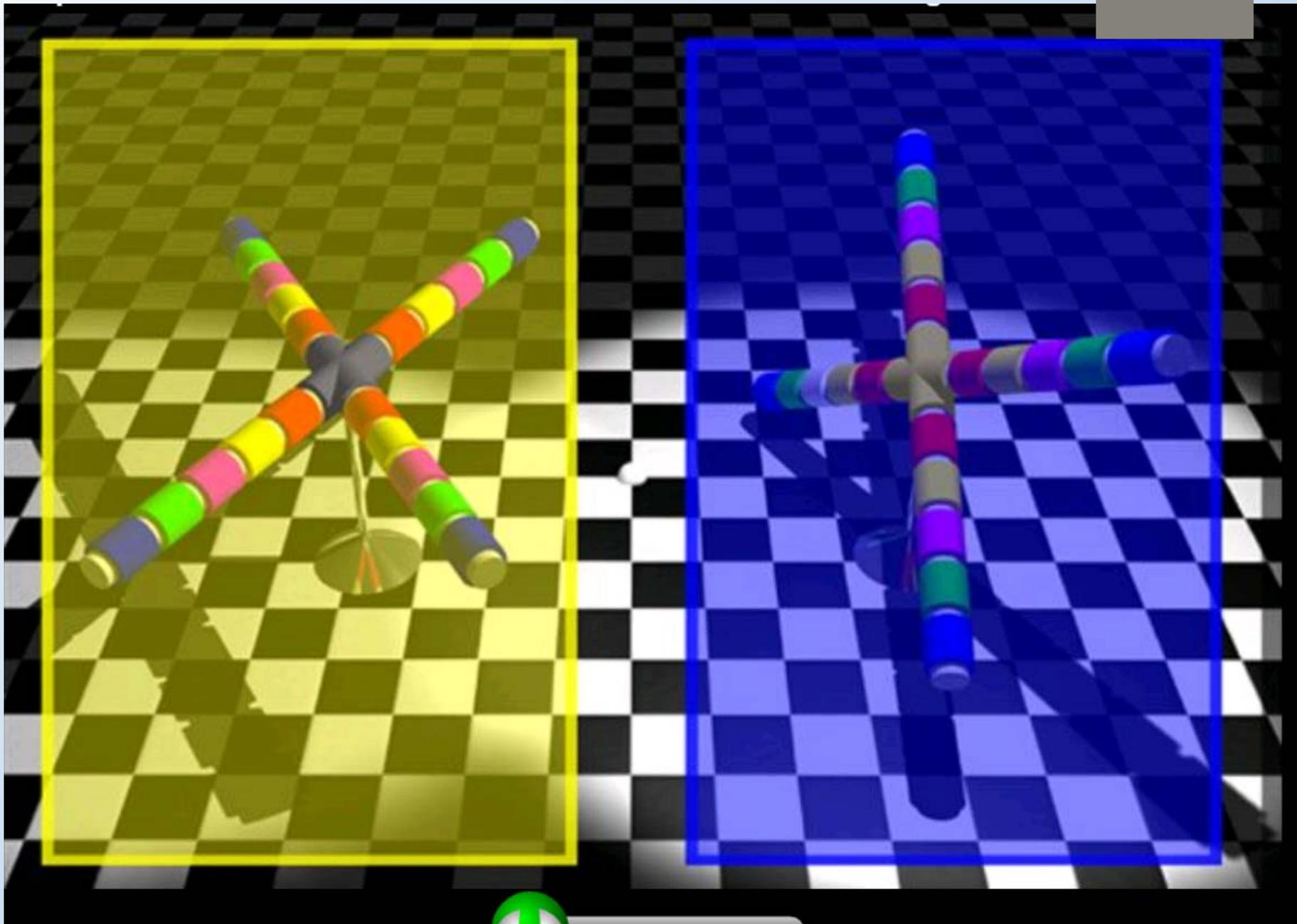
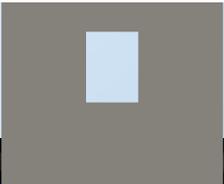
**这是什么错觉？**

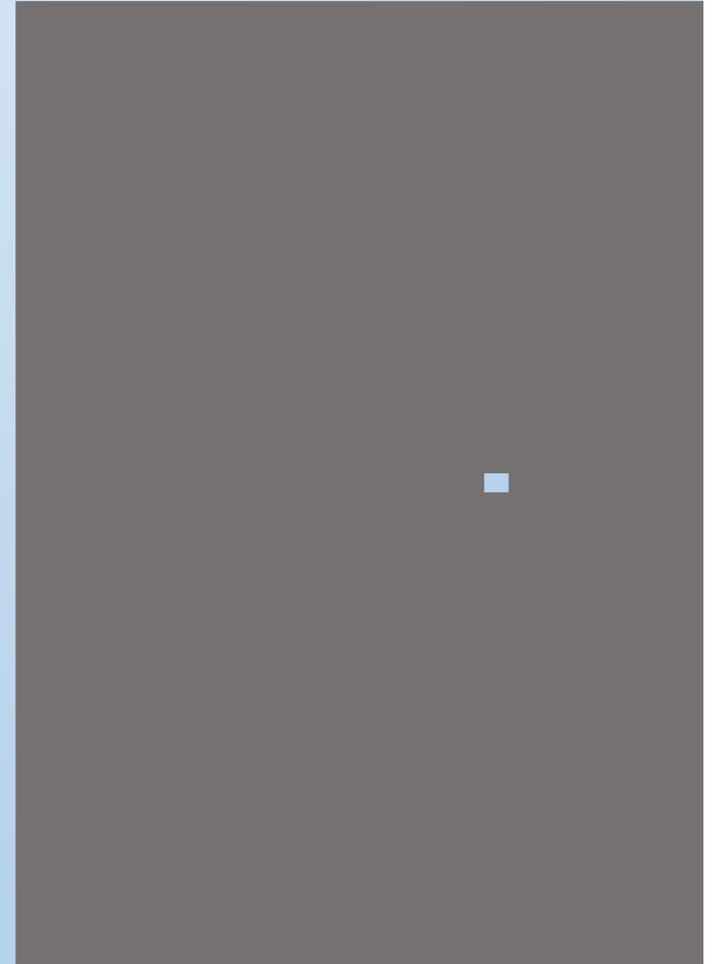


# Todorovic's Gradient Chessboard Illusion



小点的颜色？



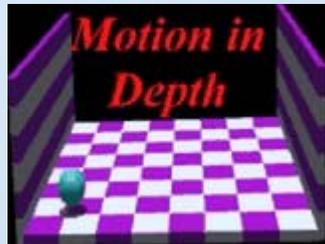




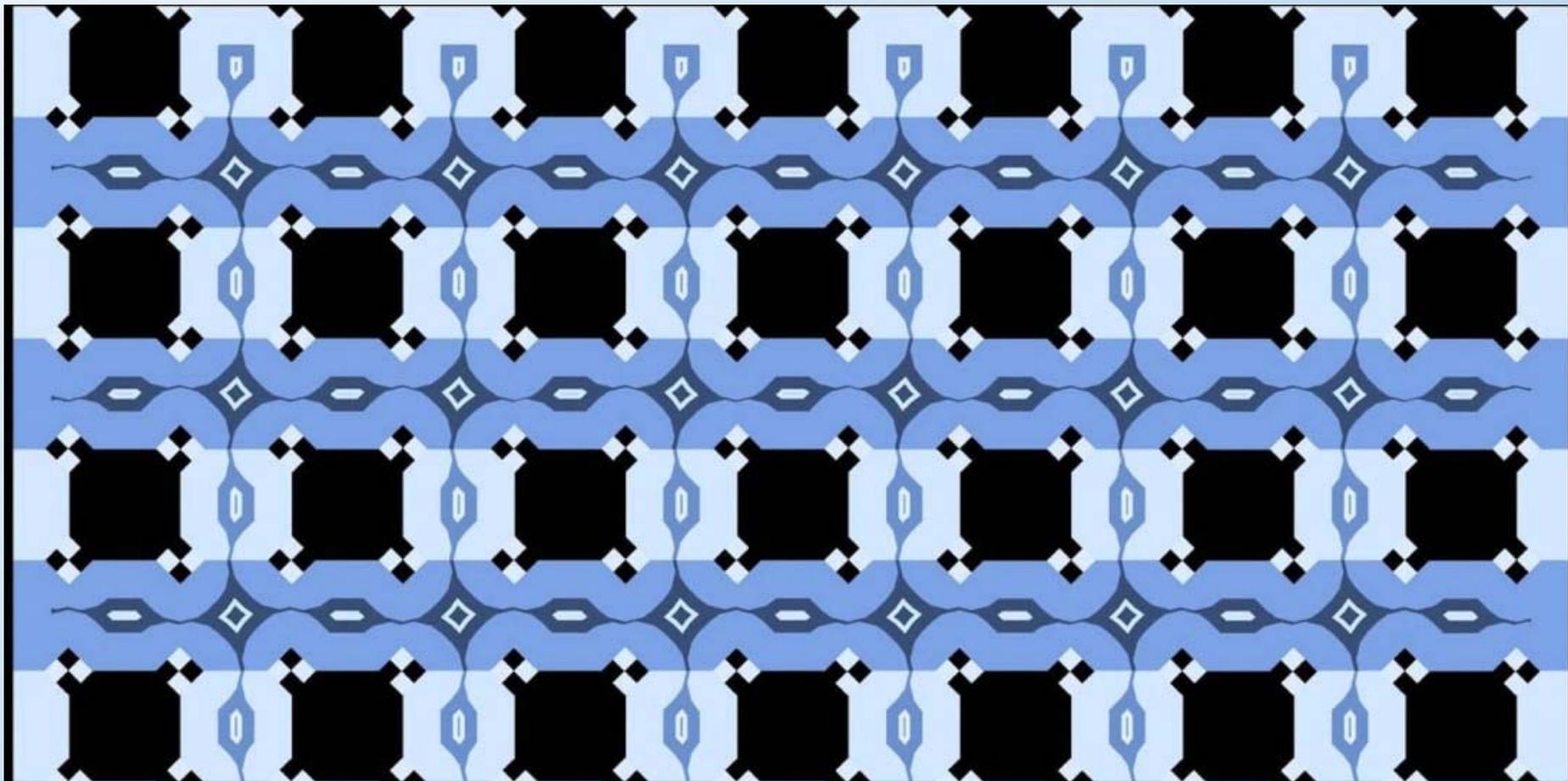
这是一种新的  
错觉

# 位置的判定

- 阴影



影响这个的是什​​么？



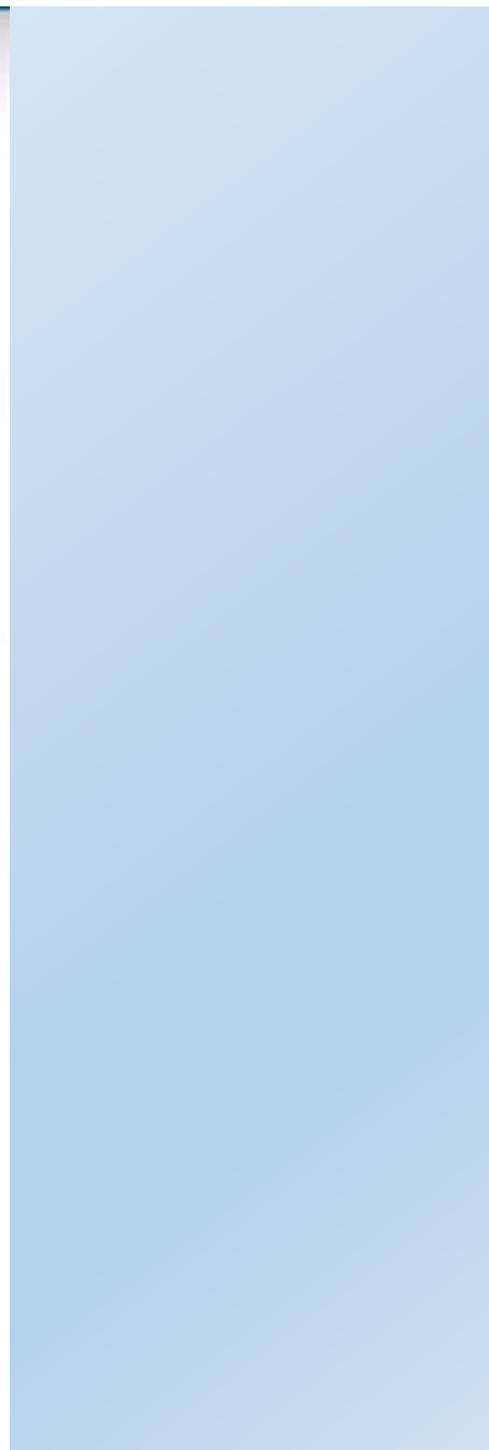
# 整体知觉

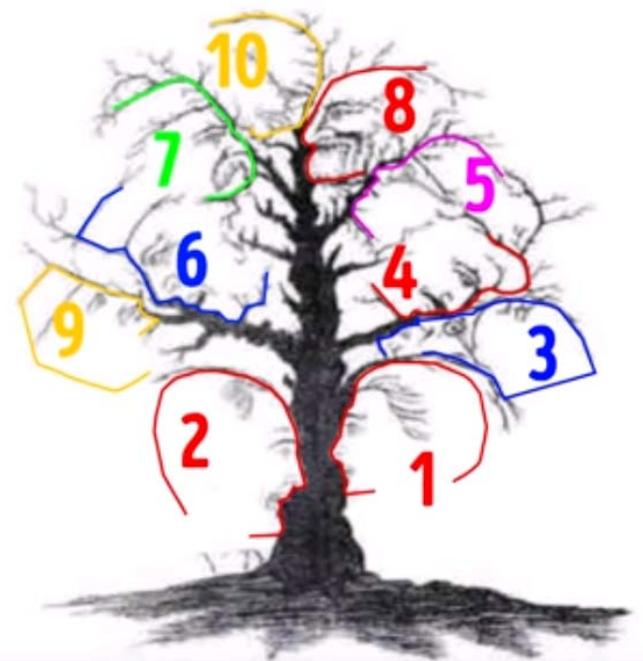
- 典型的是面孔
- 接近的还有身体

# 面孔的特征

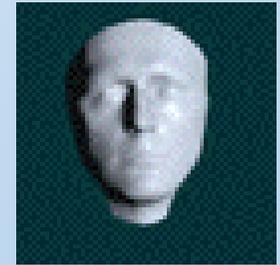








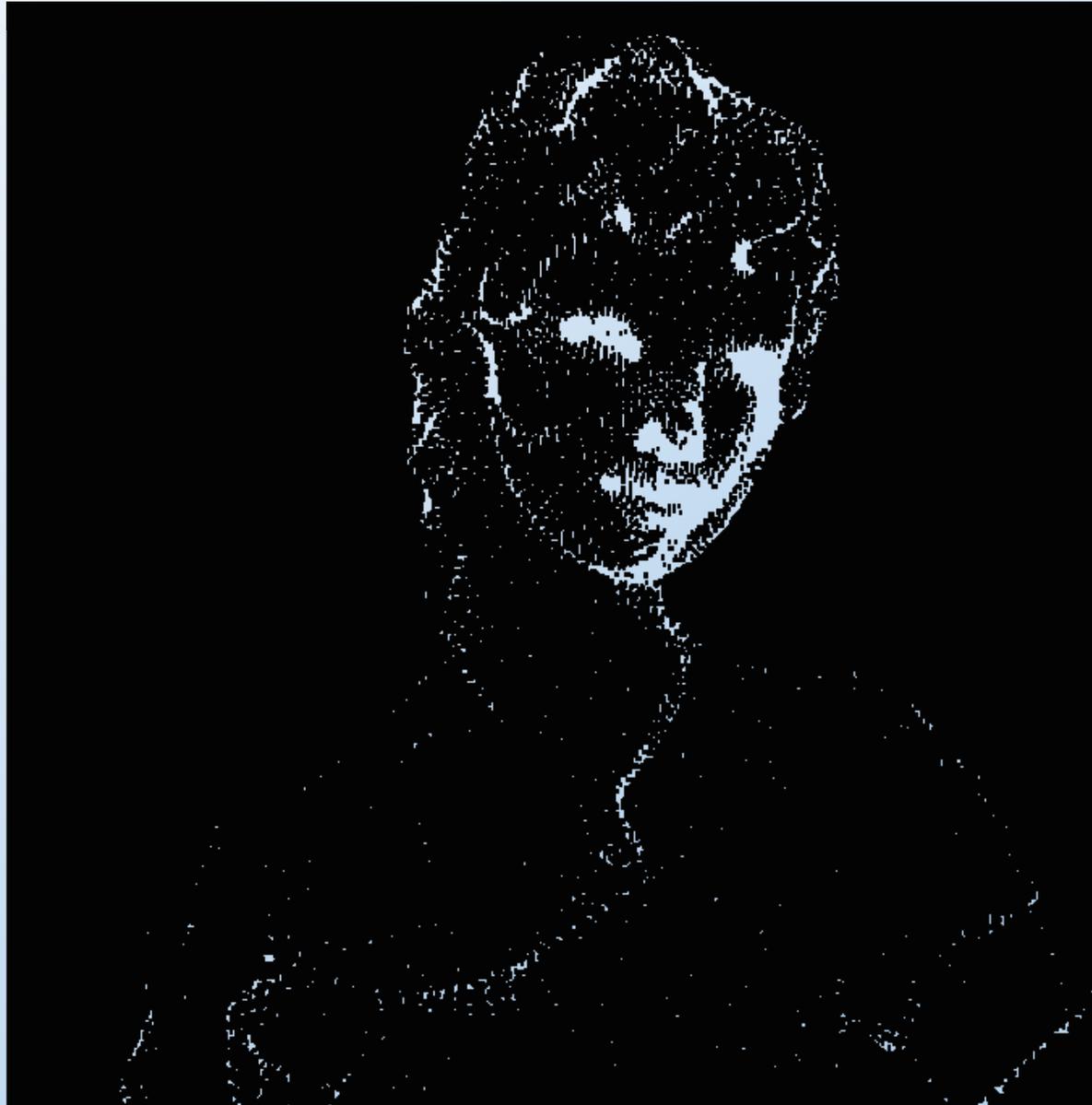
# 面孔的特征-组合性

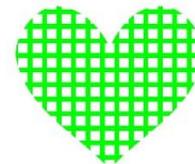
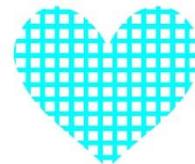
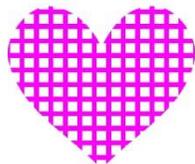
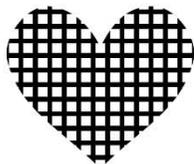
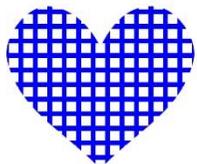


# 面孔

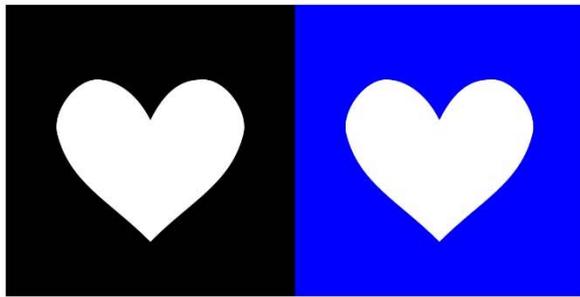


<http://www.artifacting.com/blog/which-way-is-this-lady-spinning/>

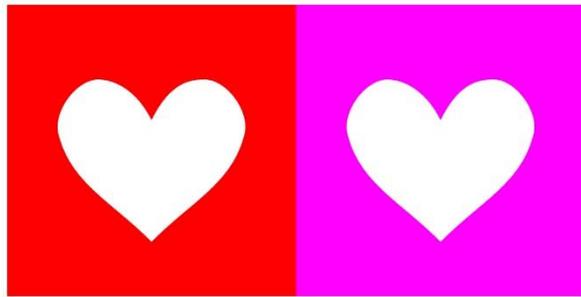




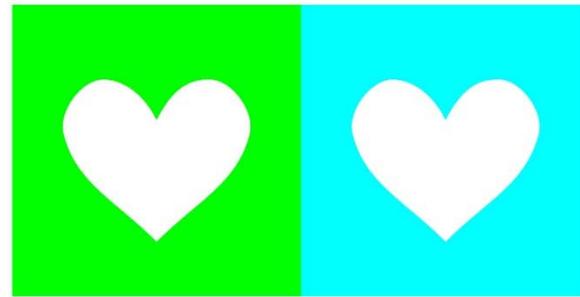
+



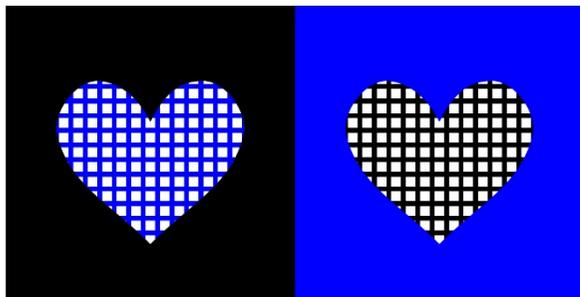
+



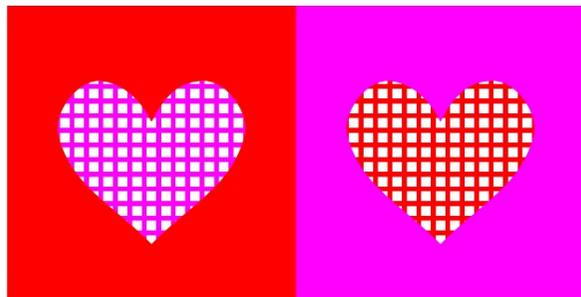
+



||



||



||

