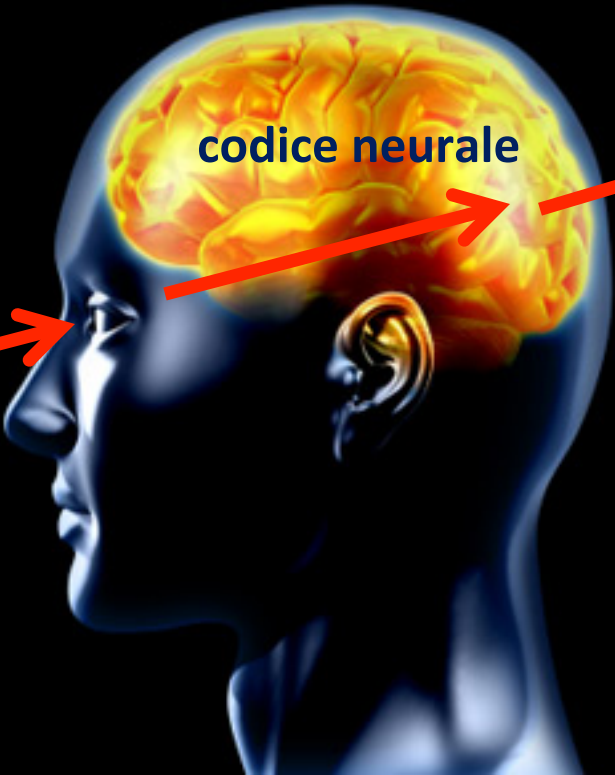


# Rappresentazione mentale dell'universo

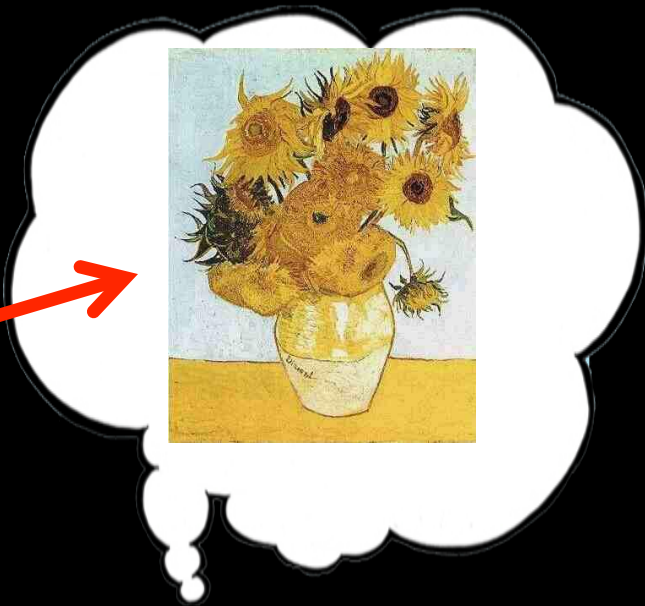




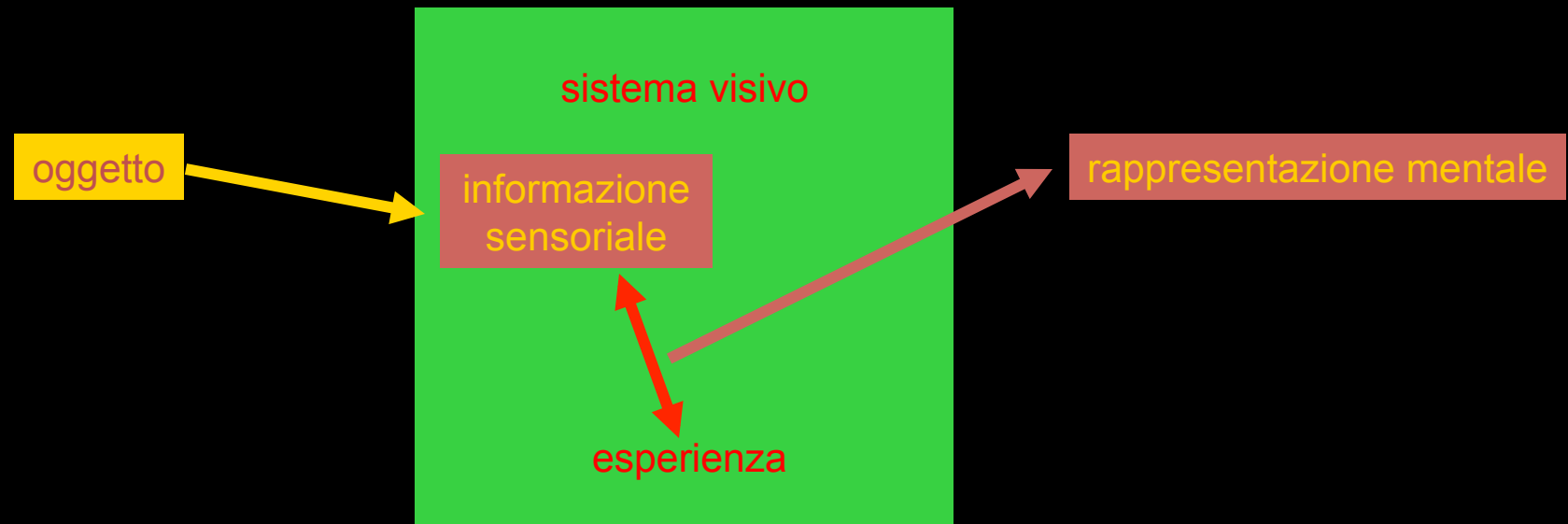
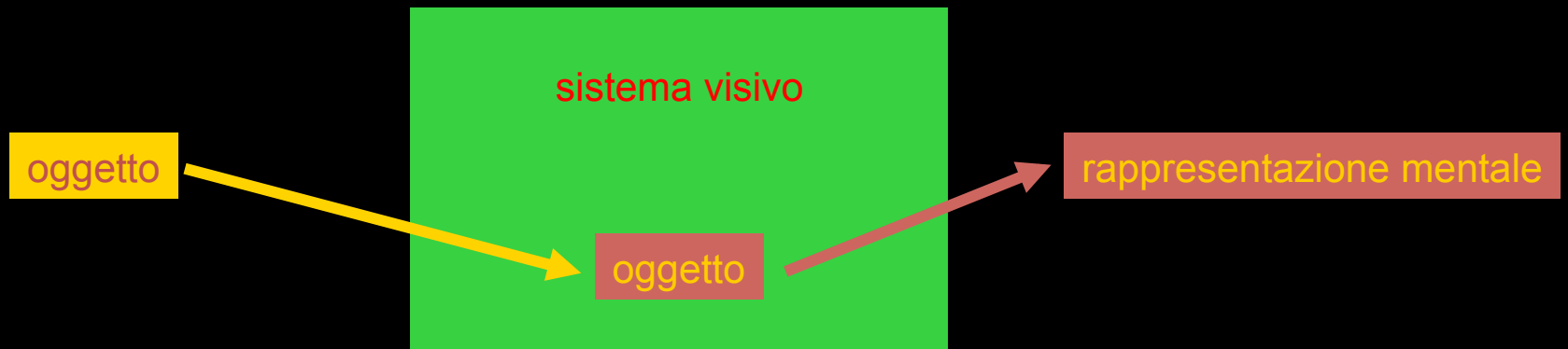
**oggetto/stimolo**



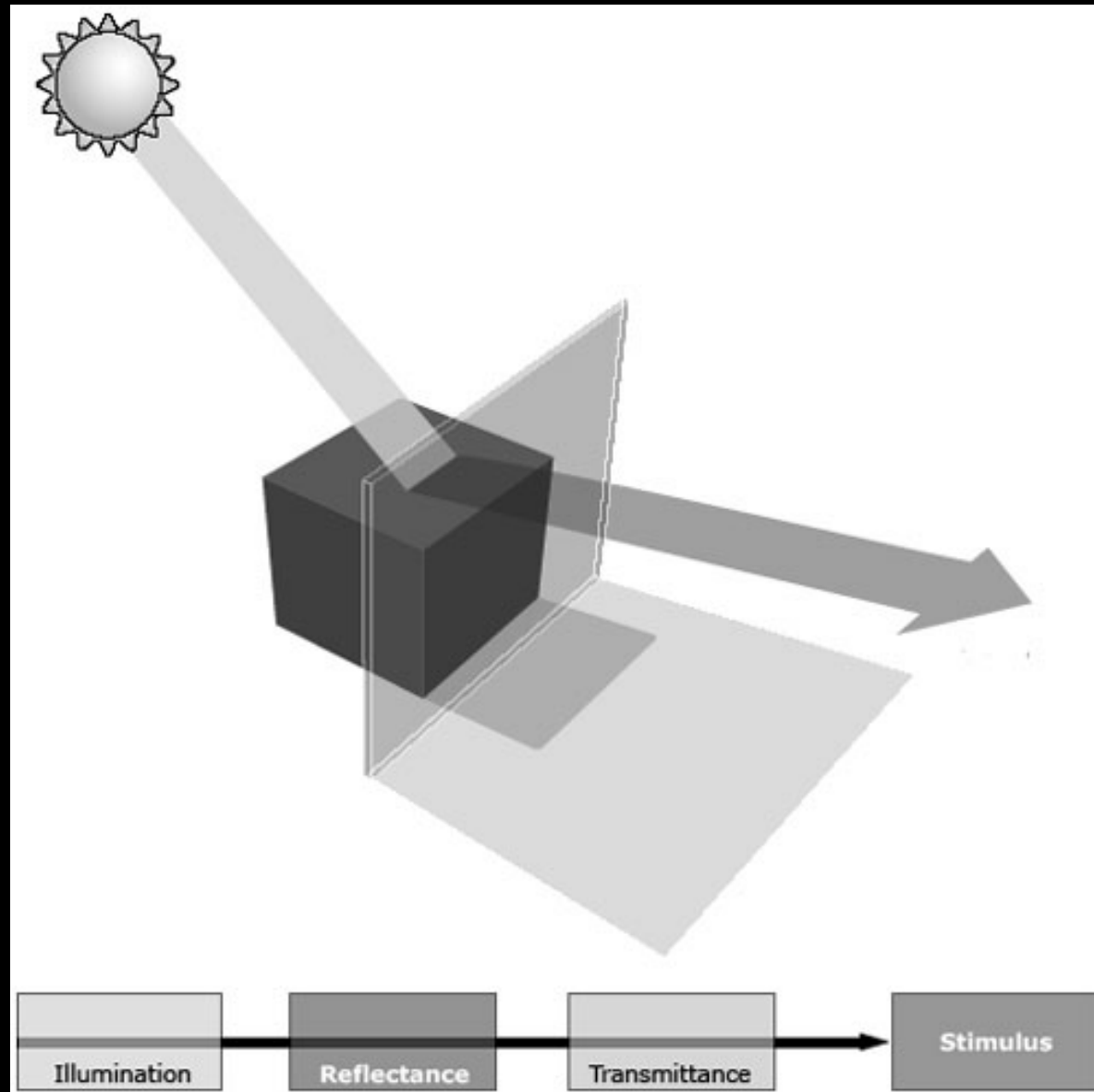
**codice neurale**



**rappresentazione  
mentale**

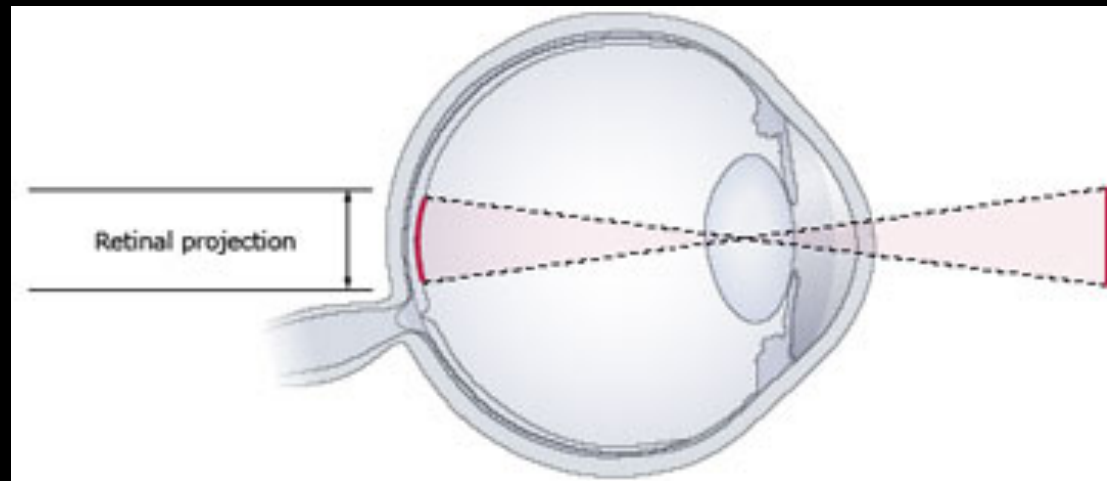


# L'informazione sensoriale visiva è ambigua - 1





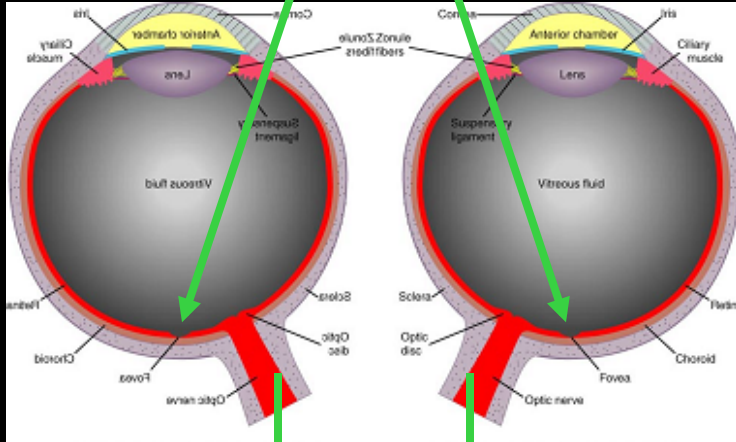
## L'informazione sensoriale visiva è ambigua - 2



# L'informazione sensoriale visiva è ambigua - 3



**l'immagine dell'oggetto  
raccolta dalla retina è:**



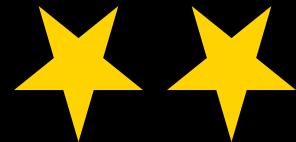
**doppia**



**capovolta**

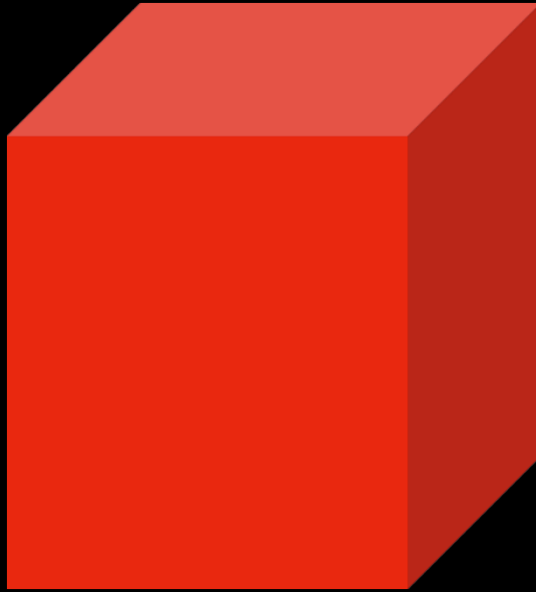


**bidimensionale**



**sistema  
visivo**





*qualia*

Forma (cubo)

Colore (rosso)

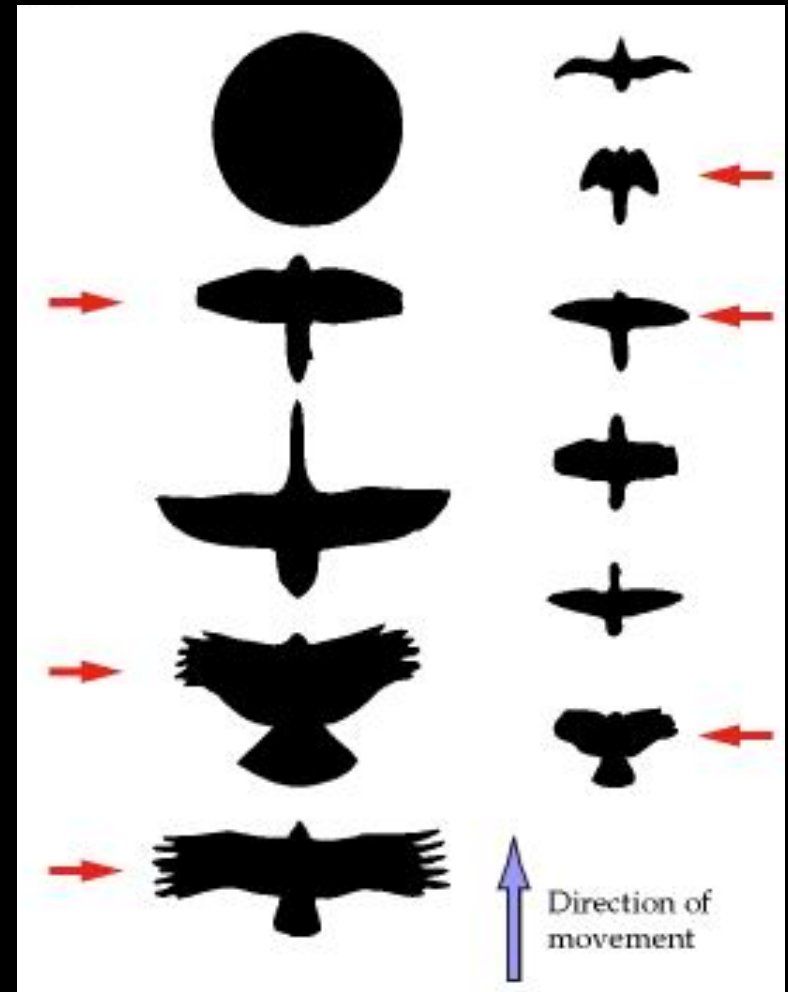
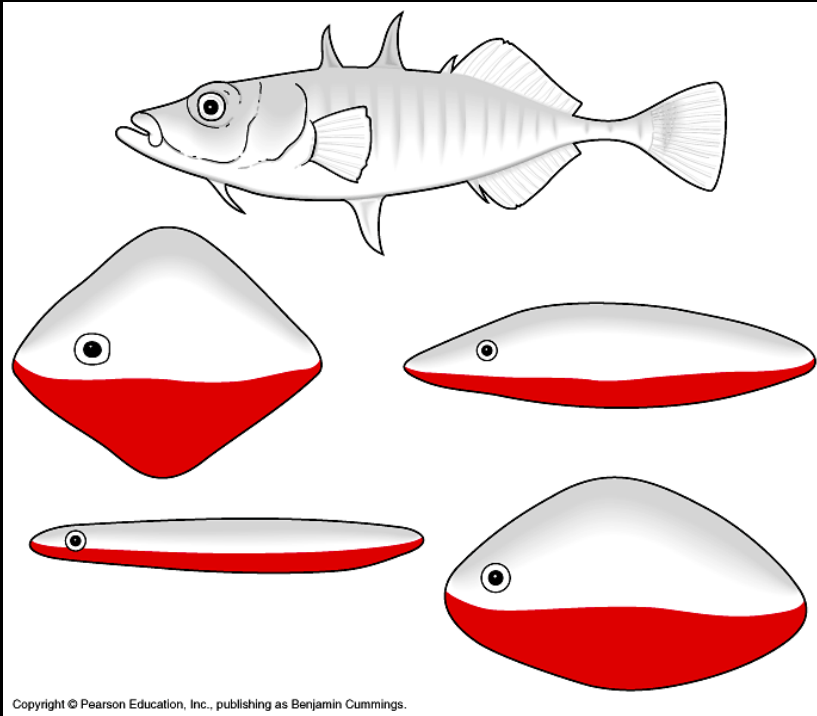
Irrevocabilità dell'input

Flessibilità dell'output

Rappresentazione mantenuta nella memoria di lavoro







Actual colour & shape	Male stickleback: red belly, bluish-white back	Female stickleback: greyish-green body, swollen silvery belly
Model characteristics	Red belly	Swollen belly
Reaction of males to model	Attack	Court

**Niko Tinbergen**



## FAP (Fixed Action Pattern)



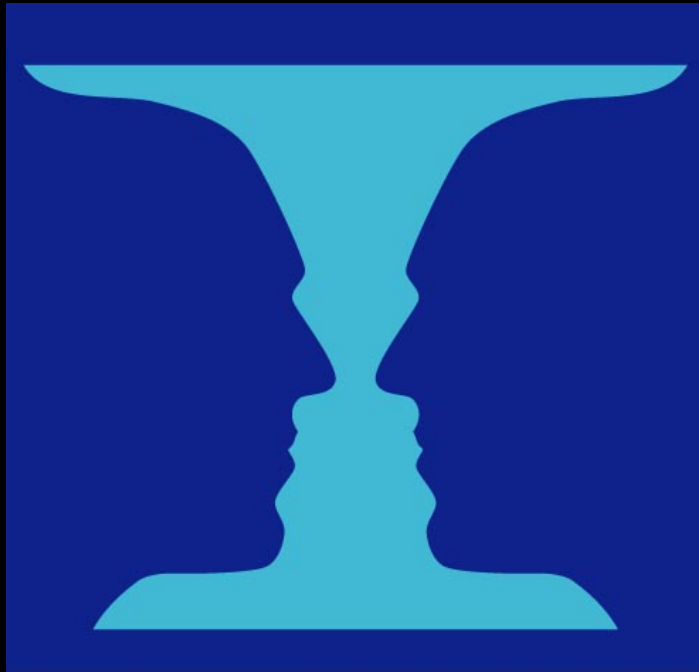
*“if you smile at me I will understand ‘cause that is something everybody everywhere does in the same language”*

**Irenäus Eibl Eibesfeldt**

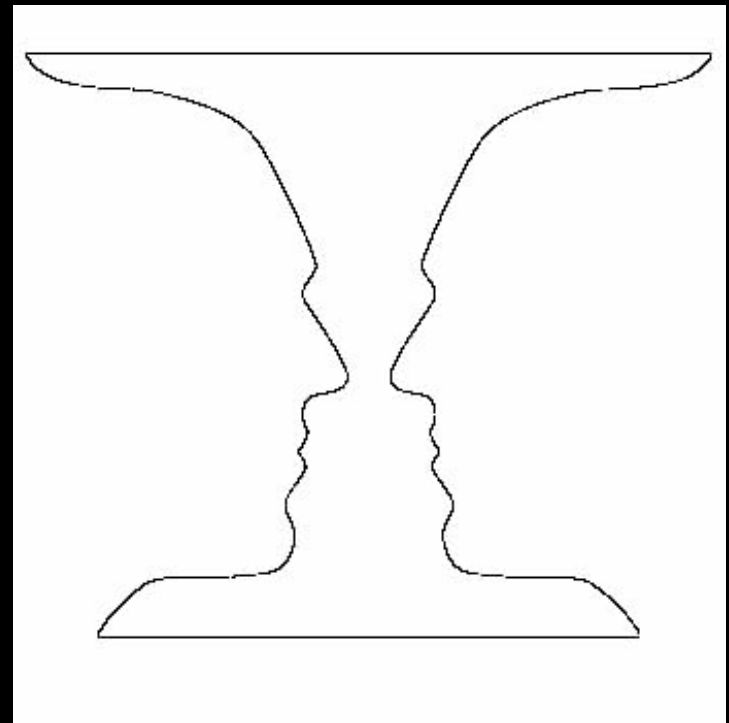


Vedere le forme



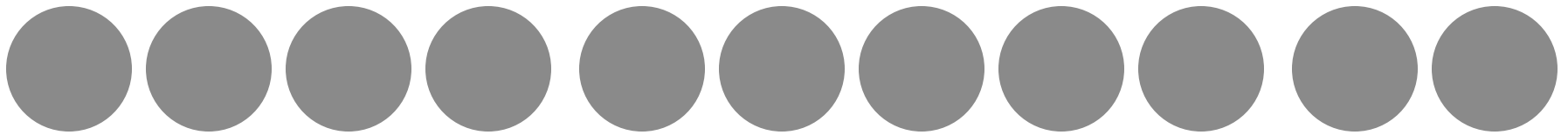


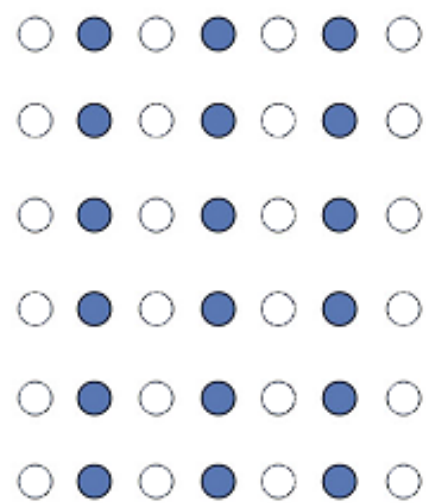
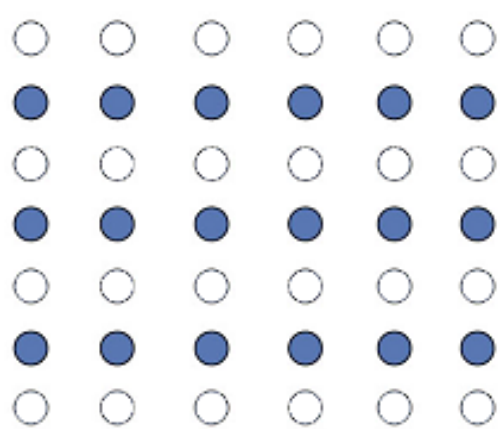
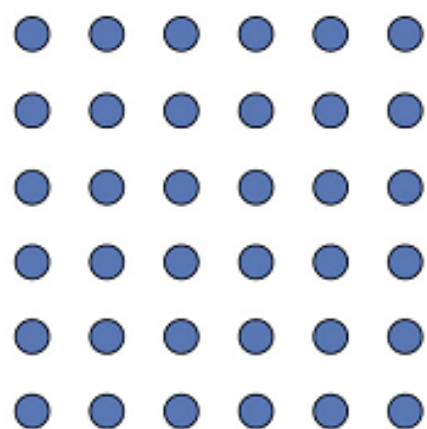
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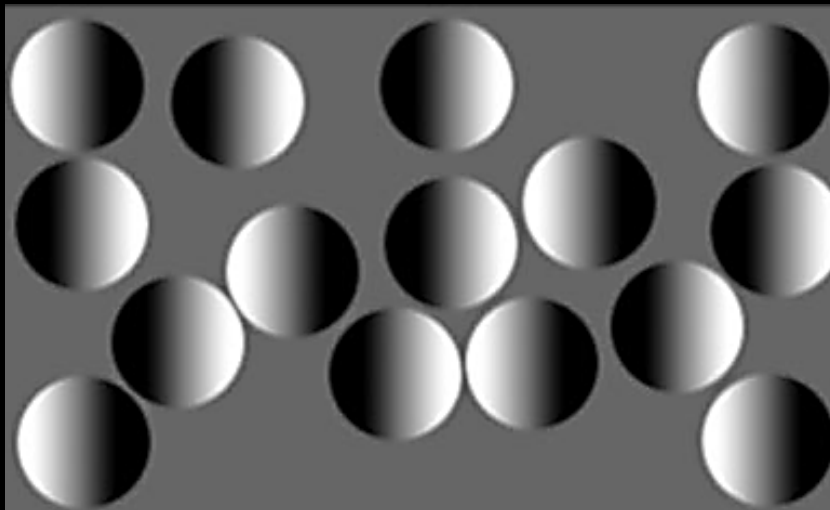
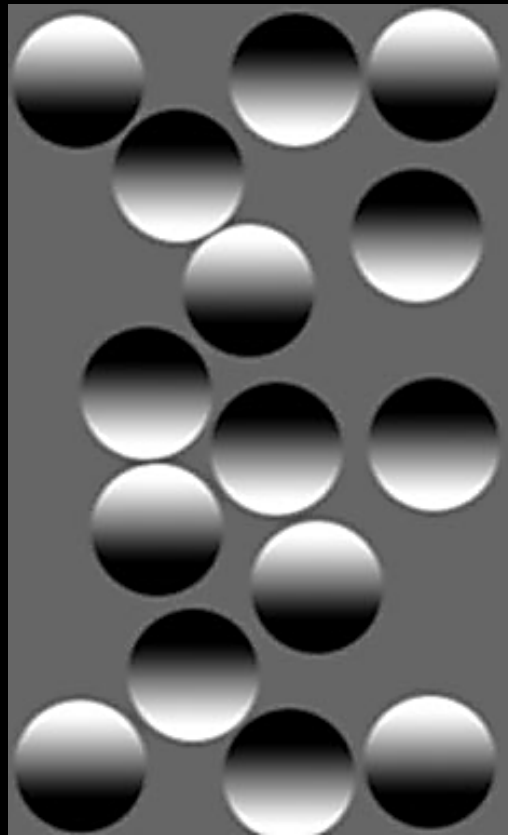
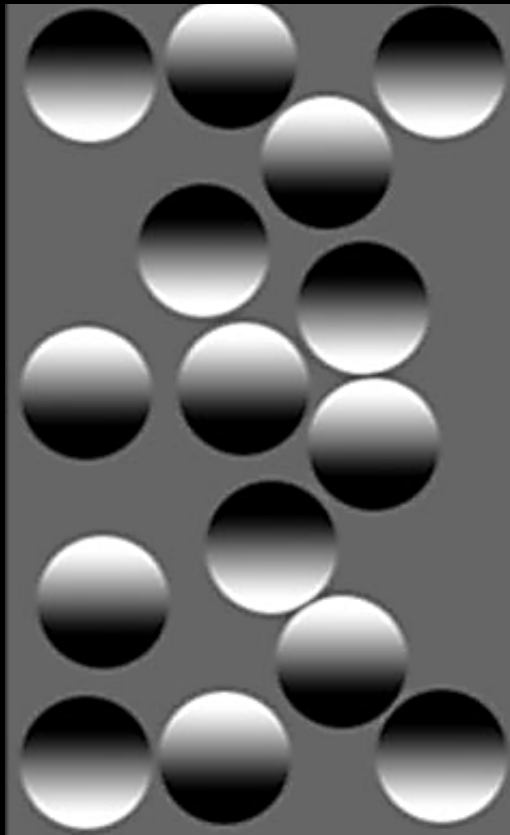




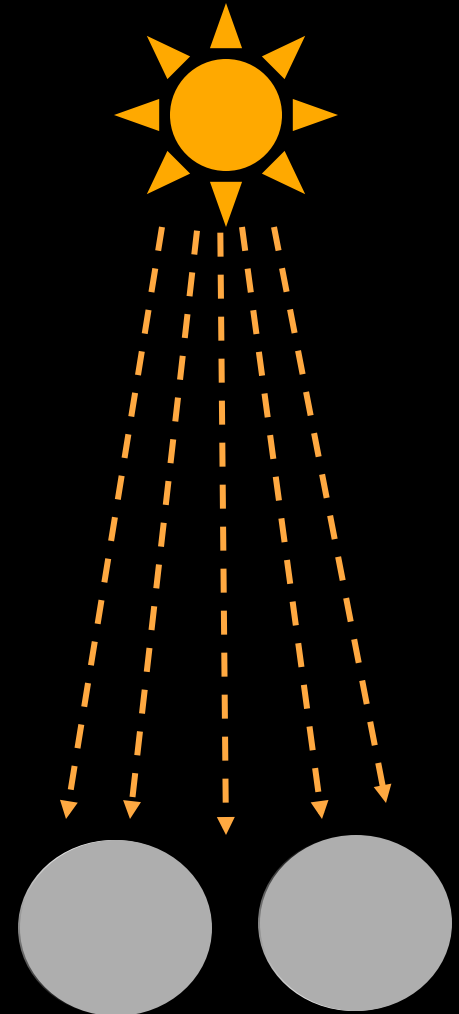




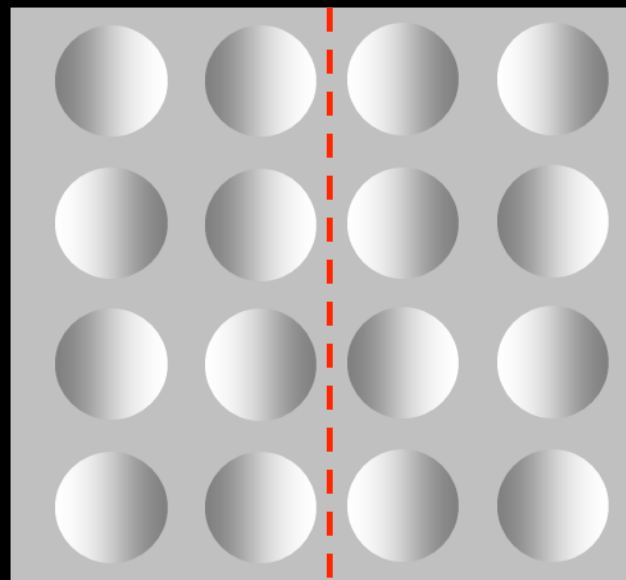
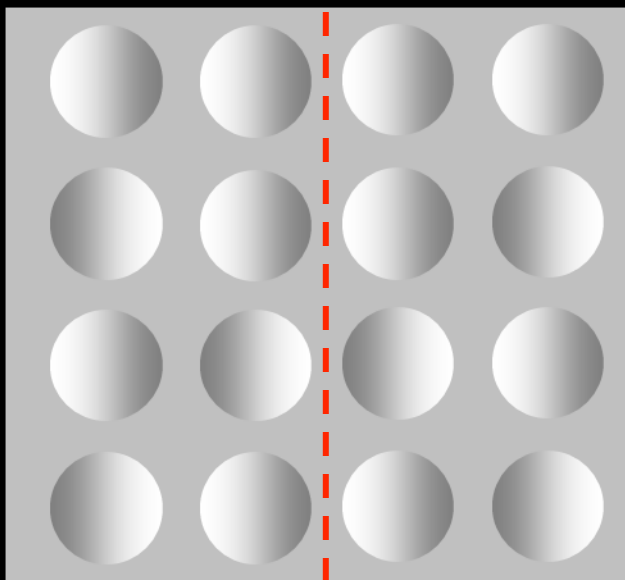
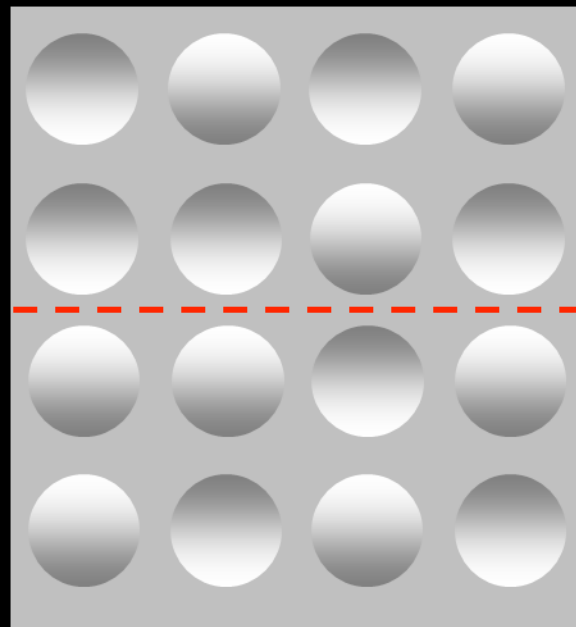
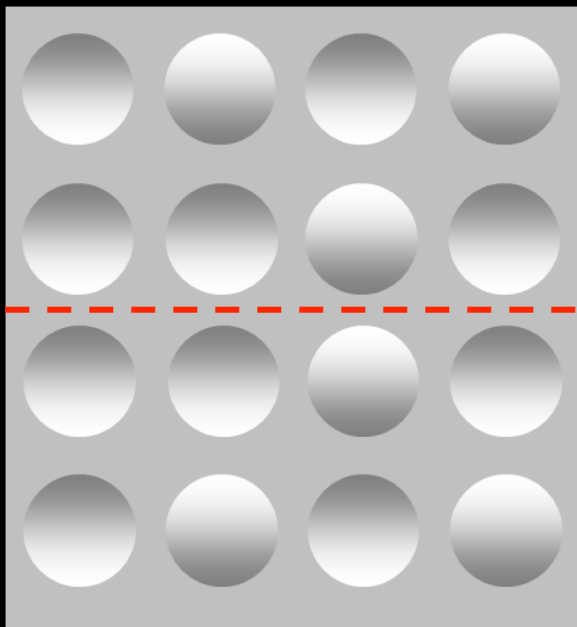




**Vilayanur  
Ramachandran**









Vedere i colori





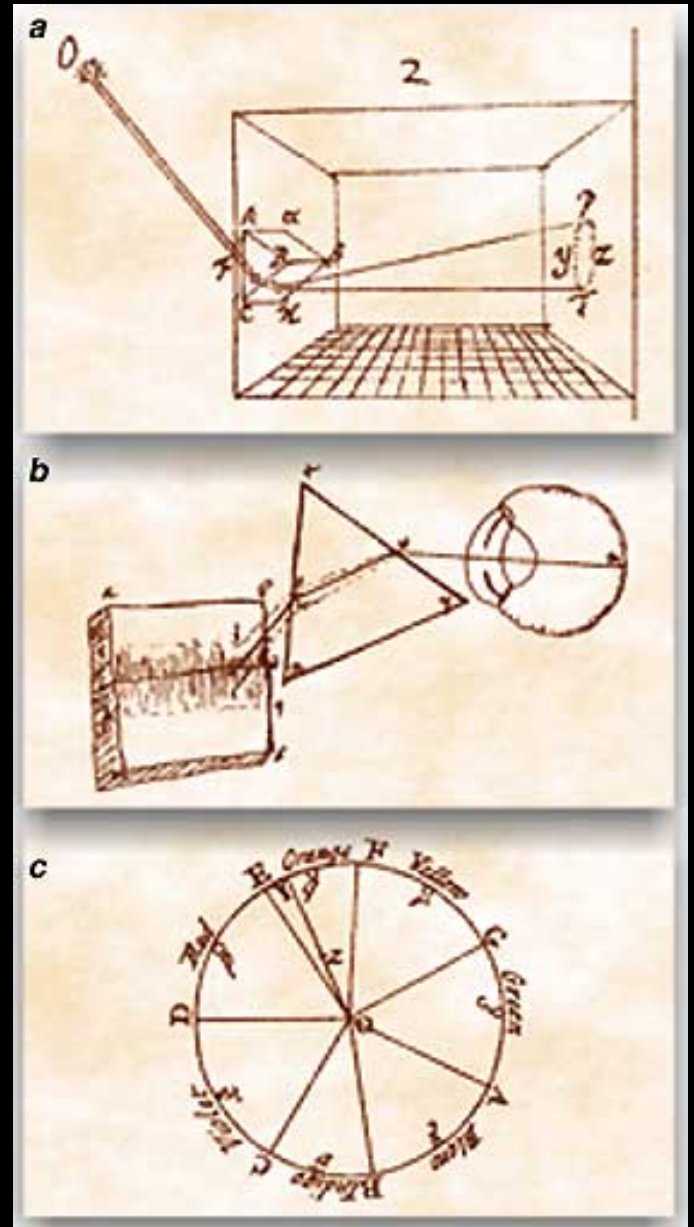
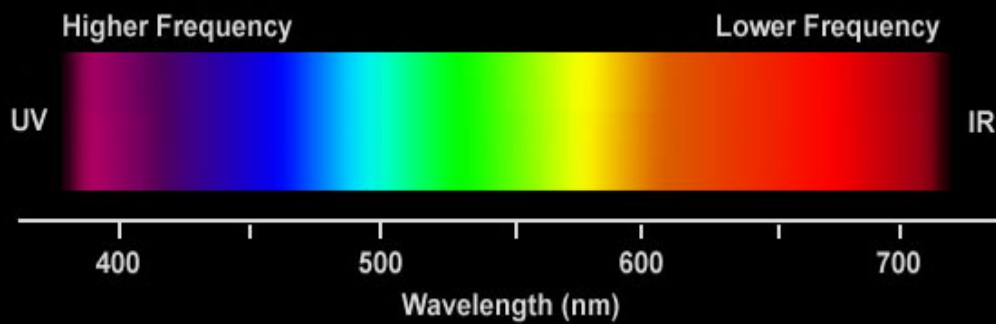
quantità di luce

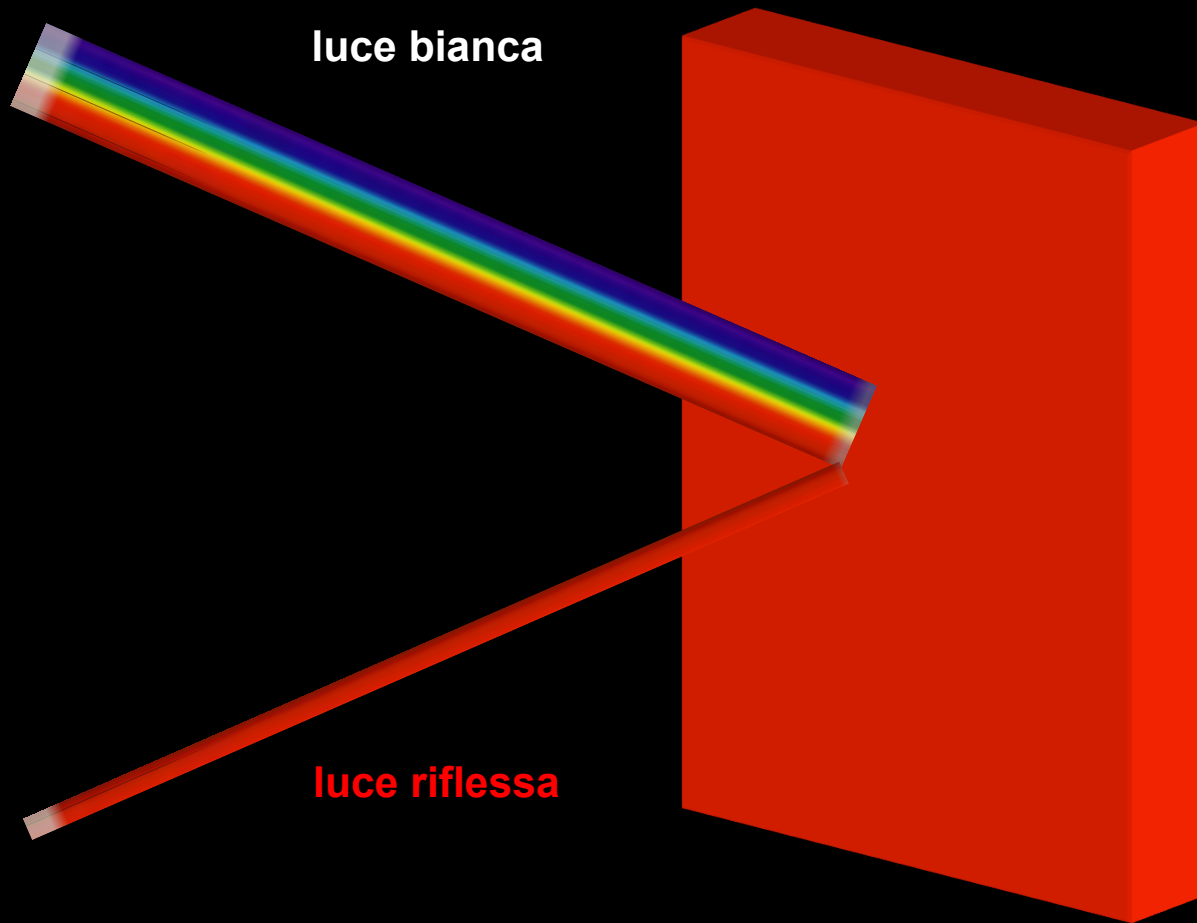


qualità della luce



Visione dei colori







# The Color of Light

## *DAYLIGHT FILM*



Tungsten Light  
(uncorrected)



Normal

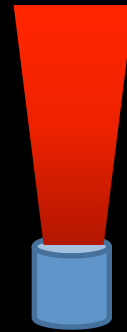
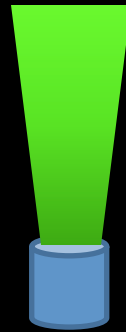
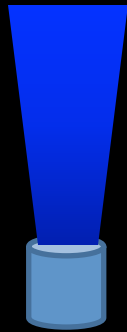
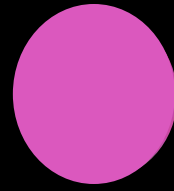


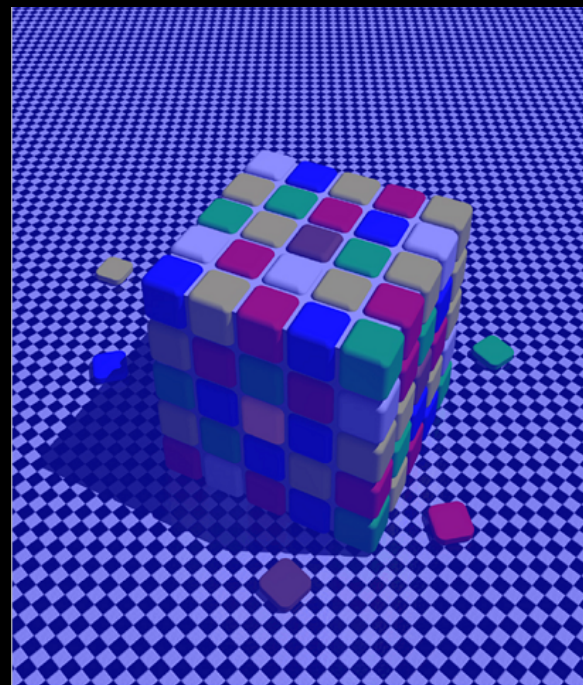
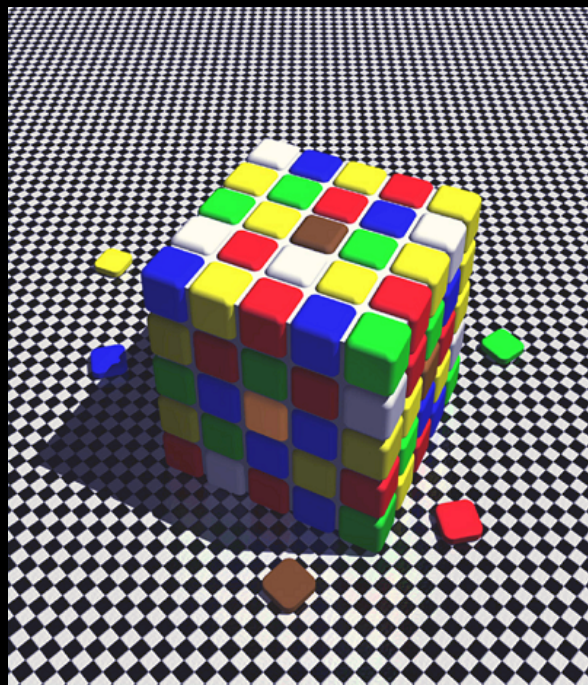
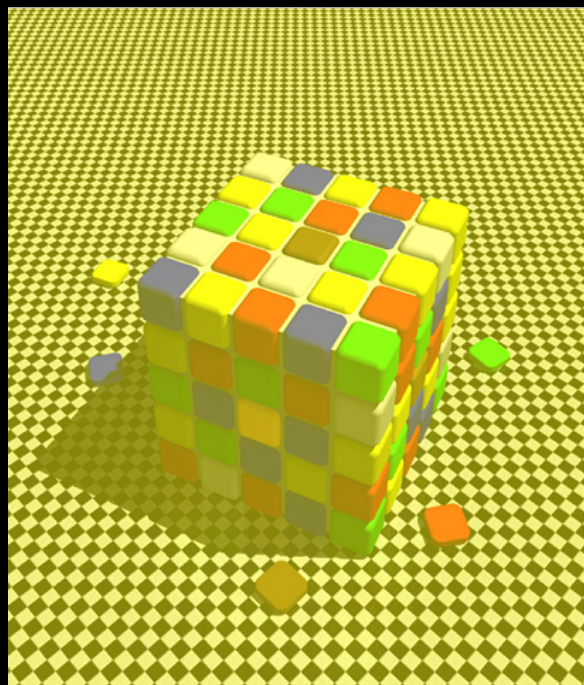
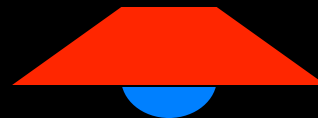
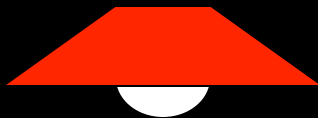
Fluorescent Light  
(uncorrected)



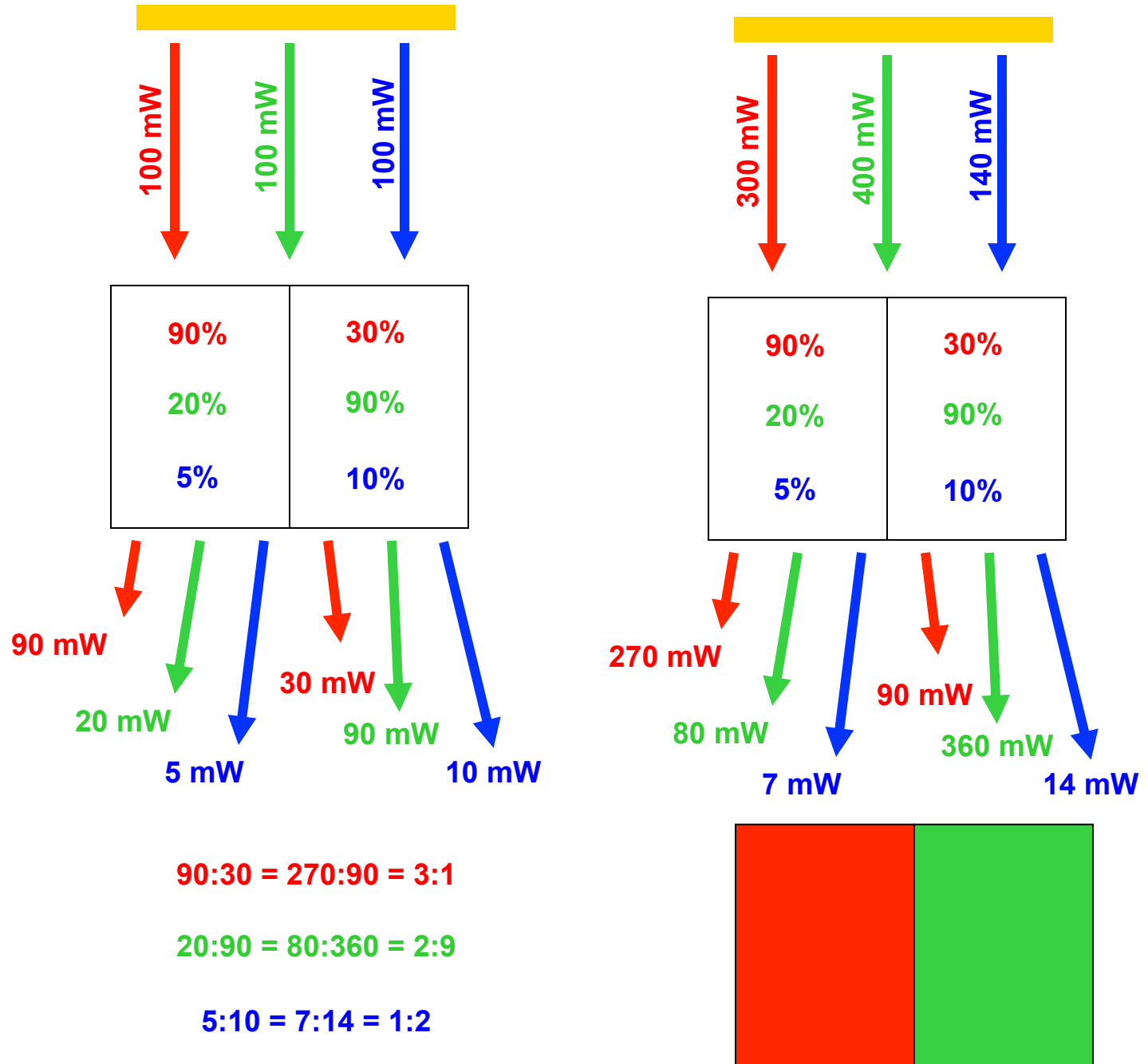


**Edwin Land**

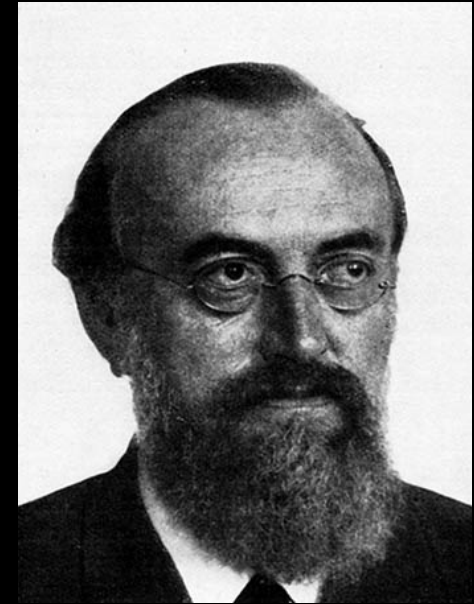




# sorgente luminosa

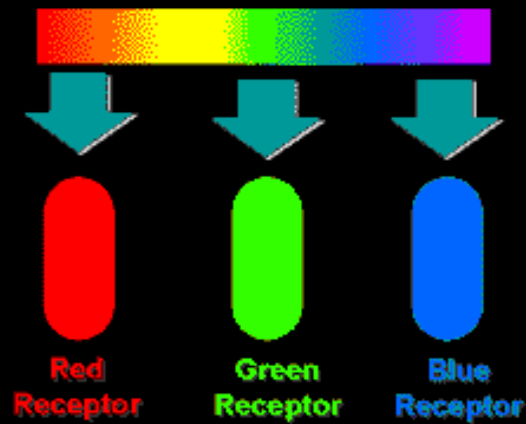






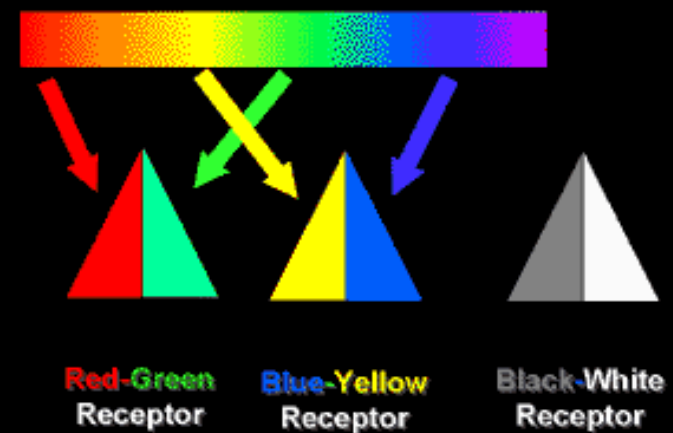
### Young-Helmholtz (Trichromatic) Theory

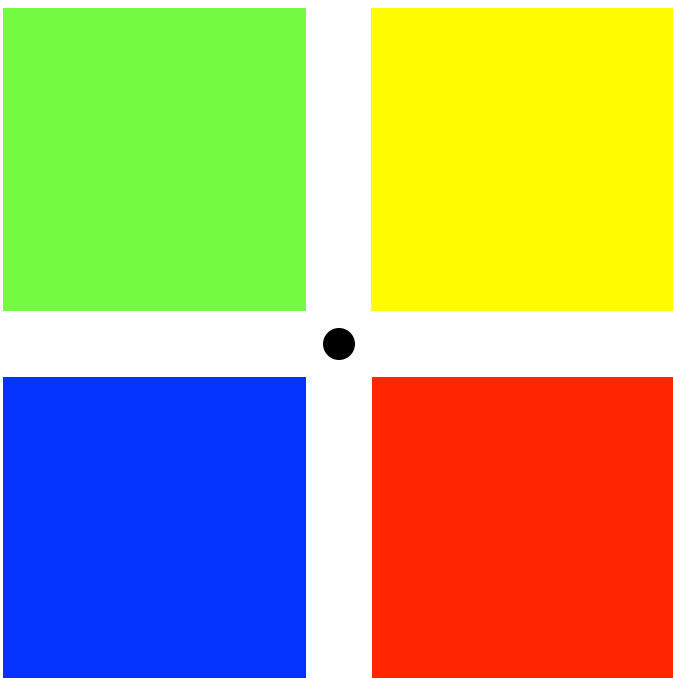
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### Hering-Hurvich (Opponent-Process) Theory

---

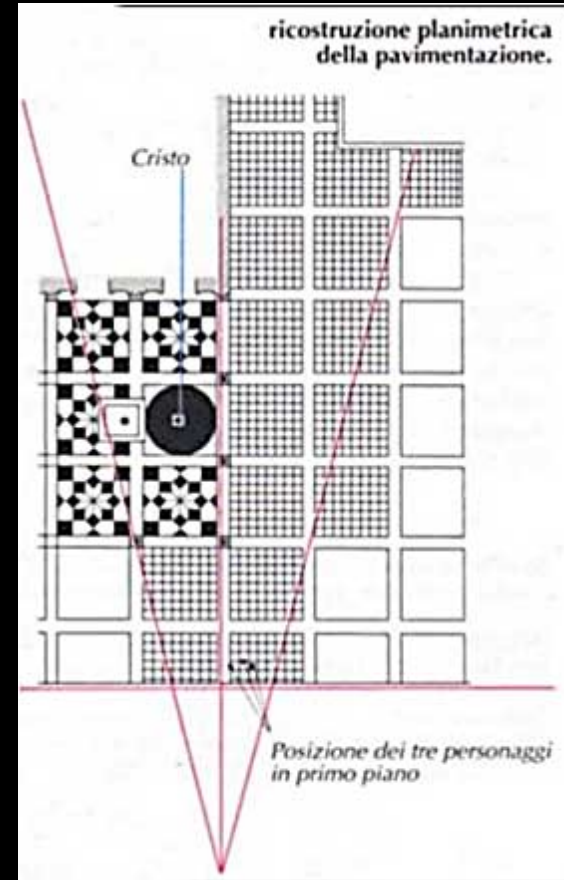
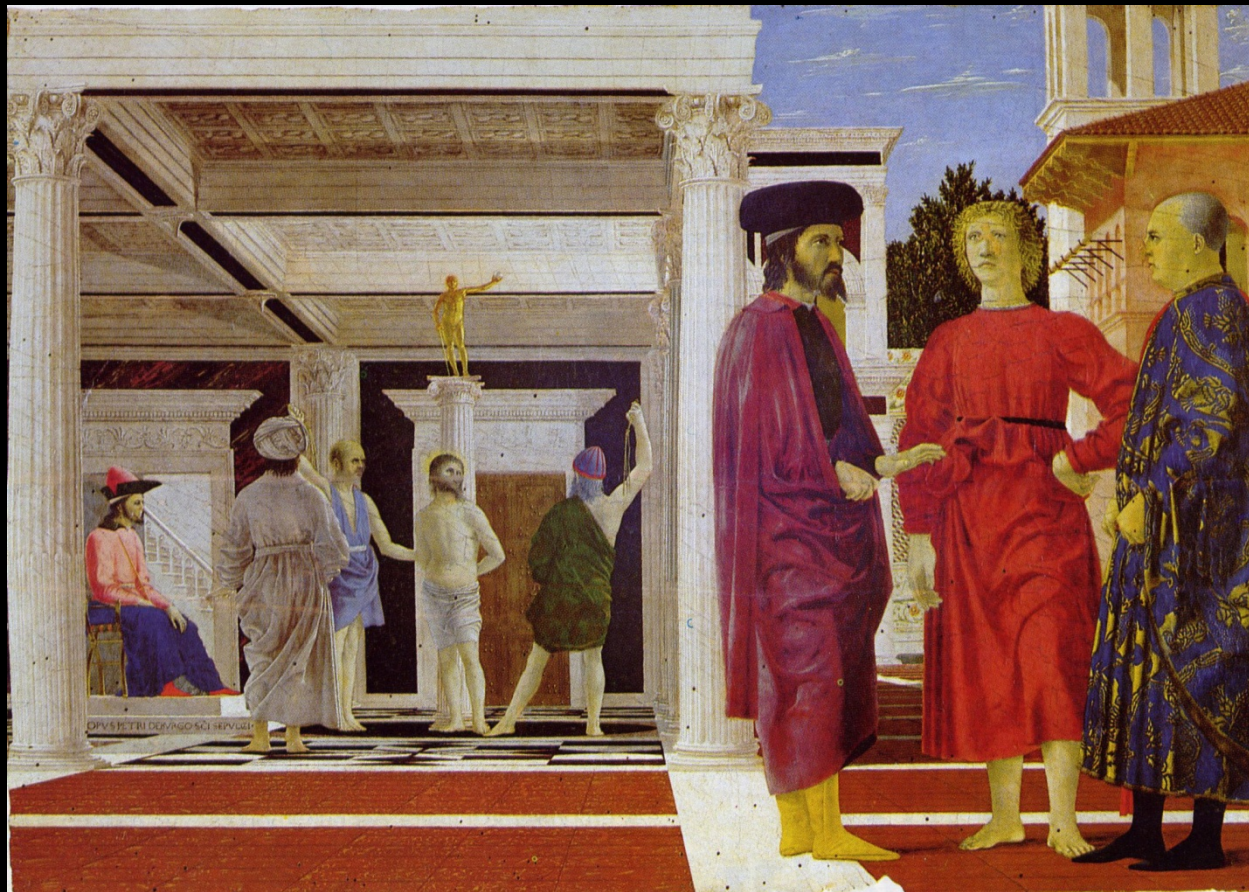


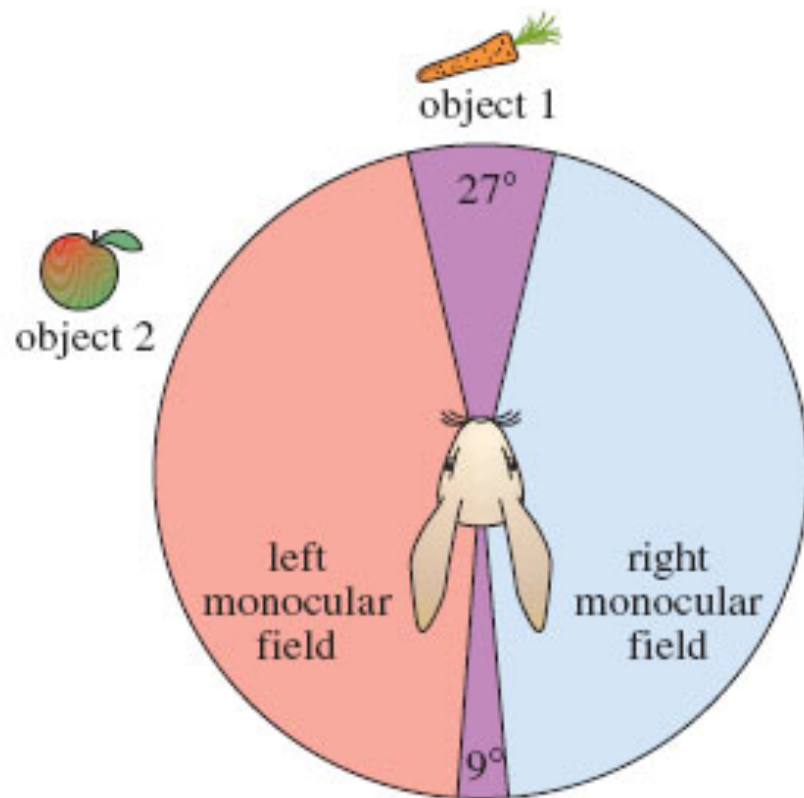




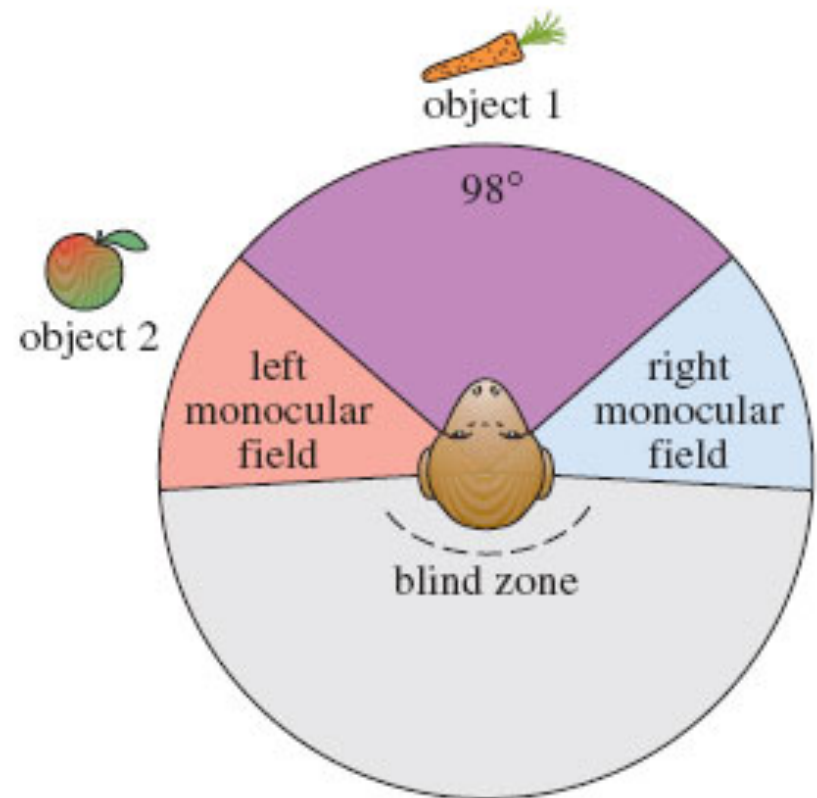


# Vedere a tre dimensioni

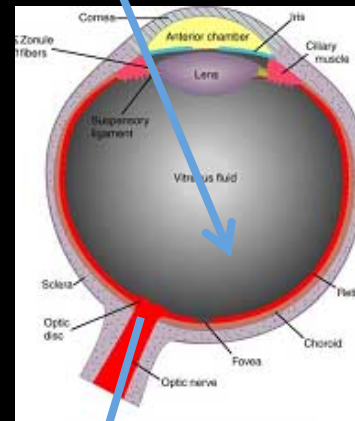
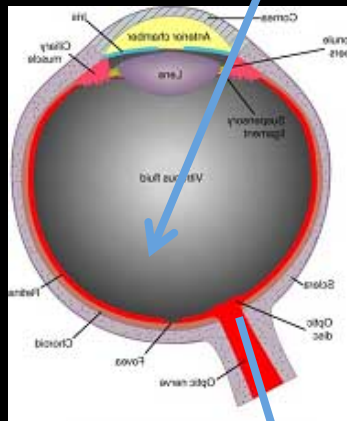




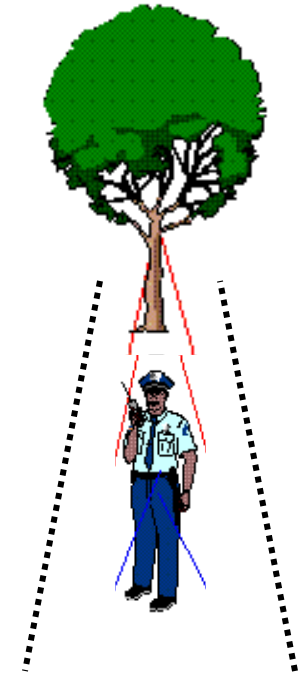
(a) rabbit



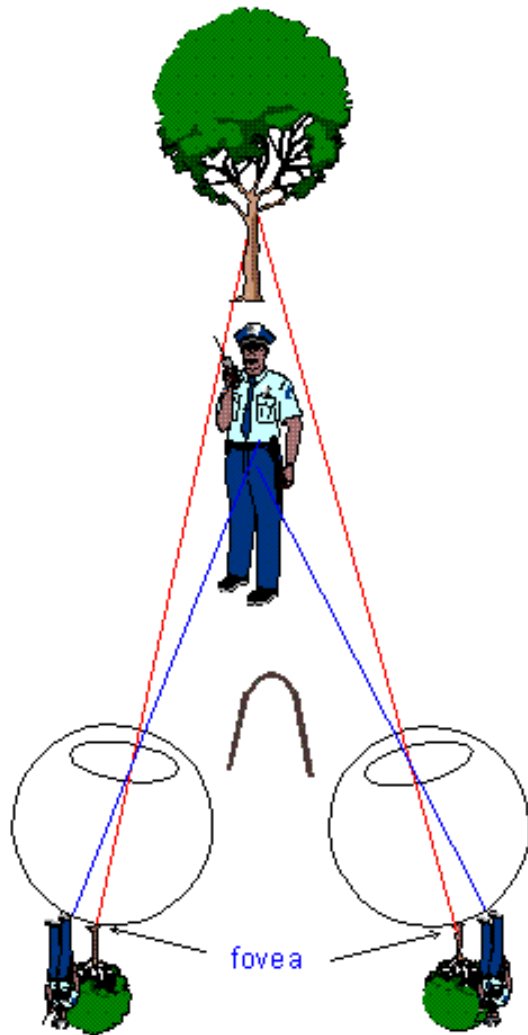
(b) monkey



**rappresentazione mentale**



**disparità  
binoculare**



**informazione sensoriale**



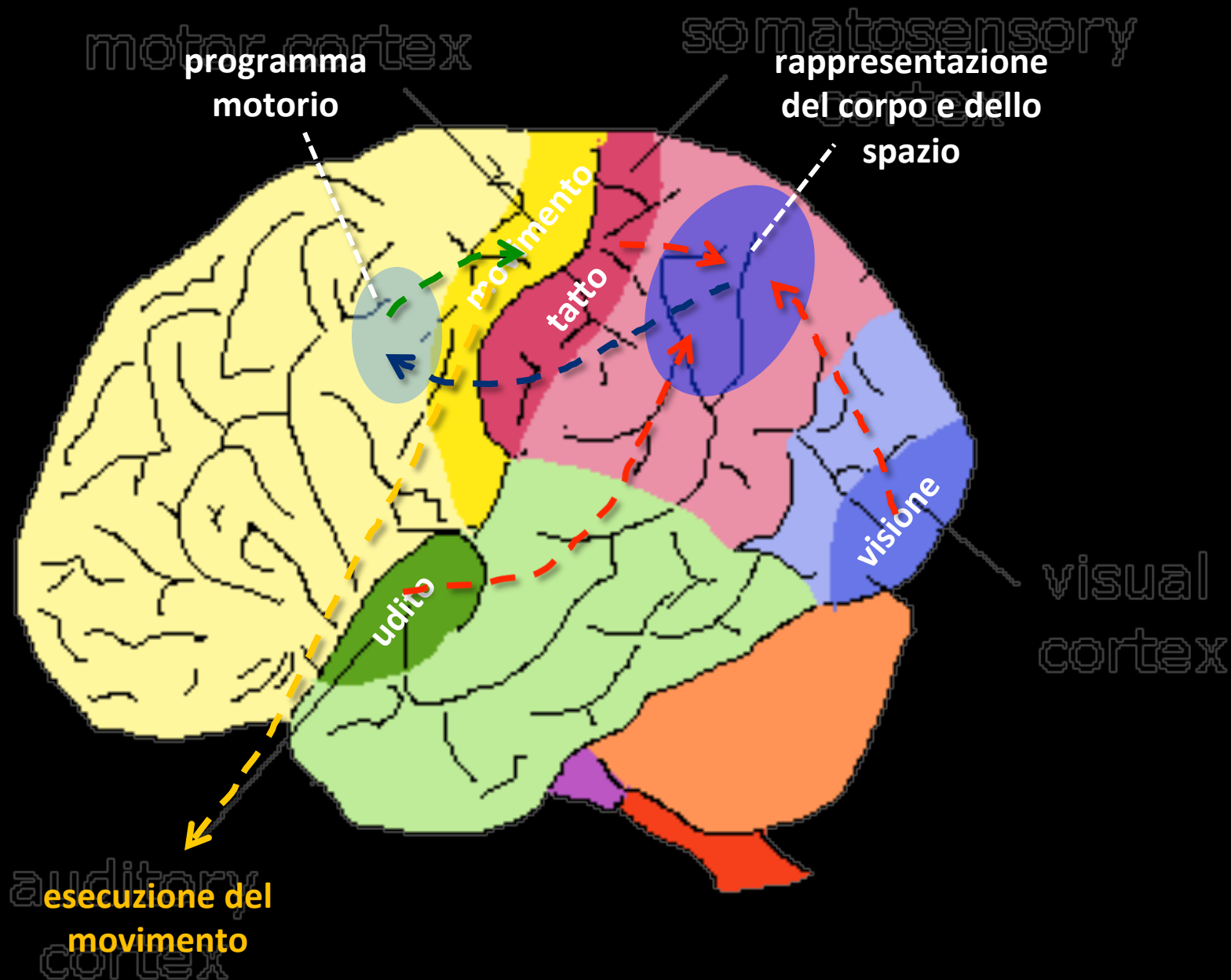




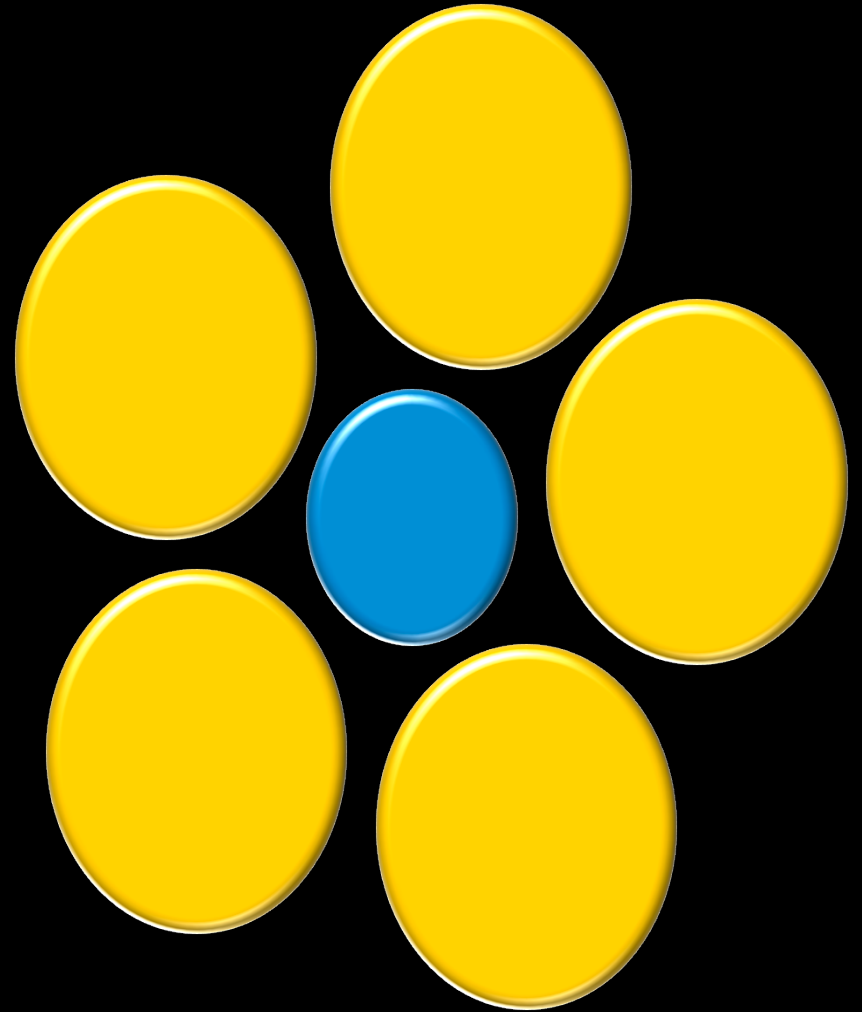
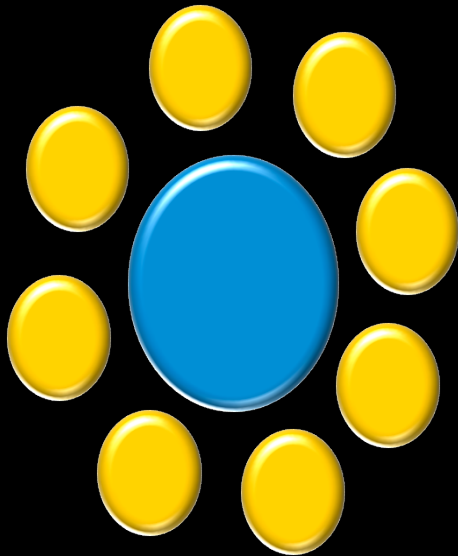
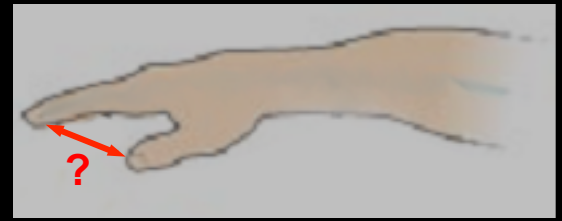
Vedere per interagire











via dorsale  
*come?*



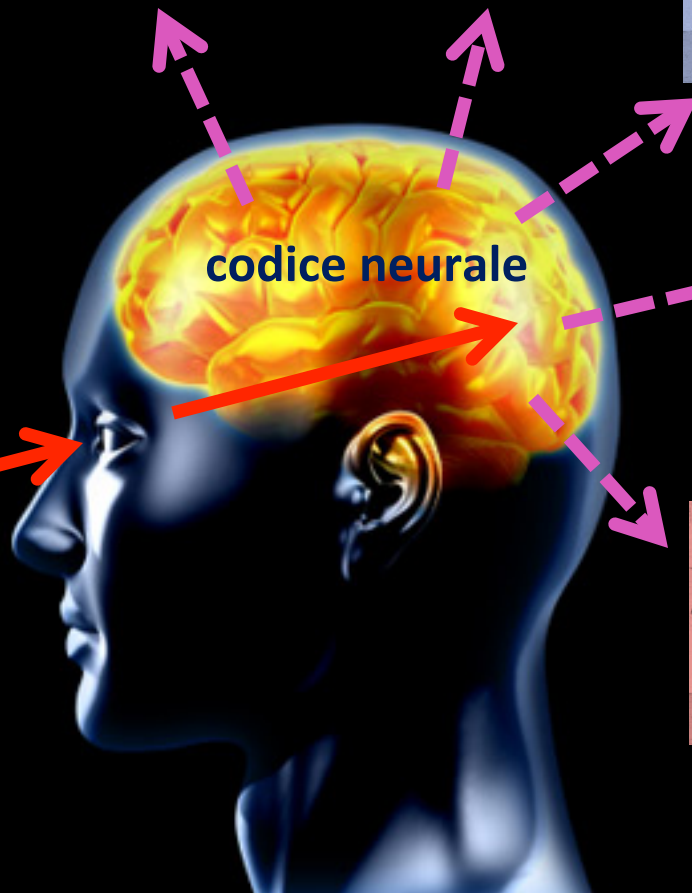
**corteccia  
visiva**

via ventrale  
*cosa?*





racpresentazioni  
mentali  
multiple



oggetto/stimolo

## **La rappresentazione cosciente della realtà è**

- **Obbligatoria**
- **Derivata da un numero limitato di informazioni sensoriali**
- **Costruita decodificando le informazioni sensoriali attraverso parametri (preconoscenze) interne**
- **Costruita su base probabilistica**
- **Mantenuta nella memoria di lavoro per permettere la scelta di una risposta non automatica e variabile**
- **Multipla per rispondere a diverse necessità funzionali**



That the goal of behaviour is maximizing genetic fitness does not mean to say that the origins of that behaviour (in terms of its development in the individual) are genetic. The capacity to make the decision to behave in a certain way may be genetic, but that does not mean that the decision to act in a particular way is itself genetically determined. It is the capacity (to all intents and purposes, the brain) that allows the organism to evaluate the costs and benefits of alternative behavioural possibilities, and so to make its choice on the basis of a free decision after weighing up its options.

*Robin Dunbar (2004) The Human Story*