

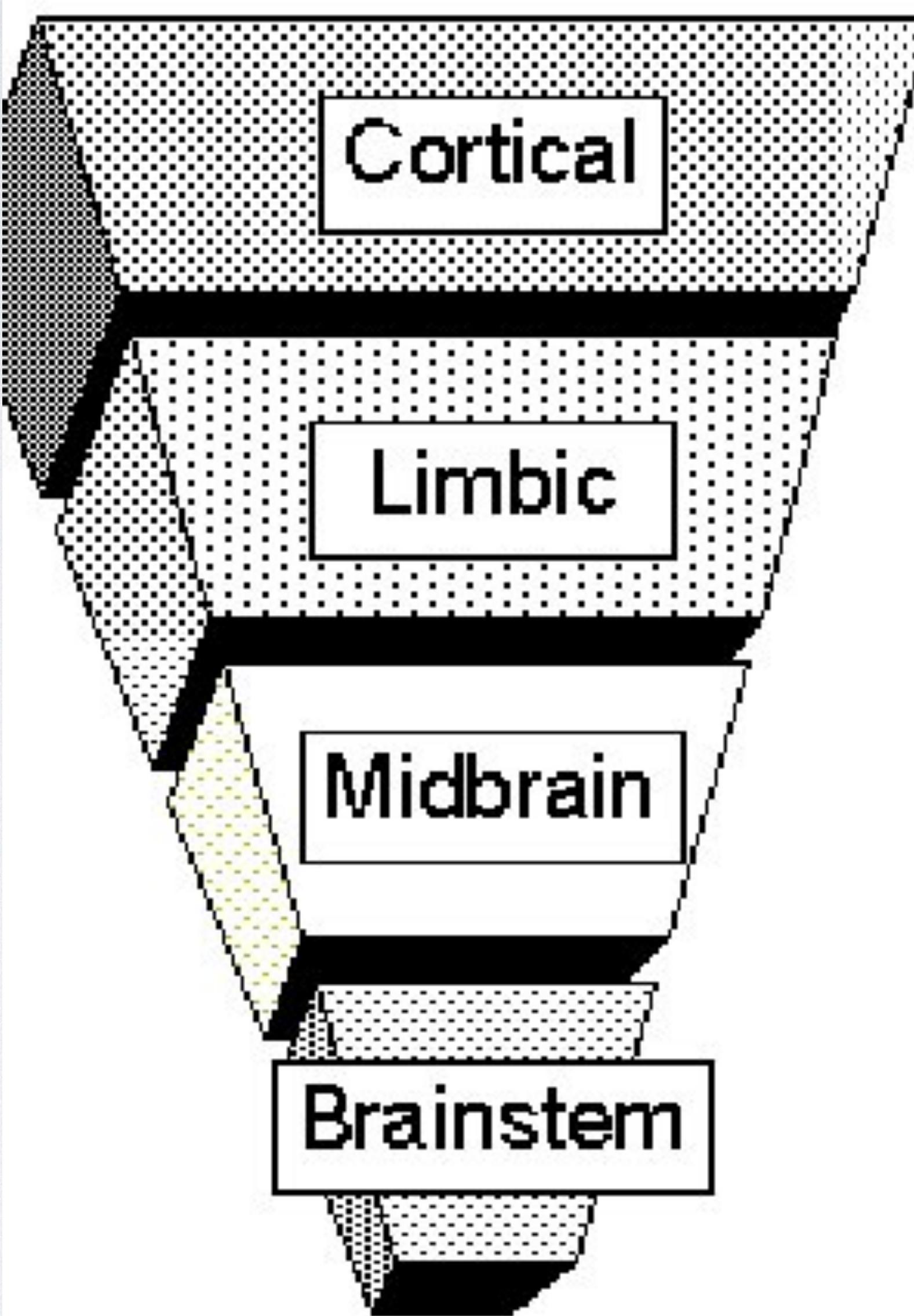
IMAGES FROM INSIDE THE HUMAN BRAIN

by Léon van der Lee

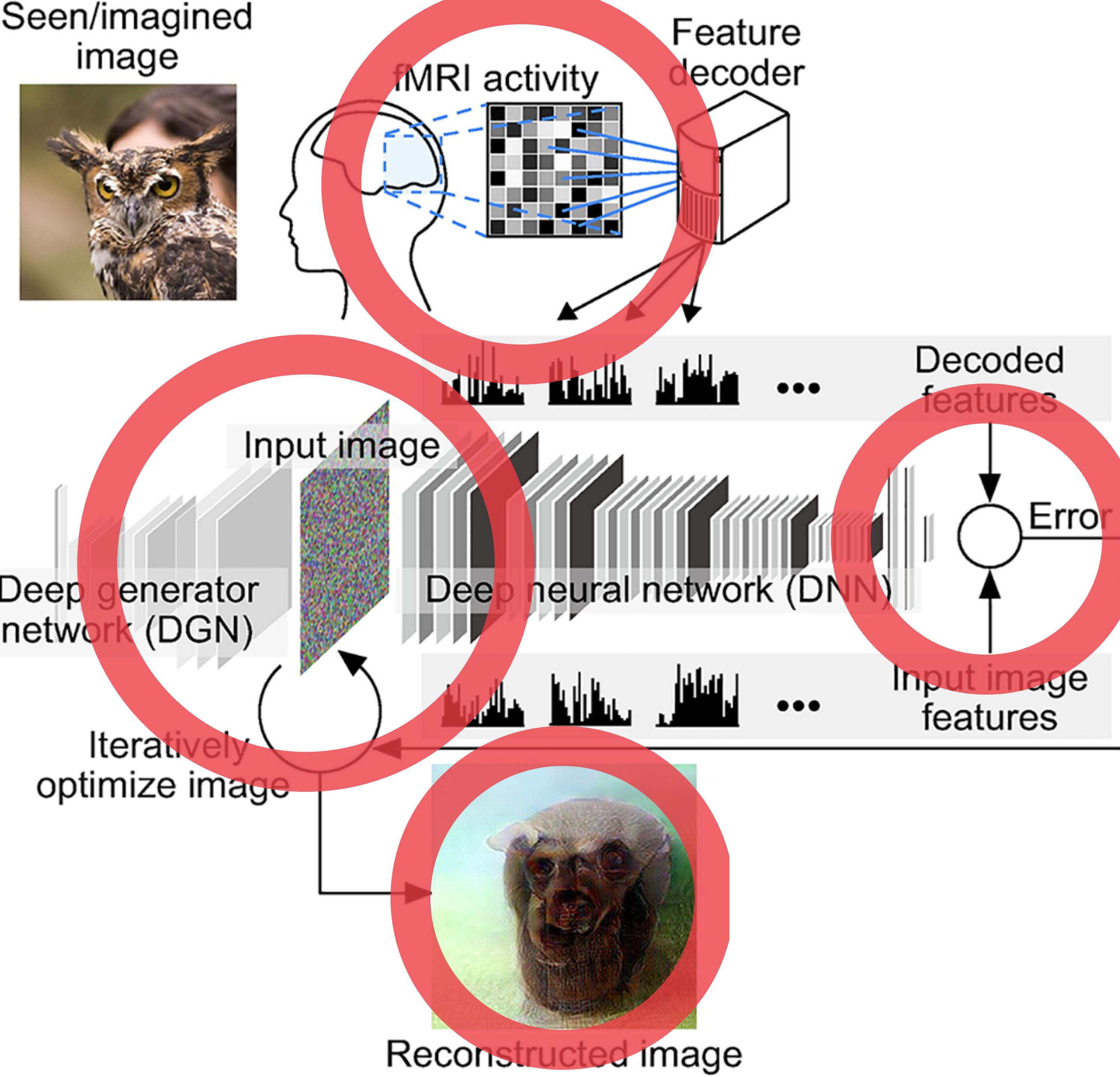
INTRODUCTION

- Subjects seeing different images
- functional MRI (fMRI)
- Deep neural network (DNN)

- Different levels of the brain's visual system
- Results are further enhanced with a deep generator network



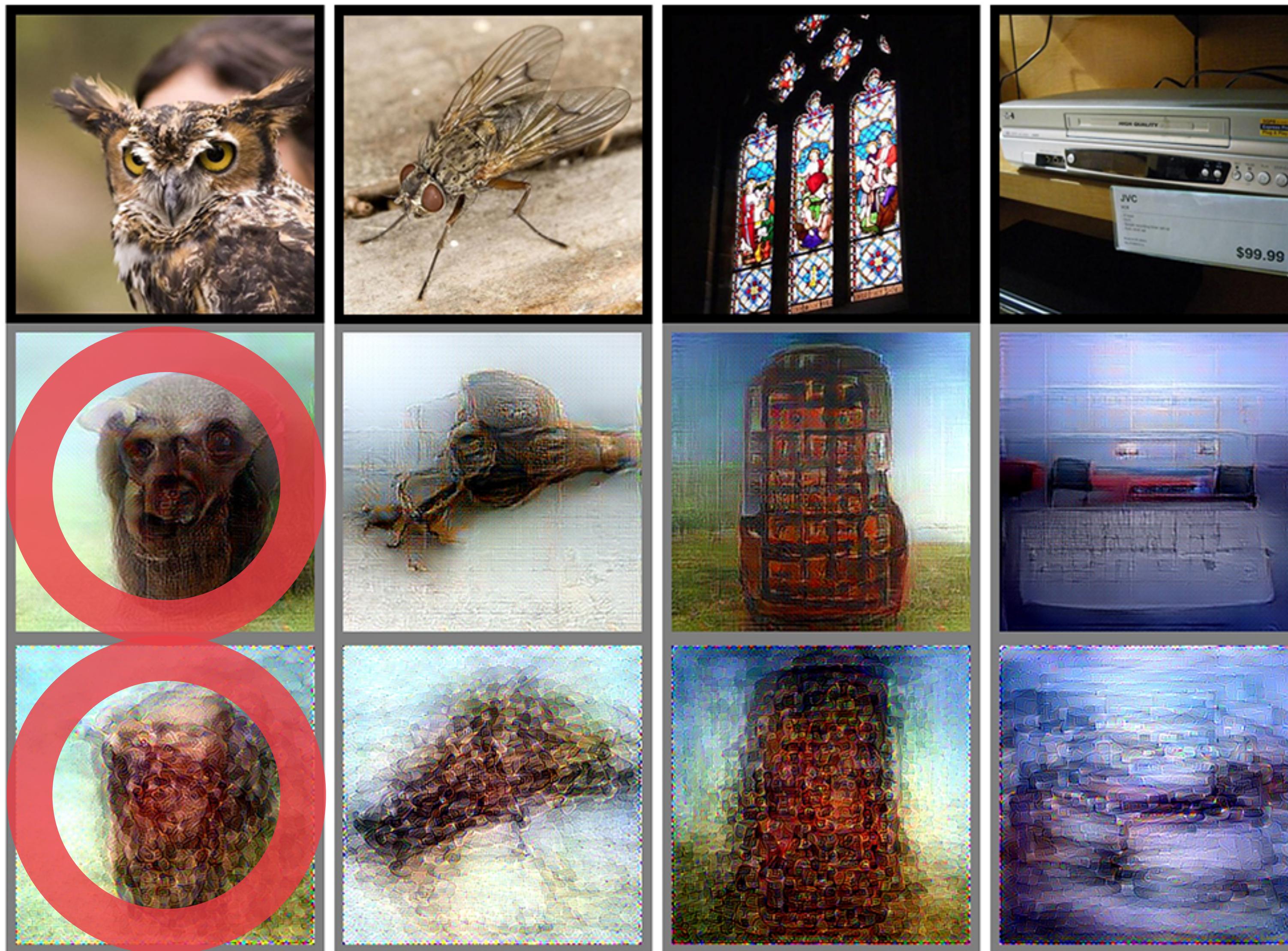
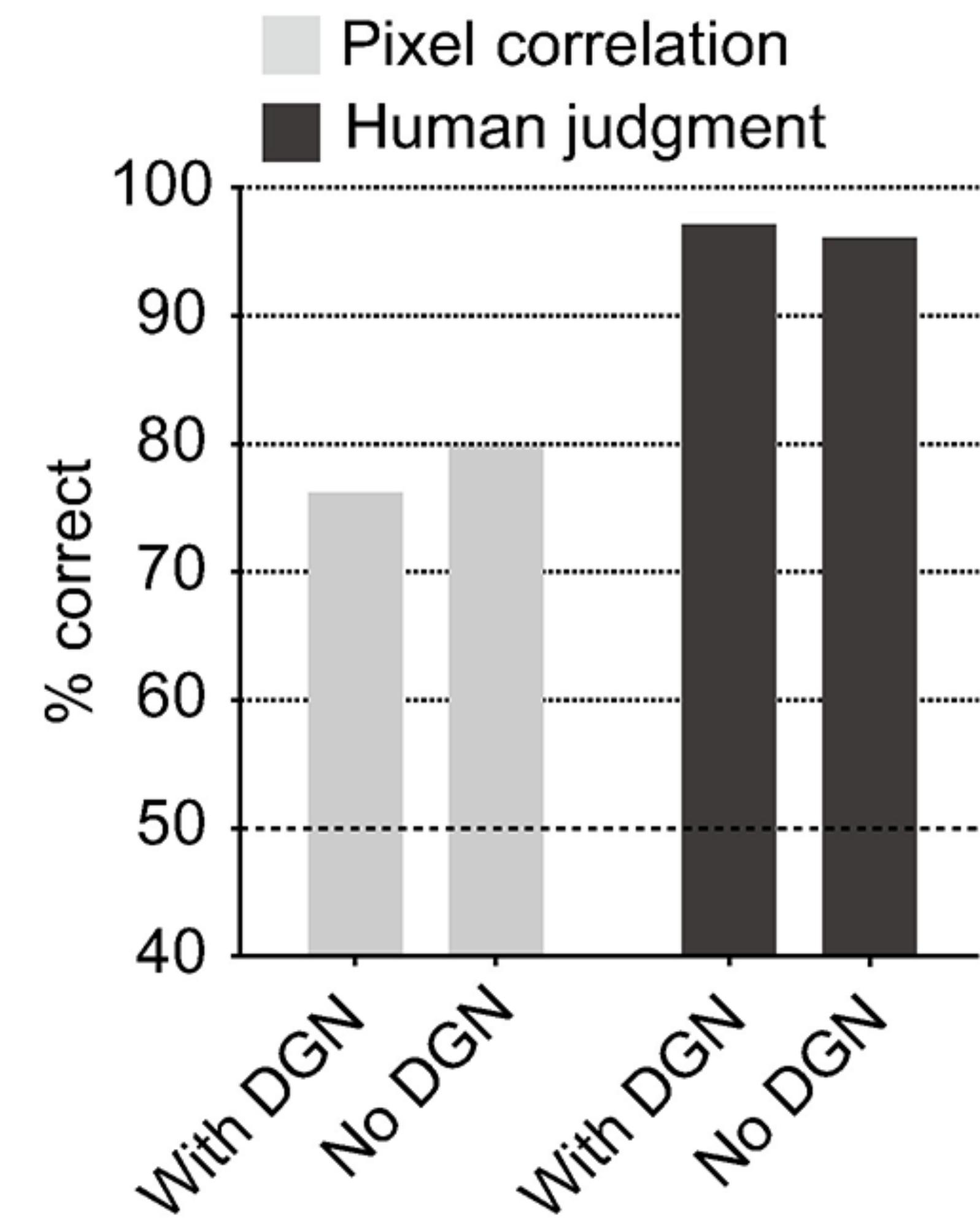
Abstract Thought
Concrete Thought
Affiliation
Attachment
Sexual Behavior
Emotional Reaction
Motor Regulation
"Arousal"
Appetite/Satiety
Sleep
Blood Pressure
Heart Rate
Body Temperature

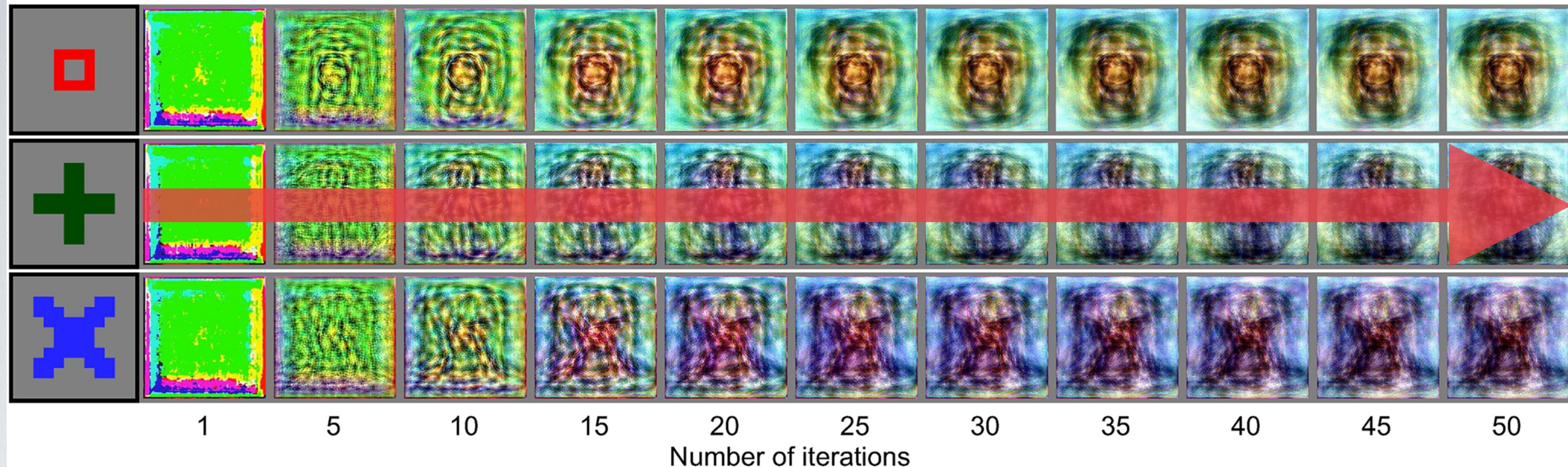
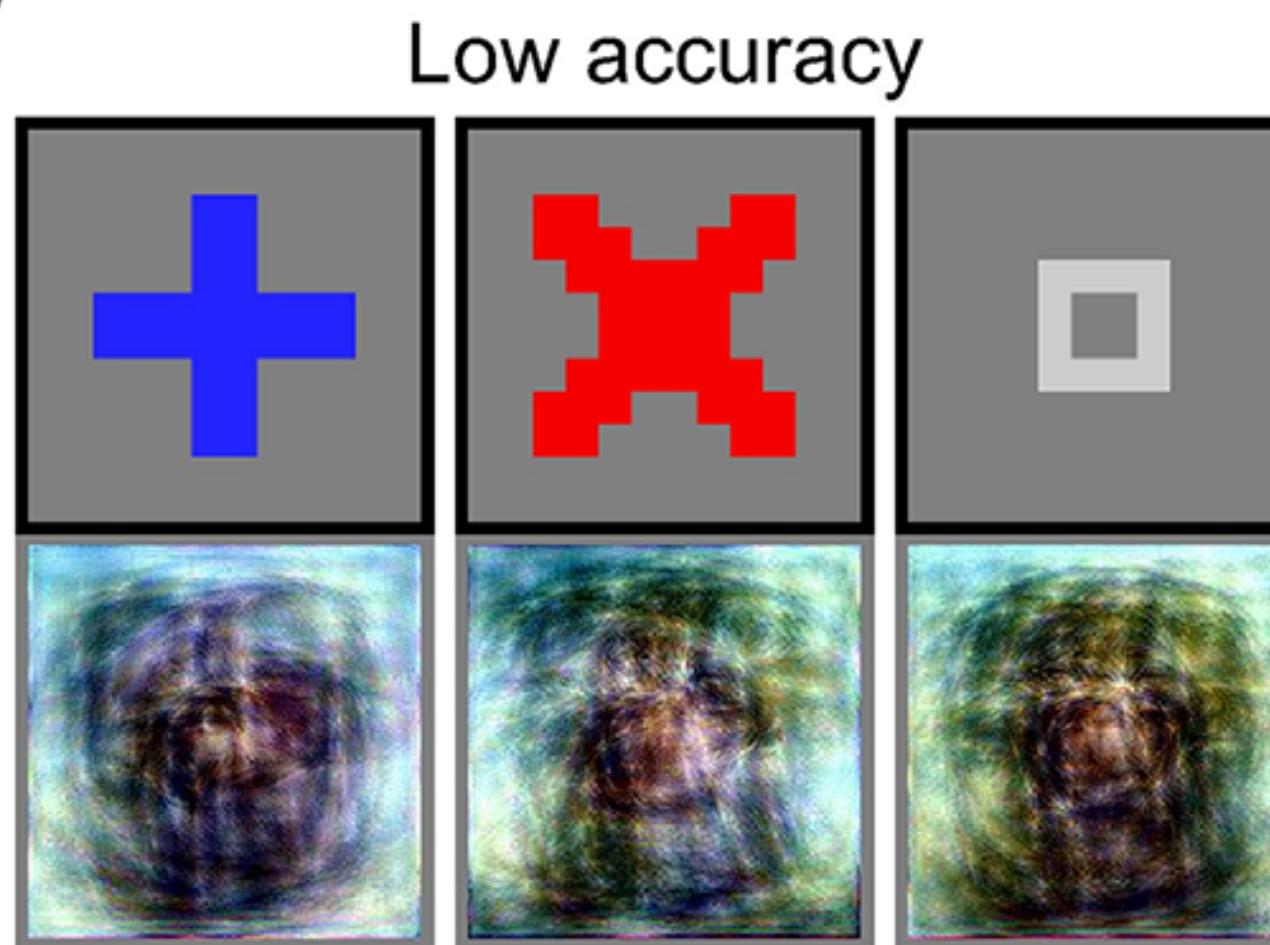
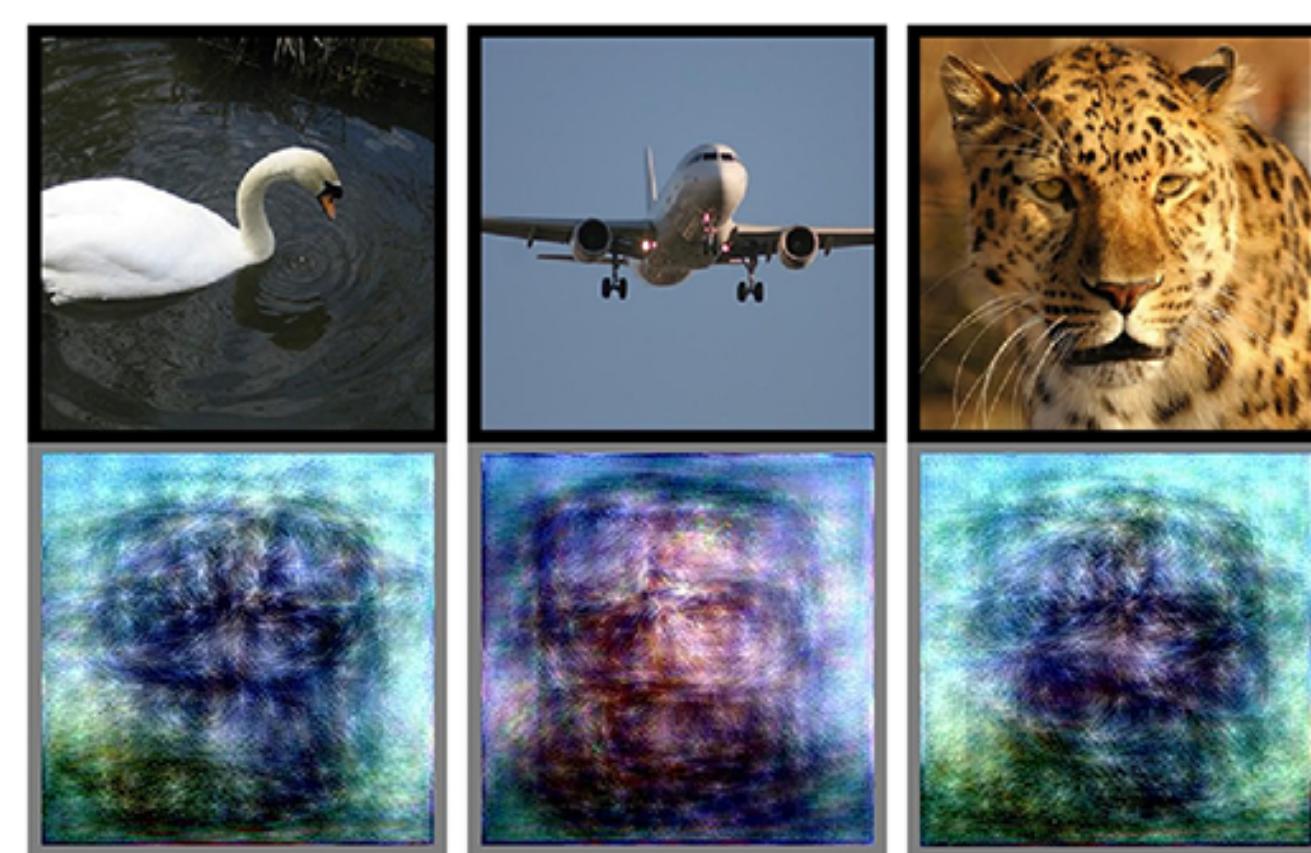
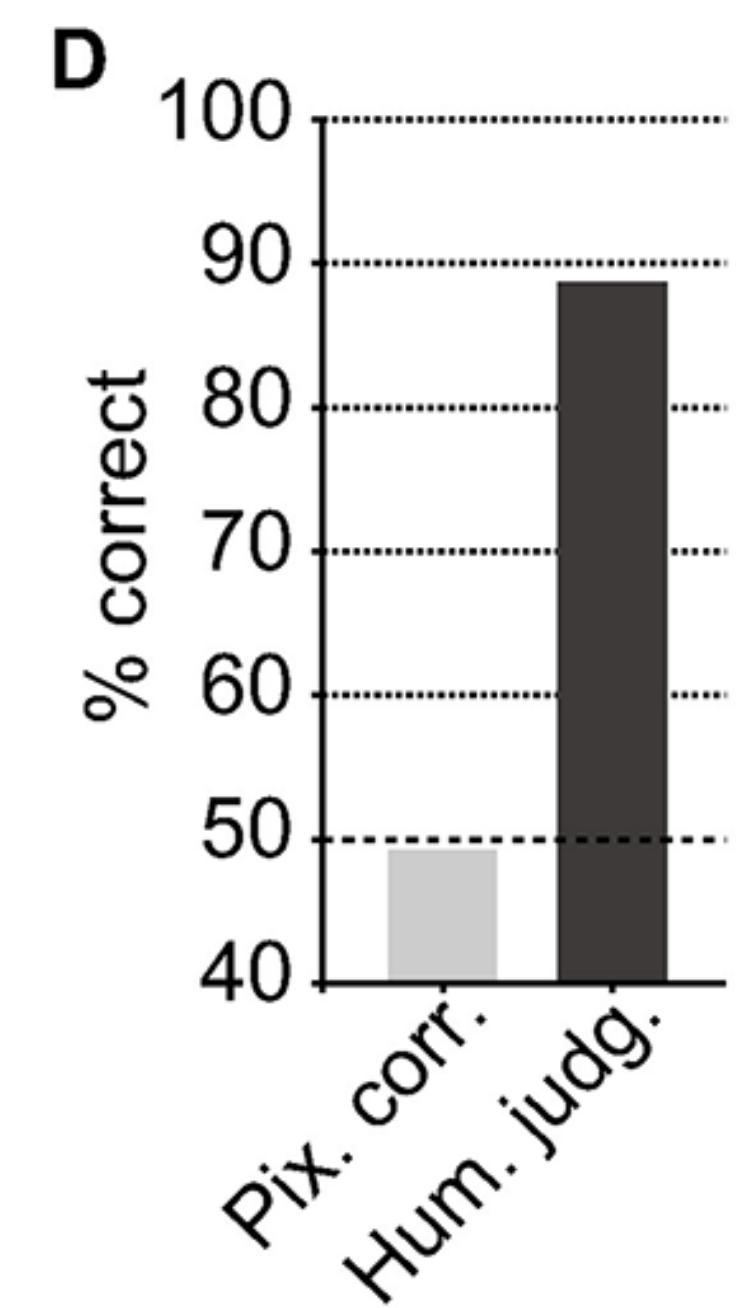
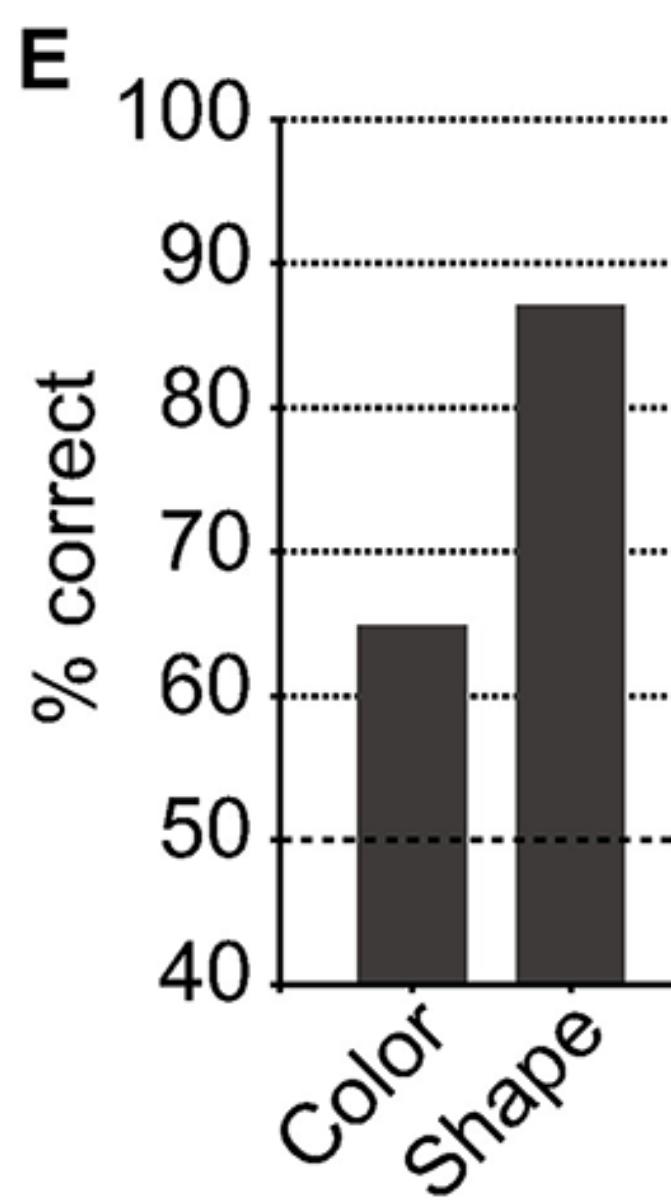


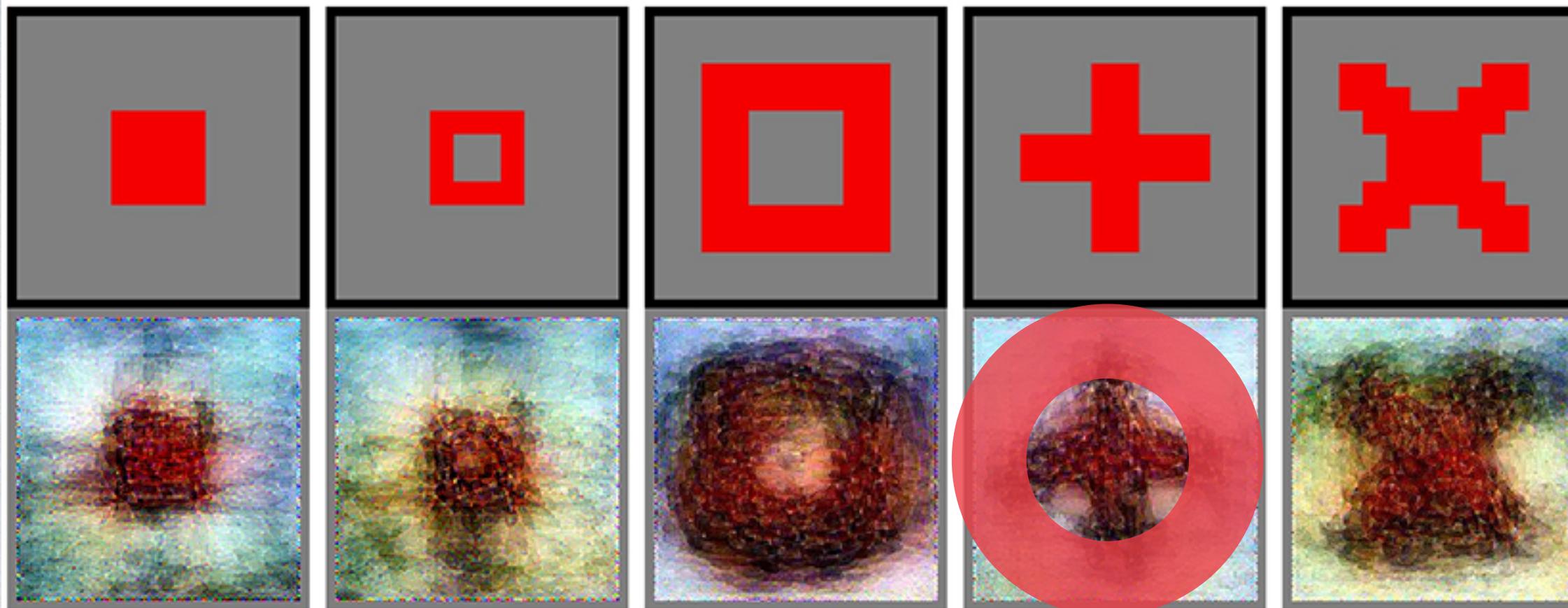
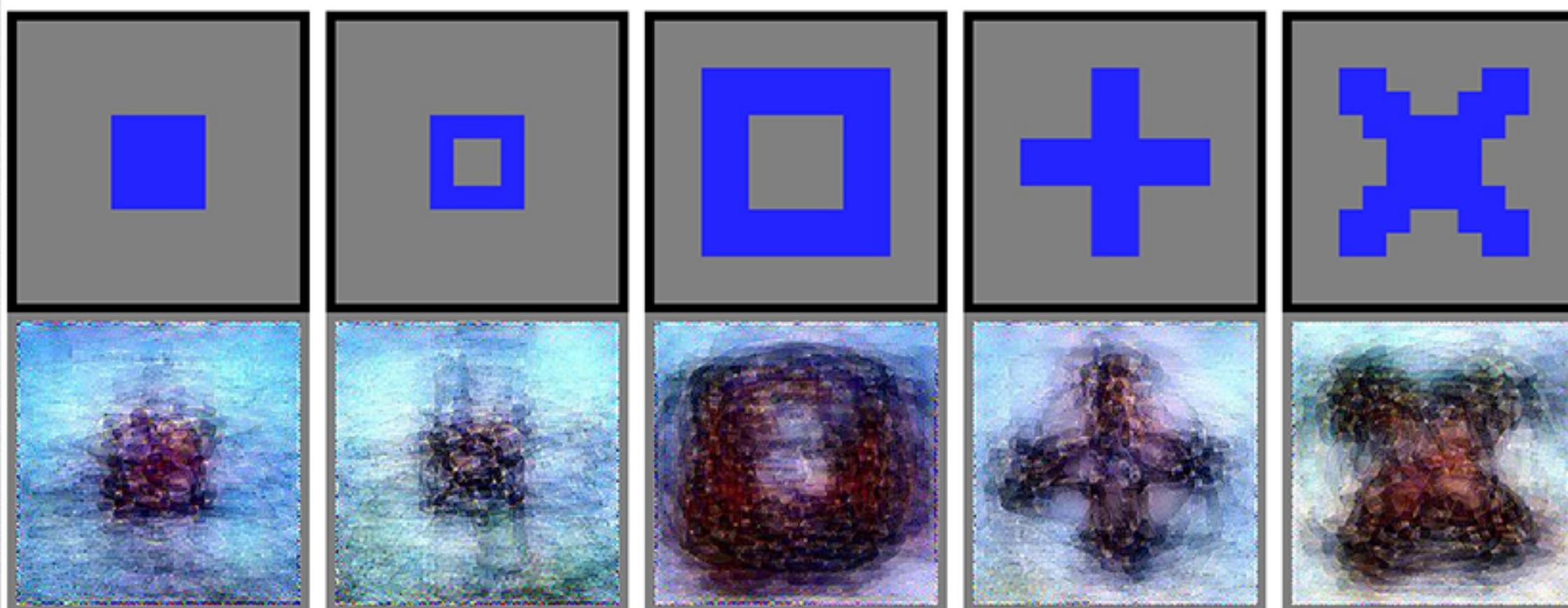
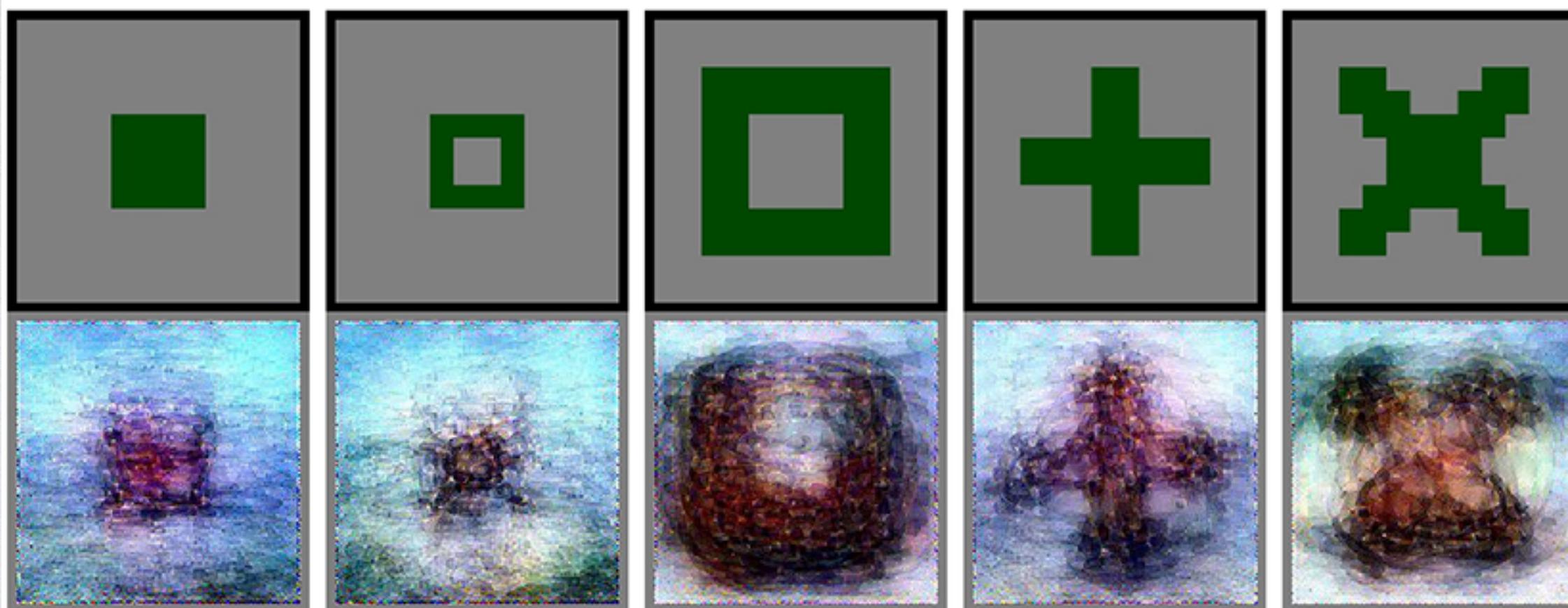
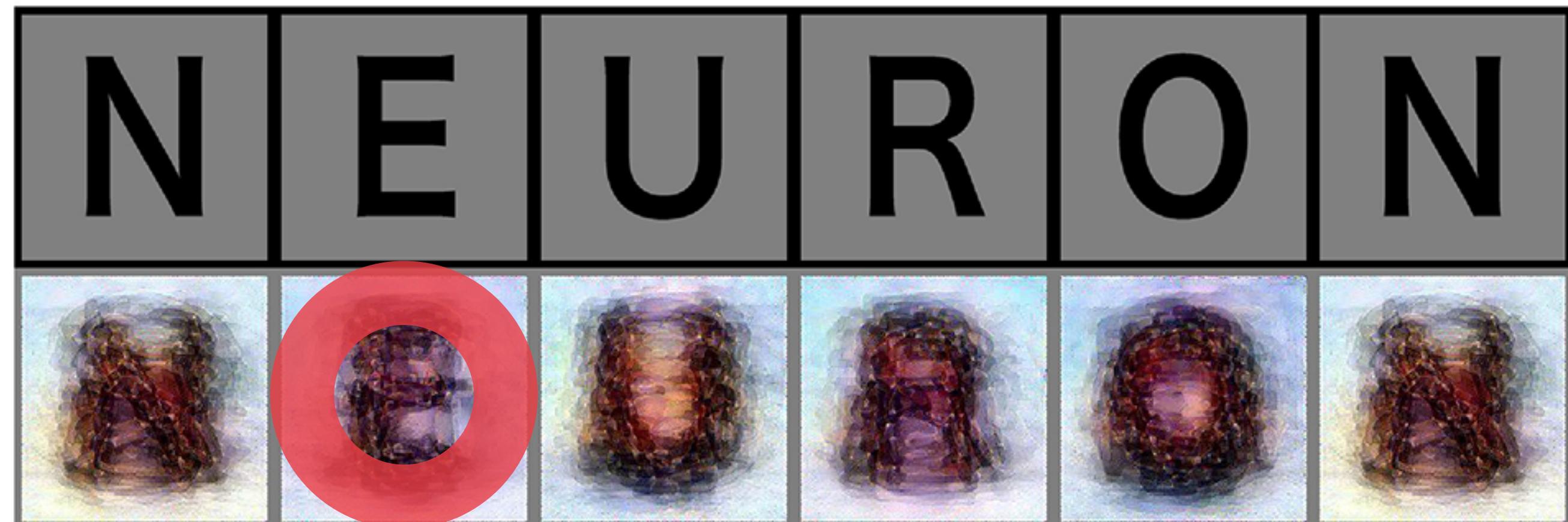
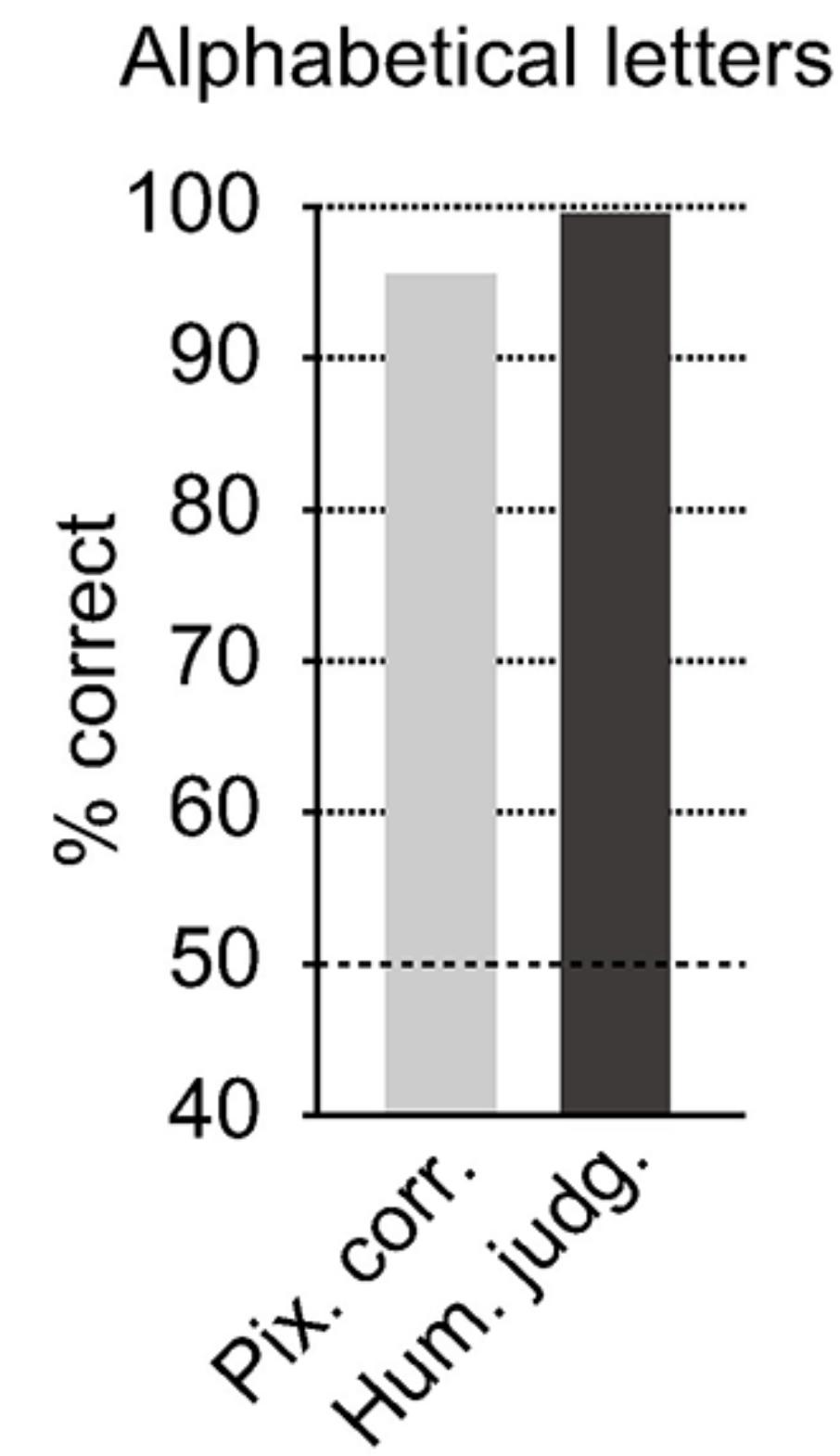
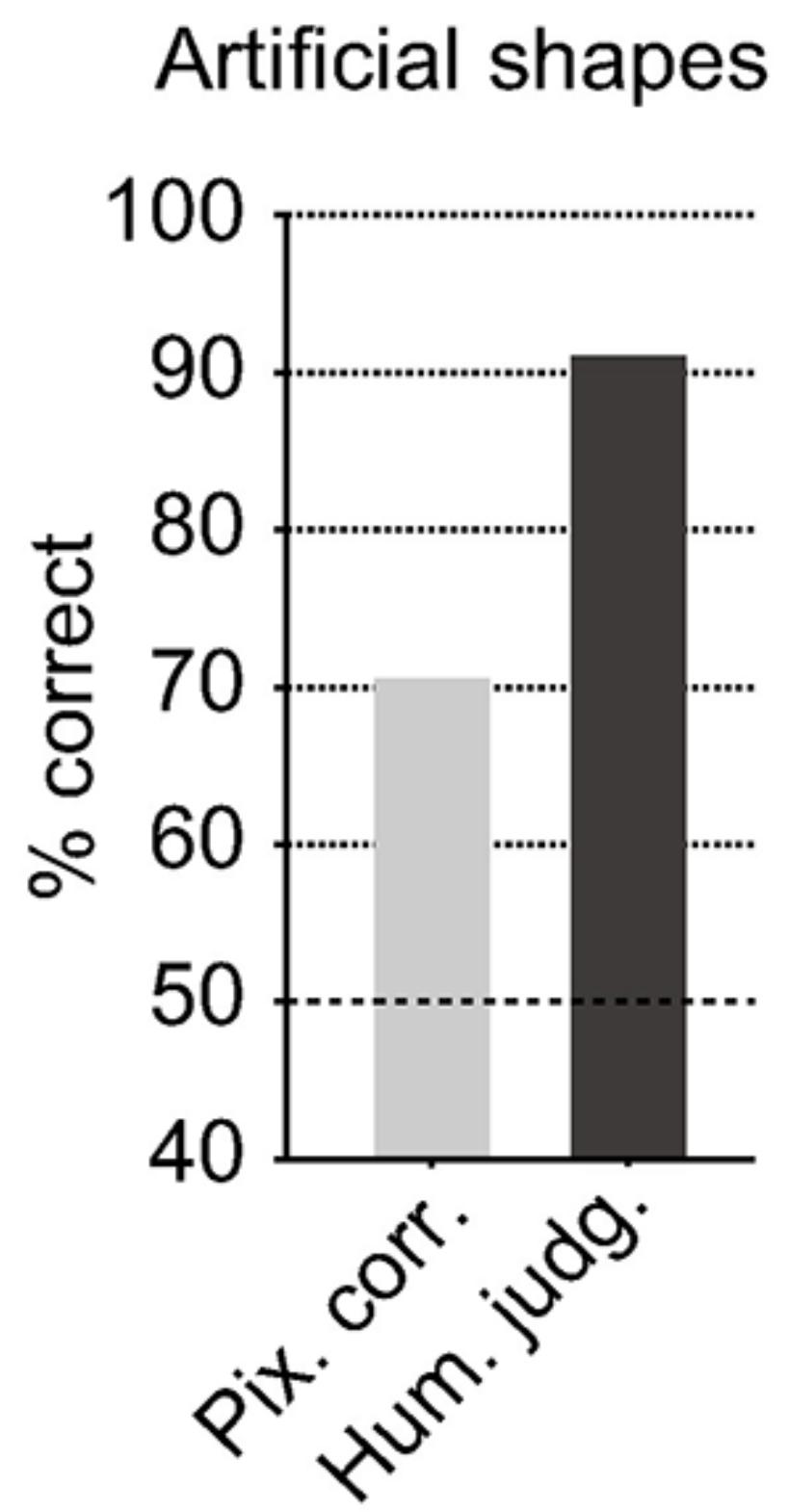


1 20 40 60 80 100 120 140 160 180 200

Number of iterations

A**B**

A**B****C****D****E**

A**B****C**

FUTURE POSSIBILITIES

- Speech disorders
- Searching for things out of memory
- Communicating by thought
- Privacy!

THANK YOU FOR YOUR TIME