

Vilayanur Ramachandran, professor in neurobiology at the Center for Brain and Cognition, University of California, San Diego.

Ramachandran has formulated what he calls *eight laws of aesthetics*.

According to Ramachandran, art will always tend to be a sort of exaggeration of the reality.

Venus of Willendorf
Indian female temple sculptures
caricature drawings



1. PEAK SHIFT PRINCIPLE



Super Stimulus

A slide titled "1. PEAK SHIFT PRINCIPLE" illustrating the concept. It shows a photograph of a man's face on the left and a caricature of the same man on the right. The caricature has exaggerated features, such as a large nose, thick lips, and a prominent forehead. The text "Super Stimulus" is written below the caricature.

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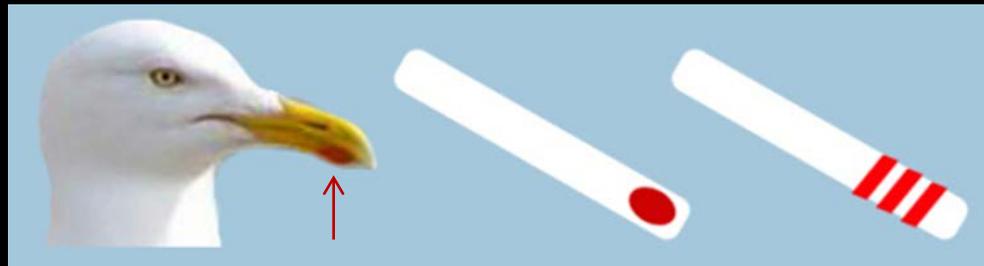
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An interesting experiment has focused on seagulls feeding their chicks. The beak of the seagull, which is yellow, has a red stripe on it which the chickens pecks at when they ask for food.



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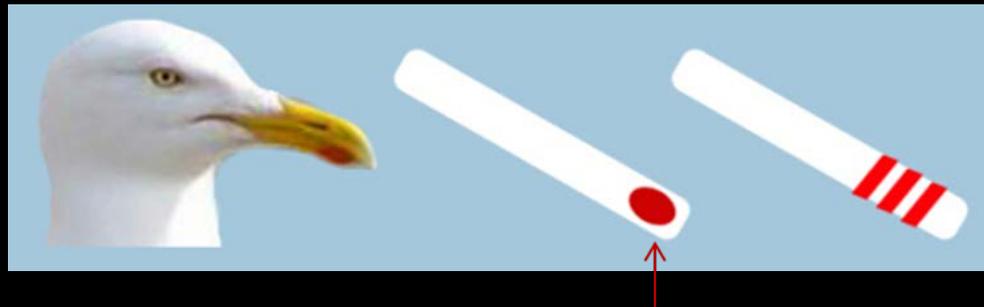
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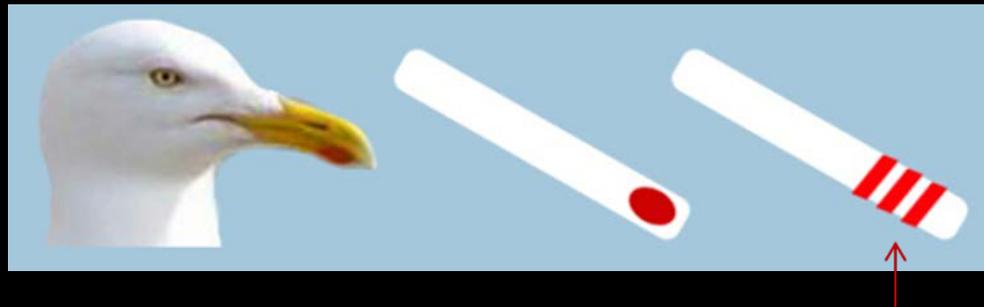
Venus of Willendorf

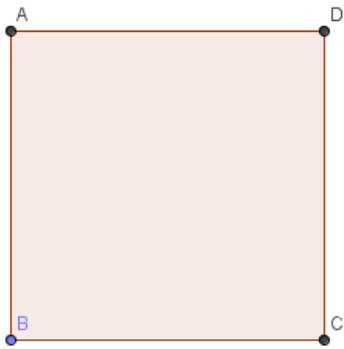
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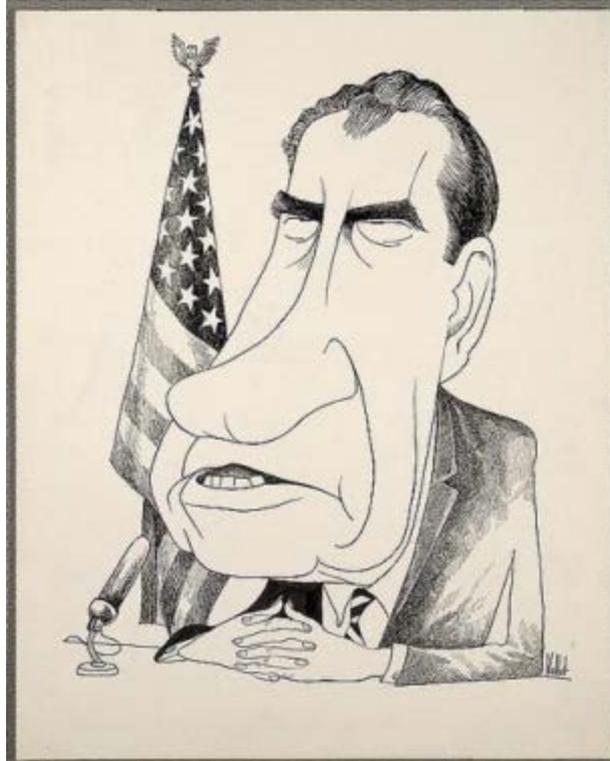
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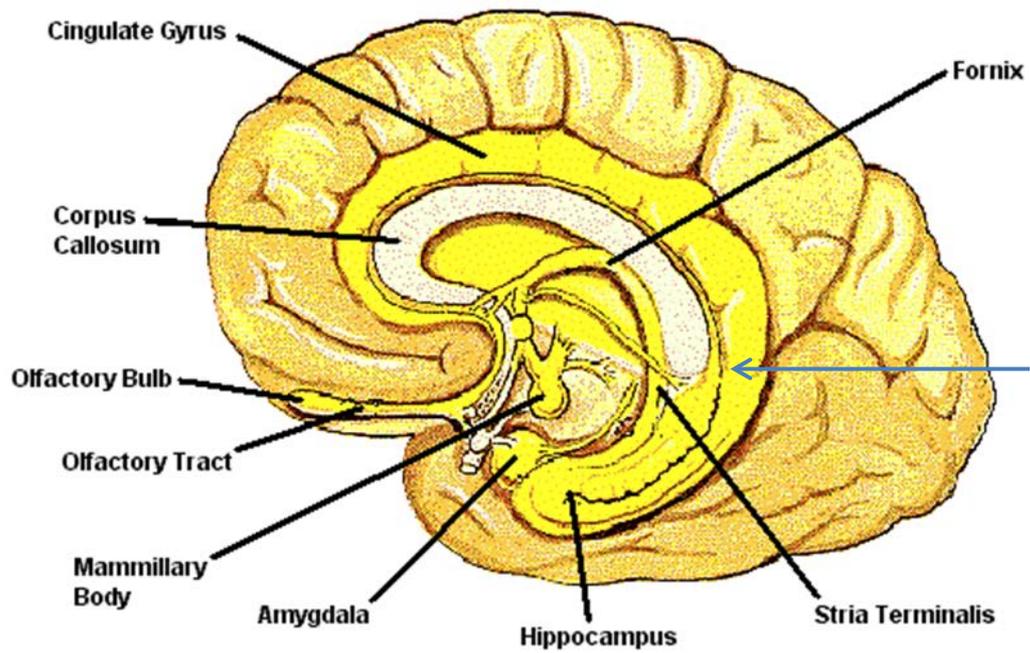
Super stimulus = «rectangularity»





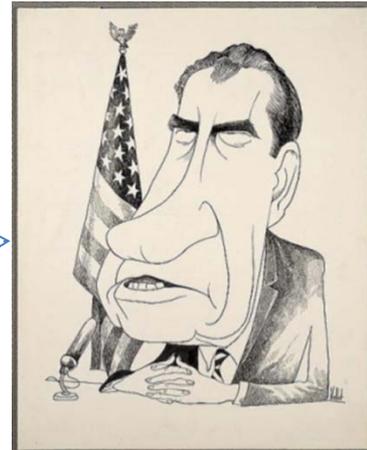
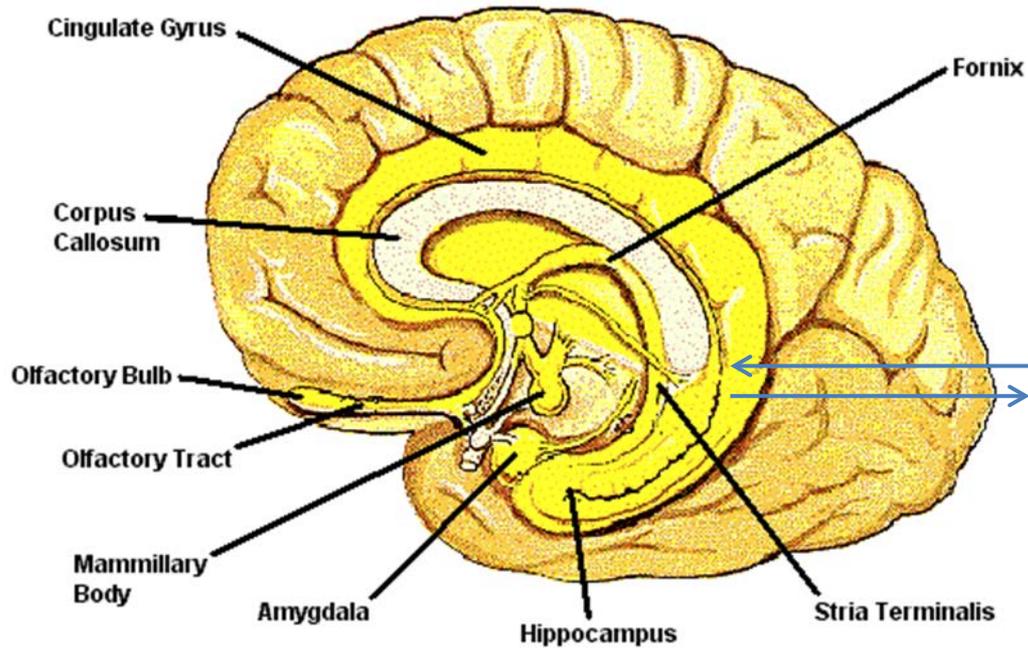
Nixon «super stimulus»
More Nixon like than Nixon himself





'Nixon stimulus' sent to the limbic system

Limbic reinforcement



'Nixon stimulus' sent to the limbic system, from which feedback loops will lead back to the early visual centres to reinforce the 'Nixon module', which turns the 'Nixon stimulus' into a 'Nixon super stimulus'.



Plate 1: A copper alloy statue of the Goddess Parvathi from the Chola period circa 11th Century AD (Ramachandran collection). What is unique about this sculpture is that it is not only sensuous and alluring but is also the very epitome of feminine grace, poise, and dignity — combining the seemingly antithetical elements of sexuality and spirituality in a single exquisite masterpiece.

The artist has here created what Ramachandran will designate a «super stimulus» of female beauty and sexuality. This super stimulus captures the *rasa* of feminine pose and grace which will tap into the limbic system of the beholder resulting in an emotional response.

Hindu artists often speak of conveying the *rasa*, or 'essence', of something in order to evoke a specific mood in the observer.



Plate 4:

A celestial nymph — the rasa of feminine perfection. (Mathura, 800 A.D.). Notice the clever use of abdominal creases and dimples produced by subcutaneous fat — a feminine secondary sexual characteristic. (Replica in Ramachandran Collection.)



To subtract a typical male posture from a typical female posture and then magnify the difference will lead to the *rasa* of femininity.

Rasa for sexual and amorous ecstasy



Plate 7:

Amorous couple. Notice the poses are highly 'improbable', yet very evocative. The woman elevates her chin to expose her throat — an ethological gesture of complete vulnerability that belies the intense passion on the woman's face. (Redrawn from *Sensuous Immortals* by P. Pal, Los Angeles County Museum of Art.)

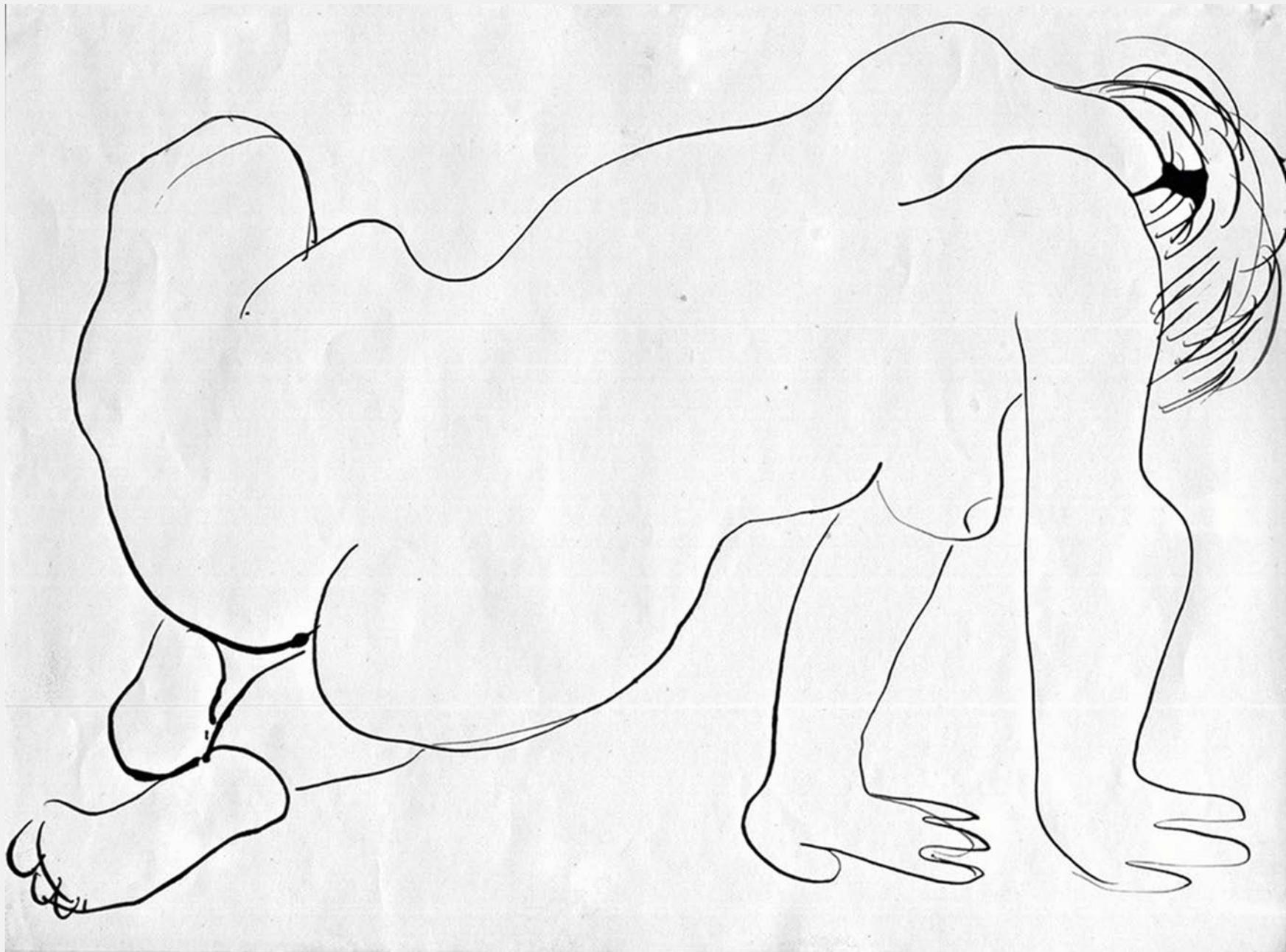
Femininity as «superstimulus»



Venus of Willendorf c. 26 000 BP

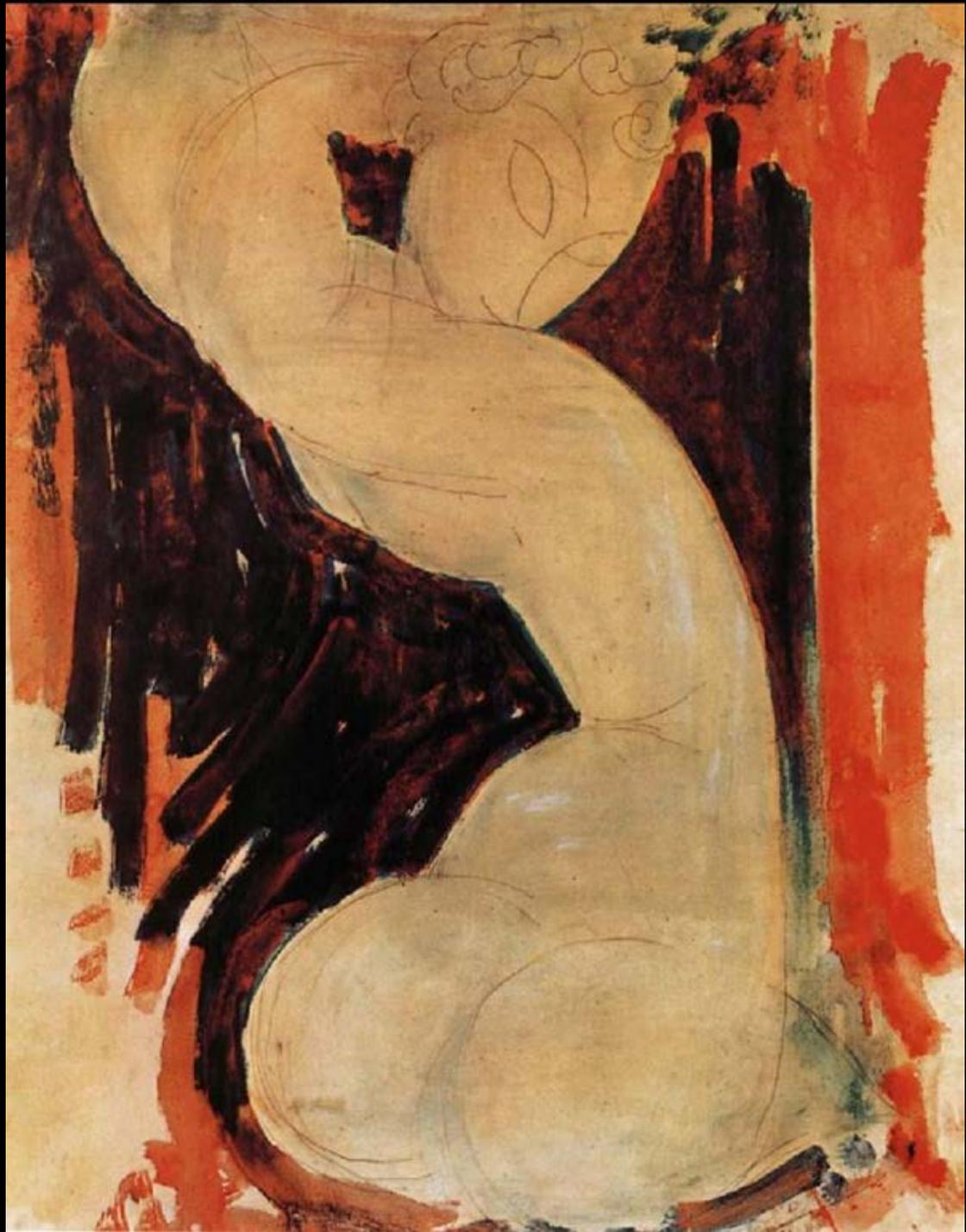












Graciousity as «superstimuli». The gothic maiden

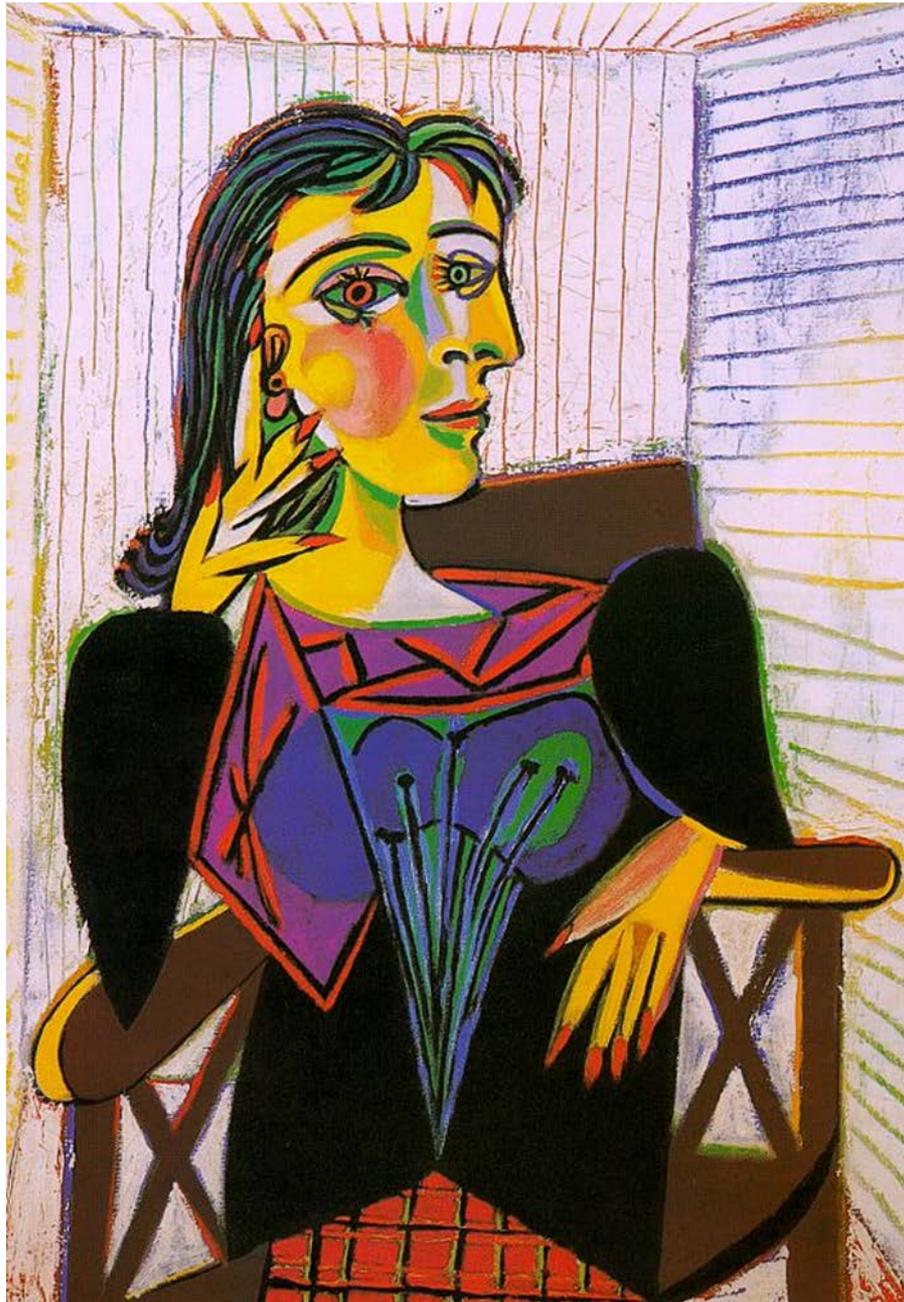


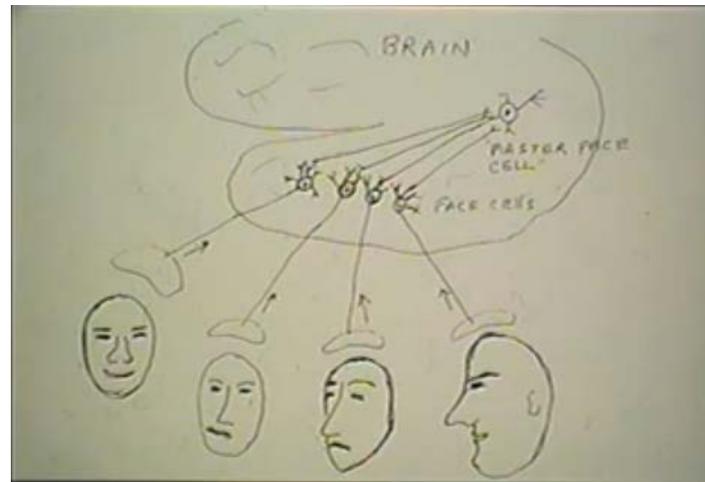
Paris, Notre Dame.



Mannerism: Parmigianino, «Madonna with the long neck»

The face and the eyes as «superstimulus». Cubism, here Picasso







Ramachandran: «Perhaps some movements in the history of art can be understood as driven by a logic of peak shift: the new art form finds and amplifies the essence of a previous one (sometimes many years previous, in the case of Picasso and African art).



First law

The essence of art and the peak shift principle:

Peak shift effect

Super stimulus

rasa

Second law

Perceptual grouping and binding is reinforcing





Figure 1

A jumble of splotches or a face?

[If you have difficulty 'seeing' the face, try looking through half-closed eyes — Editor.]



Figure 1

A jumble of splotches or a face?
[If you have difficulty 'seeing' the face, try looking through half-closed eyes — Editor.]



Figure 2

Initially seen as a jumble of splotches, once the Dalmatian is seen, its spots are grouped together — a pleasing effect, caused perhaps by activation of the limbic system by temporal lobe cortex.



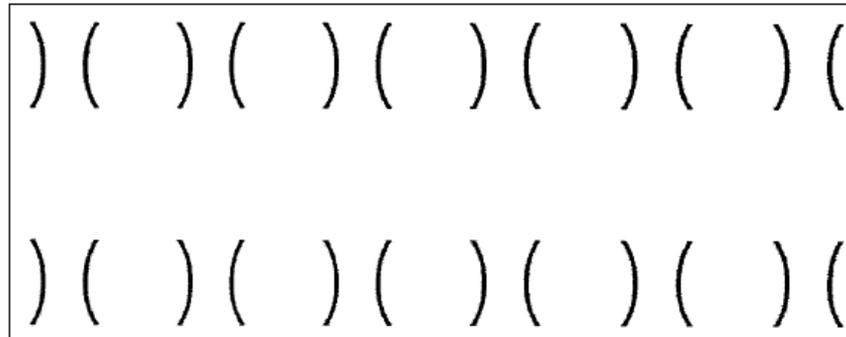
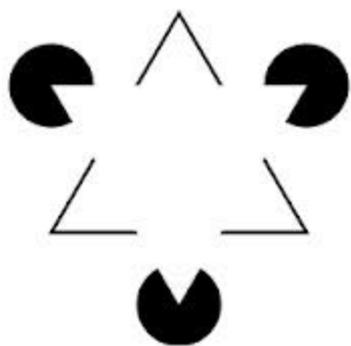
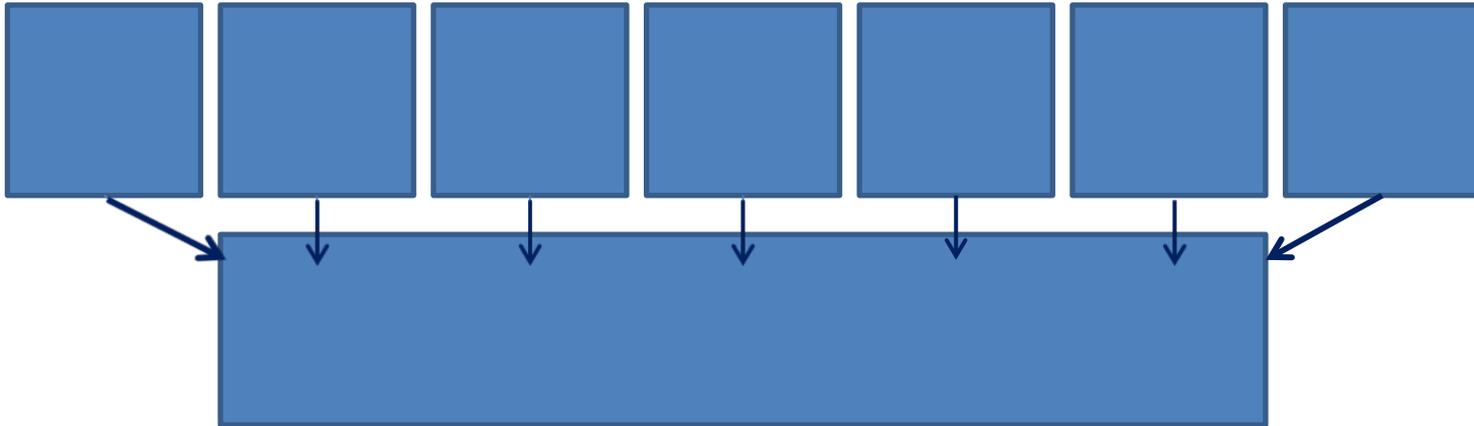


Figure 3
Gestalt grouping principles. The tokens can be grouped either on the basis of 'proximity' (which produces hourglasses), or 'closure'. The latter organization is more stable and pleasing to the eye.





visual areas processing stimuli



limbic system

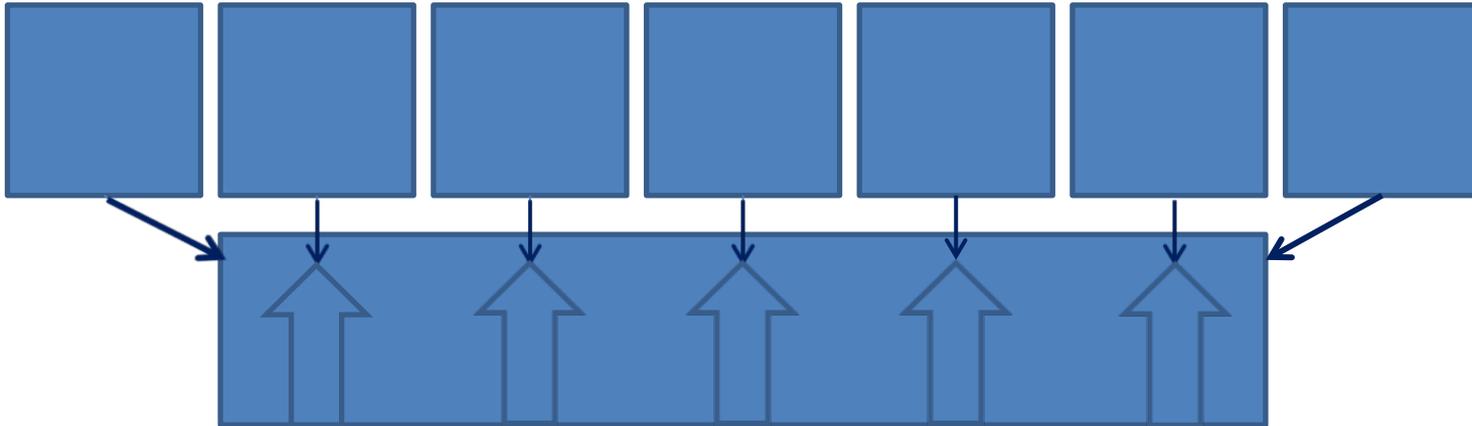
«I can just see spots, but they mean nothing to me»

visual areas processing stimuli



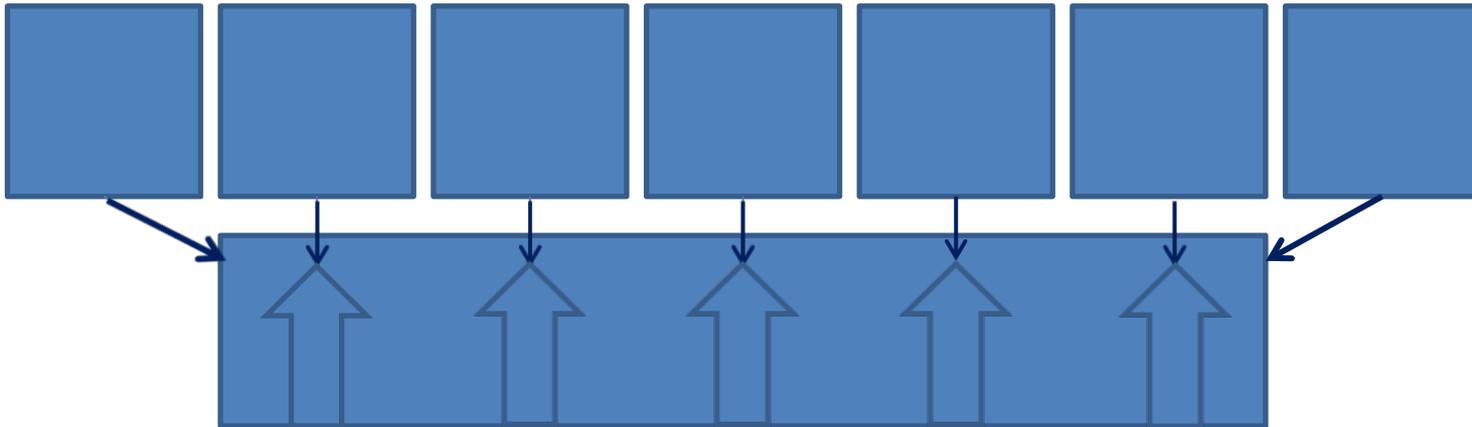
limbic system

visual areas processing stimuli



limbic system
limbic reinforcement

visual areas processing stimuli



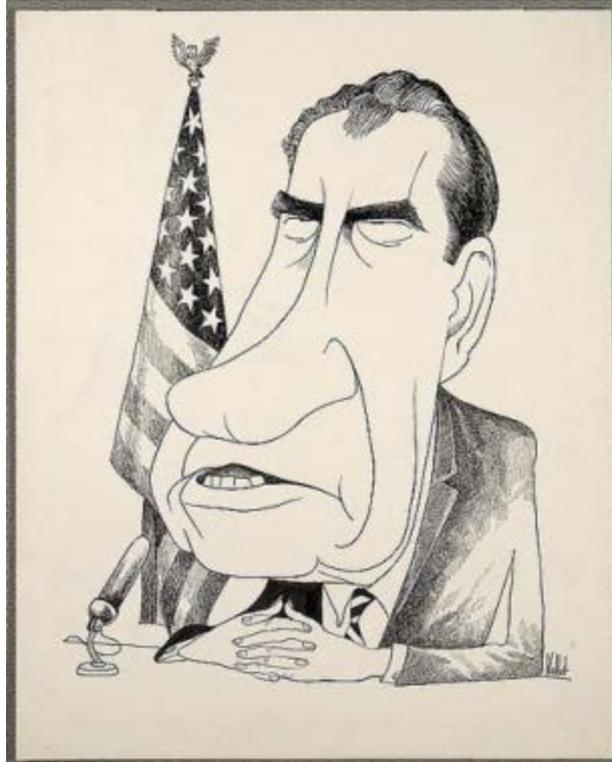
limbic system
limbic reinforcement
«aha, it is a dalmatian»

Third law

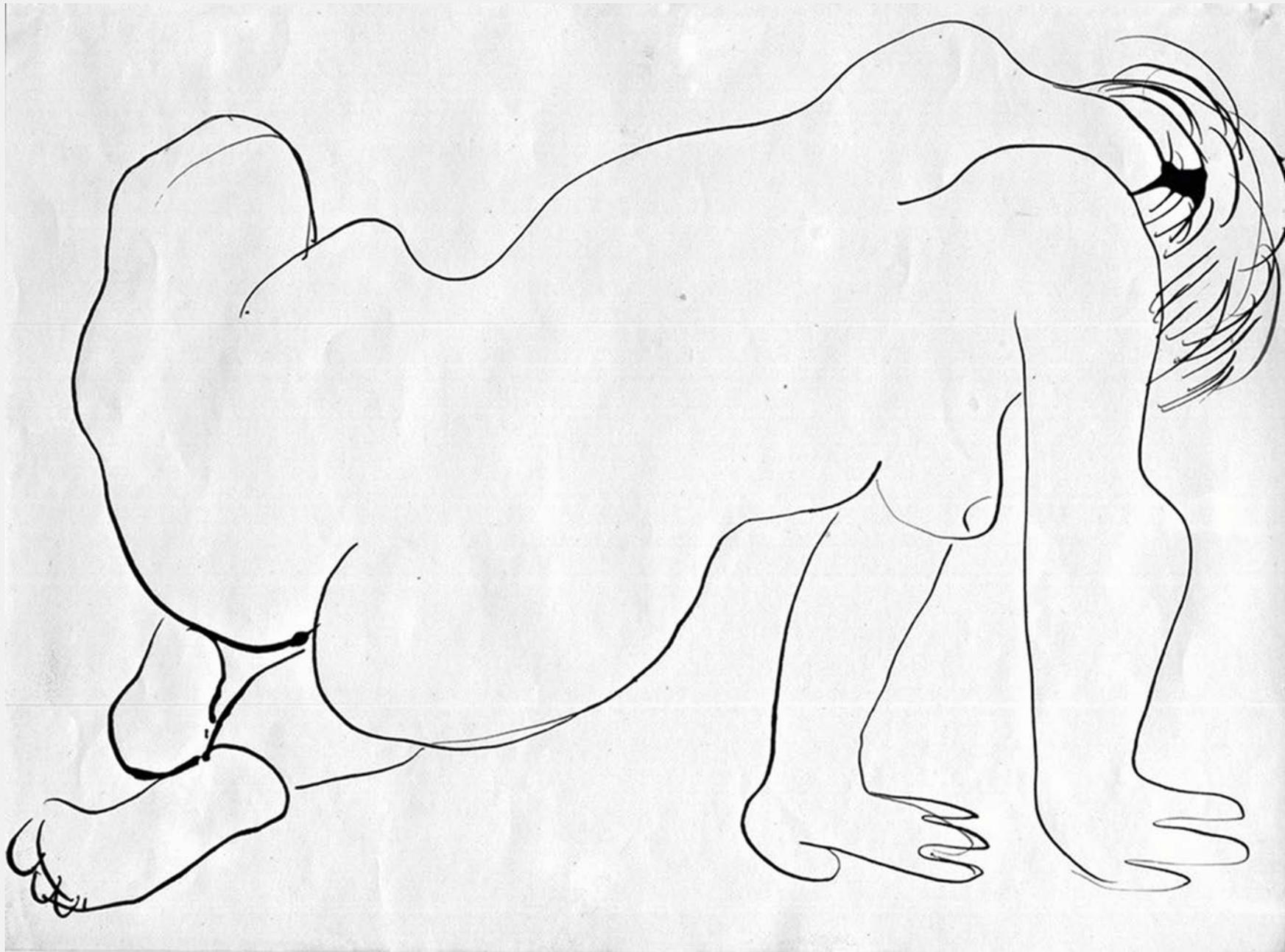
Isolating a single module leads to allocating attention



«Nixon module»



«Nixon module» amplified



Female form module

Drawings by Nadia, an autist 4 years old





(a)

Nadia 4 years old



(b)

Leonardo da Vinci



(c)

Normal child drawing, 5 years old

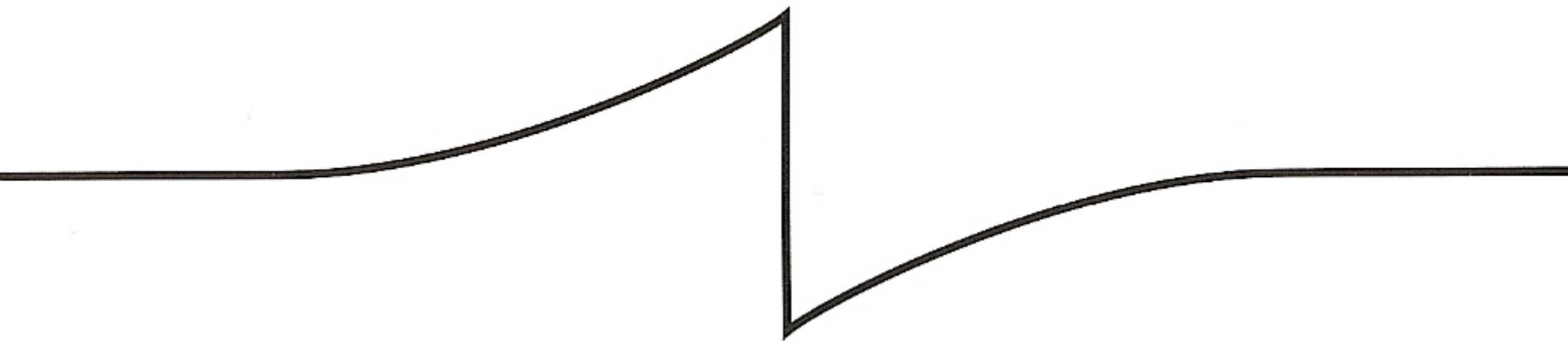


Nadia has an extraordinary ability to deploy all attentional sources to the 'visual form representation channel' enabling her to grasp the horse module and representing it a la Leonardo.

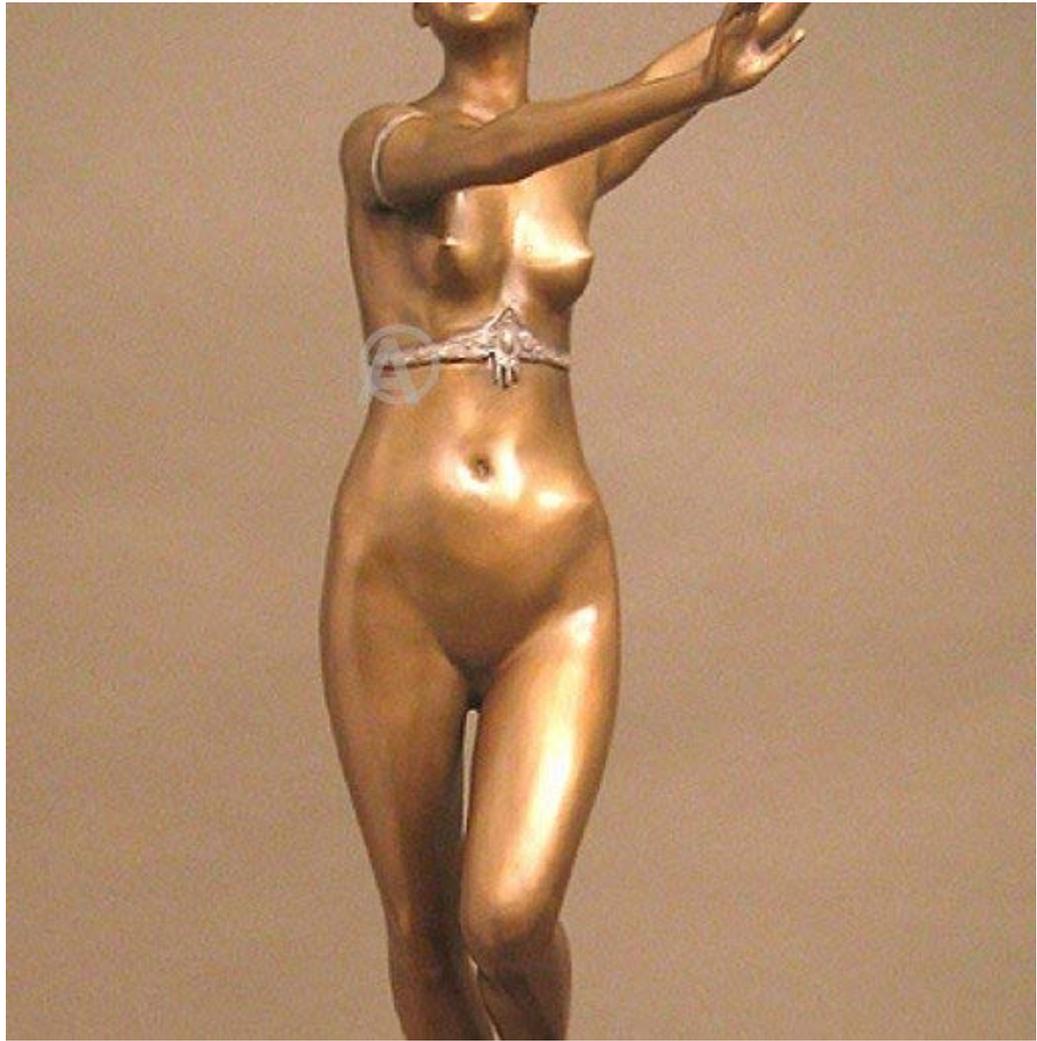
Fourth law

Contrast extraction is reinforcing

THE CORNSWEET ILLUSION





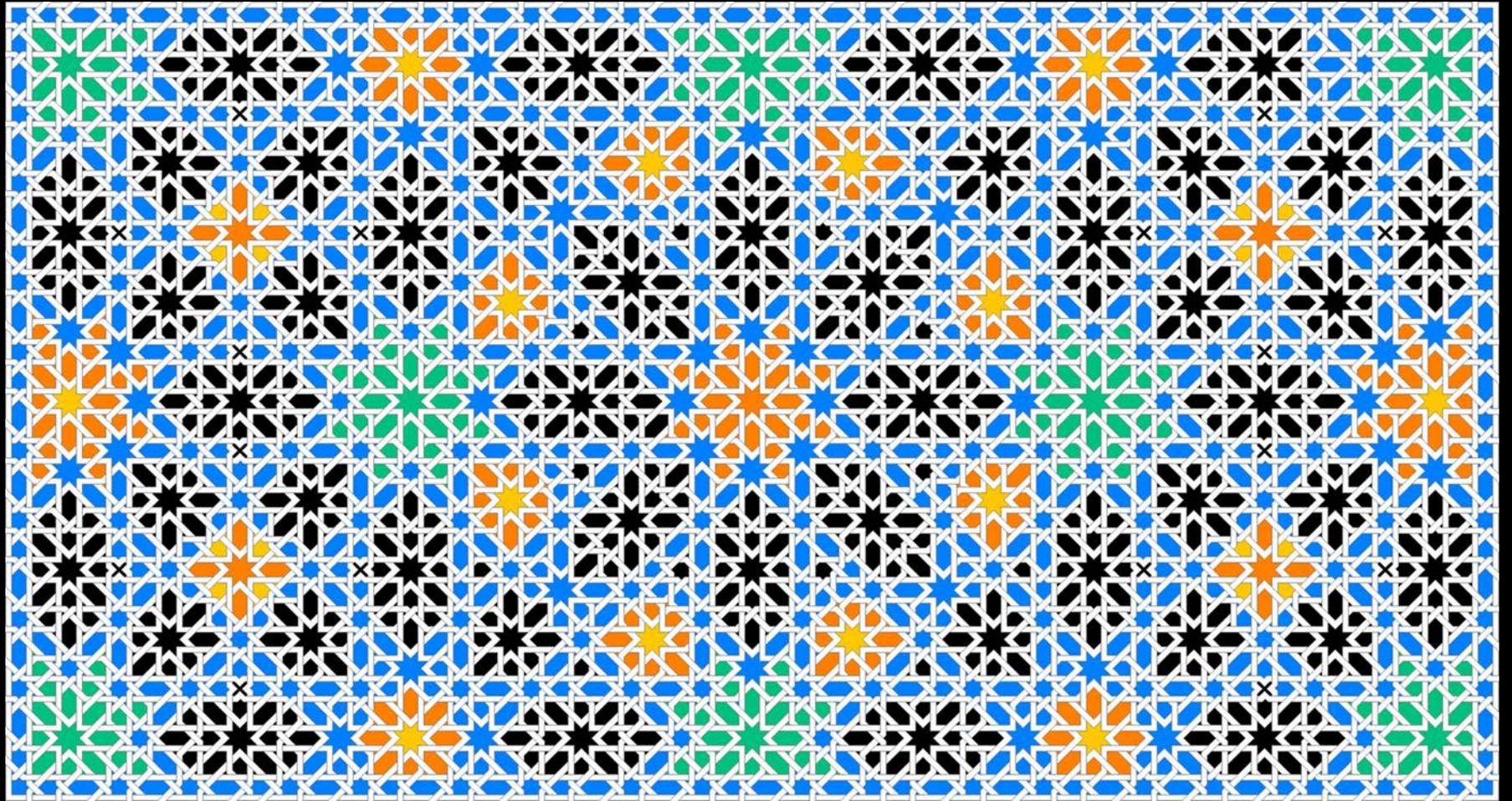


Fifth law
Symmetry



Marmor av typen cipolla plassert symmetrisk. Hagia Sofia, Istanbul.
Foto B. Kiilerich







Villa Rotonda, Vicenza 1566



Great Hall of the People, Beijing





Sixth law
The generic viewpoit

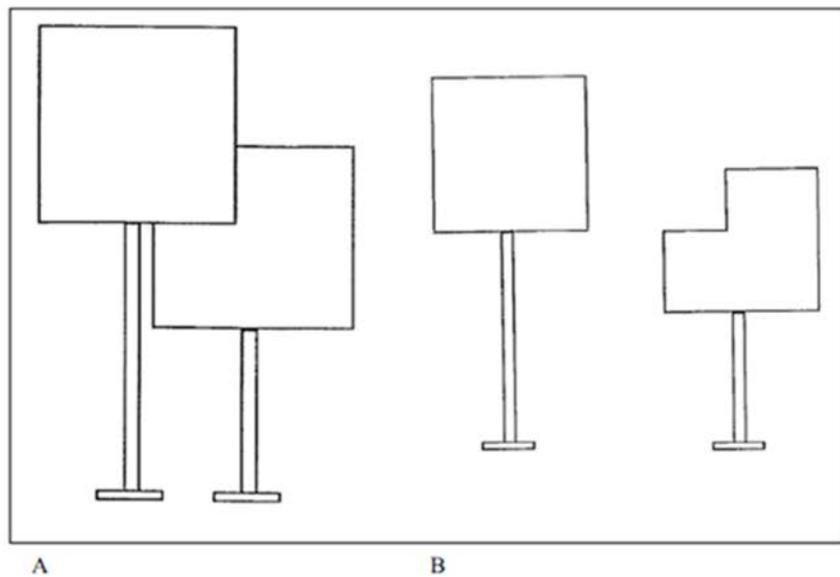


Figure 5

One square is seen as occluding the other. It is hard to see A as B viewed from a unique vantage point. The brain 'prefers' the generic view.

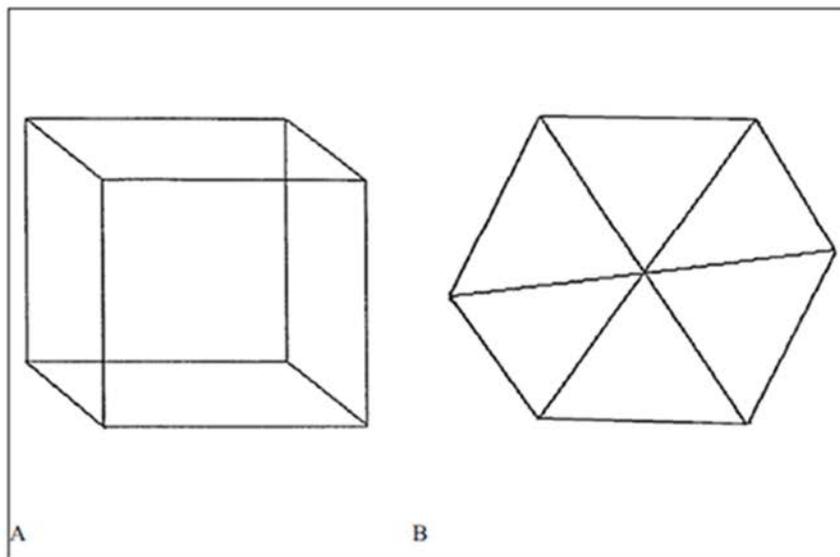


Figure 6

The flat hexagon with radiating spokes could be a cube but is never seen as one. The 'generic' interpretation is again the brain's preferred one.

Seventh law

Perceptual problem solving is reinforcing



Ramachandran: «A model whose hips and breasts are about to be revealed is more provocative than a completely nude model»

Eight law
Art as metaphor

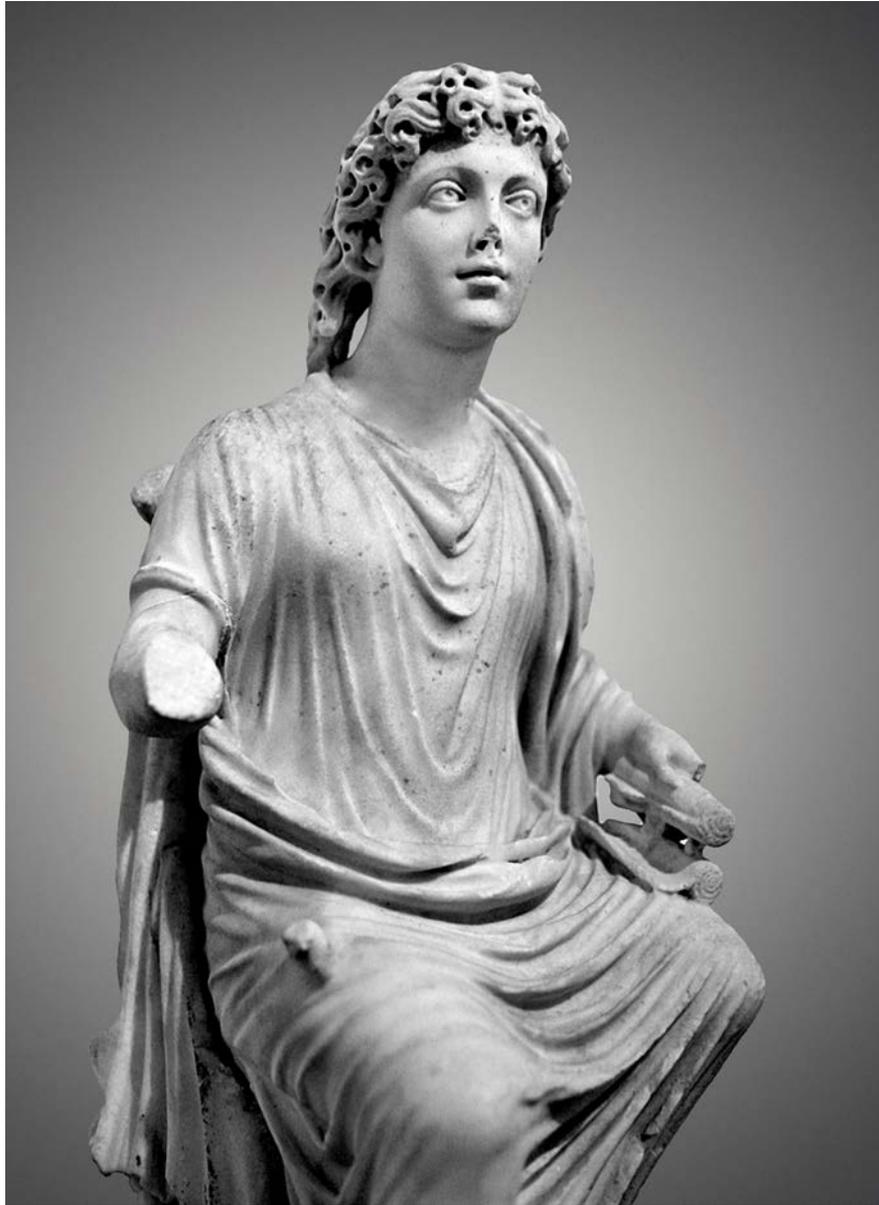
Religious poetry

Song of Songs

beauty – goodness – trustworthy/truth



Afrodite of Knidos



beauty – goodness – trustworthy/truth

Christ, Museo Nazionale, Rome,
c. A.D. 380