

The Universe of Images

Masaryk university

9 Faculties, over 200 departments and institutes

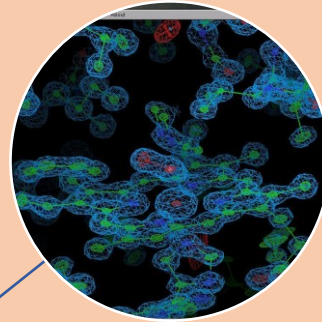
43, 000 students

2, 000 academic faculty

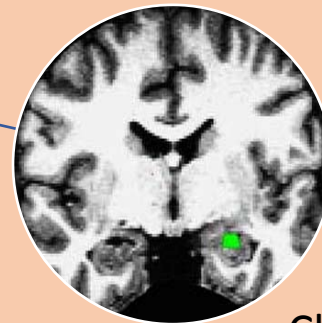




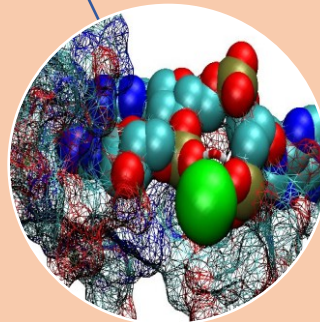
Film studies



Center for Biomedical Image Analysis



Clinical imaging



Center for Biomolecular research



Social studies
Visual sociology



Astrophysics



Archaeology

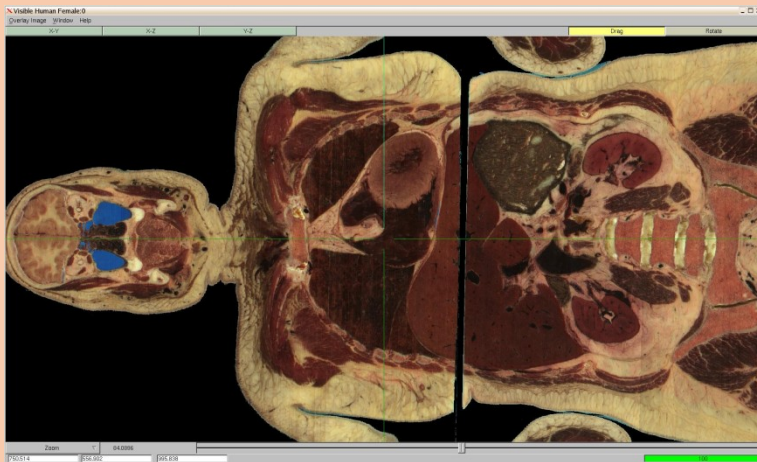
Families of images



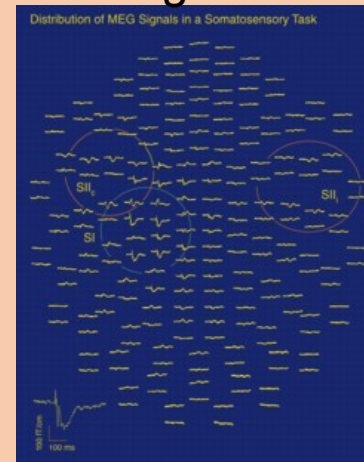
Art images



Media images



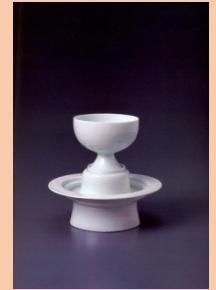
Information, epistemic images



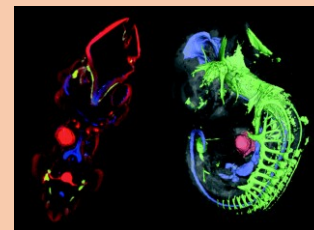
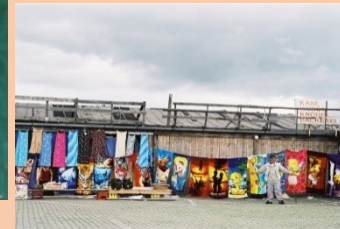
Special images

ART
(Religious
imagery)

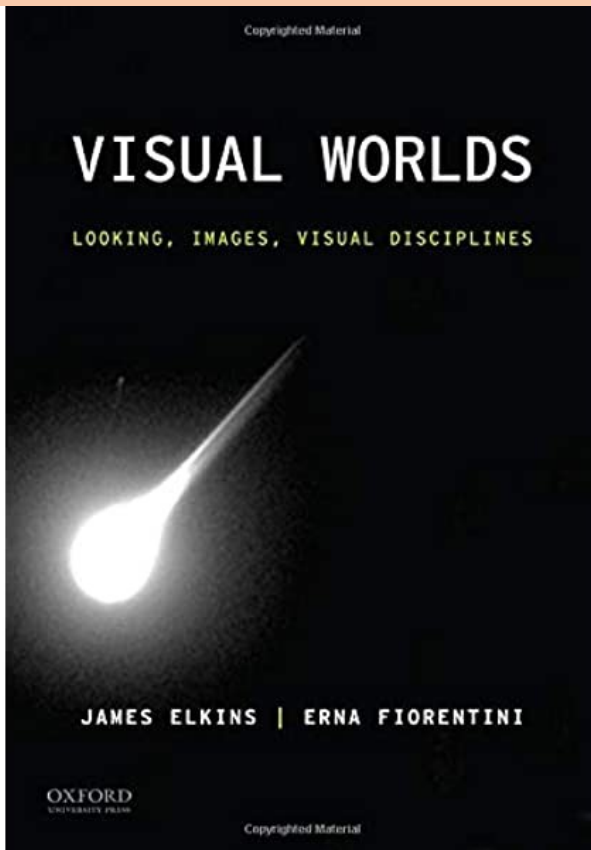
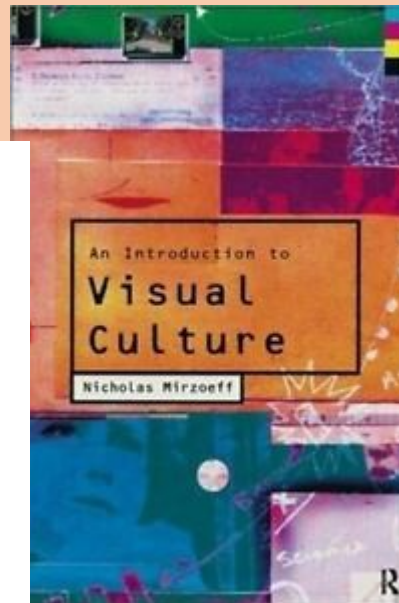
Art history



Visual studies



Visual studies // Bildwissenschaft

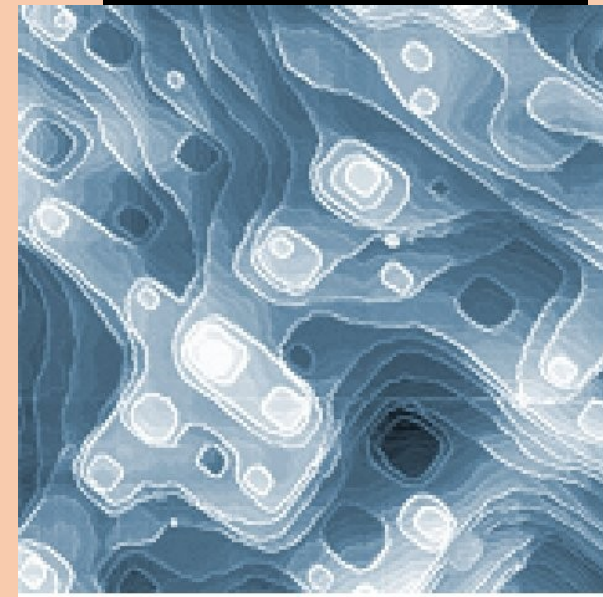
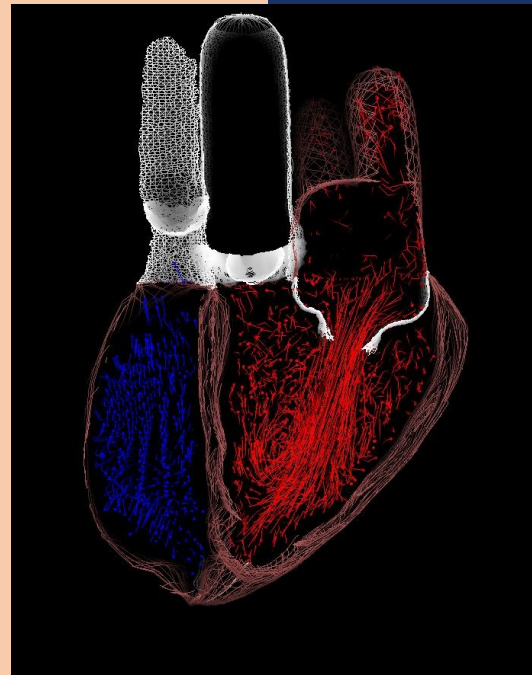
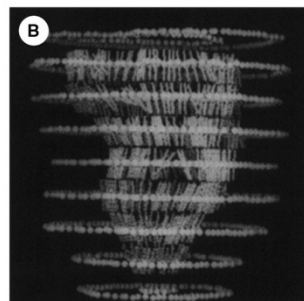
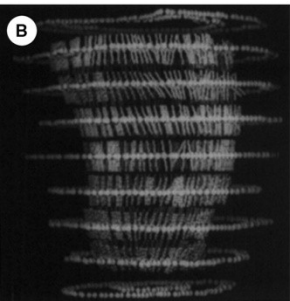
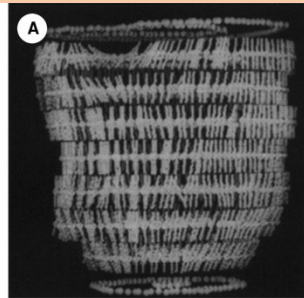
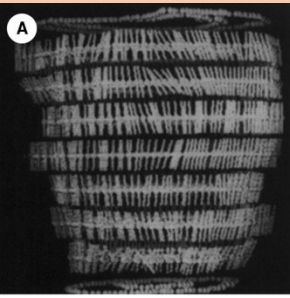
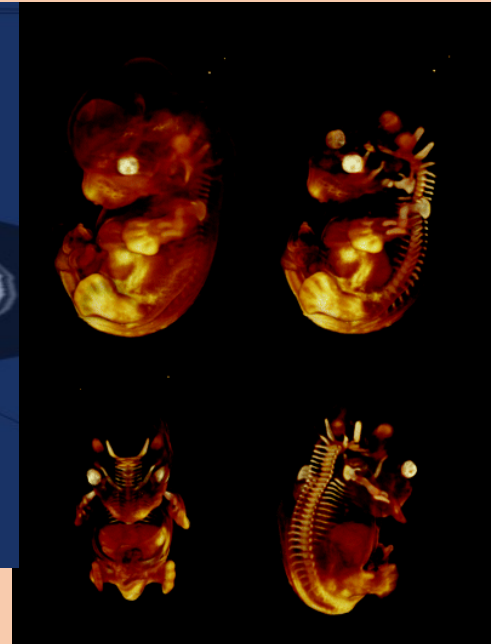
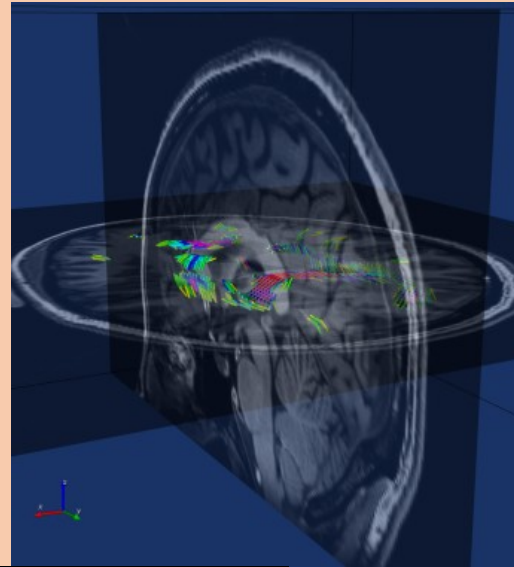
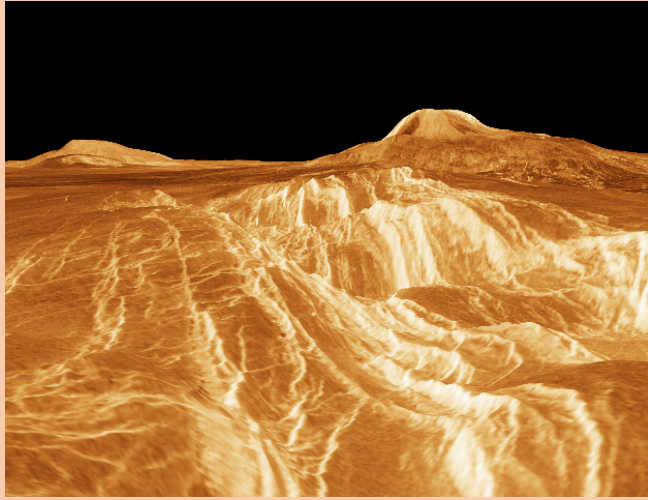


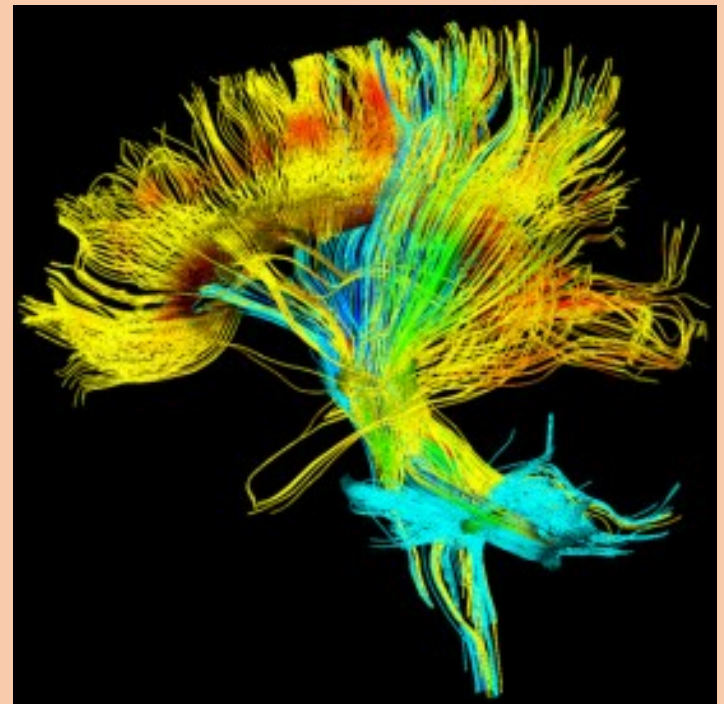
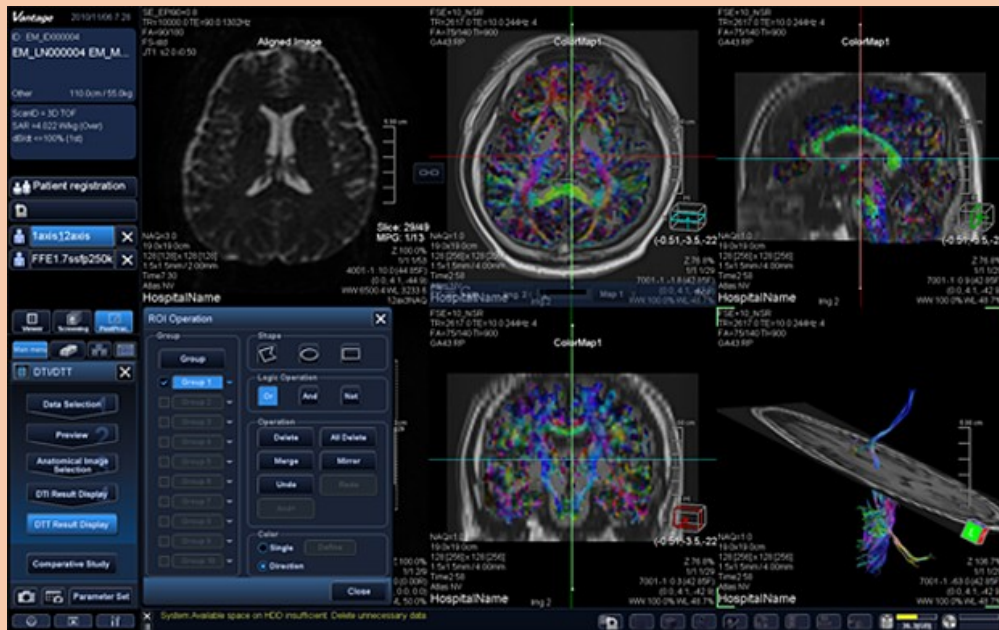
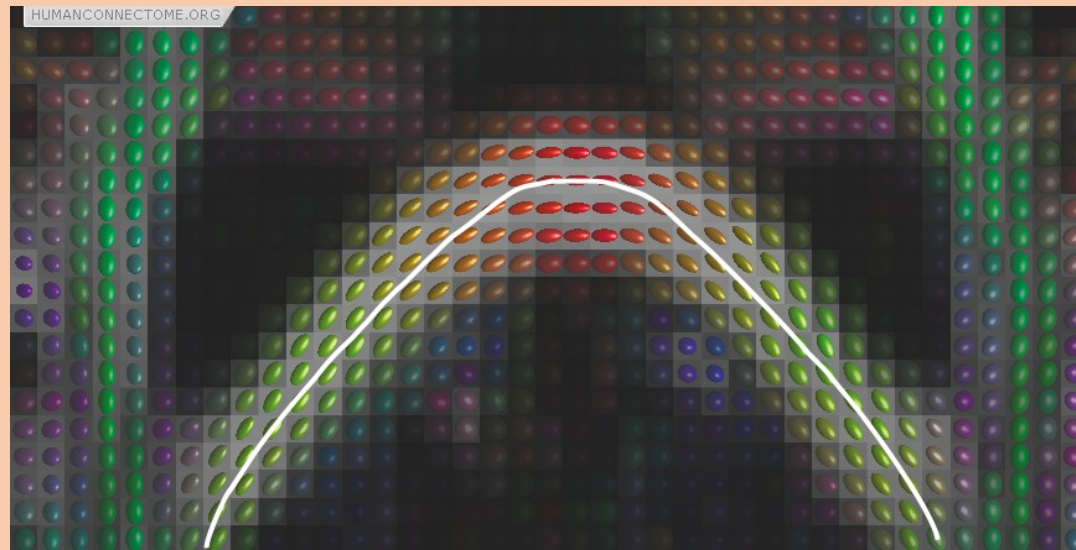
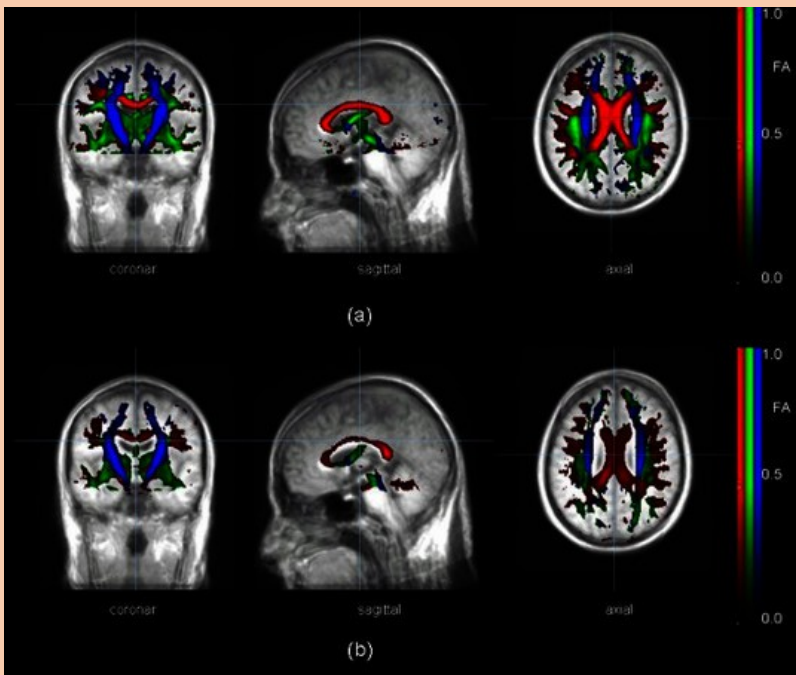
Visual studies *within* art history ?

- Orlan, (Cyber)feminism: postmodern utopia?
- Watchmen – Graphic novel
- Instalattion art in street art
- Topics of traditional Japanese tattooing and their influence on contemporary tattooing



Some of the most interesting things about images happen in and around **epistemic images**!

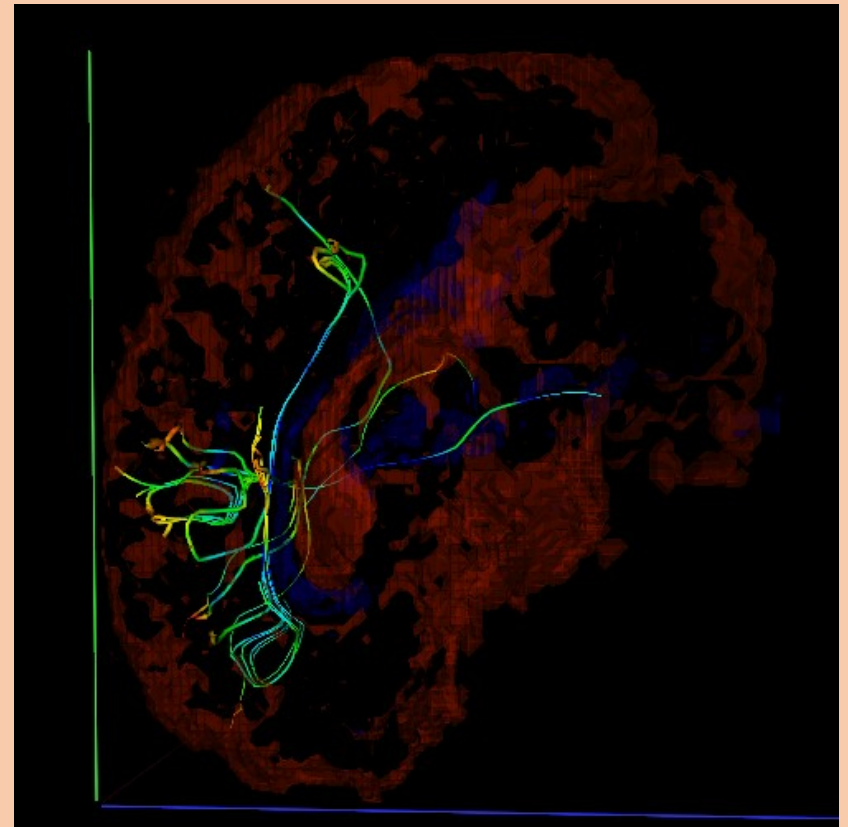




Different visual competencies



Pablo Picasso, *Les Femmes d'Alger (O. J. R. Version O)*



Averaged diffusion tensors using a $5 \times 5 \times 3$ Gaussian kernel weighted with their linear measure cl , resulting in a macrostructural measure of fiber tract organization

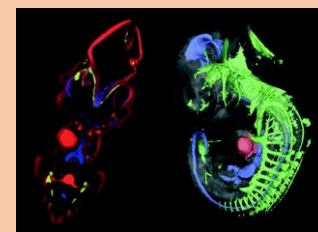
Challenge for art history (teaching)

Canon

Global art



Visual cultures



What is image?

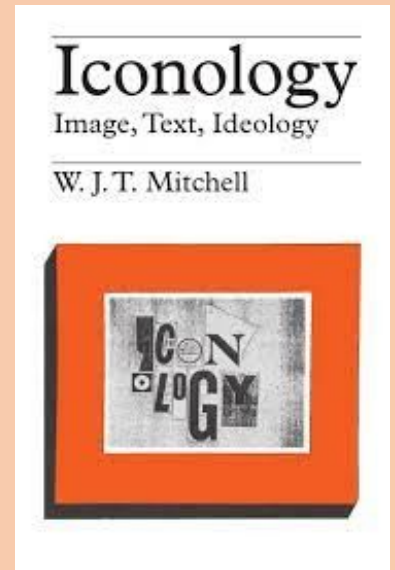


Kinds of images – J.J. Gibson

- **Solid images** — three-dimensional objects like sculptural pieces, statues, models or toys.
- **Pictorial images** — pictures, paintings, drawings, engravings, photographic prints, projected slides or shadow-casters like low or high relief.
- **Arrested images** — screen images like Oriental shadow-play and cinematic images.
- **Mirror images** — virtual objects or scenes behind smooth reflective surfaces.
- **Projected camera images** (*camera obscura*) — pictures formed on the inner surface of a dark chamber with a pinhole or lense in the opposite wall.
- **Photographic camera images** (*camera lucida*) — camera images arrested by a shutter, latent image in emulsion, negative image on film and positive image on another surface.
- **Retinal images** — an optical image on the inner surface of the dark chamber of the vertebrate eye (false analogy with the *camera obscura*), or a physiological image in the mosaic of photoreceptors of the retina transmitted to the brain (false analogy with a latent arested image in photo-graphic emulsion).
- **Optical after-images** — "supposedly the after-sensation of overstimulating the photoreceptors", or of prolonged stimulation of them, with a fixated eye".
- **Memory images** — "taken to be the trace of an arrested physiological image that has been transmitted to the brain"
- **Mental images** — "a little-understood kind of experience"; we do not have tiny observers in our heads but, "if not an image, what is the experience to be called?" Dream images, imaginary fantasies, metaphorical imagery, mind's eye images, schemes of thought?

“The Family of Images” (WJT Mitchell)

- Graphic (pictures, statues, designs)
- Optical (mirrors, projections)
- Perceptual (sense data, appearances)
- Mental (dreams, memories, ideas, fantasmata)
- Verbal (metaphors, descriptions)



What is an image? Orthodox conception

Image refers to its subject iconically, on the basis of likeness

Criterion of likeness



What is an image? Theological tradition...



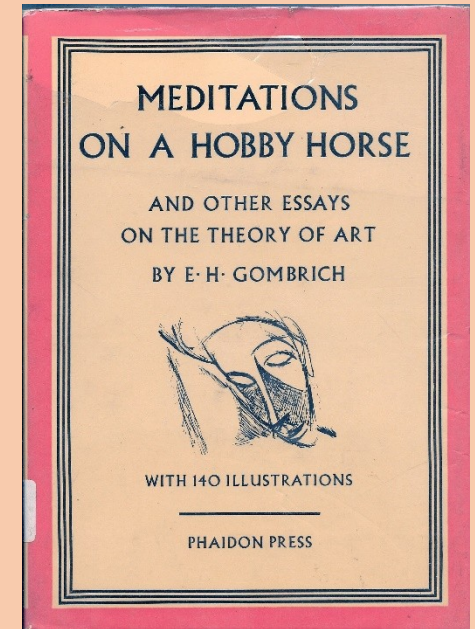
*John of Damascus (675-750?), **Apologia Against Those Who Decry Holy Images***

An image is a likeness of the original with a certain difference, for it is not an exact reproduction of the original.....

For the invisible things of God since the creation of the world are made visible through images. We see images in creation which remind us faintly of God.....

Critique of orthodox conception...

Relativisation of likeness



...no degree of resemblance is sufficient to establish the requisite relationship of reference.

Almost anything can stand in for anything else!

What is an image? An inclusive definition

Image is a mapping (transfer) of an object or some of its property (chemical, physical....) into the image space.

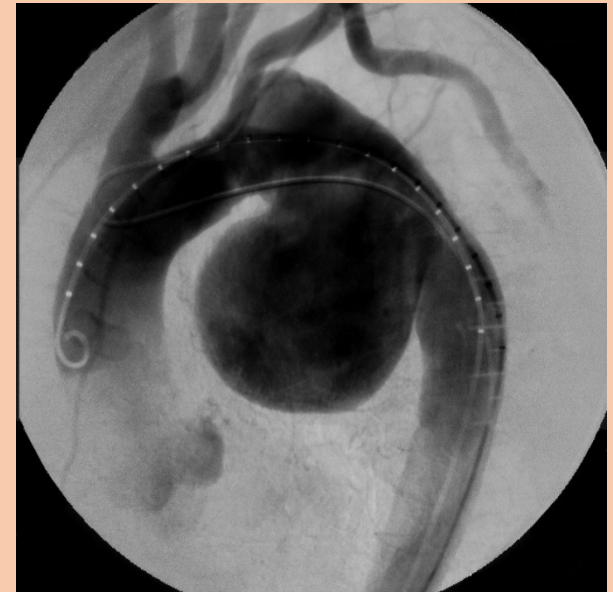
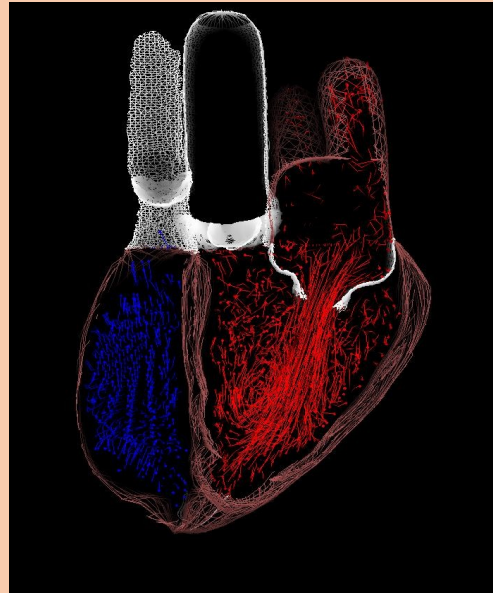
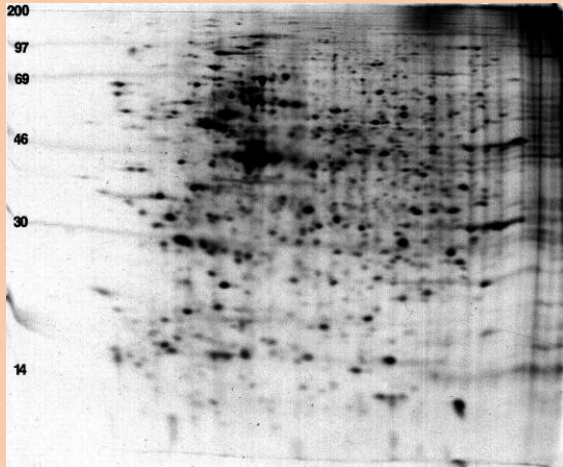


Image-body-medium

Visibility of images is grounded in their specific mediality

Images live in their media, much as we live in our bodies

Images happen, exist between bodies and mediaBody is an image medium



Image and marking

Mark

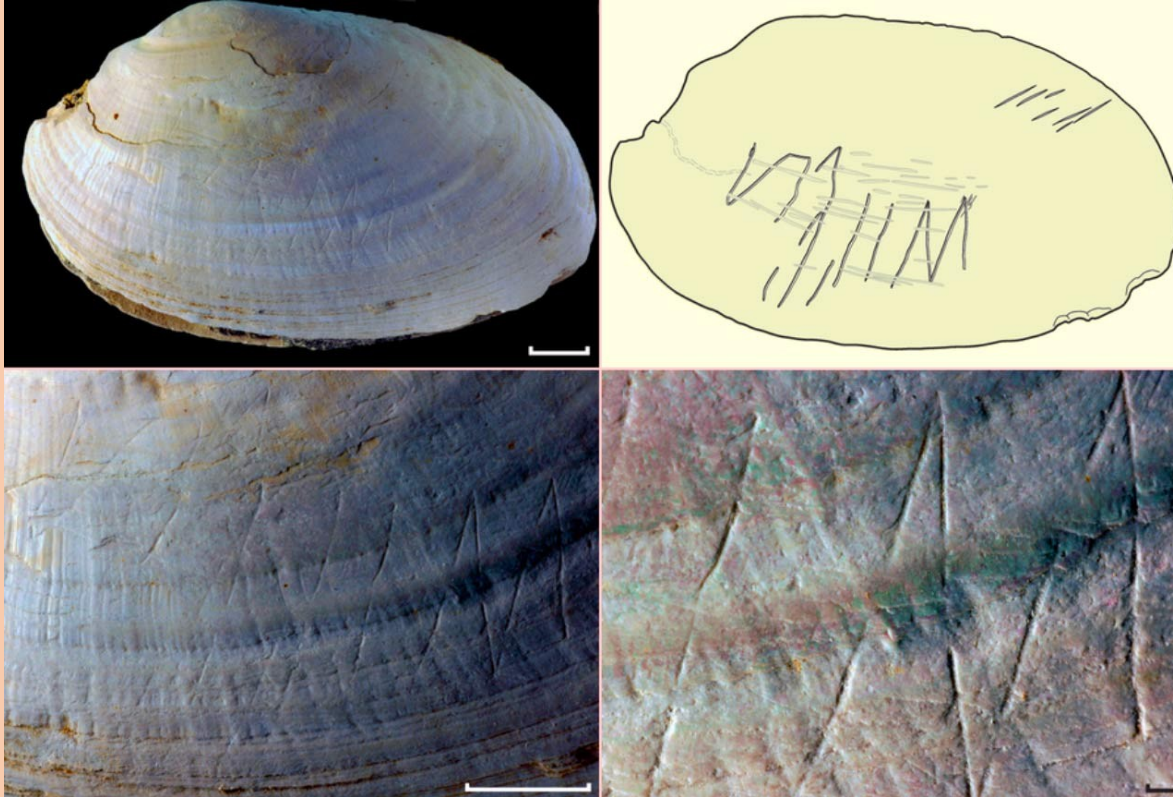
Marking

Image, image-making



Some of earliest „images“

Homo Erectus: ca 540-430, 000 BP



LETTER

doi:10.1038/nature13562

Homo erectus at Trinil on Java used shells for tool production and engraving

Josephine C. A. Joordens^{1,2}, Francesco Di Marco^{3,4}, Frank P. Wesselingh⁵, Stephen Munro^{6,7}, John de Vos⁸, Jakob Wallinga^{8,9}, Christina Antónigeano¹⁰, Tony Robinson¹¹, Jan R. Wijbrans¹², Khaidi F. Kufner¹³, Herman J. M. Meijer¹⁴, Håkan Coomans¹⁵, Vincent Pihl¹⁶, Imke Jost¹⁷, Bertil van Oort¹⁸, Arne S. Schulp^{19,20}, Michel Panfili^{21,22}, Victoria van der Haas²³, Wim Losterhouwer²⁴, John J. C. Kleinjan²⁵ & Wil Roebroek¹

The manufacture of geometric engraving is generally interpreted as indicative of modern cognition and behaviour¹. Key questions in the debate on the origin of such behaviour are whether this innovation is restricted to *Homo sapiens*, and whether it has a uniquely African origin². Here we report on a fossil freshwater shell assemblage from the *Hangpulo* beach site ('main bone layer') of Trinil (Java, Indonesia), the type locality of *Homo erectus* discovered by Eugène Dubois in 1891 (ref. 2 and 3). In the Dubois collection (in the Naturalis museum, Leiden, The Netherlands) we found evidence for freshwater shellfish consumption by hominins, on a uniauricular shell tool, and a shell with a geometric engraving. We dated sediment contained in the shells with ⁴⁰Ar/³⁹Ar an diluence dating methods, obtaining a maximum age of 54 ± 0.30 million years and a minimum age of 0.43 ± 0.05 million years. This implies that the Trinil *Hangpulo* beach site is younger than previously estimated. Together, our data indicate that the engraving was made by *Homo erectus*, and that it is considerably older than the oldest geometric engraving described so far⁴. Although it is not possible to assess the function or meaning of the engraved shell, this discovery suggests that engraving abstract patterns was in the realm of Asian *Homo erectus* cognition and technological control.

We analysed an assemblage of fossil freshwater mussel shells (*Parasulcula vanderkooijensis* trinilensis Dubois 1903, Fig. 1) excavated in the 1890s from the Pleistocene *Hangpulo* beach site at Trinil on Java (Extended Data Fig. 1 and 2, Supplementary Tables 1 and 2). The Dubois collection from the Trinil *Hangpulo* beach site contains 11 freshwater mollusc species and is numerically dominated by *Parasulca* specimens⁵. The *Parasulca* assemblage consists of 143 articulated shells, 25 single valves, and 24 fragments representing a minimum of 106 individuals (Supplementary Table 1). The sedimentary fillings of articulated shells indicate burial deposition under varying water levels and sediment loads, and include volcanic minerals transported along the river network draining volcanic canyons located south-southeast of Trinil⁶. The dominance of articulated shells in the assemblage and the taphonomy of the fillings suggest rapid filling and subsequent burial of the shells during deposition of the *Hangpulo* beach site (Extended Data Fig. 1).

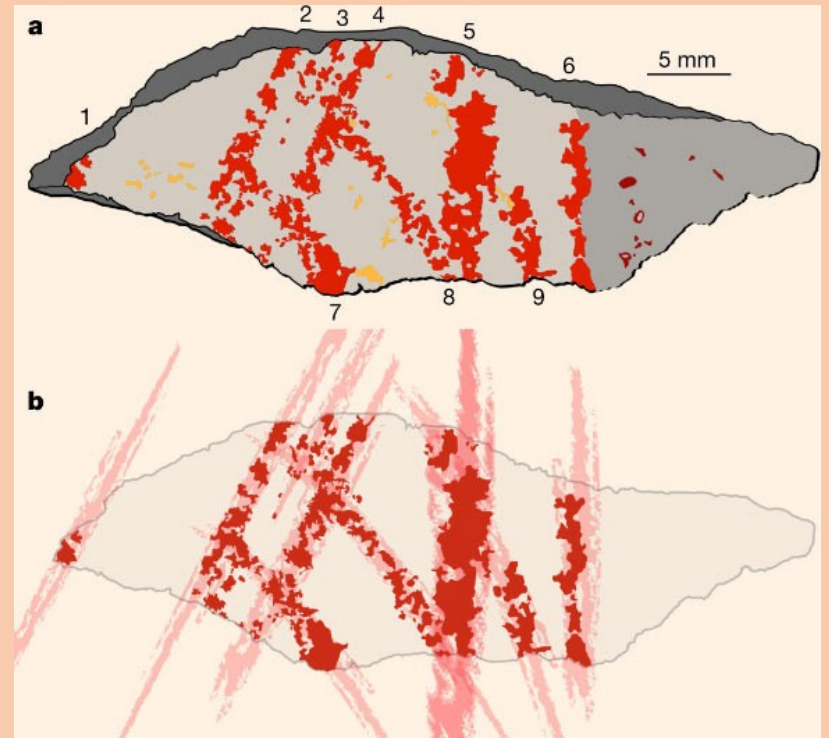
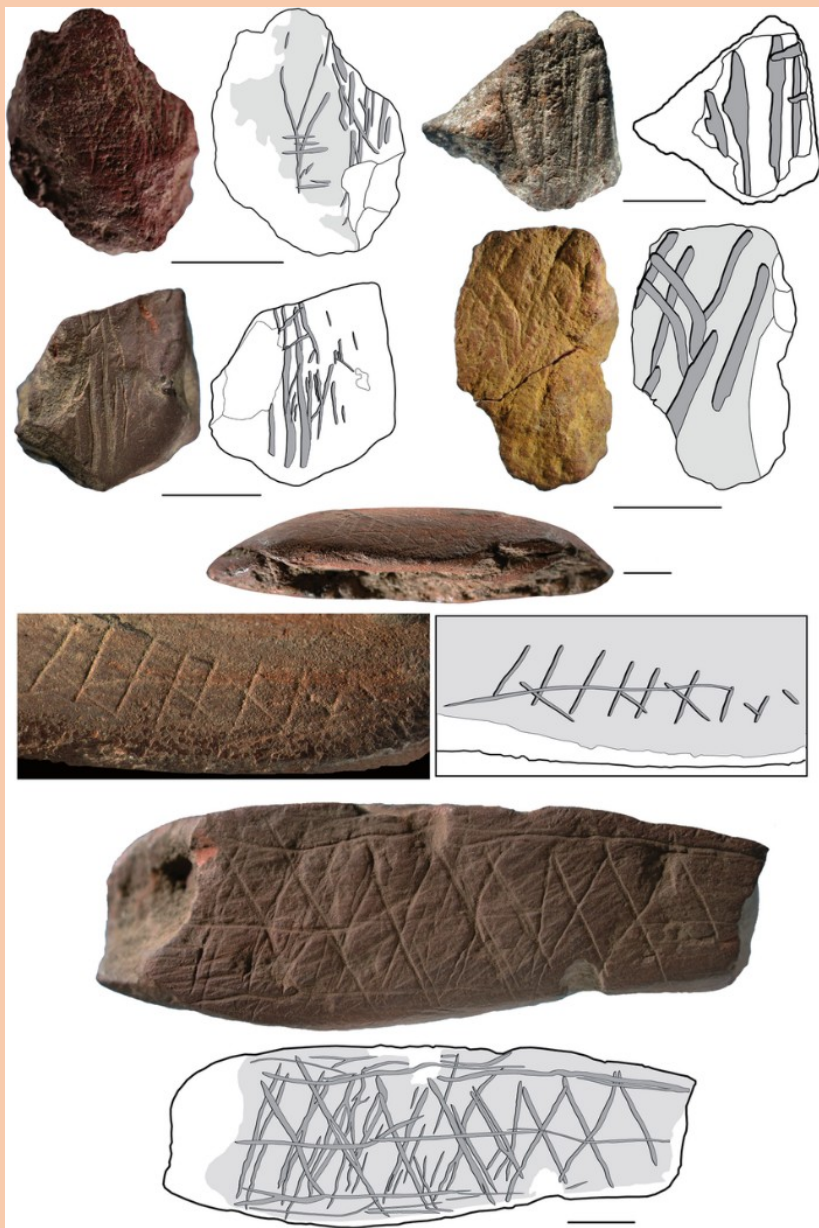
The well-preserved *Parasulca* shell assemblage does not appear to represent burial of a natural, living population. First, 33% of the individuals display one or two characteristic holes in the shells at the location of the anterior adductor muscle (Fig. 1). Second, the assemblage contains only adult large-sized specimens (about 80–120 mm in length), while

under normal conditions mussel populations comprise all age classes (Extended Data Fig. 1). A possible excavation bias in favour of large specimens does not explain this pattern, because the presence of much smaller shells, bones and shell fragments in the Dubois collection shows that fossil remains of all sizes were recovered and curated. Third, there is a large range in the length, width and area of the *Parasulca* shells, indicating that the assemblage includes specimens from several different environmental settings along a river. These observations indicate that the Trinil *Parasulca* assemblage did not result from the burial of a living, local population, but was brought together by a size-selective agent collecting mollusks for consumption.

Most (79%) of the holes observed in the *Parasulca* specimens correspond to the location of the anterior adductor muscle scar inside the shell, their diameter is about 5–10 mm. Potential mollusc-consuming agents at Trinil that could have produced the holes include otters (*Ampelisca* sp.), *Rattus* (rodents), monkeys (*Macaca* sp.) and hominins (*H. erectus*). However, the holes in the Trinil shells do not resemble the various types of damage caused by any of these non-hominin agents, nor those caused by birds, marine predatory mollusks (snails, octopuses, and abiotic abrasion and dissolution processes (Extended Data Fig. 1c–f)). Holes comparable to those of Trinil were made by pre-Holocene modern human inhabitants of the Caribbean region in the gap-tooth *Lobos* gully (formerly known as *Strombus* gully) (Extended Data Fig. 3c–i), with the purpose of catching the adductor ligament⁷.

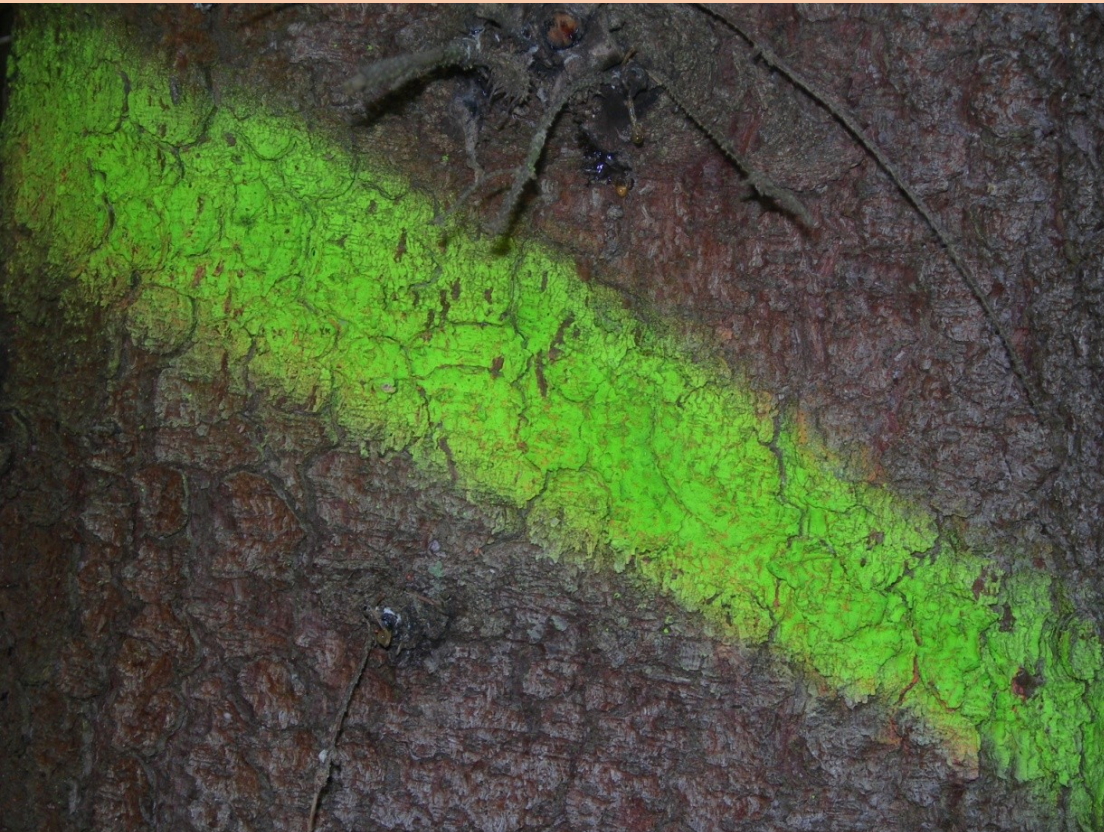
To assess possible perforation techniques we conducted experiments with living freshwater mussels of the same family, comparable in size and shell thickness to the extinct Trinil *Parasulca* (Extended Data Fig. 3j–m). A pointed object such as a shark tooth—several of which were present in the Trinil *Hangpulo* beach site (Extended Data Fig. 3h–i), employ with a non-ang motion into the living shell at the location of the anterior adductor muscle, produces a hole similar in size and morphology to the holes from Trinil (Fig. 4d). As soon as the shell is pierced and the muscle has been damaged by the tool tip, the animal loses control of the muscle, the soft part and the shell can be opened without breakage (Supplementary Video 1). Our experiments indicate that a high level of dexterity and knowledge of mollusc anatomy is required to open shells in this way. The absence of holes similar to those at Trinil in natural shell assemblages, the difference between the holes observed in the Trinil assemblage and those produced by non-human animals and abiotic factors, and the similarity between our experimental holes, human-made *Lobos* holes and Trinil holes all suggest that *H. erectus* was the

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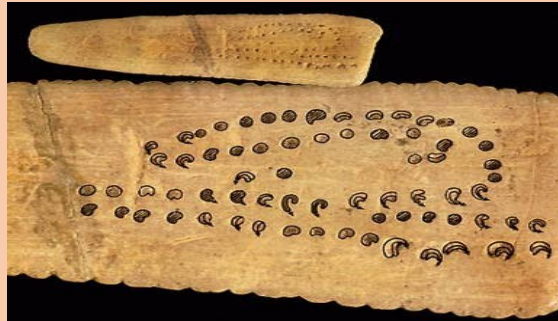
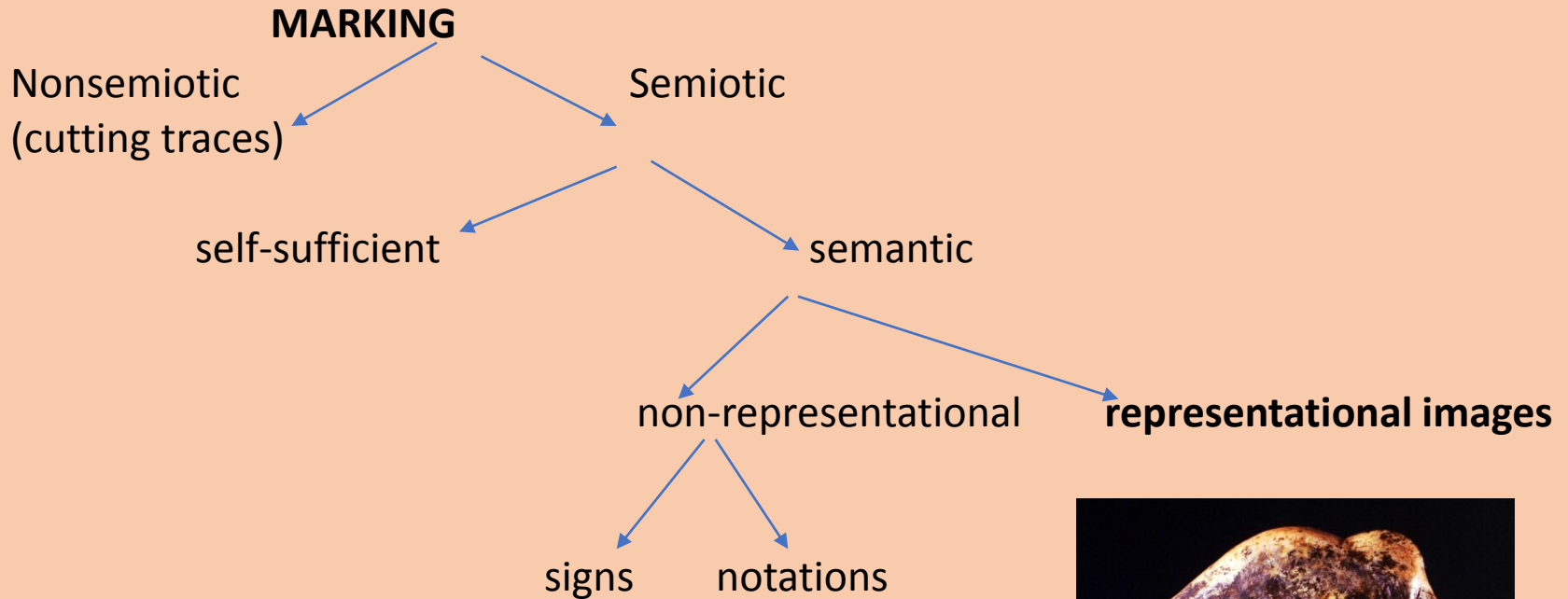


Incised and drawn lines on ochre tablets
Blombos, ca 100, 000 - 75, 000 BP

When is an image?

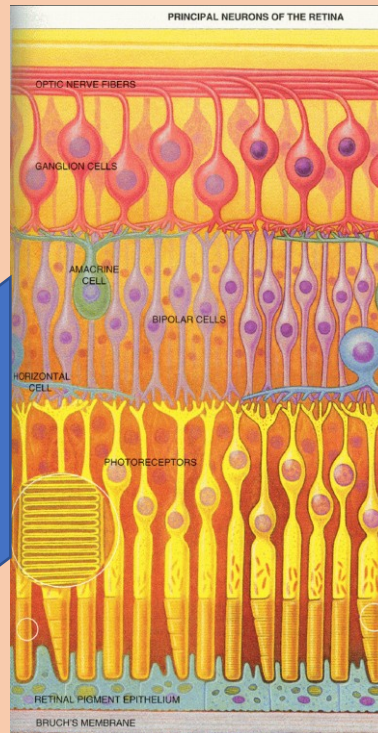


Taxonomy of markings



**External images
(in front of the
eyes)**

Art history, visual
studies, film
studies.....

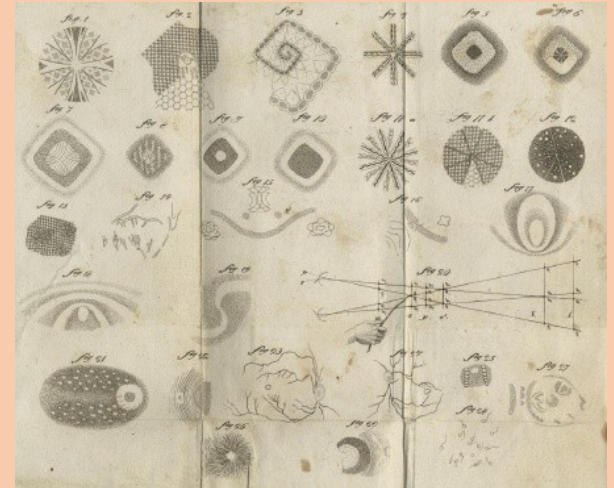


**Internal images
(behind the eyes)**

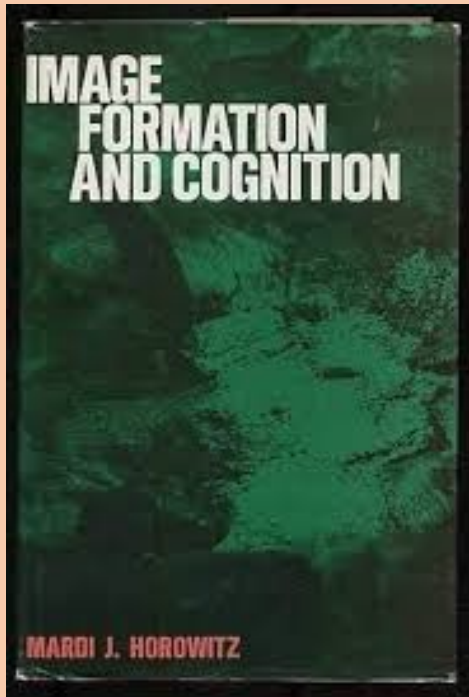
Psychology,
cognitive science,
neuroscience

Somatic (endogenous) images

- Entoptic phenomena
- Afterimages
- Mental images
- Visions, hallucinations
- Dreams
- Memories
- Neuronal correlates



..we must categorize image phenomenologically, by their most striking characteristics:



A. IMAGES CATEGORIZED BY VIVIDNESS

1. Hallucination
2. Pseudohallucination
3. Thought image
4. Unconscious image

B. IMAGES CATEGORIZED BY CONTEXT

1. Hypnagogic or hypnopompic image
2. Dream image; nightmare
3. Psychedelic image
4. Flashbacks
5. Dream scintillations

C. IMAGES CATEGORIZED BY INTERACTION WITH PERCEPTIONS

1. Illusion
2. Perceptual distortion
3. Synesthesia
4. Déjà vu
5. Negative hallucination
6. After-image

D. IMAGES CATEGORIZED BY CONTENT

1. Memory image; eidetic image
2. Imaginary image
3. Entoptic image
4. Body image; body schema experience
5. Phantom limb
6. Paranormal hallucination
7. Imaginary companion
8. Number and diagram forms

Edmund Husserl and phenomenological conception of image

Bildträger /image carrier/

Entity of real world

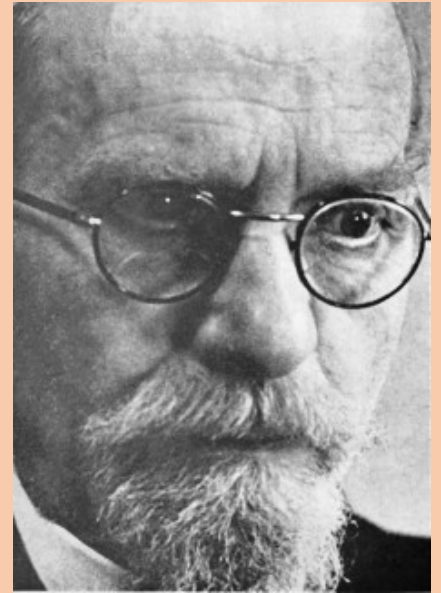
Image carrier is a medium that makes image object visible and its semiotic use possible =

Entity of real world

Bildobjekt /image object/

an image object is “a nonthing supposedly appearing to us at present...” =

Intentional object of consciousness



*Phantasie, Bildbewusstsein, Erinnerung.
1904-05.*



Image-object (image) represents a
subject



Image carrier, pictorial vehicle) =
medium

Image object (pictorial image)
= **IMAGE**

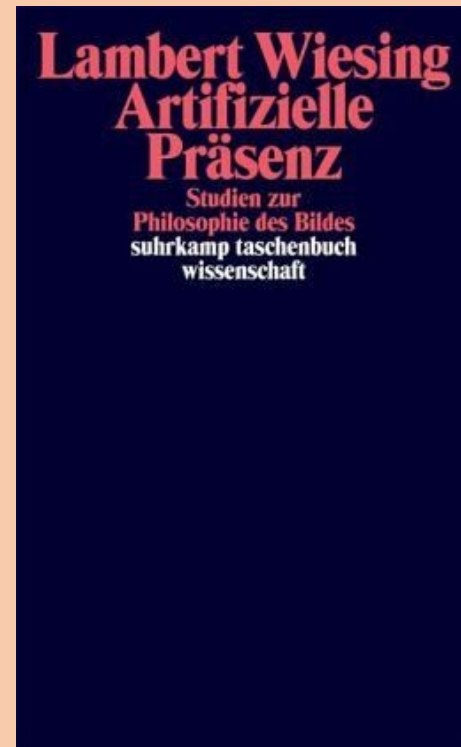
Image subject (pictorial subject)
= **referent**

If no one looks at image-carrier, there is
no image-object !

...the physical image “awakens”
the mental image and this in
turn presents something else,
the subject”

“how an image carrier is able to
produce in the viewer the
consciousness of ‘an image
object presently presenting
itself” is, at least for the
moment, inexplicable.....

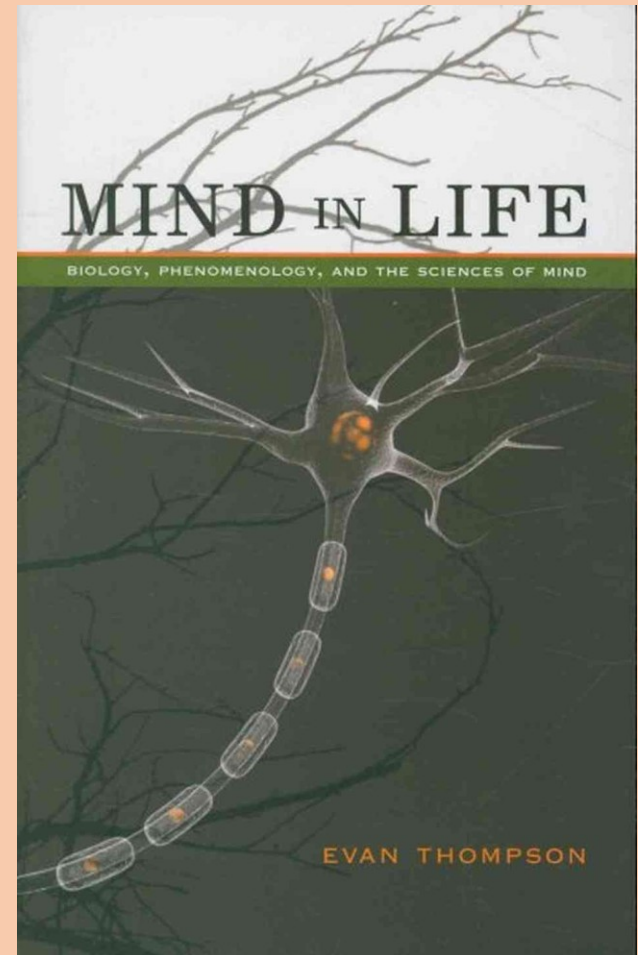
....We do not know how this
“awakening“, precisely this
coming-to-consciousness,
functions.“



Phenomenological conception of the image

...a picture is nothing other than an intentional correlate of the mental activity of picture-viewing. This image has a clearly identifiable vehicle, the physical material of the picture.

Evan Thompson



Bildträger = medium

- FORMAT
- SURFACE
- MATERIAL/TECHNIQUE



Images always comes to us in some format



Shaping of format extends from the format itself into the social space which it occupies and determines the conditions of viewing



Image format determines conditions of manipulability, transfer and ownership of the image



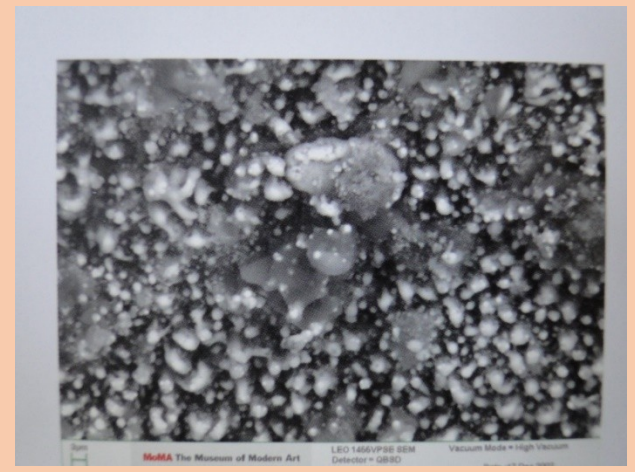
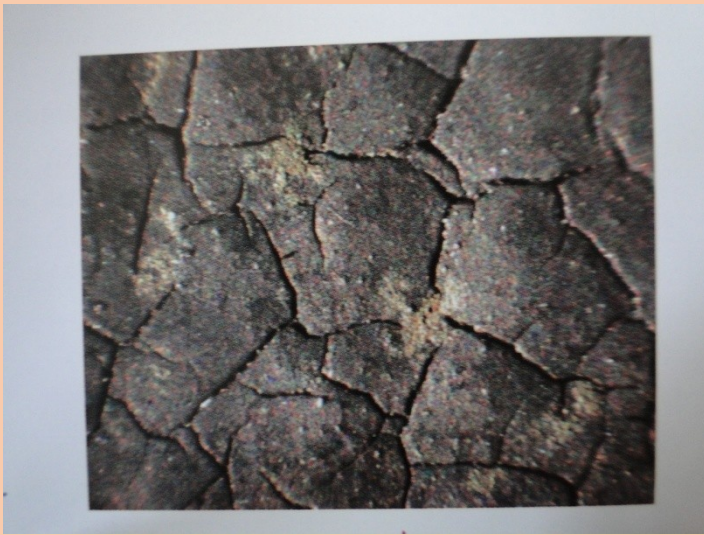
Materiality



Materiality



Ad Reinhardt, Black painting



Images are not isolated, they live in symbiosis with words !!!

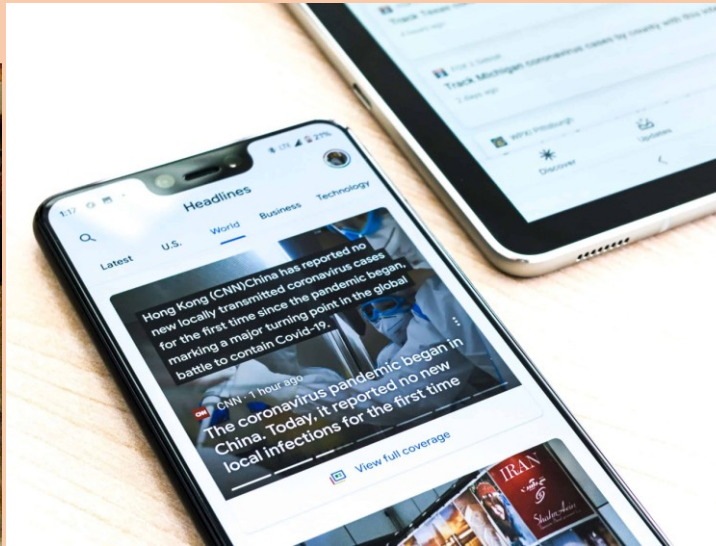
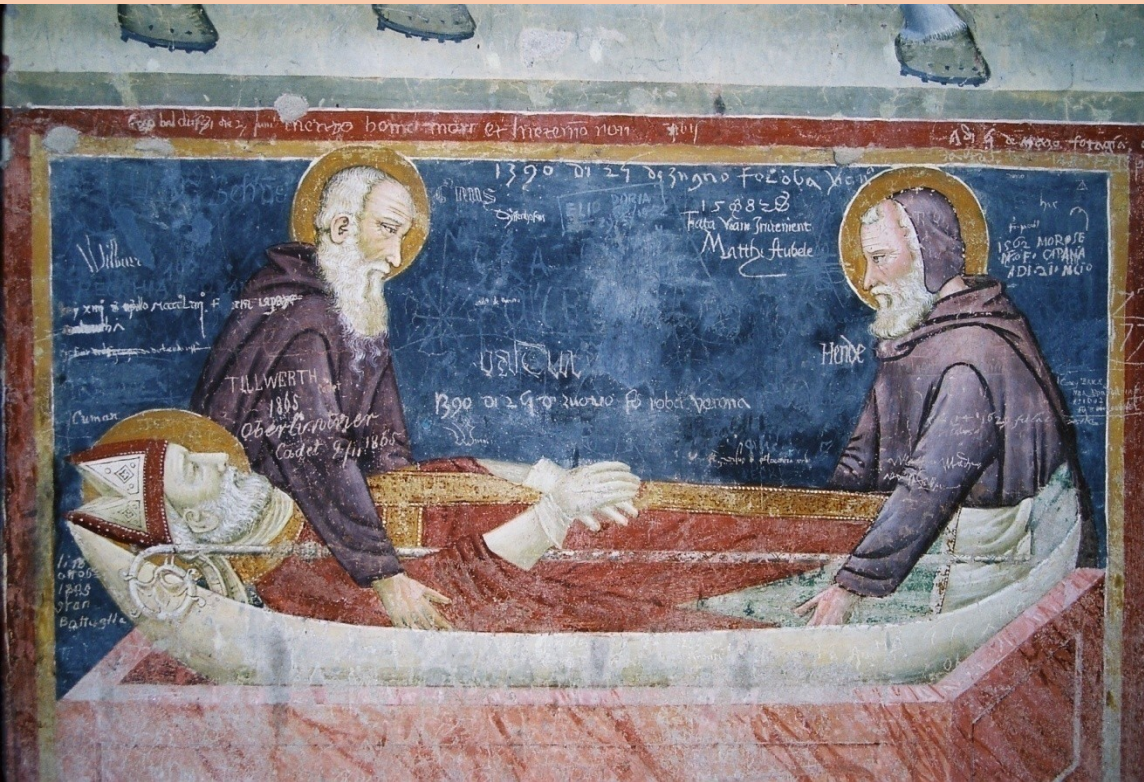


Image-text



Schemas-diagrams

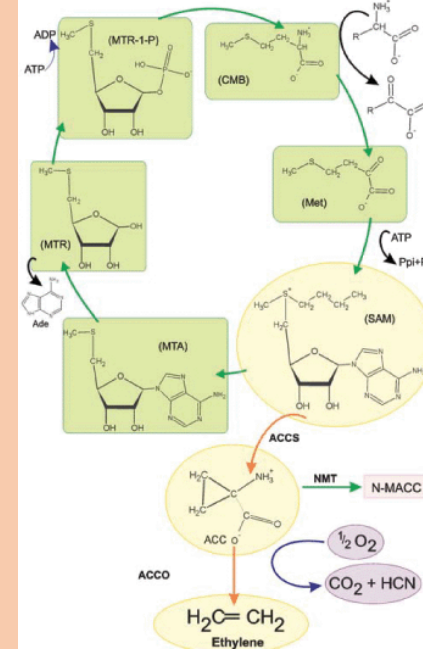
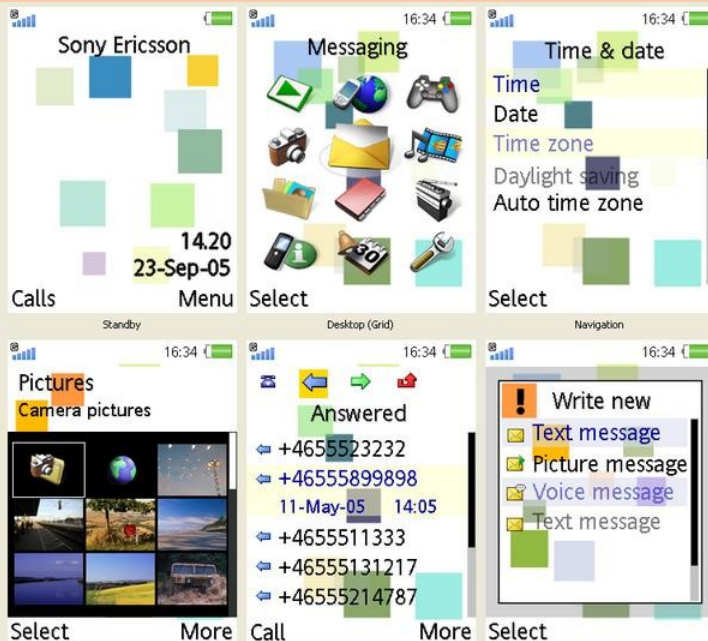
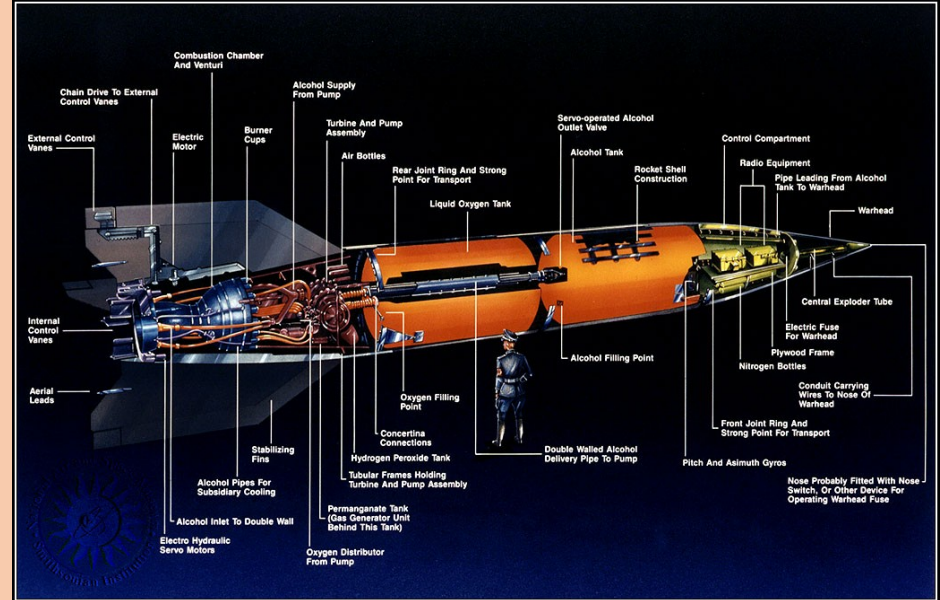
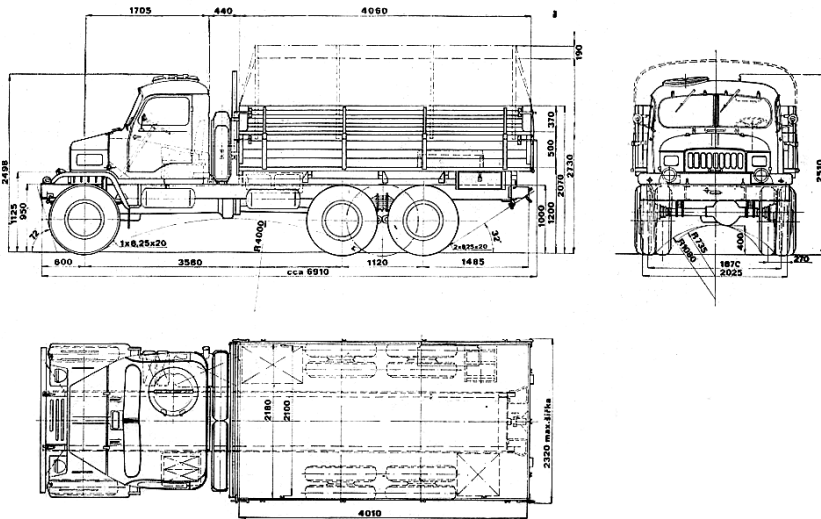
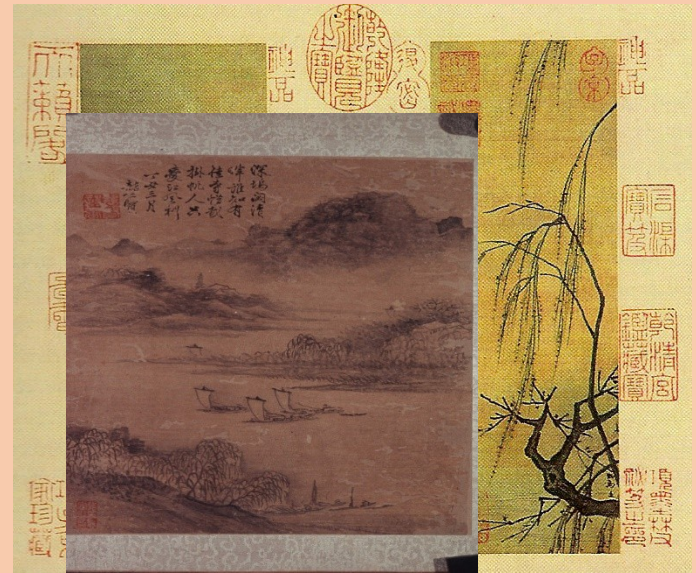


Figure 1 - Ethylene biosynthesis pathway (yellow) and its relationship to the methionine cycle (green). ACC: 1-aminocyclopropane-1-carboxylic acid; ACCS: ACC synthase; ACCO: ACC oxidase; Ade: adenosine; ADP: adenosine 5'-diphosphate; ATP: adenosine 5'-triphosphate; CMB: 2-keto-4-methylbutyrate; MTA: 5'-methylthioadenosine; MTR: 5-methylthio-ribose; MTR-1-P: 5-methylthio-ribose-1-phosphate; N-MACC: N-malonyl ACC; NMT: N-malonyl transferase; SAM: S-adenosyl methionine (adapted from Yang and Hoffman, 1984).

Text „infects“ pictorial space



pg

Narrative picture (illustration of the text)



Methods of art history

- Formalism
- Iconography and iconology
- Social history
- New social history, contextual history
- Poststructuralism, critical theory
- Feminism
- Deconstruction

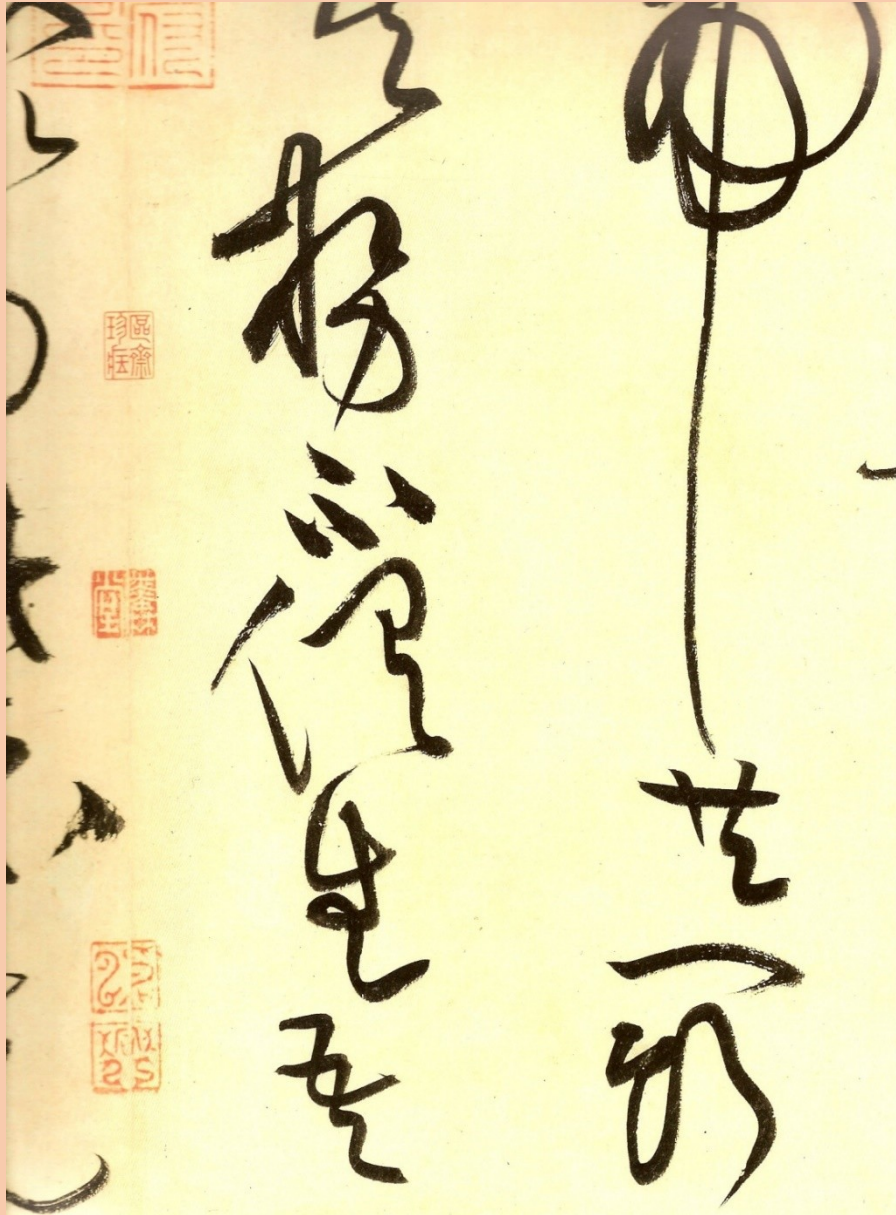
„Classic concepts“ of art history

- Form
- Expression
- Symbol
- Style
- Idea
- Meaning
- Space
- Context
- Original, copy
- Author

Culture-specific critical concepts

- Ars
- Disegno
- Concetto
- Colorito
- Sfumato
- Durezza
- Grazia
- Pentimenti.....





qi yin shendong

Spiritual consonance

Zhao Meng-fu, Autumn colors in Qiao and Hua Mountains, 1296



Gao-gu (ancient and lofty)



- „Poté co jsem v 9.měsíci namaloval tento obraz potěšení z divoké přírody v podzimním hájku pro Siao-šana, přinšesl jej nazpět a požádal mne abych jej nadepsal. Stalo se, že 15.dne minulého měsíce jsem míjel altán Ti-ling? a kasiové stromy před ním byly v plném květu. Tom mne inspirovalo k této básni.....

Pingdan: (literally: straight and pale)

Ni Zan, Delight in nature in autumn grove, 1339

Concepts and terms

Representation	Context
Sign	Meaning/Interpretation
Simulacrum	Histories
Communications	Appropriation
Word and Image	Art History
Narrative	Modernism
Performance	AvantGarde
Style	Primitive
Memory monument	Commodity
Beauty	Collecting/Museums
Ugliness	Value
Ritual	Postmodernism/postcolonialism
Fetish	Visual culture
Gaze	
Gender	
Identity	



....and a few other (which are relevant for our course)

- Image
- Image-carrier
- Medium, mediality
- Format
- Surface
- Materiality
- Gaze
- Visuality
- Intention
- Mimésis
- Anachronism
- Empathy
- Embodiment
- Attention
- Affect
- Gestalt
- Agency

- Kunstwollen /Riegel, Panofsky/
- Macchia /Sedlmayr/
- Pathosformel /Warburg/
- Nachleben /Warburg/
- Beholder's share /Gombrich/
- Affordance /Gibson/
- Period eye /Baxandall/
- Pan /Didi-Huberman/
- Ikonische Differenz /Boehm/
- Real metaphor /Summers/
- Opera aperta /Eco/