

English
translation

IN
THE
WEB
OF
THE
visible

INTRODUCTION

We're perpetually entangled in a web of visible and invisible things. This net has been created by our learning processes and visual experiences as well as by cultural conventions and aesthetic norms. Historical objects and images carry within them certain ways of seeing, which have shaped our thought and sciences to the present day. In order to improve our understanding of culture and nature, and to organize and impart knowledge, universities have been, and will continue to be, sites of collection.

What is it that has been made visible in the items collected from the distant past to the present day? Which aspects have remained invisible by being discarded or excluded? The interdisciplinary project "INSIGHT. Signatures of Sight – Facets of Seeing" has brought together four collections in order to investigate the multifaceted phenomenon of seeing through the lens of specific objects that have been collected:

- the Adolf-Würth-Center for History of Psychology
- the Research Center for Historical Visual Media
- the Martin von Wagner Museum and
- the Collections at the Institute for the History of Medicine.

Thanks to support from the Federal Ministry of Education and Research, it has been possible to secure, catalogue, digitalize and partially restore thousands of items from these collections over the past three years.



Portrait of King Max I Joseph of Bavaria

This portrait was created out of feathers from different bird species. Bonavita Blank (1740-1827) used feathers and other natural materials, like mosses and lichens, for further so-called Musivgemälde. To create these landscapes and portraits, he aesthetically arranged objects that he had seen and collected in nature. Blank's famous naturalia cabinet is the nucleus of the University of Würzburg's collections.

**MUSIVGEMÄLDE | BONAVITA BLANK AND BARBARA THEIN | 1819 | FEATHERS
73 (H) X 55 (W) CM | MARTIN VON WAGNER MUSEUM, PAINTINGS GALLERY
INV. NR. Z752**

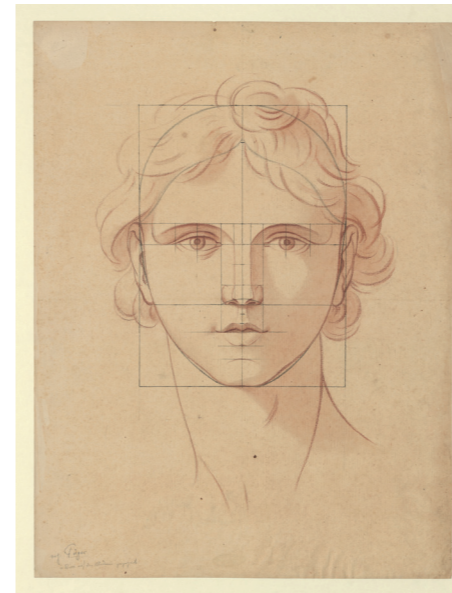
CHAPTER ONE

Wahrnehmen und urteilen – Perception and Judgment

What is beautiful? How people perceive and judge things has preoccupied artists and scientists from the very beginning. According to the philosophical discourse of aesthetics, the 18th century marked the starting point for the analysis of classical ideals of beauty. In the 19th century, measurements and experiments were conducted that aimed to make objective judgments about the beautiful possible. This set off clashes between the disciplines of natural science, medicine and art on the true causes of the beautiful.

Vermessen des Schönen – Measuring the Beautiful

Since the end of the 18th century, modern science has pursued the idea that aesthetic impressions are measurable, and the beautiful is capable of being scientifically determined. From that time on, science has sought to objectify subjective sensory impressions by means of norms derived from data.



Study of the proportions of a male head

Since the Renaissance, the laws of beauty have rested heavily on references to classical sculptures, which have been seen as representing the ideal human body and researched and measured accordingly. At the popular art academies of the 18th and early 19th centuries, artists, aided by standardized proportional schemes, studied and internalized human anatomy. The Würzburger artist Martin von Wagner (1777-1858) likewise made a study of the ideal head at the Vienna Academy for Visual Arts according to the specifications of a drawing book by his professor Heinrich Friedrich Füger (1751-1818). The head's symmetry, emphasized by the frontal perspective, is created through a grid of construction lines.

**DRAWING | MARTIN VON WAGNER | AFTER: "ATTEMPT AT A GENERAL STANDARD FOR DRAWING HEADS: CONTAINING 12 SHEETS, DRAWN BY HEINRICH FÜGER AND ENGRAVED BY JACOB EGGER, NÜRNBERG 1802" | 1802 | SANGUINE AND CHALK ON PAPER
59,7 (H) X 44,5 (W) CM | MARTIN VON WAGNER MUSEUM, COLLECTION OF GRAPHIC ART
INV. NR. HZ 3893**

Pelvimeter after Thöle



In the 18th and 19th centuries, Pelvic bones from people and animals were increasingly collected, measured and compared for anthropological research and medical training. Through the systematic comparison of shapes and sizes scientists hoped to confirm assumed differences between men and women as well as between people who originated from different regions. Devices to measure the pelvis have been part of the obstetric equipment of doctors since the beginning of the 19th century. The distance between the pelvic bones of a pregnant woman have been measured in order to determine whether a natural birth is possible or whether the birth canal is too narrow for the baby's head. But body measurements have also been taken in order to establish what constitutes "normal" and "healthy" by means of a large sample of values. These have become the artificial standards to which the 'beautiful' has been assigned. The pelvis played an essential role in doctors' assessments of women till far into the 20th century. The 'beautiful woman', medically construed, is healthy, normal and childbearing. "The doctor's eye, like that of the artist, is present from birth." (Carl Heinrich Stratz, 1900)

**INSTRUMENT | MANUFACTURER: G. SCHULART MARBURG | 19TH C. | STEEL AND BRASS
33 (H) X 12,5 (W) X 1,5 (D) CM | MEDICAL HISTORY COLLECTIONS AT THE INSTITUTE FOR
THE HISTORY OF MEDICINE | RESTORED BY FRANK WITTSTADT | INV. NR. GK-309**

Versuche zur Ästhetik – Experiments on Aesthetics

The word aesthetic derives from the Greek aisthesis—meaning perception mediated by the senses.

Aesthetic thought and theories reflect diverse areas of knowledge and practice.

By adopting an experimental approach, empirical aesthetics severed itself from the philosophical discipline of aesthetics.

NUMBERS ON THE FLOOR ONTO THE EXHIBITION HALL AND IN THE DOORWAY: TABELLE ÜBER DIE VERSUCHE MIT 10 RECHTECKEN.

Experimental psychology was founded in the 19th century. It was decisively influenced by Gustav Theodor Fechner (1801–1887).

In the spirit of the psycho-physical way of thinking, attempts were made to objectivize subjective judgments of taste by using key indices to determine the aesthetic content of objects. To do so, individual features of an object, such as its proportions, were examined in isolation.

A famous example is the golden ratio: the postulation that rectangles with an aspect ratio of 1.62:1 have a special aesthetic appeal. In the experiment, several rectangles with sides of different aspect ratios were displayed on a table to the test participants. The participants were then asked to choose which ones give them the greatest and least feeling of pleasure. The results did indeed show a preference for a relation between the sides that approximates the golden ratio. Whether or not an aesthetic effect can really be attributed to this, however, remains a matter of contention.

TABLE OF RESULTS FOR THE EXPERIMENT WITH TEN RECTANGLES.

TAKEN FROM: VORSCHULE DER AESTHETIK, LEIPZIG: BREITKOPF & HÄRTEL, 1876.

PAIRWISE COMPARISON

In his "Vorschule der Ästhetik" (1874), Fechner postulates multiple aesthetic principles and methods. Derived from his "method of choice", the methodology of paired comparisons evolved in subsequent years. In this procedure, two objects of a subset are compared according to a single attribute. The participant chooses the preferred object until each object has been compared to every other object. Based on this comparison task, a scale of the objects' feature values can be computed.

Try it on your own! Which body does look more pleasant to you? Double-click on the corresponding image.

START (double-click)

Ideale Körper – The Ideal Body

Images of the ideal body are everywhere, consciously and unconsciously shaping the judgments we make about beauty.

In many instances, such conceptions go back to the sculptures of Antiquity, which are still very frequently used as mediators of aesthetic norms.



"Plastische Anatomie" – Sculptural Anatomy

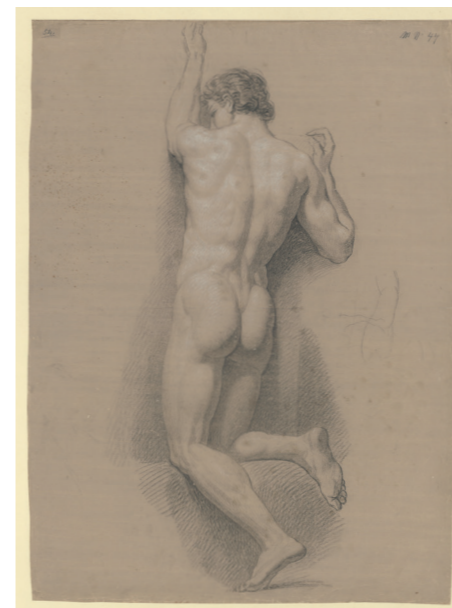
"Anatomy for Artists" was the title of the lecture Siegfried Mollier (1866–1954), a professor of anatomy, first gave in 1897 at the Academy of Visual Arts in Munich.

The book that emerged from it, "Sculptural Anatomy. The Constructive Form of the Human Body", appeared in 1924. It was initially conceived for artists and scientists in equal measure.

According to his contemporaries, Mollier succeeded with all due scientific rigor in creating a true work of art through his series of images.

"It began like this: I was sitting in the hallway of the Munich Institute of Anatomy on one of the wide, red triassic marble windowsills and enjoying, as I often did, the labyrinth of ground bryozoans and ceretites. My reticent friend Alverdes was squatting next to me. We had both just heard Rückerts anatomical lecture and were waiting for the bell to ring to call us back to the lecture hall, now for embryology, presented with theatrical refinement by the elegant Mollier." (Erwin Stresemann, 1909)

DIAPPOSITIVES | SIEGFRIED MOLLIER IN COLLABORATION WITH HERMANN SACHS
SELECTION FROM THE PHOTO-SERIES "THROAT", "SPINE AND RIBCAGE", "PELVIS AND HIP JOINT" AND "FOOT, LOWER LEG, ANKLE" FOR ANATOMICAL INSTRUCTION IN ARTISTIC AND MEDICAL TRAINING | 1924 | GLASS AND PAPER
12 (H) X 9 (W) X 0,4 (D) UND 9 (H) X 12 (W) X 0,4 (D) CM | MEDICAL HISTORY COLLECTIONS AT THE INSTITUTE FOR THE HISTORY OF MEDICINE
INV. NR. FG-009, FG-010 UND FG-011



Studies of Male Nudes

The study of nudes is an important component of an artist's education. Martin von Wagner attended the renowned Academy of Fine Arts in Vienna for five years. The continual study and copying of nude, and at the time exclusively male, bodies was intended to train the eye and entrench the 'proper' representation of human anatomy through repeated practice.

The eye oscillates between the nude model and the forms drawn on the paper— with corrections made in order to come as close to the model, i.e. nature, as possible.

Since the models often assume the poses of Greek and Roman sculptures, the conceptions of an ideal body also play a role. Yet at the same time, despite the rigid pose, we also see an individual person, eyeing us just as critically as we are eyeing him.

DRAWINGS | MARTIN VON WAGNER | 1798–1802 | CHALK ON PRIMED PAPER
MARTIN VON WAGNER MUSEUM, COLLECTION OF GRAPHIC ART
INV. NR. HZ 4082, 4084, 4085, 4098, 4100, 4116



CLASSICAL TORSO OF A YOUNG MAN (POSSIBLY REPRESENTING APOLLO)
FROM THE WAGNER COLLECTION | 2ND CENTURY A.D. | MARBLE
MARTIN VON WAGNER MUSEUM, ANTIQUITY COLLECTION | INV. NR. H2407

Sehen üben – Practicing to See

Can taste be taught?

This question has been posed by art teachers and educators since the beginning of the 20th century, who have tried to influence children's perception of art and inculcate the sense of beauty. One of the initiatives used to achieve this end has been to decorate school classrooms with artistic images.



"An der Tränke" – At the Trough

Artistic wall decor has been produced by several publishers, among them Merfeld and Donner, B. G. Teubner and R. Voigtländer in Leipzig. "Instruction booklets" have also arrived on the market as supplementary aids to help ensure that the images and their content are correctly grasped and discussed. Implicit here is the view that a child's eye needs to be trained how to observe art. At the same time, it raises the question of the degree to which children are even capable of grasping the aesthetic expressive value of an image at all. At the turn of the 20th century, for instance, the Leipzig teacher Rudolf Schulze attempted to investigate this issue by showing children images of artistic wall decor and photographing their facial expressions as they looked at them. Teaching art through art should not be left to chance.

ARTISTIC WALL DECOR | R. VOIGTLÄNDERS VERLAG LEIPZIG | 1900 TILL 1910 (C. 1905)
ARTIST: JULIUS BERGMANN | SERIES: ARTIST-LITHOGRAPHS NR. 139
KUNSTDRUCKEREI KÜNSTLERBUND KARLSRUHE GMBH | COATED PAPER
55,8 (H) X 75,7 (W) CM | RESEARCH CENTER FOR HISTORICAL VISUAL MEDIA
INV. NR. FHBW/KW006

CHAPTER TWO

Sehen lernen und sehen lehren – Seeing Learning and Teaching

We see with our eyes – but our knowledge, individual experience, and the impressions of our other sensory organs also inform the complex process of perception.

How we see the world is, moreover, socially conditioned. As beings who constantly form social groups, we develop seeing collectives – mutually constructed ways of seeing.

Blicke erziehen – Educating the Eye

Learning to see is a school project, and it is directed at everyone. In this regard, the first visual instruction in elementary school lays an important foundation. Images make education more immediate, and they ought to be used to train our perception. They serve as a guide to seeing correctly and demand exact observation.

Anschauung, or the union of seeing and understanding, was already an educational aim in Johann Amos Comenius' (1592-1670) "Orbis sensualium pictus" from the year 1658. In the school posters of the 19th and 20th centuries we see the definitive emergence of a universe of images that places an all-encompassing focus on seeing.

SPITZWINKELTRÄGER

At the end of the 19th century, seeing was among the cultural practices that were subjected to comprehensive questioning. It was postulated that seeing had to be learned anew: on the one hand, regarding the artistic understanding of the self and the world; on the other, regarding the education of consumers according to national aspirations and economic interests.

In schools, seeing properly gained significance across disciplines, reflected, e.g., in natural history and drawing courses involving visual aids.

A diverse range of visual materials, above all school posters, served to educate the eye.



"Falsche und richtige Haltung in der Schule" – Correct and incorrect posture in school

Teaching and learning how to see is especially crucial when considering the school as an institution. Here, contents are presented visually and ideas about concrete objects and processes, as well as about categories such as 'correct' and 'incorrect' or 'healthy' and 'sick' are formed through seeing.

This school poster lets us look inside the classroom of a girls' school around 1920. The schoolgirls are sitting on the benches in a variety of postures. Instructional posters are hanging on the wall above them, displaying representations of various kinds of spinal afflictions caused by bad posture alongside warnings to sit up straight.

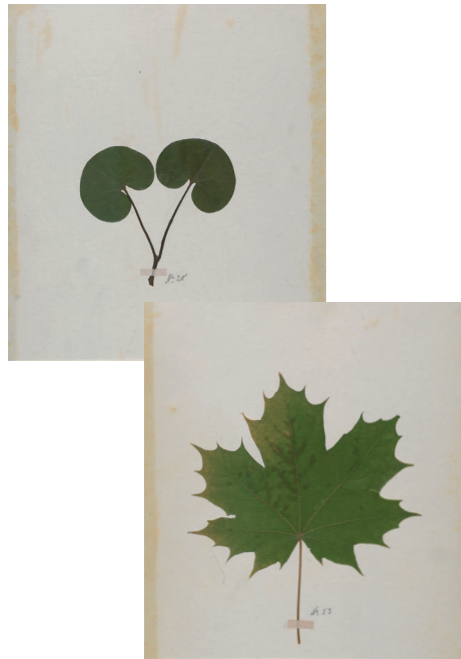
SCHOOL POSTER | PUBLISHER: GERMAN MUSEUM OF HYGIENE, DRESDEN
AROUND 1920 | SERIES: BIOLOGICAL AND HYGIENIC LESSON COLLECTION NR. 18
PAPER ON LINEN, WOOD, METAL, TAPE, CORD | 71 (H) X 99,1 (W) X 3,5 (D) CM
RESEARCH CENTER FOR HISTORICAL VISUAL MEDIA | INV. NR. RK32022

Zeichnend sehen – Seeing through drawing

Drawing is still seen today as an education in how to see. To transfer what one sees onto paper involves observing it with intense concentration.

Copying from the original and drawing classical sculptures and nude models has long been a fixture of an artist's education, especially since the 18th century.

Through constant repetition one is supposed to learn certain drawing techniques as well as train the eye's ability to discern such things as human anatomy or the structure of plants.



European Wild Ginger and Norway Maple

It is clear in methodological contributions to 19th century drawing lessons just how much the courses are structured in accordance with the physiological bases of seeing and the development of perception in childhood. Seeing is here the central didactic consideration, since accurate drawing is an expression of accurate seeing. Such seeing is, in turn, connected to spiritual improvement. It has to do with "thoughtful observation of the visible world" and the identification of natural laws.

First and foremost, came the practice of geometric shapes. As drawing courses underwent reform, nature began to play an ever-greater role. Around 1900, pedagogical reformers characterized plants, with their abundance of subtle movements and delicate colors, as the "most appealing and delightful object for studying nature."

These botanical drawing models were intended for lessons. They show the growing significance in schools of the connection between conceptions of art and nature.

DRAWING MODELS | WITWE GARVE & SOHN HANNOVER
AROUND 1910 | PAPER, CARDBOARD, FABRIC, METAL, PREPARED LEAF
72,5 (H) X 26,0 (W) X 0,6 (D) CM UND 72,5 (H) X 26,0 (W) X 0,6 (D) CM
FORSCHUNGSSTELLE HISTORISCHE BILDMEDIEN
INV. NR. FHBW/GA005.2 | INV. NR. FHBW/GA012

Kollektiv sehen – Collective seeing

"I spy, with my little eye", the popular children's game, shows that what we see and pay attention to exist in relation to what others have noticed and named. Seeing is thus not a purely individual affair. Rather, we rely on seeing the same thing as the people around us, because we've learned how to see together. This is why certain things are only visible to particular groups that have trained themselves to see them.

X-RAY READER

The "Planilux" Negatoscope

Scientific and medical images and objects often convey information that is invisible or unreadable to lay people. Scientists and doctors use certain instruments and techniques that enable them to have special insights. During their training, they also learn how to resist images: to ignore things that are visible but do not contribute to knowledge.

Groups that possess certain disciplinary capacities to see form so-called seeing collectives. They exchange images amongst themselves and discuss what they see. Beyond the confines of these seeing collectives, the knowledge they possess remains hidden and the images are incomprehensible.

GERMANY | END OF THE 20TH C.
ON LOAN FROM THE MEDICAL COLLECTION AT THE CHAIR OF THE HISTORY OF MEDICINE ERLANGEN, FRIEDRICH-ALEXANDER-UNIVERSITÄT ERLANGEN-NÜRNBERG

PHOTOGRAPH OF AN X-RAY

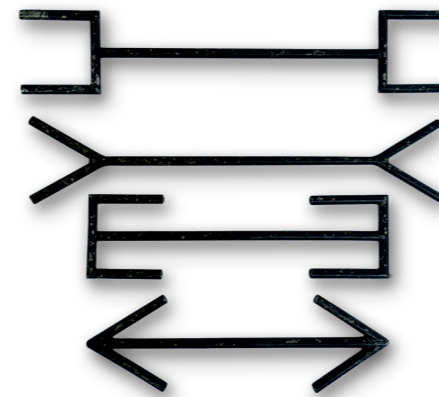
Wilhelm Conrad Röntgen's picture of his hunting rifle

On January 23, 1896, Wilhelm Conrad Röntgen held a lecture entitled "A New Kind of Rays" in front of the Physical-Medical Society of the University of Würzburg, during which he made the subsequently famous image of anatomy professor Albert von Kölliker's (1871–1905) hand.

He had previously conducted numerous experiments with the rays that would come to bear his name, and which he himself called "X-rays". Among the things that the hunting enthusiast illuminated was his hunting gun, the double-barreled rifle seen here. This image marks the beginning of the history of materials testing.

("LEFAUCHEUX" CARTRIDGE SYSTEM)
FROM THE ESTATE OF WILHELM CONRAD RÖNTGEN | 1896
WÜRZBURG | 18 (L) X 13 (W) | UNIVERSITY ARCHIVE, WÜRZBURG
INV. NR. AND MATERIAL MISSING

Metal rods for the Müller-Lyer illusion



Under certain conditions our eyes and bodies behave 'automatically'. We seldom think about what we see. We think, e.g., that we see that the two lines on the left side are longer than the line in the middle, and that the lines on the right side are shorter than the lines in the middle. But measure them and you'll find that all the lines have the same length!

The principles behind the neural processing of sensory impressions have been studied in psychology since the beginning of the 20th century, but no definitive explanation for the illusion depicted here has yet been found.

Experience, however, seems to play a role: members of indigenous cultures, who in daily life rarely see right angles and straight lines, are only a little or not at all fooled by the arrows.

This experiment makes it clear that learning to see has an impact on our perception. We see what we have been taught to see.

EXPERIMENTAL STIMULI | MANUFACTURER UNKNOWN | 20TH C.
STEEL, PAINTED BLACK | 21 (H) X 6 (W) TO 30 (H) X 5,8 (D) CM
ADOLF-WÜRTH CENTER FOR HISTORY OF PSYCHOLOGY

RED GLASSES TO TRY ON, ON THE TABLE

Umkehrbrille – Upside-down Goggles

Be careful when wearing these goggles: your vision and coordination will be strongly impaired! Only make slow movements. If you feel unwell while wearing the goggles, take them off immediately.

These glasses make the world appear upside-down.

At the beginning of the 20th century, psychologists such as Theodor Eris-mann (1883–1961) investigated the effects of wearing these upside-down goggles on perception and action.

The goggles strongly affect people's behavior. Test subjects initially find it impossible to catch a ball or ride a bicycle. After about a week of wearing the goggles, however, they learn to adjust themselves to the altered visual conditions. While the world continues to be perceived as upside-down, the tests show that actions are barely affected. One participant even drove through the city on a moped. We don't recommend trying this yourself!

**MODEL KIT BY ASTROMEDIA | 20TH C. | PLASTIC, GLASS
9 (H) X 17 (W) CM | ADOLF-WÜRTH CENTER FOR HISTORY OF PSYCHOLOGY**

VIDEO ON TABLET

**"THE INVERSION GOGGLES AND SEEING STRAIGHT "
THEODOR ERISMANN AND IVO KOHLER | 1950
ADOLF-WÜRTH CENTER FOR THE HISTORY OF PSYCHOLOGY**



Stereoscope for use on desk or bench top

The visual impression of space is based above all on offsetting the perspectival differences of the two eyes. So-called stereoscopic vision is a fundamental visual ability. However, it is not believed to be present at all at birth, but rather to be learned during early childhood development.

Test charts were developed in the 20th century to test stereoscopic vision. When viewed through the stereoscope, the objects depicted on the charts appear to be ordered according to different spatial depths. Viewers in experiment should try to determine their relative position to one another.

**WITH TEST CHARTS ON STEREOSCOPIC VISION, DEVICE
VEB CARL ZEISS JENA WITH ADJUSTABLE LENSES | GDR | METAL, GLASS, PLASTIC
23,3 (H) X 12,9 (W) X 19,2 (D) CM | ADOLF-WÜRTH CENTER FOR HISTORY OF PSYCHOLOGY
| INV. NR. 41001**

An empty show case

Being on display in a glass case or shop window, objects get disclosed and are exposed to the views of observers. An empty showcase is expected soon to be filled and delight the beholders' eyes. This showcase will remain empty. On the one hand, it keeps space for all the objects of University of Würzburg's collections that cannot be exhibited here. On the other hand, it challenges the matter of course that we get to see something all the time.

**SHOW CASE | GLAS | 40 (H) X 35 (W) X 35 (D) CM | ITEM ON LOAN BY THE GERMAN
MUSEUM FOR THE HISTORY OF MEDICINE, INGOLSTADT**

CHAPTER THREE

Zeigen – Showing

All things that can be grasped by the senses have to present themselves. In research and teaching, presentation is an essential element of the representation and communication of knowledge. How things show themselves, how images and information are produced and incorporated, depends on the medium of representation and transmission.

Medien des Zeigens – Media of presentation

The medium is the means by which content is conveyed. It is through a medium that things first become visible.

The choice of which medium to use depends upon the situation or the audience.

The way in which a specific content is presented alters its meaning. This means that a medium never shows anything without also showing itself.

Three Amazones and Greek (The Bassai frieze)

Before the advent of photography, drawing and graphic reproduction were the most important media for the transmission of images.

Martin von Wagner saw drawings as tools that enabled artworks from Antiquity to be beheld in all their detail.

On his trip to Greece in 1812/13, he was one of the first to draw the recently discovered frieze of the Temple of Apollo at Bassai. He then transferred the drawings onto engravings and accompanied them with informative archeological texts. Once printed and bound, Wagner's depictions of these spectacular new discoveries, which in those days were very hard to reach, were made visible to a larger audience.

The drawings, composed while standing in front of the originals, emphasize the three-dimensionality of the reliefs. The engraving, whose printing plate has been preserved, focusses entirely on the outlines of the figures and ignores whatever imperfections there may have been.

Each medium thus conveys a different impression of the object. The images produced are marked by Wagner's individual way of seeing, which idealizes what was seen. He tries, on the one hand, to capture the figures' garments as faithfully as possible. Yet, on the other, his artistic eye is superimposed upon the scientific and archeological standards ingrained in him through years of practice: in many places, he improves the ancient model and turns it into a 'beautiful' image that corresponds to the classical striving for harmony.



**DRAWING | MARTIN VON WAGNER | 1812/13 | PENCIL ON PAPER
23,7 (H) X 34,8 (W) X CM AND 24,8 (H) X 41,2 (W) CM
MARTIN VON WAGNER MUSEUM, COLLECTION OF GRAPHIC ART
INV. NR. HZ 4546 AND 4552**

**PRINTING PLATE | FERDINAND RUSCHEWEYH | 1814 | COPPER
20,7 (H) X 39,1 (W) CM | MARTIN VON WAGNER MUSEUM, COLLECTION OF GRAPHIC ART
INV. NR. KP 9**

ENGRAVING

FROM: "BASSORILIEVI ANTICHI DELLA GRECIA O SIA FREGIO DEL TEMPIO DI APOLLO
EPICURIO IN ARCADIA. DISEGNATO DAGLI ORIGINALI DA GIO. MARIA (SIC!) WAGNER ED
INCISO DA FERDINANDO RUSCHWEYH, ROM"

MARTIN VON WAGNER AND FERDINAND RUSCHWEYH, 1814

MARTIN VON WAGNER MUSEUM, COLLECTION OF GRAPHIC ART

INV. NR. DGR 6003

Instruction for using the lamp: Make the invisible visible! Move the lamp slowly over the printing plate and let your eyes follow the fine lines.

"Varicella" (Chickenpox)

Moulage and its depiction in the Textbook and Atlas of Venereal and Skin Diseases



Medical moulages are three-dimensional wax models of the body parts of a sick person. They are produced by first making a plaster mold of the afflicted body part. After the mold is filled with wax and left to harden, the moulages are painted at "the sickbed" so as to imitate the exact appearance and ensure accurate coloring. The wax model is then attached to a wooden board and wrapped in cloth.

A moulage conveys not only the clinical symptoms, but also the gestures of the person modeled. These molds are today among the few surviving bits of information on the patients who were treated, about whom there is otherwise very little documentation. It's not known if they consented to the reproduction and dissemination of their images.

As the newly emerging discipline of dermatology discovered wax moulages at the end of the 19th century, the tradition of true-to-nature imitation in art had come into disrepute.

Moulages are especially suited to capturing and depicting skin changes in the most realistic possible way. Doctors, for this reason, would take the precious and very fragile pieces with them to congresses and lectures, where moulages every now and then served as substitutes for the presentation of actual patients that was prevalent at the time.

Photographic reproductions of wax moulages have been possible using four-color printing since the invention of cychromy in 1900. Due to the nature of the process, however, it was not possible to accurately reproduce the colors found in living people. Producing images of patients that met the demands of dermatological exactitude only became possible much later, with further developments in photographic technology. It was only in the 1960s that color photos finally superseded the importance of moulages.

DERMATOLOGICAL WAX MOULAGE | MOLEUR: OTTO VOGELBACHER

FREIBURG IM BREISGAU | 1936, DUPLICATE OF A MOULAGE FROM 1916 FROM THE COLLECTION OF THE UNIVERSITY DERMATOLOGY CLINIC FREIBURG IM BREISGAU

WAX, WOOD, CANVAS, PAPER, STEEL | 22 (H) X 20 (W) X 12 (D) CM

RESTORED BY JOHANNA LANG

MOULAGE COLLECTION FROM THE DEPARTMENT OF DERMATOLOGY, VENEROLOGY AND ALLERGOLOGY AT THE UNIVERSITY HOSPITAL IN WÜRZBURG

INV. NR. D-M-153

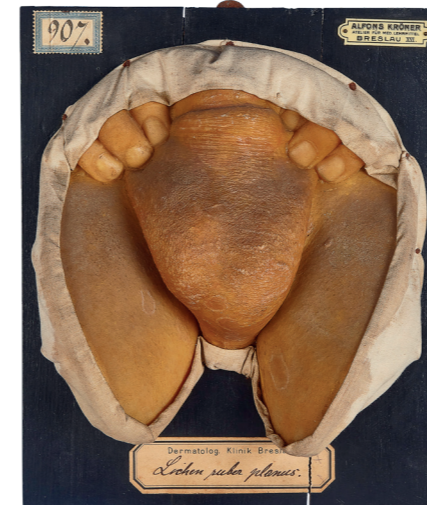
PLATE 113 "VARICELLAE FACIEI (STATT FACEIEI) ET MUCOSAE ORIS" FROM: KARL ZIELER: TEXTBOOK AND ATLAS OF VENEREAL AND SKIN DISEASES, BERLIN AND VIENNA: URBAN AND SCHWARZENBERG, 6TH EDITION 1942.

Strategien des Zeigens – Strategies of Presentation

An excerpt or detail is consciously chosen to direct the eye.

To present details instead of presenting the totality can be a pictorial strategy used for purposes of understanding as well as for purposes of manipulation.

Messages can be hidden within images and can occasionally lodge themselves unnoticed in the viewer's memory.



"Lichen Ruber Planus" (Lichen planus lesions)

This moulage shows not only what can be seen, but also how something comes to be seen: namely by exposing, and thus making visible, an especially intimate part of the body.

The man with the lichen planus lesions is helping the moulage maker Alfons Kröner (d. 1937) manage to get a smooth imprint. In the image of the moulage, his fingers also perform a presenting function: by lifting his scrotum they bring an unusual part of the body – for the disease as well as for the eyes of most people – into the viewer's field of vision.

DERMATOLOGICAL WAX MOULAGE | MOLEUR: ALFONS KRÖNER, ATELIER FÜR MEDIZINISCHE LEHRMITTEL | BRESLAU | 1908 | WAX, WOOD, CANVAS, PAPER, STEEL

23,5 (H) X 20 (W) X 7,5 (D) CM | MOULAGE COLLECTION FROM THE DEPARTMENT OF DERMATOLOGY, VENEROLOGY AND ALLERGOLOGY AT THE UNIVERSITY HOSPITAL IN WÜRZBURG | INV. NR. D-M-156

SCHOOL POSTER TEA TRADE



Untitled [Tea trade]

This school poster contains advertising messages for the tea trade. It's only at second glance that one recognizes the image is an ad for the brand Teekanne. The consumption of colonial goods was promoted at the end of the 19th century. Products like tea or palm oil, which were then still exotic, as well as related brand names like "Teekanne" or "Palmin", were also being publicized in schools through images and illustrated stories. The brand names have been inserted with varying degrees of conspicuousness into the image. Children are thus already being addressed as consumers and having their needs shaped through the elements of design and the choice of motifs.

School posters, in general, are made so that something can be seen. They are explicitly intended as tools of presentation.

The things we are supposed to see emerge from existing normative regimes, which more or less consciously determine the act of seeing. The intent behind the use of these images thus went beyond the merely visible.

SCHOOL POSTER | TEEKANNE GMBH DRESDEN (PRESUMABLY)

AROUND 1900 | PAPER ON LINEN, WOOD, PLASTIC, CORD

103,8 (H) X 120,5 (W) X 1,3 (D) CM | RESEARCH CENTER FOR HISTORICAL VISUAL MEDIA
INV. NR. FHBW/KZ092

INSTRUCTION FOR THE HISTORICAL PROJECTOR

You may use the projector yourself. Please be careful when changing the glass slides.

Reproductions of the glass slides are from the Research Center for Historical Visual Media and the Medical History Collections at the Institute for the History of Medicine.

PROJECTOR ON THE TABLE

"Avanti" Slide Projector

"The portable Avanti is especially well-suited for traveling speakers. Schools that want to use the image projector in the classroom as well as the auditorium will also find what they are looking for." (Deutsche Optische Wochenschrift, 1932)

Film, television, photography, and slide projectors are display tools with origins dating back to the photographic devices of the early modern period: the camera obscura and laterna magica. Scientists of the time thought about the human visual process by analogy to the camera obscura – as a geometric operation of light rays that captured an image of the outside world in a dark chamber, or eye. They thereby separated the process of seeing from subjective experience.

The precursor of the slide projector, the laterna magica or magic lantern, was likewise an invention of the early modern period. It essentially flipped the camera obscura around, by using an artificial light source to project fabricated imagery outwards.

**PHOTO-PROJECTION-DEVICE | MANUFACTURER: ED. LIESEGANG
DÜSSELDORF | C. 1932 | WOOD, STEEL, GLASS | 31 (H) X 43 (W) X 21 (D) CM
MEDICAL HISTORY COLLECTIONS AT THE INSTITUTE FOR THE HISTORY OF MEDICINE
INV. NR. FG-077
DONATION 2018 FROM DANIEL ROHMANN, GASTHAUS "ALTE SCHMIEDE" PRICHSEN-
STADT**

Hand-held stereoscope

A person normally perceives the world through two eyes, with each eye seeing from a slightly different perspective due to the distance between them. The brain then synthesizes the information it receives from both eyes into a complete spatial image.

The stereoscope sparked tremendous excitement in the latter half of the 19th century by making use of exactly this principle: while we normally can only perceive depth in a photograph by means of other reference points, if we are presented with two partial images slightly offset from one another, our eyes are able to discern the spatial order of the depicted objects.

**DEVICE | MERCURY STEREOSCOPE MARK | BEGINNING OF THE 20TH C.
WOOD, METAL, GLASS, TEXTILE | 19,8 (H) X 18,5 (W) X 31,4 (D) CM
ADOLF-WÜRTH CENTER FOR HISTORY OF PSYCHOLOGY | INV. NR. 00030**



VR-GLASSES ON THE TABLE

Hold the home button on the controller (Oculus symbol) pressed to start the VR stereoscope app. You can switch the image with the trigger button on the back of the controller. By pressing left and right on the touchpad, you can zoom in and out.

(If you leave the app by accident, you can use the back button to open it again)

Sichtbar machen – Making visible

Stories ineluctably evoke images in us, causing people and places from the past to take shape before our inner eye.

Artists can illustrate literary texts in totally different ways. Through this creative act they make their ideas visible to us as viewers.



Hector with Paris and Helen

Martin von Wagner was preoccupied for nearly his entire life with the Iliad's famous story of the Trojan War by the Greek poet Homer.

Wagner presents to us his own ideal vision of the Greek world, informed by consulting scholarly works and observing ancient works of art, in nearly 700 drawings and sketches.

Wagner would begin by sketching a scene in a few strokes, then, years later, he would rework them in more detail, making improvements that reflected how his conception of art had changed. His notes on the pages provide information about both the way he worked and the specific scene from the Iliad depicted on the page.

In the scene shown here, the Trojan warrior Hector is calling his brother Paris (also known as Alexander or Alexandros) back into the battle. The latter has fled the battlefield and is sitting with Helen and her maid in the bedchamber. In the sketch, Wagner stresses this appeal through Hector's intense gesture of pointing, which foreshadows the coming events.

You can discover more scenes on the tablet.

**SKETCH AND OUTLINE DRAWING | SCENE FROM HOMER'S ILIAS (6TH SONG)
MARTIN VON WAGNER | 1819 AND CA. 1840/50 | PEN AND PENCIL ON PAPER
19,2 (H) X 27,1 (W) CM AND 24,8 (H) X 38,7 (W) CM
MARTIN VON WAGNER MUSEUM, COLLECTION OF GRAPHIC ART
INV. NR. HZ 2852 AND 2853**

Objects from collections that have been deemed to bear 'true witness' to history leave their stamp on the views of subsequent generations. Previous role models, ways of seeing and conceptions of the ideal body are transmitted through these objects and shape the way we look at people today. What we have seen has an impact on how we understand ourselves. Our image of others reveals our view of ourselves.

Projektionen – Projections

The "we" of social and cultural groups is constantly changing. A given self-image often emerges by looking back at the past, a past which thus participates in the present and future.

At the same time, however, our images of the past, can, like our role models, themselves be shaped by the desires and ideals we (super)impose upon them.

DIGITAL SKETCHBOOK

Sketchbook with studies of classical Roman sculptures and the people of Rome

Martin von Wagner spent most of his life in Rome. While there he not only studied the classical monuments but also observed the people on the streets of Italy.

It's striking how much his figures resemble the classical ideal of physical beauty: the women and men of different ages and professions stand in the room like statues in Greek robes or display what was considered the ideal "Greek profile".

After recording the classical heads of the gods in the Vatican museums in the same sketchbook, Wagner looked upon the Roman population through these "classical glasses". Like many artists adhering to classicism, Wagner sought the "quiet simplicity and noble grandeur" of the Greeks in his own surroundings.

Leaf through the sketchbook and follow Wagner's gaze!

**MARTIN VON WAGNER | 1805 | PEN AND PENCIL | 17 (H) X 10,8 (W) CM
MARTIN VON WAGNER MUSEUM, COLLECTION OF GRAPHIC ART
SKETCHBOOK S36 (WS 75)**



"Römisches Straßenleben" – Street life in Rome

In this image we see an attempt to create a "completely realistic portrayal of the life of the elderly" by depicting scenes from everyday life rather than momentous political events. The picture exemplifies the generalizing mode of representation often found in school posters. Each figure stands for a specific type, stylized by the times, such as the slave. The aim, as explained in a teaching catalogue, was to thereby enable a proper evaluation and "effectively prevent over- and underestimation". In such historical images there are no representations of specific individuals or concrete historical events. The often prevalent ideologization thereby withdraws, while the living conditions in what are supposed to be scenes of daily life are sugarcoated and disparities smoothed over. Historical reality can thus be distorted for the viewer by "falsely romanticizing" – even if the images compel one to become more deeply involved through contextualized analysis and reflection, and even if the historical events are depicted as accurately as possible.

**POSTER | A. PICHLER'S WIDOW AND SON, VIENNA | AROUND 1913
ARTIST: ROBERT ASSMUS | SERIES: HOFFMANN/ SCHMIDT, POSTERS ON GREEK AND ROMAN MYTH AND HISTORY NR. 12 | PAPER, CARDBOARD, TAPE, METAL
61,1 (H) 84,7 X (W) X 0,3 (D) CM | RESEARCH CENTER FOR HISTORICAL VISUAL MEDIA
INV. NR. FHBW/3766**



Stereoscopic image cards (stereograms)

While numerous new means of transport emerged in the 19th century, long distance travel, let alone travel to other continents, remained out of reach for most people. Large publishers of photobooks, like Underwood & Underwood, dispatched photographers to the furthest corners of the world. With the advent of affordable stereoscopes, everyone could now discover unknown worlds in the comfort of their home.

Due to their highly realistic spatial qualities, the images allow one to feel as though actually at the place depicted.

The fascination with stereoscopic views from around the world quickly took hold in many households, and viewing the pictures came to play a role in evening entertainment similar in significance to that occupied by television in more recent times.

**IMAGE CARDS FROM THE SERIES "WORKING SCENES FROM AROUND THE WORLD"
PUBLISHER: UNDERWOOD & UNDERWOOD NEW YORK | AROUND 1903
8,9 (H) X 17,8 (W) CM | ADOLF-WÜRTH CENTER FOR THE HISTORY OF PSYCHOLOGY
INV. NR. 39ABC-39XYZ**

"The longing for distant, foreign lands in which one suspects a lost paradise has a long tradition in Europe. One dreamed not only about the fantasy of a preindustrial idyll, but also about a life free from every sort of moral and societal compulsion. [...] Along with this came, on the one hand, efforts to legitimize the attacks by the European colonial powers, as well as to define oneself and one's own values in contradistinction to the "others". (Can Sungu, 2018)



"Baumwollernte" – Cotton harvest in Tajikistan

School posters appealed to the desire to conquer foreign worlds with one's eyes, while at the same time making use of this desire for educational purposes.

The foreign can be multivalent, it can strengthen distinctions or give rise to processes of identification.

In the school poster shown here, we see two cotton pickers in traditional clothing working cheerfully in a field. They seem both foreign and familiar at the same time.

We find ourselves in what was then the Soviet Republic of Tajikistan, which at the time the image was made was just making its name on the global cotton market. In the 1930s, barren desert lands and mountain valleys in the region began to be cultivated with cotton through artificial irrigation systems and forced resettlement – a move that has caused the present-day population to contend with significant environmental, economic and social challenges. A corresponding teachers' manual from 1960, describes this project as a "great" plan for meeting the growing demand for textiles. In the image, the women's joy as they harvest reflects this message.

SCHOOL POSTER | PUBLISHER: DER NEUE SCHULMANN STUTTGART | 1960
PHOTOGRAPHER: RAINER MARIA WALLISFURTH | OFFSET PRINTER FRICKE & CO. STUTTGART | SERIENNUMMER 4116 | PAPER | 92,0 (H) X 64,0 (W) CM
RESEARCH CENTER FOR HISTORICAL VISUAL MEDIA | INV. NR. FHBW/1433

Blickregime – Visual conventions

Scientific strategies to make things visible, and the "visual evidence" they use to this end, has the power to strengthen or weaken social, political and cultural positions.

Yet, changing underlying conditions, in turn, also continually establish new boundaries for scientists. While ethical and cultural questions often serve to restrain, they can at the same time serve as fruitful challenges for researchers: requiring them to constantly and self-critically reassess their own presuppositions and justify the purpose of their inquiries.

LARGE GLASS SHELF

An empty place

The pelvic specimen mentioned in the book probably refers to the "round pelvis" whose tag is exhibited here, which is housed in the University Gynecology Clinic's Collection at the Institute for Medical History.

Pelvic specimens and other human remains are preserved for study in many university collections.

Unlike the rules and practices of present-day collections, which require the precise documentation of the origin and prohibit obtaining them in an unjust manner, the origins of human remains that have been passed down from earlier times are often not (yet) clear. Protecting human dignity demands, in all cases, that all mortal remains be handled with care and respect regardless of their provenance.

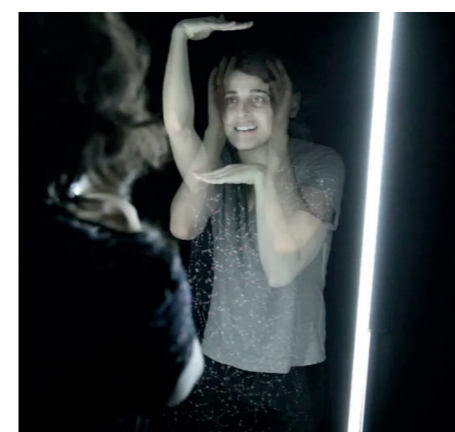
Is there a need for reparations to be made to the dead even if the research that we now consider to be unethical took place long ago? How could this be achieved?

TAG OF AN HISTORICAL OBJECT | BELONGS TO A BONE SPECIMEN FROM A WOMAN'S PELVIS | 19TH C. | CARDBOARD, WIRE | 7,8 (H) X 15 (W) CM
MEDICAL HISTORY COLLECTIONS AT THE INSTITUTE FOR THE HISTORY OF MEDICINE
INV. NR. GK-HR-091

OTTO VON FRANQUE: ON THE FEMALE PELVIS OF DIFFERENT RACES, IN: FRIEDRICH W. SCANZONI (ED.): BEITRÄGE ZUR GEBURTSKUNDE UND GYNAEKOLOGIE, BD. 6, WÜRZBURG, 1869, LIBRARY OF THE INSTITUTE FOR THE HISTORY OF MEDICINE.

CINEMA

Individual presentations of the collections



Alter Ego (Version II), Installation
 Moritz Wehrmann
 2013

Warning:

This installation involves a rapid succession of lights. This can lead to epileptic seizures or impairments of consciousness for those who suffer from photosensitive epilepsy. Only view the installation if you have no history of such episodes. If you experience symptoms such as dizziness, visual impairment, eye or muscle twitches, loss of consciousness, or disorientation, or if any kind of involuntary movement such as cramps occur, we ask that you exit the installation immediately.

HANDS-ON SHELF

Objects in collections are categorized, measured, magnified, photographed, inventoried, preserved, restored, researched, publicized...
 Discover the University collections on this interactive shelf. Touching is totally permitted!

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GEFÖRDERT VOM



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Deutsches
Medizinhistorisches Museum

