

Comparative Guts – Exploring the Inside of the Body Through Time and Space

Report on a Conference organized by the Cluster of Excellence ROOTS of the Christian-Albrechts-Universität zu Kiel at Kunsthalle Kiel, 7–9 June 2023

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The conference was part of a carefully planned longer term project which aimed to investigate the visualisation of the inside of the body from a comparative perspective. A year before the hybrid in person event took place more than thirty visual artists, textual historians, medical anthropologists and archaeologists were invited to several online meetings by CHIARA THUMIGER and ANGELIKA MESSNER (both from Kiel University, Cluster of Excellence Roots). This was in order to work collaboratively in creating an online exhibition to present human guts from various angles. The project was created as a platform for interdisciplinary dialog and partnership with a diverse and inclusive perspective. It was part of the sub-cluster: ‘Knowledge’, under the Cluster of Excellence: ‘Roots’ at Christian-Albrechts University in Kiel funded by the German Research Foundation (Deutsche Forschungsgemeinschaft: DFG). With this multidisciplinary approach, it did not take long before lively debates about the function, definition and ethical or emotional significance of our guts would ensue. The differing perspectives were brought together under the design of Christoph Geiger, who created a wonderful digital exhibition that has been available online since spring 2023 (<https://comparative-guts.net/>). It can be regarded as a collection of regional histories and a reflection on different frameworks endorsed by the conference program with manifold contributions. The conference turned out to be a celebration of what has already completed and is ready to be shown to a broader public. It was inclusive not only with regards to perspectives but also our senses. On the final day, specially made tactile panels with historical or contemporary representations of guts were set up so that visually impaired people could also read more about the topic, and

scents which imitated the smell of ancient rituals involving animals were presented to the attendees. This part was supported by Christian-Albrechts University (Diversitätsfonds der Christian-Albrechts-Universität zu Kiel). In the meantime, a printed catalogue with all contributions has been published.¹ The following report is based on my own conference transcript and is complemented by the texts written and published by the presenting authors.

Wednesday, June 7

In her presentation, entitled “An Example of 17th-century Sino-European Cross-Cultural Medical History”, MARTHA HANSON (Max Planck Institute Berlin, Erlangen Divination) selected five images held in the Staatsbibliothek zu Berlin, two images were taken from Chinese medical manuscripts depicting two different side views of the body. Another three images were shown representing European interpretations of the first two images (1682 Specimen Medicinae Sinicae Frankfurt). The images are connected with the first translation of formulas and Medicinals: A 17th century *Materia medica* traveled from China to Europe held in the Staatsbibliothek which apparently is not the original but a later print. She showed the complexity of its reception and historical transfer to Europe and introduced the translations and hand written texts of historical figures involved such as Polish MICHAEL BOYM (1612–1659), FLEMISH PHILIPP COUPLET (1623–1693), SHEN FUZONG (1658–1691) Acadmie Naturae Curiosorum (future Leopoldina), ANDREAS CLEYER (1634–1698) or German SEBASTIAN SCHEFFER (1631–1686). (<https://comparative-guts.net/an-example-of-17th-century-sino-european-cross-cultural-medical-history>).

BRIGITTE SONNE (University of Copenhagen) and ULLA ODGAARD (independent) gave an historical overview of the history of the East Arctic region and discussed the special significance of entrails in Inuit culture in Greenland (“Greenland Tupilak Figures: Arctic archaeology”). Regarded as the direct ancestors of contemporary Greenlanders, Inuit hunting culture and their specialised knowledge was vital to the prevention of hunger and death. Inuit hunting utensils were not only connected to the spirits, but they were also often made of guts. For example a hunting bladder made of seal skin or a hunting float or cooking pot made of a stomach. An exceptionally well made item of clothing for a girl was presented: a watertight lightweight gut skin parka made in the middle of the 18th century served as protection from wind and rain. This material was also used for adult sized underwear in the winter. Aside from these very practical tools used in the cold arctic, other objects were connected to myths and sorcery. (<https://comparative-guts.net/greenland-tupilak-figures>)

IGNACIO SANCHES (University of Warwick) stressed in his presentation “Anatomical Traditions in the Premodern Islamic World: Arabic and Persian Materials” that a prominent feature of anatomy and human representation in the medical Islamic World included the question of dissection. IBN AL-NAFIS’ (1213–1288) brain ventricles were presented as well as HUNAYN IBN ISHAQ’s (808–873) diagram of the visual system which is one of the earliest of its kind. In connection to Chinese medicine, an early example of the transfer of medical knowledge was shown: the Persian Translation from Chinese: the *Tansūqnāma* commissioned by Mongol vizier RASHĪD AL-DĪN in 1313 (Istanbul MS Aya Sofia). European influences and the origin of the „Fünfbilderserie“ of MANŞŪR IBN ILLYĀS (14th; Teheran MS Majlis 7430) were discussed in comparison with images from the Benedictine cloister of Prüfening (dated 1158). They illustrate arteries, veins, muscles, bones, nerves of a human being and might have served as templates for Tibetan Medical Thangkas. (<https://comparative-guts.net/arabic-and-persian-materials>)

TAWNĪ TIDWELL (University of Wisconsin) & KATHARINA SABERNIG (University of Applied Arts) focused on “Tibetan medicine (8th to 17th century) including contemporary knitted artwork

interpretations (early 20th to 21st century)”. Tibetan anatomical representations became widely known with the publication of a set of 79 medical thangkas (scroll paintings). TIDWELL introduced the history and significance of these original, colourfully elaborated paintings from the seventeenth century commissioned by SANGYĒ GYATSO (1653–1705), who was the regent of the Fifth Dalai Lama (1617–1682). Many of the anatomical depictions refer to either anatomical structures mapping medical terms or therapeutical interventions regarding intestinal ailments. The author of this report, SABERNIG, spoke about the spread of anatomical knowledge to the northern regions. In the early decades of the 20th century in Mongolia and especially in Buryatia, a part of Russia since the 17th century, efforts were made to adapt Tibetan body images to modern anatomy. The Buryat medical scholar Dondub Endonov (1870–1937?) authored another set of anatomical paintings (see BOLSOKHOEVA in *Curare* 39 [2016] 1).² (<https://comparative-guts.net/area-tibet>)

Modern anatomy is a child of the renaissance and started an avalanche of scientific depictions explained GIDEON MANNING (Cedars-Sinai Medical Center, Los Angeles) in his presentation on “Birth of Modern Anatomic-Pathology”. MANNING focused on new theories and data on wood blocks and engravings. Asking questions regarding where, why and who performed anatomical dissection and produced paintings. The Painting “JOHN BANISTER Delivering an Anatomical Lecture on the Viscera” (1581) was used as a visual demonstration of the connection between dissection and the text. The scene depicts the dissection of viscera with a framed copy of REALDO COLOMBO’s *De re anatomica* (1559) prominently displayed. Depictions of guts were viewed in particular contexts such as “Guts and Punishment”: the Reward of Cruelty in *The Four Stages of Cruelty* by William Hogarth (1697–1764), “Guts and Persecution” in the martyrdom of St. Erasmus, about 1430–1440 by Master of SIR JOHN FASTOLF, “Guts and Sculpture” in Andreas Vesalius *De human corporis fabrica libri septem* (1543) or “Copying guts and Vivification”: from JUAN DE VALVERDE *Historia de la composición del cuerpo humano* (1556). (<https://comparative-guts.net/birth-of-modern-anatomic-pathology>)

A completely different approach to combining text and visualisation was presented by the ATLOMY Project which creates digital 3D models on Aristotelian texts and its terminology by means of textual and visual analysis. In this project, as described by DMITRY EZROHI (Hebrew University of Jerusalem) in his presentation “Modelling as Research: Digital imaging and history of medicine”, classicists, modern anatomists and experts in 3D design and software development worked together to discover the unknown parts of these ancient medical texts. Textual analysis brought to light that the caecum is described as much larger in the ancient texts than in modern texts. It is the purpose of the project to visualise this sort of detail by means of 3D animation. It also turned out that the text reads as a description about and not of the large intestine, and reference is given to parts of other animals of a similar nature. Hands-on dissection with veterinarians allowed visual analysis and comparison with the large intestine of pigs. The project discovered that the text is based on animal analysis and described in a humanised way including physiological processes, by use of metaphor from daily life such as comparisons with pots and mugs, or food seeping through vessels and their pores like water through raw ceramic vessels. (<https://comparative-guts.net/digital-imaging-and-history-of-medicine>)

CHIARA THUMIGER (Christian Albrechts University zu Kiel and Humboldt University Berlin) took a close look at “Greco-Roman Medical cultures”. While the first documented beginning of Graeco-Roman medicine is associated with Hippocrates of Cos, the first surviving detailed anatomical works are assigned to Aristotle who studied bodily structures on non-human mammals. Even though artists and poets were interested in the internal organs hidden under the abdominal surface, medicine was not primarily interested in looking under the skin and images are hardly available. CHIARA THUMIGER presented a variety of figurative material visualising the outer silhouette of human guts: such as the marble tombstone of the Athenian physician Jason (Trustees of the British Museum, 2nd cent. CE) palpating a young patient’s belly or the Cleveland Apollo (Apollo the Python-Slayer) which portrays the outer shape of the lower abdomen. A Hellenistic terracotta figurine (Benaki Museum, Athens 3rd Cent BCE)

presents an old man with a protruding belly in a playful, even comical position. All these figurative materials demonstrate awareness of the significance of the condition of human guts. (<https://comparative-guts.net/greco-roman-medical-cultures>)

The history of the “The ancient stomachion, a Graeco-Roman gut-game” is examined in the ERC granted ATLOMY Project and was presented by MARCO VESPA (Hebrew University of Jerusalem). It is not included in the encyclopaedic and lexicographical texts explaining ancient games. The term refers to the Greek noun *stomachos* denoting the oesophagus or at least the tube between the mouth (*stóma*) and the stomach. From the available texts, an Arabic translation and a reproduction held in the Museum of Ancient Greek Technology, we know that it consisted of 14 geometric forms which can be formed to a square, this is similar to the famous game *Tangram* which consists of only seven forms. In the late nineteenth century a manuscript dated to the 10th century, was rediscovered in Istanbul which contains texts contributed by Archimedes who discussed the game from a mathematical and geometrical perspective. The name and use is still under discussion. (<https://comparative-guts.net/the-ancient-stomachion-a-greco-roman-gut-game>)

CLAIRE BUBB (New York University) focused on “Medieval Medical Sources in Latin”. The medieval period lasts from late antiquity to the early renaissance. The core region of the medical texts and images discussed was the Western Roman Empire in exchange with the Byzantine Empire. Translation of Greek medical knowledge into Latin took place at around the twelfth century, Latin translations of Arabic and Greco-Arabic material formed the basis of the European understanding of anatomy. An introduction to the history of the so called Five-Figure-Series (Fünfbilderserie) is imperative. However, the history of the illustrations of the Uterus from Musico’s epitome of Soranus’s *Gynecology* raised my attention as there are also images of pregnancy in Tibetan medical *thangkas*. The image of Guido da Vigevano’s *Anathomia* shows the forearm and lower leg with a single bone, which is another interesting parallel to Tibetan medical *thangkas*. (<https://comparative-guts.net/medieval-medical-sources-in-latin>)

CHARLOTTE DAMM (Arctic University of Norway) presented in her contribution “Hunter-Fishers of coastal Norway (5000–3000 BCE)” ancient rock art in northern Scandinavia from an archaeological, historical and religious point of view. Whilst only very few records from 9000-5000 BCE exist there is particularly substantial evidence from the time 5000 CE onwards. In the maritime sparsely populated area inhabitants lived from fishing, sealing and hunting. Rock art is found widely with individual motifs, dominated by terrestrial animals (reindeer, elk, red deer). Today many are made visible with an artificial red colour; originally they were slightly grey. The images focus on the outer appearance rather than internal anatomy, sometimes they show “life lines” to the heart, lungs and stomach. While there are no depictions of the practice of butchering, indications of world view and cosmology can be found. Comprehensive narrative scenes show terrestrial animals inhabiting both this and other worlds and blood from the nose and mouth is associated with death, but also with trances or life force. (<https://comparative-guts.net/hunter-fishers-of-norway>)

Thursday, June 8

THOMAS COUSINS (School of Anthropology and Museum Ethnography, University of Oxford) turned towards the African continent where guts are regarded heterogeneously. In contrast to Asian medicine only rare perspectives from Africa are included for comparison. The presentation started with reference to SIR EDWARD EVAN EVENS PRITCHARD (1902–1971) and witchcraft. This was followed by an overview of terminology and the significance of the different parts of guts. Since cattle form important social factors, there are diverging terminologies of bovine anatomical classification in rural Zululand: different stomachs, gallbladders, black and white small intestines. Guts are an important part of health and power, therefore many elixirs are on the market. The quantity of bile is important and in southern Africa is even vital to bodily and cosmological wellbeing. Finally COUSINS presented several images from contemporary artists depicting the belly and intestinal metaphors on political or sexual power. (<https://comparative-guts.net/africa-i>)

A historical classification was followed by JANE DRAYCOTT (University of Glasgow). In her contribution “Etruscan and Roman Guts” she made a differentiation of anatomical representations in ancient Greece, where mainly the external body was visualised. This was explained by an emerging disgust for entrails, whereas the Etruscans and Romans had a more positive attitude towards them. Different objects showing the interior belly were presented made of terracotta, bronze and one fresco. An exceptional Etruscan bronze model of a life-sized sheep-liver was presented: the “Piacenza Liver” (first century BCE) used for hepatoscopy. A polyvisceral plaque from around 400 BCE showing the stomach and intestines in a more or less naturalistic way was also presented – although the trachea is represented as a snake. Since anatomical votives were placed in a religious context for healing it is interpreted as a reference to the snake of Asklepios. An example from late antiquity/Christianity, in the fourth century CE, is the fresco from the hypogeum of Via Dino Compagni depicting a scene which is suggested to be an anatomy lesson. (<https://comparative-guts.net/roman-etruscan-materials>)

Beginning with a historical introduction to the Vedic Period 1500–500 BCE (Mantras), the *śramaṇa* Tradition and development of Buddhist medicine, JASON BIRCH (SOAS University of London) focused in his presentation “Yoga and Ayurvedic Medicine in South Asia (Ayurvedic and Yogic Guts)” on the the most important early Ayurvedic Texts: *Carakasamhitā* (2nd CE), *Suśrutasamhitā* (recompiled in 6th CE), and the *Aṣṭāṅga-hṛdaya-samhitā*. This was followed by an overview of the most important medical depiction of the interior in the ayurvedic context and digestion in the *Bhāvaprakāśa*. A Nepalese drawing of a human anatomical figure from 1800, which illustrates, and labels internal and external body parts was probably influenced by Tibetan medical Thangkas. Another image which was discussed broadly: A Gujarati manuscript from ca. 1900 (?) with Sanskrit and Gujarati labels shows tantric ideas in relation to the physical body. The influence of Persian anatomical drawings in the tradition of *Tashrīh-i badan-i insān* by MANṢŪR IBN IL-LYĀS mentioned by IGNACIO SANCHES is noted. (<https://comparative-guts.net/area-india/>)

The transfer of medical knowledge and images was again the central question in the discussion of the Daoist text and image compilation *Neijing tu* by LI JIONG (*Chart of the Inner Landscape*, 1269) by VIVIENNE LO (UCL History) in her contribution about China. The visual focus is on bones, solid organs and hollow guts which are accompanied by animals, spirits and state bureaucrats. When they travelled and arrived in different medical cultures they were selectively adopted and adapted in respective contexts outside China. VIVIENNE LO raised the question of whether we should talk about “Transcultural Guts” instead of “Comparative Guts” in this regard and asked what travelled and why? Why did some images or distinctive elements travel and others not? Several image details in the *Chart of the Inner Landscape* and its journey were analysed. For example, the images of RASHID AL-DĪN which arrived in Persia via the Mongolian Empire do not show animal spirits while the Korean reinterpretation does (*ui'bang'rgyuchui/Classified Collection of medical remedies*, 1477). (<https://comparative-guts.net/?s=Vivienne+Lo> sowie <https://comparative-guts.net/china>)

Friday, June 9

In their contribution “Contemporary Guts” BROOKE HOLMES (Princeton University) & MARTHA FRIEDMAN (contemporary Artist) took the view that there has been an increase in collaboration between artists and researchers over the past 25 years in contemporary art. An overview on contemporary art in the late twentieth and twenty first century contextualised the various pieces of art presented in time, space and transcultural movements. A vivid example of contemporary art in the medical humanities with scientific and societal reference was a dance choreography and installation on guts representing the microbiome by ISABEL LEWIS: *Scalable Skeletal Escalator* (2020), initially shown at Kunsthalle Zürich. The performance draws on symbiotic structures as stated by evolutionary biologist LYNN MARGULIS. A series of twelve works, the *Histology of the different Classes of Uterine Tumors* (2004–05) by WANGECHI MUTU refers to aspects of gender and “race”, while the performance *This is Offal* (2015) on the boundary between painting and poetry by MARY REID KELLY with PATRIC KELLEY (2015) broaches the issue

of silent female suicide. MARTHA FRIEDMAN'S work is a combination of ancient and contemporary art: *29 Untitled* (2018) is a series of 29 sculptures made of steel, glass and rubber, denoting the relationship between the gut and the cut and dealing experimentally with the material. (<https://comparative-guts.net/?s=brooke>)

JANE DRAYCOTT already mentioned that in ancient Greek depictions, hardly any internal organs are presented. The only exception was the examination of the liver of sacrificial animals in order to determine if the omens were good. However, in regards to humans, the only visualised internal material is blood. ROBIN OSBORNE (University of Cambridge) pointed out in his contribution “Greco-Roman Antiquity” that the Greeks cannot have been unaware of human innards. The avoidance of externalising the internal must have been for other reasons. There was enough knowledge from butchery practices and medical texts were full of descriptions of entrails. One example of texts gathered under the name of HIPPOKRATES is *On Anatomy*. (<https://comparative-guts.net/greco-roman-antiquity>)

CHANG CHE-CHIA (Institute of Modern History, Academia Sinica) presented in “China and Japan in the Modern Period” an image of a digital rendition of the organs of the Buddha made of silk to demonstrate that guts were important in the context of religious transmission. It was common to enshrine models of viscera in statues of the Buddha. It is the earliest surviving viscera model in East Asia and was made by a group of nuns and brought to Japan from Taizhou, Zhejiang in 985 (Seiryōji Monastery, Kyoto). For the exhibition the rendition was made by STELLA THUMIGER. Similar models are known in China, in some cases the stomach is filled with grains or the intestines with incense. There is also a 15th century pictorial scroll of Hippiastry held in Azabu University Library in Tokyo where organs are painted in 5 colours according to 5 elements.

A very special role is played by the so-called Manchu Anatomy, which the Jesuits hoped would help convert the Kangxi Emperor to Catholicism. The included images are copies of European anatomical paintings, but the external phenotype was often adopted to the Manchu appearance. CHANG CHE-CHIA presented many more examples and also referred to metaphorical terminology relat-

ing to guts. (<https://comparative-guts.net/china-and-japan-in-the-modern-period>)

CHRISTOPH GEIGER who designed the website and the printed edition of *Comparative Guts* explained his approach and process when designing the visual output of the project („The Digital Exhibition Comparative Guts: Interpretation, Translation, Design“). In his view design – a discipline between head and guts – is a box, or sophisticated container and has much to do with translation, knowledge transfer, and the psychology of graphic information. To translate content into visual explanation, design should sustain the reader’s attention by providing a good user experience. The Comparative Guts website presents images, so that they appear to come out of the dark, exploring the inside of the body through time and space. The design process is based on the project’s goal, content and budget. (www.christophgeiger.com)

The starting point of NATALIE KÖHLES (School of History and Philosophy of Science, University of Sydney) presentation, entitled “Anatomical Images in Northern Song China (960–1127)”, were drawings by the physician YANG JIE who, with the help of an accompanying artist, documented the dissection of the dead bodies of executed rebels. Even if the originals no longer exist, they still form the basis of the genre of *Cun zhen tu* (*Charts on Preserving the true [Essence]*) which is connected to the Daoist practice of bodily cultivation. The images depict more anatomical structures such as “tubes”, “mouths” and “gates” rather than physiological processes of “fluids”. The *Cun zhen tu* had a broad impact on most premodern representations of internal organs. Two of the oldest surviving copies were introduced and compared in detail: A Series of colourised Japanese images in the form of an Edo reprint (1603-1), based on KAJIWARA SHŌZEN’s medical work *Man’ampō* (*Myriad Relief Prescription*) written between 1315-25 and the Chinese work *Yi Yin Tangye Zhongjing Guang Wei dafa* (*Yiji dafa; Yi Yin’s Decoction [Classic] Propagated as grand Methodology* by [Zhang] Zhongjing) composed by Wang Haogu. (<https://comparative-guts.net/anatomical-images-in-northern-song-china/>)

YI-LI WU (University of Michigan) highlighted in her presentation “Ming-Qing illustrations of the organs 1500–1850” contemporary and historical debates on images of the body in Chinese Medicine and started her presentation by refer-

ring to VOLKER SCHEID’s publication *Yun Tiejiao and the disappearance of the body* (2020) and cited YUN TIEQIAO: “The five organs of the inner Canon are not the five organs of flesh and blood but the five organs of the four seasonal (transformations).” She discussed the problematic separation of physical layout and circular function. In the *Diagram of the Inner Landscape in Illustrated Wind of the Classified Canon* (*Leijing tuyi* by ZHANG JIEBIN 1563–1640) a famous blockprint showing, visceral positions and connections in lateral view. Already at that time, the historical scholar ZHANG JIEBIN discussed that the “Gate of life” (mingmen) is not the right kidney but the Uterus, or “child palace” (*zigong*). She also refers to a diagram of the heart from WANG QI (16TH cent) and debates on the number of channels, as well as observations of the corpse made by WANG QINGREN (1830) to demonstrate that the legend that Chinese medicine is not interested in anatomy is not true. (<https://comparative-guts.net/ming-qing-illustrations-of-the-organs/>)

RODO PFISTER is a specialist in the composite text *Songs of the Bodily Husk*,³ by Master Yan Luo (10th cent CE) who is also known for lost Daoist texts in meditation and breathing practices. The work was printed in 1445/46 and in a later edition the images were redrawn. The *Treatise on the Inner Realm by Superintendent Zhu* includes critical comments on body maps. RODO PFISTER presented in his contribution “The Body Maps of Master Yan Luo, as Used in Meditation, Anatomically Corrected by Superintendent Zhu” corrections and different versions of the images and discourses on the differences and discrepancies between the inner scenery experienced in the context of inward observations during meditation and empirical findings during the dissection of dead bodies. In addition, the so called five storehouses or locations for five spiritual beings (Hun, Po, Zhi, Yi, and Shen) are used differently in the context of medicine and meditation. (<https://comparative-guts.net/the-body-maps-of-master-yan-luo>)

JAMES FLOWER (Kyung Hee University) apologised in his contribution “Images of the Digestive Organs in Korea” for not being able to present many images and raised the question why Koreans do not have colourful images compared with others. It could be that they were taken to Japan or disappeared, or that there are no images because

there was a common belief that to illustrate the inner body would miss the point. Socially anchored in Confucianism, many medical texts show aspects of Taoism and Buddhism including ideas of the emptiness of the body and its invisibility. The spleen is related to the earth element and the centrality of the organ is important. While in Chinese culture the heart is regarded as the “King of Organs”, the spleen became important in Korea because it processes food and drink. A lively discussion started with regards to what is meant by the organ “spleen”. While some argued that one should also talk about the function of the pancreas JAMES FLOWER stated that most Koreans talk about the microbiome when they talk about the spleen. Since he has found a painting where the spleen also resembles a horseshoe, the duodenum is also taken into consideration to be part of the system named spleen. (<https://comparative-guts.net/images-of-the-digestive-organs-in-korea/>)

During one of our preparatory online meetings HISA KURIYAMA suggested that it would be wonderful if the project could include contributions for visually impaired people. CHIARA THUMIGER started a sub-project “The felt body: a multisensory approach: For and with a visually-impaired public” with the help of art historians ALMUT RIX and MICHAELA WILK, where additional effort was made to be inclusive for people without visual access. Image descriptions were prepared for around 50 images. During the workshop SILJA KORN, a visually impaired photographer and artist from Berlin, presented her “Lightpainting Art.” Four tactile plates were demonstrated based on images of the Comparative Guts exhibition. In the meantime, ten tactile books with ten plates were created. The workshop was generously supported by the CAU Inclusion Fund. The second part of the workshop was dedicated to the olfactory sense.

VICTOR GRUBOV & SEAN COUGHLIN (Czech, Academy of Sciences, Prag) pointed out in their contribution “Scent of Ancient Guts” that the reconstruction of the smell of the Antique, the alchemy of scent is a challenge. On an antique vase with sceneries of butchery and a detailed description of the process are depicted. The stages of slaughter, the removal or roasting of entrails have different smells, depending on what the animals have eaten or (in modern times) if they were treated with antibiotics. To get an idea of such at-

mosphere KLARA RAVAT (scent artist and designer) created sent samples which made the smell of the stages of antique slaughter experienceable in an experimental olfactory workshop, ending with a sensual conclusion of the comparative guts conference.

References

- 1 See THUMIGER, CHIARA (ed) 2024. *Comperative Guts: Exploring the Inside of the Body through time and space*. Kiel: Christian Albrecht University zu Kiel, Cluster of Excellence Roots (https://macau.uni-kiel.de/receive/macau_mods_00004630?lang=en).
- 2 BOLSOKHOEVA, NATALIA 2016. Tibetan Medical Illustrations from Atsagat Medical College and other Anatomical Achievements of the Buryat Lama and Physician D. Endonov. *Curare* 39, 1: 6–21.
- 3 PFISTER, RODO 2016. On the Meditative Use of the Body Maps Found in the composite Text “Songs of the Bodily Husk” (Ti ke ge). *Curare* 39, 1: 56–74.



Katharina Sabernig is project leader of the FWF project “Knitted Body Materiality” (doi: 10.55776/AR705) at the University of Applied Arts Vienna and studied medicine and cultural anthropology in Vienna. In her previous projects she focused on anatomical illustrations, visualized medicine and Tibetan medical terminology, about which she has published extensively. Inspired by the diversity of anatomical representations and the ethical issues involved, she began knitting anatomical objects in 2015 to find answers to various questions regarding ethics, materiality and perception of anatomical presentation. In her current project, the three-dimensional textile creations are not only exhibited, but also presented through photography, video animation and performative anatomical theater.

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