

The THESA Project - THEatre Science Anatomy

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Abstract. In this article we present the THESA Project, created to (re)discover, survey and classify the historical anatomical theatres that arose between the sixteenth and mid-twentieth centuries.

Key words: anatomical theatres, art, medicine, architecture

Introduction

For centuries, the study of the body was carried out through the dissection of animals - except for the period of the School of Alexandria founded by Herophilus and Erasistratus - and through commentary on the works by those considered to be the founders of the discipline, in particular Aristotle, Hippocrates and Galen. Mondino de' Liuzzi (14th century) was the first to introduce the practical study of anatomy as a fundament of medical knowledge, in a space that was not yet a theatre but had all its potential (1, 2). At the end of the Middle Ages, however, the concept of 'theater' was in disuse, with spectacle circulating in what were called "theatrical venues", that is outdoor spaces, and mystery plays performed with no dedicated buildings apart from churches (3-6).

The cultural concept of theatre does not reappear until the humanist era, with the exegeses of Vitruvius and the study of the texts of tragedies and comedies (7-11). Once the concept of theatre had been reinstated, the science of anatomy appropriated it as a perfect tool not only because of its perfect viewing and listening features, but also because it facilitated the slowly developing social needs of the rigid academic environment. Alessandro Benedetti describes in these words the characteristics of the anatomical theatre in use fleetingly in 1502:

"To this end a large space is required, which must be very well ventilated, and inside which a temporary theatre must be erected, with seats arranged in a circle

(of the kind visible in Rome and Verona). The space must be large enough to contain the number of spectators and to prevent the crowd from disturbing the surgeons performing the dissections. They must be skillful, having already completed several dissections. The seats must be assigned according to rank. For this purpose, there will be only one overseer who will monitor and be available to all the spectators. There will need to be several custodians to keep away intruders attempting to enter, and two trusted treasurers who with the money collected will procure all necessary materials. For the dissection, these include razors, knives, hooks, drills and gimlets (the Greeks called them "chenicia"), sponges with which to rapidly clear the blood during the dissection, scissors and basins; torches which must be kept ready in case darkness supervenes"(12).

The first anatomical theatres

From the sixteenth century on, the development of universities in urban centers led to the construction of anatomical theatres across Italy. Initially these consisted of removable structures which stayed in place only for the duration of a dissection and were then stored away until the following year, following the same custom in use for theatre performances. Eventually these were replaced by fixed structures. Evidence of this phase is found in archives and in anatomy texts depicting professors during the dissection. We can see that not all theatres have the same shape and that their

structures are in accordance with the different methods of teaching anatomy in practice in different universities: either according to the Vesaliano method, that is, focusing on a single point, or according to the Mondiniano method, with a divider between the professor who is reading and the sector performing the dissection (13, 14).

Toward the end of the sixteenth century, anatomical theatres started to become permanent structures.

The first permanent theatre for which we have a sure testimony is the one in Padua, built with public funds during Girolamo Fabrici of Acquapendente's tenure as professor of anatomy. Inaugurated in early 1595 and still perfectly preserved (Fig.1), it replaced a previous theatre which, as mentioned in the memoirs of Germanic Natio, had been conceived a decade earlier also as a permanent structure (15-17). Bearing witness to the architectural value of the theatre in Padua, for example, is the fact that in 1774 the famous anatomist Antonio Scarpa, involved in the planning for an anatomical theatre in Modena, had the professor of surgery in Padua, Girolamo Vandelli from Modena, send him a wooden model of the theatre there.

At the entrance of the anatomical theatre is visible the Latin inscription "Mors ubi gaudet succurrere vitae" (Where death is pleased to help life), stressing that the study of corpses can help the growth of anatomical knowledge, which in turn can be applied in medical practice. In anatomical theaters, however, something happens which is much more sophisticated: these theatres became places where man was placed before himself. Here he had the possibility of knowing himself as nowhere else, for those who attended

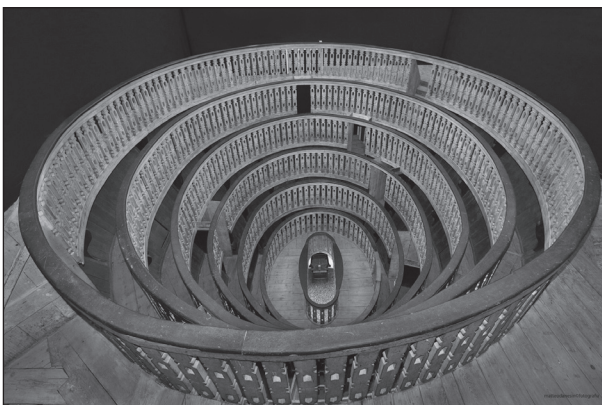


Figure 1. Anatomical Theatre, Padua

the dissections recognized themselves in the dead body at the centre of the room, with an introspection that blurred the line between life and death.

Further, throughout the modern age, the experience of dissection was a component of philosophical and religious training: by learning about the perfection of the human machine, it was possible to contemplate the greatness of God and of Nature created by Him with man at its centre. The anatomical theatre, thus, was a centre for the practice of anthropocentrism. The dissections that took place within its wall combined cultural, philosophical, and medical experiences. It was an artistic experience too, for the great painters and sculptors who would represent that human perfection in their masterpieces (18, 19).

Anatomical theatres in the modern age

Only a few of the most important anatomical theatres have survived and are recognized today as belonging to our cultural heritage, like those of Padua, Bologna, Ferrara and Pavia (Fig. 2). Others have survived over time but have not yet received much attention, like in Pistoia, Lucca and Modena (but the latter is now under renovation). Still others have disappeared, leaving only a few documents to verify their existence and their possible beauty (such as the theatre in Florence, with artworks of Gioacchino Masselli and Santi Pacini) (20). Anatomical theatres are found within universities and in the hospitals associated with them, their structures and locations having changed over time. Even if certain types of events held in ana-



Figure 2. Aula Scarpa, Pavia (photo by Luca Borghi for Himetop)

tomical theatres came to be considered inadequate in modern times, especially those that were too focused on spectacle and ritual, anatomical theatres continued to be built to serve educational and training needs. This was the case in Bologna where, in the last years of the eighteenth century, public events at the Archiginasio were criticized because they had become mere spectacle, that is, debates in which the professor gave a display of his oratorical skills but without concrete demonstrations of scientific interest. However, after the old premises of the Archiginasio were closed by Napoleon, on the University's new premises at Palazzo Poggi two new anatomical theatres were erected, each serving a specific need: one for the study of anatomy being carried out by the Academy of Science, and the other to teach the techniques of surgery to medical students.

Over time, anatomical theatres lost more and more importance as 'performance' spaces, acquiring instead the characteristics of science laboratories. This transformation did not cause the theatres to fall into disuse. On the contrary, we find a proliferation of theatres serving different purposes. Some scientific academies promoted their own spaces, giving birth to multifunctional theatres of indisputable merit, as we can see in the scientific theatre of Antonio Galli Bibbiena in Mantua (Fig. 3). The division between anatomy and surgery led to the creation of separate locations for the study of the human body: theatres intended only for the study of anatomy and others intended for carrying out surgical operations. At the same time, the difference between theatre and classroom was becoming ever more subtle.



Figure 3. Bibbiena Scientific Theatre, Mantua

A look abroad

Anatomical theatres are not a uniquely Italian phenomenon. Like science and art, they developed along different currents in different parts of Europe, but always linked to one other. Anatomical theatres recur across the mainland and the adjoining islands. Some are directly related to Italy, with their inspiration clearly identifiable in their shape, like in Leyden and Uppsala (Fig. 4). Others tell different stories, such as the Barber-Surgeons anatomical theatre in London built by Inigo Jones, the famous architect in the performative world of the English court. Jones had been exposed to classical Italian art when he undertook the Grand Tour. There are traces of anatomical theatres also in France (Fig. 5), thanks to the early rise of medical schools in Paris and Montpellier in the Middle Ages, which created an interest in anatomy that carried on through the Enlightenment. In short, the fervent atmosphere of exchange and collaboration that characterizes the history of Europe created a map of anatomical theatres that arose to accommodate research by man on man. There are also newer theatres on the American continent (Philadelphia and Boston), which are the forerunners of the modern structures where autopsies are performed today.

Presentation of the research group

Anatomical theaters, in short, are a priceless cultural heritage from a number of perspectives, from architec-



Figure 4. Anatomical Theatre in Gustavianum, Uppsala

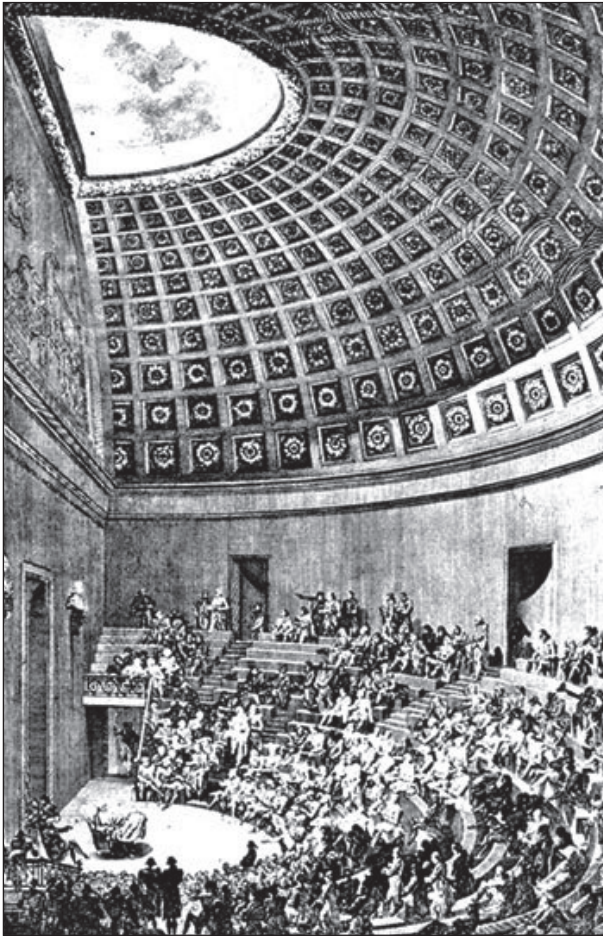


Figure 5. École de Chirurgie, Paris, Jacques Gondouin 1780

tural and artistic to scientific and anthropological (for the rituals practiced in them and for the science-religion relationship). On the one hand, anatomical theatres are scientific instruments and as such are part of the history of anatomy and medicine, bearing witness to the development of medical schools from their inception to current times and to the evolution of scientific thought. On the other hand, they retain an undisputed artistic and architectural value which is neither secondary to nor independent of their scientific function, but rather complementary to the activities for which the theatres were created. Further, anatomical theaters, where academic studies, the local public, and civic and religious authorities came together, symbolize the presence of universities in their urban contexts. Like all theaters, they are performance spaces and, for this reason, interesting architectural and decorative qualities can be traced throughout their evolution. Many theatres reflect the style of the period in which they were

built, from the simple, functional temporary structures of the Renaissance to the ornamental baroque structures of the seventeenth century, the Archiginnasio theatre being a fine example of the latter.

Unfortunately, few of these buildings have survived, and many of those that are still in existence have been neglected or are not accessible to the public.

The project Thesa was created to (re)discover, survey and classify the historical anatomical theatres that arose between the sixteenth and mid-twentieth centuries. The first task is to track down the surviving structures in universities and hospitals. Simultaneously, bibliographic evidence and archive images will be searched to document those structures that have not survived. This combined effort will provide a census of anatomical theaters, which will allow us to define the identifying characteristics of each individual site, and possibly also identify connections among them, the mutual influences that characterize their form and the relationships among those who experienced anatomy firsthand. Once the identification and census are complete, a further objective of the project will be to classify the anatomical theatres in relation to the following questions: What are the characteristics that must be present in an anatomical theatre for it to be defined as such? What are the discriminating factors that distinguish anatomical theatres from simple classrooms? Is it possible to talk about anatomical theatres in the present or has science embarked on a new path?

We believe the achievement of these objectives defines the essential conditions necessary to regain full awareness of the value of anatomical theatres in both the academic and popular contexts, thus creating a fertile cultural basis for new initiatives that can continue the quest for knowledge undertaken in the past in these places. From an architectural and evocative perspective, they are and will remain places where man puts himself at the centre and at the same time observes himself: this peculiarity makes anatomical theatres extremely versatile and suitable not only for scientific initiatives but also for artistic ones, because they have always been a space where art and science commingle.

Given the enormity of the project, initially research will be restricted to anatomical theatres in Italy, where there has been a tremendous development from early modern times to the present. The second stage of the research will focus on European theaters, including both

those that have survived or been transformed to serve a different purpose, and those which have disappeared. The third stage will be devoted to theatres outside Europe. Ultimately, we will be able to provide a definitive census of anatomical theatres which for more than four centuries have been the symbol of anatomical research, and which encompass the quest for knowledge of the human body, from a medical, philosophical and artistic perspective.

Such an ambitious and interdisciplinary project can only be carried out by a heterogeneous group of researchers with expertise in many different fields. Our team includes two professors of The History of Medicine: MAURIZIO RIPPA BONATI (Schio 1949), associate professor of The History of Medicine at the University of Padua and optional courses on Medical Museology, Paleopathology and The History of Spas, and director of the Interdepartmental Centre for the History of Medicine at the University of Padua; and LUCA BORGHI (Bologna 1962), Campus Bio-Medico University of Rome, creator of “Himetop - The History of Medicine Topographical Database” (himetop.net), a web project aimed at mapping geographically the material evidence that comprises the history of medicine. The team also includes ANDREA COZZA and EMANUELE ARMOCIDA, two young members of the History of Medicine Society trained in medicine; VALENTINA CANI, a post-doctoral researcher at the University of Pavia, who collaborates with the Museum for the History of the University; CHIARA IANESELLI, who holds a degree in Cultural Heritage from the University of Trento, works as an independent curator in various galleries and institutions, and is following the Les Gares project on anatomical theatres through the medium of art; and CHIARA MASCARDI, who carried out a PhD on the correlation between anatomical theatres and the history of dramatic theater and is currently managing the project *In Studiis Artistarum* in Anatomical and Scientific Museums.

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