

THEATERS BUILDINGS FOR CULTURE

Course:

**BUILDING TYPOLOGY,
PRACTICAL THEORY**

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NEUFERT, E., NEUFERT, P. , 2012. Neufert Architect`s Data. 4ed . West Sussex: Black well publishing Ltd.

Abstract:

An essential part of what gives a city character and a sense of community is its history, culture, and ultimately the constructions for social communications. The buildings we can find in a city, especially old or historical ones, work as a link to our past. Without a link to the past, we will eventually forget about those who came before us.

We strongly need to have buildings for culture since they not only represent the history of a city but also play a significant role in a city's cultural and economic well-being. Many old buildings have been preserved and repurposed, working as start-up incubators, galleries, libraries, and cultural spaces for citizens to enjoy. Theater as an integral part of European architecture is the main subject of this essay to discuss its chronological development and the main architectural elements that existed in different historical periods.

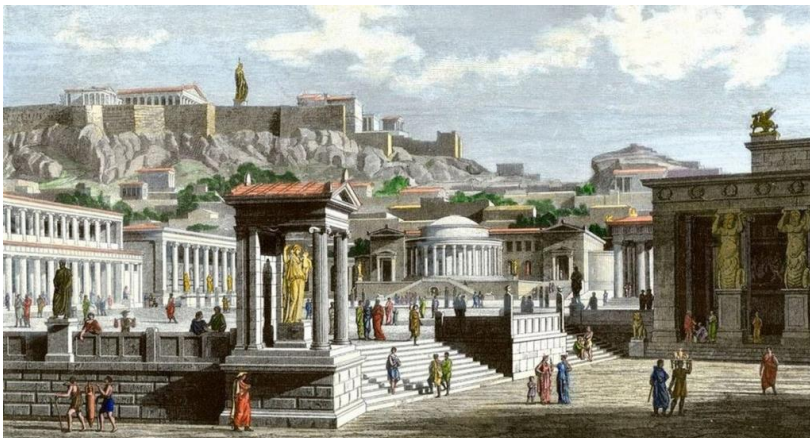
Keywords: Theater, Cultural heritage, Chronological development, Theatrical spaces, Buildings for culture, Architectural heritage, basic typological principles, typological characterization, current situation of theater.

Introduction:

To begin with, taking a look at the relationship between Culture and Architecture, in brief, Culture shaping architecture is a very inherent concept. However, we usually tend to overlook this concept or idea. To truly understand this concept, let us first try to understand what culture is. Culture is defined as the ideas, customs, and social behavior of particular people or societies. The behaviors we are accustomed to and have been taught are the factors determining the kind of spaces we need to live in. Among the foremost things that decide the role of architecture or space, culture plays a very significant role. The location of a space, the size required for that function, and the way through which it connects all are aided by the basic cultural significance space is being designed for. Space and culture are interlinked together to the extent that space cannot be analyzed without that factor coming into play. First, space is formed based on certain cultural requirements, later it may even influence some transformations in the existing culture.

Moving on to some examples that demonstrate this fact:

In ancient Greece, the people were rigorously engaged in public debates about philosophy, mythology, and science. It was considered a part of being Greek. That is where the well-known gathering place of the agoras was born. A place for public gatherings to express their thoughts and consequently become a part of that society. The agoras are what turned into public squares and can be seen even today in major cities modeled after classical city centers.

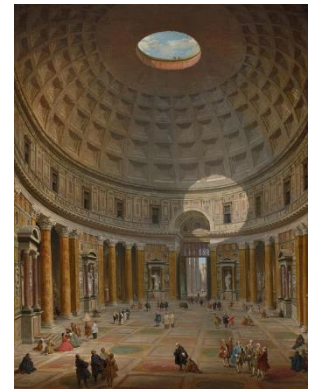


An imaginary depiction of the Agora of ancient Athens at the time of Pericles (Fig.1).

In ancient Rome, the concept of the pantheon, where all their gods were situated at an equivalent position in comparison to each other, showed their strong belief in polytheism. They had transformed the idea of 12 equal beings into space and architecture. The result was a circular ace with 12 niches at equal distances. Additionally they decorated the way they knew best, with classical Roman proportions and orders. Today it stands as the symbol for ancient Rome and classical architecture.

Nearly all modern theatre design can be traced back to the theatrical traditions established by the Greek-speaking peoples of the Mediterranean starting in the 6th century BCE.

Methods: To investigate the Theaters history and typology research methods including library, documentary studies, and papers were used.



Interior of the Pantheon, Rome, 1747 is a painting by Giovanni Paolo Panini (Fig.2)

THEORETICAL PRINCIPLES:

THE DEFINITION OF CULTURAL HERITAGE:

Cultural heritage is the legacy of tangible and intangible heritage assets of a group or society that is inherited from past generations. Not all legacies of past generations are "heritage"; rather, heritage is a product of selection by society.

Cultural heritage includes tangible culture (such as buildings, monuments, landscapes, books, works of art, and artifacts), intangible culture (such as folklore, traditions, language, and knowledge), and natural heritage (including culturally significant landscapes, and biodiversity). The term is often used in connection with issues relating to the protection of Indigenous intellectual property.

Broadly speaking, Cultural Heritage is an expression of the ways of living developed by a community and passed on from generation to generation, including customs, practices, places, objects, artistic expressions, and values.

THE DEFINITION OF ARCHITECTURAL HERITAGE:

Architectural heritage is defined as monuments, group of buildings and sites, outstanding universal value from the point of view of history, art or science. In the modern theory by Brandi, the qualities of a cultural heritage are the historical and the aesthetic values. An historical building is a complex system of spaces, volumes, materials, surfaces, constructive aspects, actual and past functions and configurations, degradation, etc. The whole is the result of a continuous historical process of modification and transformation

WHAT ARE THE CULTURAL BUILDINGS:

Cultural buildings are special buildings in a city that embrace people gatherings for cultural activities which can be either educational to enhance people's knowledge and awareness or about the expression of the traditional values of a certain nation, where can attract residents and tourists alike and that house objects of value or debate and events. They may be designed and constructed as buildings but they may also become symbols for a city. The Eiffel Tower can be considered a cultural structure for the city of Paris. Historical landmark buildings are considered the built heritage of a culture. Even when cultural activities take over or reuse historic structures, their presence brings a new respect to the building and the neighborhood. Culture is always be created, reevaluated and changing. Buildings also can change meaning depending upon how they are being used. Some buildings house permanent archives and become identifiable and memorable landmarks in peoples' minds. Other cultural events are temporary and require pop ups

THE SYMBOLIC DEFINITION OF BUILDINGS:

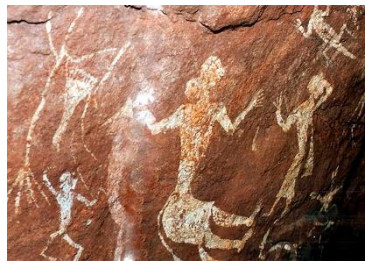
Buildings were much more than a place to live, work, worship or be entertained. Nearly as important as these basic functions, buildings were also symbols. Buildings symbolized the might and wealth of the emperor, their ownership and mastery of the land.

Theatre :

Ancient humans in the Paleolithic period were the first to leave behind art. They used combinations of minerals, ochres, burnt bone meal and charcoal mixed into water, blood, animal fats and tree saps to etch humans, animals and signs. They also carved small figurines from stones, clay, bones and antlers. Cave paintings and totally prehistorical work arts can be considered as the earliest symbols originated from culture. Theatre as an expression of human needs, dreams, desires, and fears predates written history. Theatre which is considered as a valuable cultural heritage has always been a multimedia and a multipurpose activity. Earliest records on cave walls and in ancient sculpture indicate that performance involved a combination of music, dance, and imitation or acting. cave painting with 2 dancing, masked figures. The goals of the performance were at once spiritual, social, educational, and entertaining. The conditions of production and reception of theatre today are also more complicated than many other art forms, due to the number of artists, complexity of media, and audience formation customary in the theatre.



Earliest records
on cave
walls.(Fig.3)



Dancers, Prehistory Art,
Cave painting.(Fig.4)



Cave Paintings(Fig.5)

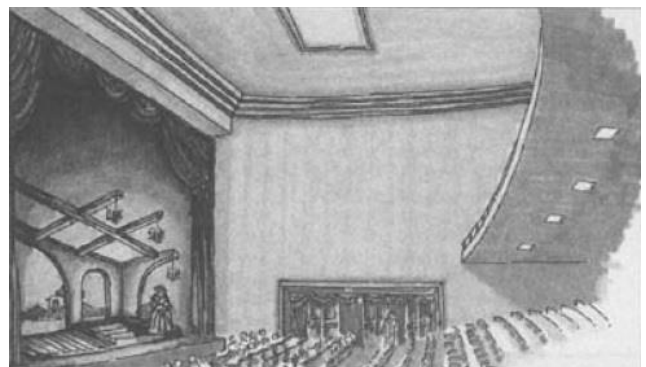
Theatre Spaces :

Theatre can take place in a variety of locations, from large and elaborately decorated opera houses to street corners. Although theatrical performances often take place in buildings specially designed for the purpose. The buildings designed and dedicated to theatrical performances which have been always prominent constructions specially in Europe are regarded as the main part of cultural buildings and architectural heritage.

Theatre performance spaces generally fall into four categories: proscenium theatres, thrust theatres, arena theatres, and found spaces:

1. Proscenium Stage:

Proscenium Stage also known as picture frame stages is a stage configuration in which the spectators watch the action through a rectangular opening (the proscenium arch) that resembles a picture frame and developed during the Italian Renaissance.



Proscenium(Fig.6)

2. Thrust Theatre:

A stage projecting into, and surrounded on 3 sides by the audience. In a typical modern arrangement: the stage is often a square or rectangular playing area, usually raised, surrounded by raked seating. Other shapes are possible; Shakespeare's Globe Theatre was a five-sided thrust stage.



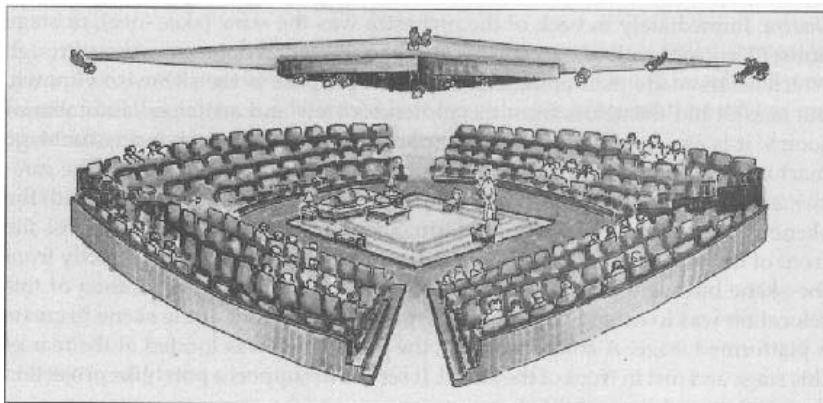
Globe Theatre (Fig.7)



Globe Theatre (Fig.8)

3. Arena Theatre:

A central stage surrounded by audience on all sides. The stage area is often raised to improve sightlines.



Arena Theatre (Fig.9)

Greek Theatre:

Ancient Greece is one of the ancient civilizations that dates back to the early 8th and 6th centuries BC and ends in ancient Europe (around 600 AD).

Every Greek city had a theater that was used for both public gatherings and dramatic performances. These plays were rooted in religious ceremonies and they date back to the 6th century AH. Classical sculptures considered themselves the best form of Greek culture. Theaters were built mainly in the hilly areas and rows of semi-circular seating around the stage respectively. Behind the scenes of a short building There was a storage space and a dressing room and a space behind the scenes.

The earliest Greek theatres can be traced back to the Minoan civilization on Crete where a large open space with stepped seating can still be seen today at the site of Phaistos. Evolving from a stage area of tramped earth set before a natural hill on which spectators might sit and watch religious ceremonies, the early theatres appeared from the 6th century BCE and were built wholly of wood. Early examples may also have had a rectangular arrangement of seating (as at Thoricus and Trachones in Attica) but this soon developed into the semi-circular arrangement which allowed more people to see the spectacle and have a better view. At the end of the 5th century BCE a rectangular stage building was added with wings on each side. Still, only the front seats were made of stone and the rest of wood. Monumental entrances were built at the sides of the stage for the public to enter.

In the 4th century BCE all the seats were made in stone (benches) and walkways made between sections of seats to facilitate access. Stone ramps were added to the entrances to allow the audience to leave the theatre in good order. Finally, the stage scenery or backdrop also came to be made of stone and faced with semi-columns. The theatre had ultimately acquired the architectural form which became more or less the standard across the Greek and later Roman worlds.



Odeon of Herodes Atticus
(Fig.10)

Typical Architectural Elements:

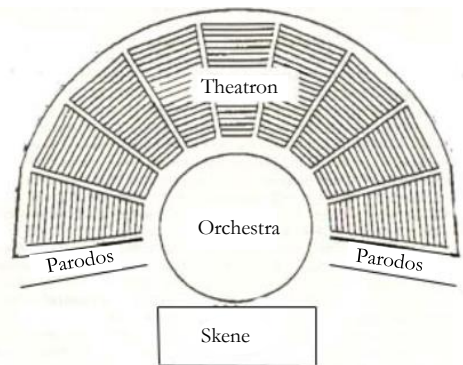
Theatron(Cavea): where the audience sits.

Auditorium: the area between the stage and seats.

Orchestra: circular playing area

Skene: stage house, used for entrances/ exits; dressing rooms, storage, etc. which also acted as scenery for the performance.

Parodos: entrance/ exit corridors



Parts of a Greek Theater (Fig.11)

Seats of the Theatre of Dionysos, Athens (Fig.12)

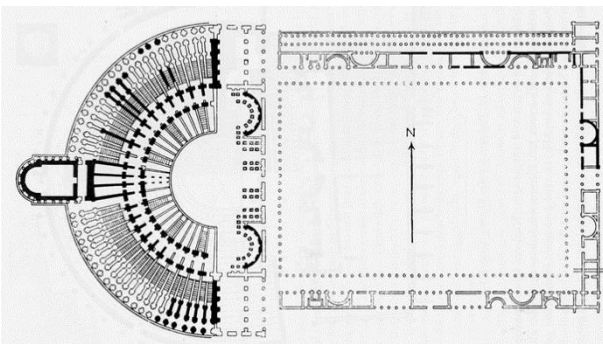


Roman Theatre:

Theatre at Epidauros (Fig.13)

The Romans encountered Greek theatre design as they conquered the Greek colonies of southern Italy between 343 and 341 BCE and added Sicily in 241 BCE. The start of Roman theatre is usually dated to 240 BCE. The Romans built their theatres of wood for a specific festival; when the festival was over, the entire structure was taken down. However, gradually these structures became fantastically elaborate.

The first permanent theater in the city of Rome was the Theater of Pompey, dedicated in 55 B.C. by Julius Caesar's rival, Pompey the Great. The theater, of which only the foundations are preserved, was an enormous structure, rising to approximately 45 meters and capable of holding up to 20,000 spectators.



Roman Theatre Plan (Fig.14)



Roman Theatre (Fig.15)

Features:

Roman theaters were being built upon their foundations instead of earthen works or a hillside and were completely enclosed on all sides. They enlarged the permanent scenery behind the stages of Greek theatres making it into a multi-story backdrop (scaenae frons) that joined the sides of the cavea. Nero, for example, added a monumental Roman-style stage building to the Dionysos Eleuthereus theatre which reduced the now marble stage area to its semi-circular form still seen today.

Moreover, A low speaker's platform (bema) was added to the enlarged stage as well in the 2nd or 3rd century CE. The Romans also paved the orchestra, sometimes added an awning roof (vela), built substructures under the seating, and generally added more decoration to theatres by adding monumental statues, exotic marble columns, and relief carvings to the stage area.

With their high backstage and covered roof, the enclosed and almost claustrophobic atmosphere of the Roman theatre would more and more come to resemble the modern theatres of today. Roman theatres were built in all areas of the Empire, from Spain to the Middle East. Because of the Romans' ability to influence local architecture, we see numerous theatres around the world with uniquely Roman attributes.

Here are some examples in Europe:

1. Orange, France.
2. Plovdiv Roman theater, Bulgaria.
3. Verona, northern Italy.



Orange, France (Fig.16)



Plovdiv Roman theater, Bulgaria (Fig.17)

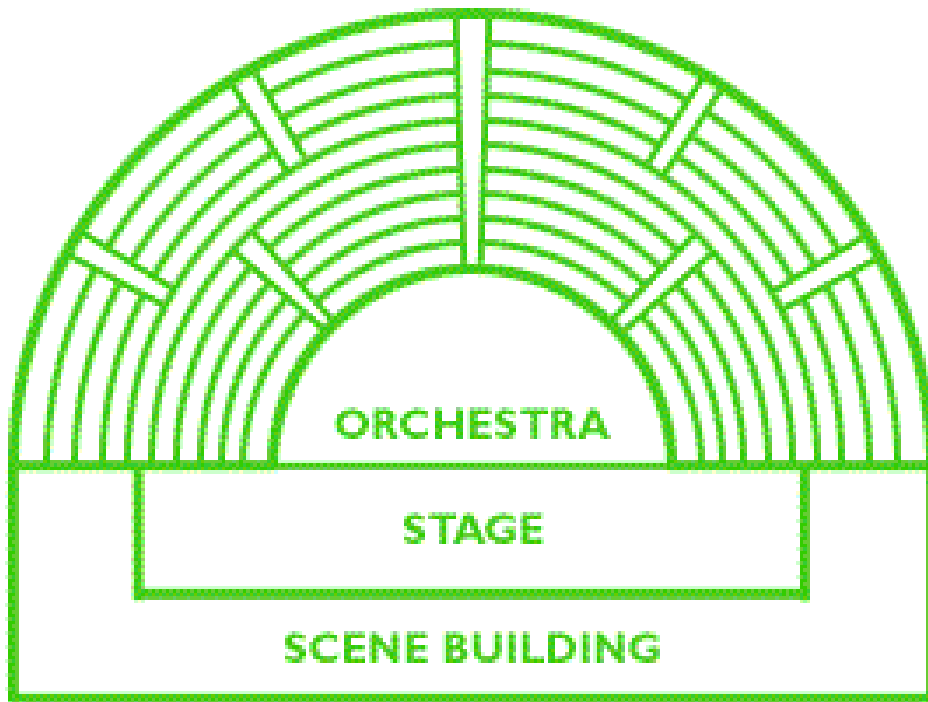


Verona, northern Italy. (Fig.18)

Typical Architectural Elements :

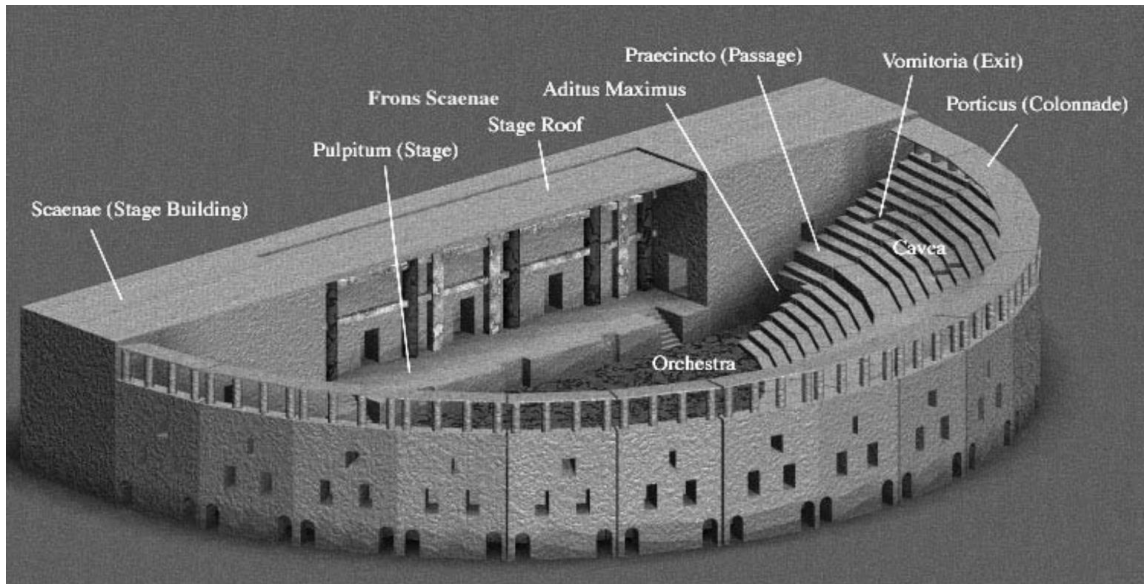
Cavea: auditorium, often separated from orchestra by short wall.

Scaenae frons (skene): stage house with an elaborately decorated single facade



GROUND PLAN OF A ROMAN THEATRE

(Fig.19)



Architectural elements (Fig.20)

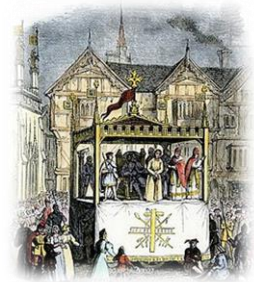
After the fall of Rome emperor the theatres were abandoned AD 476 and for 500 years formal theatre was virtually dead. However, Theatrical tradition was kept alive by bands of traveling entertainers, primarily actors and jugglers.

Middle Ages:

During the Middle Ages, theatre began a new cycle of development that paralleled the emergence of the theatre from ritual activity in the early Greek period. As opposed to the Greek theatre had grown out of Dionysian worship, the medieval theatre originated as an expression of the Christian religion. Medieval Theatre came to life on two different stages: The Fixed (Stationary) Stage, and the Pageant Wagon.



Pageant Wagon (Fig.21)



The Fixed (Stationary) Stage
(Fig.22)

The Fixed Stage consisted of a large mansion, which served as different locations and scene changes for during the plays. Heaven and Hell were the two opposite realms identified by the two opposite sides of the stage. The platea was the acting area (the Roman equivalent of the skene in Greek Theatre), adjacent to the mansion. Actors could be lifted and lowered off stage using what was then considered exemplary machinery such as trap doors, fire, and flying techniques.

On the other hand, pageants were the more physical stages that were maneuvered using wagons. Their platforms could hold several actors as well as minimal props such as chairs and tables. The upside: They would attract large masses of audiences in outdoor markets and festivals who could investigate the scene as they passed by, the downside was that Actors needed to make an extra effort to hide when it wasn't their scene.

Soon these stationary stages began to change. Stage construction soon took a turn to something different, “pageant wagons,” which were basically small stages placed on a wheeled wooden cart. This new type of stage changed the number of people who could view the plays, instead of people having to travel to the church to see the play, the stage and the play could now come to them. The wagons often made cycles through towns or cities and would perform the acts multiple times so people could view them

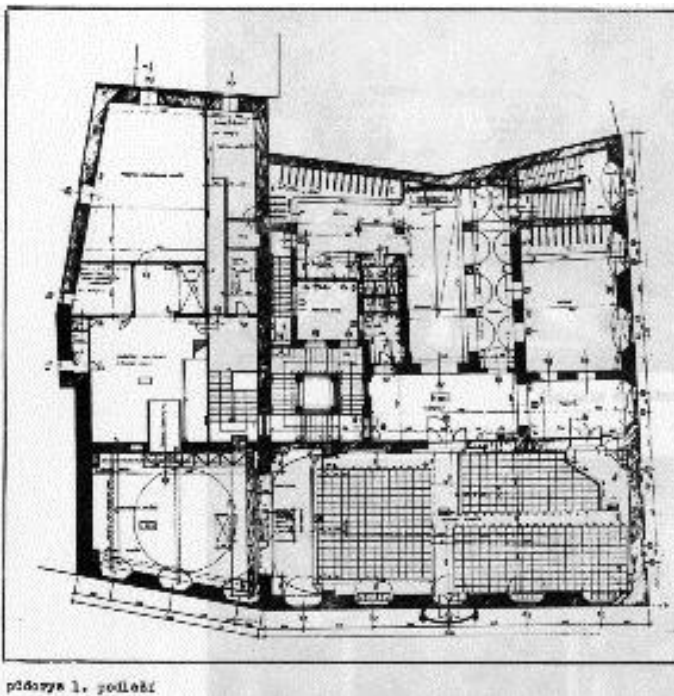
Renaissance:

The word Renaissance is a French word that means “Rebirth” due mainly to the fact that an enormous cultural reawakening occurred during this era. In fact, the cultural thinkers of the late 14th century looked back into history and saw two bright examples of the wonders that humanity was capable of: Greece and Rome. The Roman Empire had achieved great growth and development of its culture and power, building on the even earlier Greek models. So, the thinkers of the Renaissance began to give a rebirth to those ideas and to update them to reflect their own “modern” sensibilities that had grown out of a millennium of Church dominated culture. During renaissance, theatres sprang up all over Europe besides a strong interest in classical forms and structures appeared and the basic shape of Greek and Roman theatres was adopted cleverly based on architectural writings of Vitruvius.

Architectural Elements:

1. Main difference: Indoor theatres.
2. Entire structure was enclosed in one building.
3. Cavea was an ellipse instead of semi-circle.
4. Scanae frons was broken up by several arches instead of being a single wall

The Reduta Theatre the oldest theatre building in Central Europe which is now part of the National Theatre in Brno, Czech Republic is a good example of renaissance theatres. It was built on the city's oldest square 1608 ,(Zelný trh) and began its life in Renaissance times as the Taverna (Tavern) Theatre.



The Reduta Theatre Plan(Fig.23)



The Reduta Theatre(Fig.24)

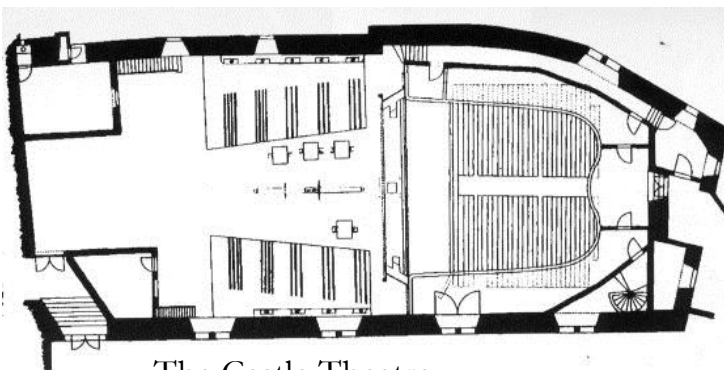


National Theatre in Brno(Fig.25)

Palace Theatre in Český Krumlov:

The Castle Theatre in Český Krumlov is situated on the Vth courtyard of Český Krumlov Castle behind the moat near the castle's west wing. It connects with the Cloak Bridge via a covered connecting corridor leading from the Masquerade Hall to the royal box of the castle theater. The first theater building was built by Jan Krisian of Eggenberg in the early 1680s. In the 1700s, Cesky Kumlov became property of the Dukes of Schwarzenberg. In 1765 - 1766, Josef Adam zu Schwarzenberg had the building reconstructed and equipped with new machinery and decorations.

Český Krumlov
Castle(Fig.26)



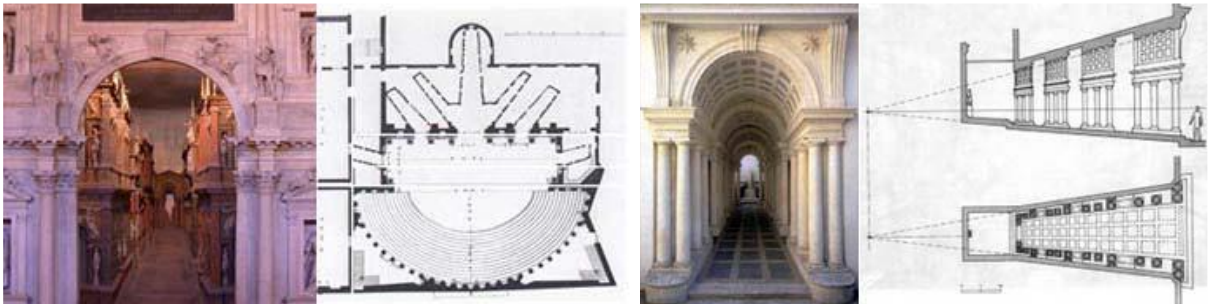
The Castle Theatre
Plan(Fig.27)



The Castle
Theatre(Fig.28)

Scenic Elements:

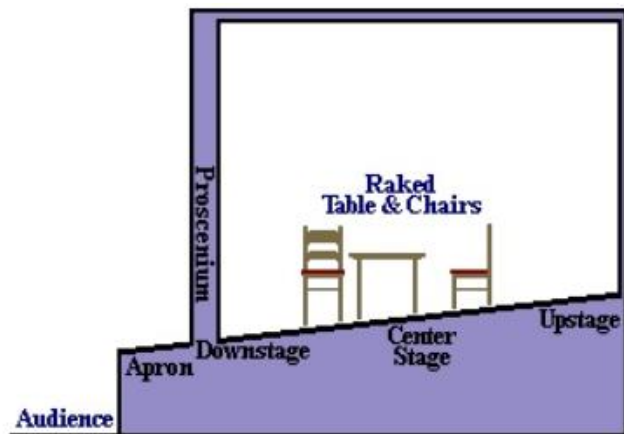
1. Elaborate permanent sets of street scenes were built in forced perspective.
2. A visual distortion technique that increases the apparent depth of an object was introduced.



Vincenzo Scamozzi, Teatro Olimpico Stage Set, Vicenza, IT 1585. Building designed by Andrea Palladio(Fig.29)

Carlos Borromini, Palazzo Spada Alcove, Rome, II 1632 (Fig.30)

3. Raked stage behind the arches of the scaenae which is a stage floor that is higher at the back than at the front, and the actors performed on a flat playing area in front of the raked stage



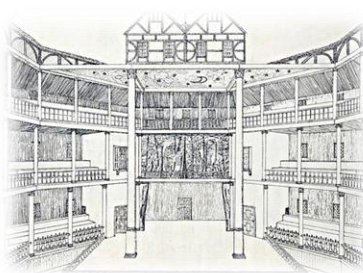
Raked Stage
(Fig.31)

Elizabethan Theatres:

Elizabethan theater refers to the reign duration of Elizabeth I of England (r. 1558-1603 CE). It had different type of structure, but basic shape was similar. By 1600 a number of theatre had been built just outside London including Shakespeare's Globe Theatre (1599-1632). In 1576 CE London received its very first purpose-built and permanent playhouse, founded by James Burbage (c. 1530-1597 CE), himself an actor, and simply known as the Theatre (although there were earlier adapted buildings with temporary scaffolding such as the 1567 CE Red Lion). Located on Holywell Street in Shoreditch, the Theatre was a wooden enclosed building with no roof in the center, and it welcomed audiences of both courtiers and commoners.



Globe Theatre (Fig.32)



(Fig.33)



(Fig.34)

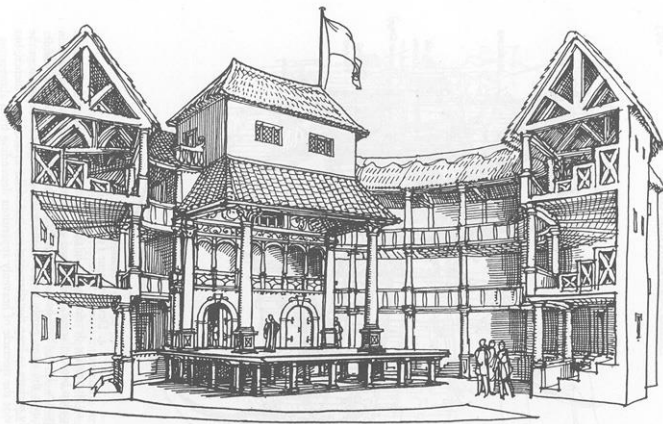
Architectural Elements:

1. Large, open-air platform, generally raised 4-6 feet off the ground.
2. The stage had become surrounded by yard or pit where the lower class audience (aka groundlings) stand.

Stage House Structure:

1. Inner below-upstage of the platform-disputed structure-curtained alcove or roofed building.
 2. Inner above-would be a story above the inner below
- Generally, Elizabethan theaters were surrounded by the outside of the building, a three-story structure that housed galleries and private boxes for wealthier patrons and nobles.

In addition, candles and reflectors were used to light the stage so the audience could see the actors.



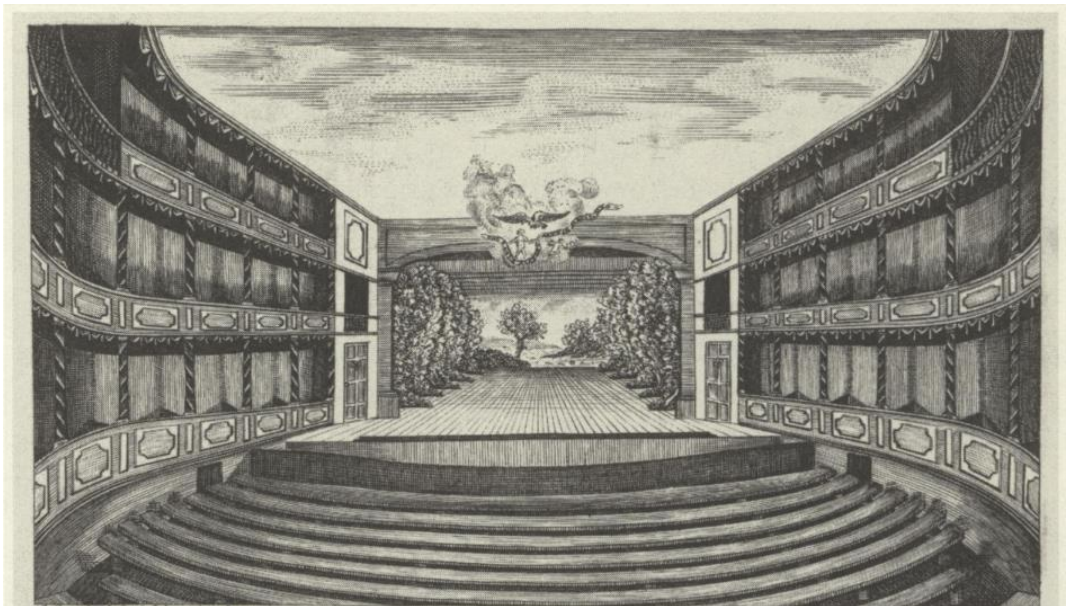
(Fig.35)



A sketch by Aernout van Buchel
(Fig.36)

Theatre's features between 1650 and 1900:

1. Theatres were primarily rectangular.
2. Stage set at one end of building.
3. Raked stage was framed by proscenium arch and the apron thrust toward the auditorium.
4. Apron: the flat extension of the stage floor that projects from the proscenium arch towards the audience where the majority of action takes place.



(Fig.37)

20th century and current situation in Europe and the Czech republic:

The 20th century was a period of change and upheaval. The expansion of ideas in the 19th century led to relatively rapid advancements in technology. The primary features of theater in this century include:

1. More realistic and naturalistic type of drama caused productions becoming more realistic, consequently, the shape of theatres changed to support this form.
2. Settings became environments for the plays rather than backgrounds.
3. Action of play moved from the apron to the stage, besides apron depth became shorter.

In general, the theater building tendencies currently can be defined as Preservation, restoration and modernization of existing theatres from the 19th to mid-20th century, and New buildings with 'experimental' open-space character.

New Stage (Nová scéna):

The building was designed by Stanislav Libenský and erected in Prague in 1983.

It is an unique ice-cube shaped building constructed from more than four thousand blown glass blocks, which drastically changed the neo-Renaissance appearance of Narong street. The building is constructed in a brutalist style and after almost forty years it still looks modern today. This style is characterized by repetition and regularity, heavily shaped authorial elements and irregular concrete surfaces.



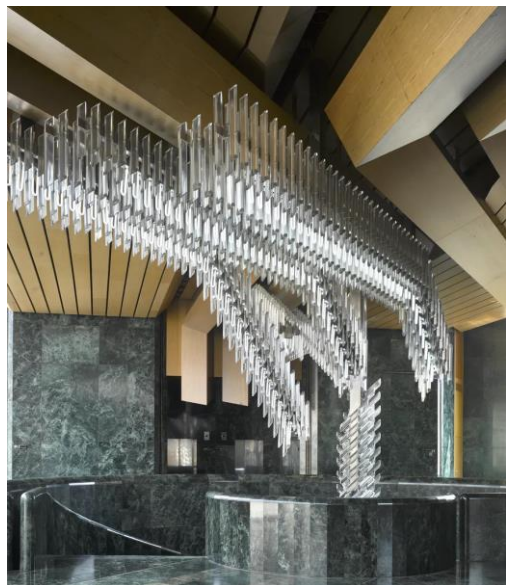
(Fig.38)



(Fig.39)



(Fig.40)



(Fig.41)

Pilsen's J.K. Tyl Theatre:

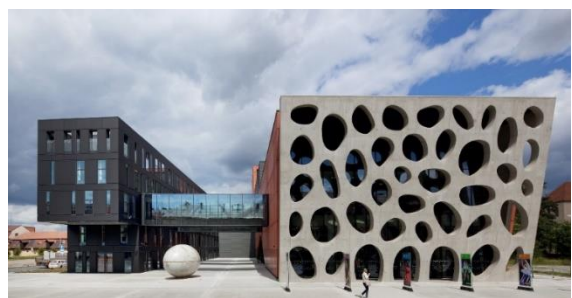
The theater building holds up to 460. Its protruding façade, made of cast cement with 28 irregular bubbles, was meant to reflect the theatre's stage curtain. Pilsen's four-ensemble J.K. Tyl Theatre is split into two main buildings, and each structure comes from a separate century, designed for different performances. The genres of theatre that could be performed in the new Theater embraces operas, dramas, musicals, and even operettas and ballets. These genres are supported by the building's equipment which includes the most modern stage technology. However, the second stage is the Small Hall which seats 150 spectators and has equipment for both chamber and club performances at its disposal.



(Fig.42)



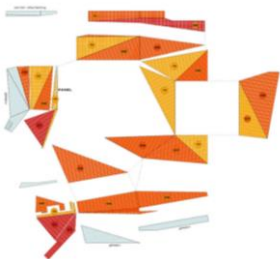
(Fig.43)



(Fig.44)

Theatre Agora Lelystad, Netherlands, 2002-2007

The Agora Theatre is an extremely colorful, determinedly upbeat place. The building is part of the master plan for Lelystad by Adriaan Geuze, which aims to revitalize the pragmatic, sober town center. The theatre responds to the ongoing mission of reviving and recovering the post-war Dutch new towns by focusing on the archetypal function of a theatre: that of creating a world of artifice and enchantment. Both inside and outside walls are faceted to reconstruct the kaleidoscopic experience of the world of the stage, where it is extremely difficult to be sure of what is real and what is not. All the facades have sharp angles and jutting planes, which are covered by steel plates and glass, often layered in shades of yellow and orange. These protrusions afford spaces a continued off-stage spectacle of the display, where the roles of performer and viewer may be reversed. The artists' foyer, for instance, is above the entrance, enabling the artists to watch the audience approaching the theatre from a large, inclined window.



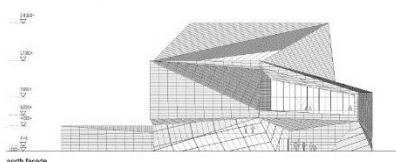
(Fig.45)



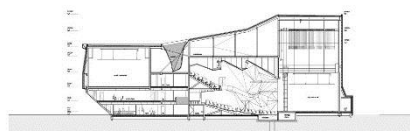
(Fig.46)



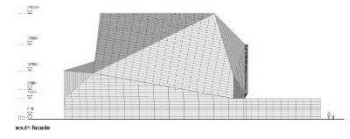
(Fig.47)



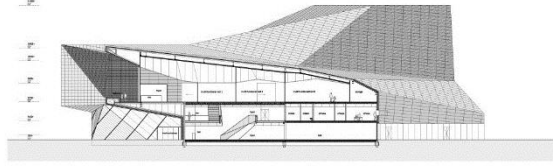
(Fig.48)



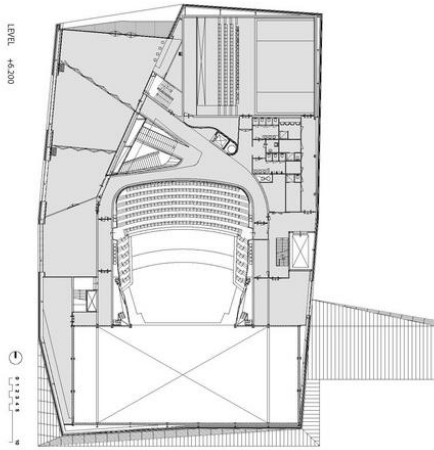
(Fig.49)



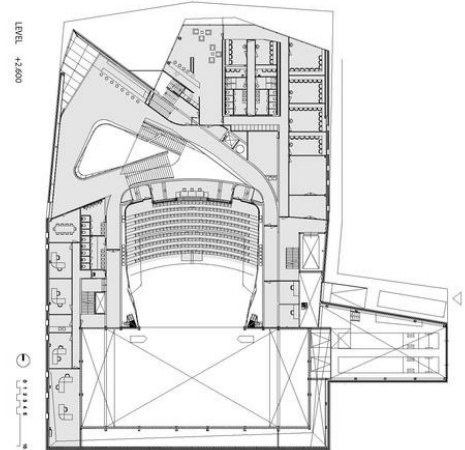
(Fig.50)



(Fig.51)



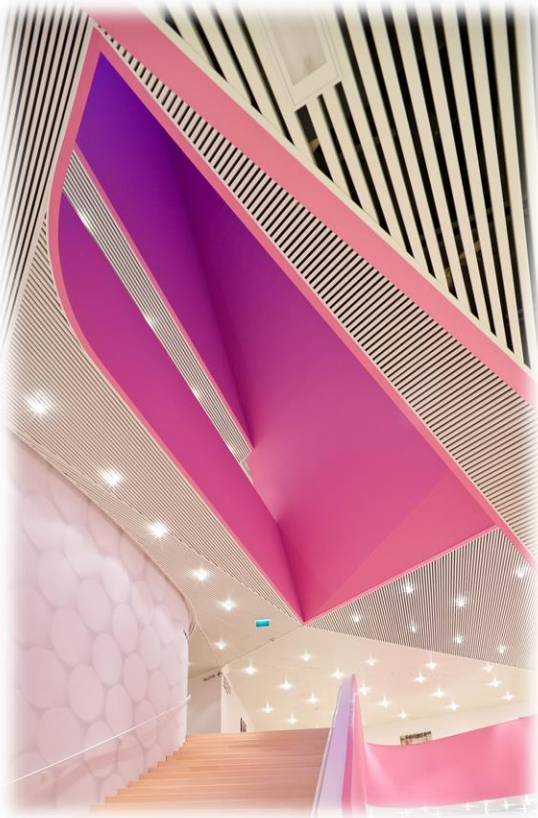
(Fig.52)



(Fig.53)



(Fig.54)



(Fig.55)



(Fig.56)

Basic typological principles, typological characterization:

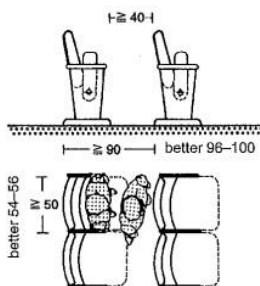
The size of auditorium and the required floor area is mainly based on how many audience is estimated for the building. Generally, an area of 0.5 square meters should be considered for each spectator. This figure results from: width of the seat \times space between rows and the minimum space for seat which is $0.45\text{m}^2 + \text{Additional space that is at least}(0.5 \times 0.9\text{m})$ (approx. 0.05m^2 for each seat)).

Length of the seat rows per aisle:

There must be a maximum of sixteen places on each side. Twenty-five places per aisle are possible if an exit door is placed between every three to four row of seats.

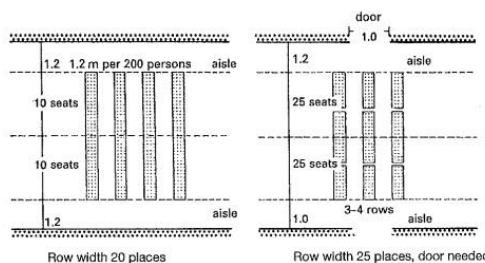
Exits, escape routes 1.2 m wide per 200 people.

1% of the seats (at least two) must be accessible for wheelchair users, if possible in connection with a seat for an accompanying person.

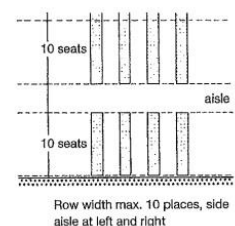


Seating must be fixed according to Places of Assembly Regulations. Minimum dimensions are not adequate for theatres!

(Fig.57)



(Fig.58)



(Fig.59)

Auditorium volume amount:

This is originated from acoustic requirements:

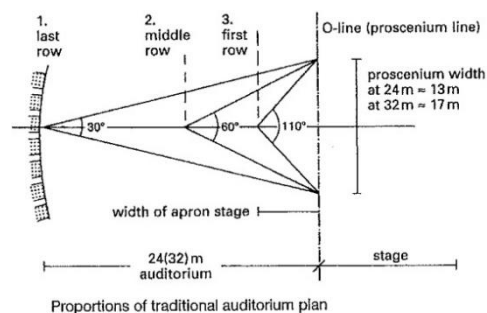
1. Playhouse approx.4-5 m³
2. Opera house approx.6-8 m³.

In order to avoid exceeding speedy air variances(draughts), air volumes must not be less for technical ventilation purposes.

Proportions of the auditorium:

These are derived from the psychological awareness and angle of view of the spectator, or the requirement for a good view from all seats. Options are:

1. Good view, without moving head, but light eye movements of around 30°.
2. Good view with slight head movements and light eye movements of approximately 60° .
3. Max. awareness angle without head movement about 110°, all actions in the field are 'in view'. Outside this field, there is uncertainty, because 'something' is out of view.
4. Full head and shoulder movement allows an angle of view of 360°.



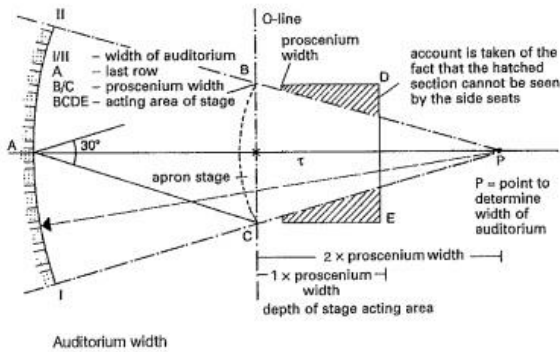
(Fig.60)

Proportions of the classic auditorium:

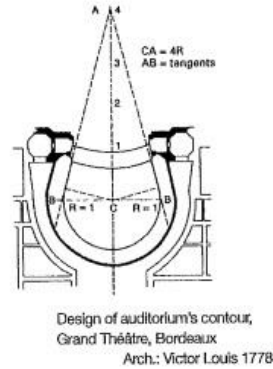
Opera, multi-purpose theatre, and traditional playhouse: distance of the furthest row from the start of the stage should not exceed: playhouse, max. 24 m (max. distance for the recognition of facial expressions); opera, 32 m (large movements are still recognizable).

Auditorium width is determined by the spectators at the side being able to see the stage adequately. The comfortable proportions and sometimes good acoustics of the classic theatres of the 18th and 19th centuries are based on particular rules of proportion. The elevation (gradient) of the seating in the auditorium is derived from the sight lines. The sight line construction applies for all places in the auditorium (stalls, but also tiers). It can be assumed that the spectators sit sensibly and so only every second row requires full sight super-elevation (12 cm). Specialized mathematical literature addresses problems of view in the theatre, including, for instance, the distribution of people's heights.

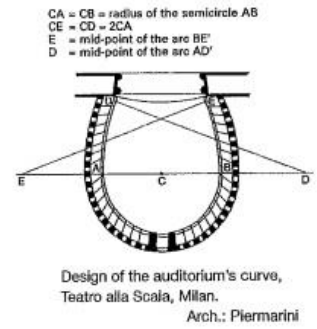
Rows of spectators should be positioned in arcs, not only for better alignment toward the stage, but also to achieve a better perception of each other (security effect). The stepped side aisle must rise 10-19 cm and the tread must not be less than 26cm. The floor between the seats must be on the same level as the adjacent aisle at the side.



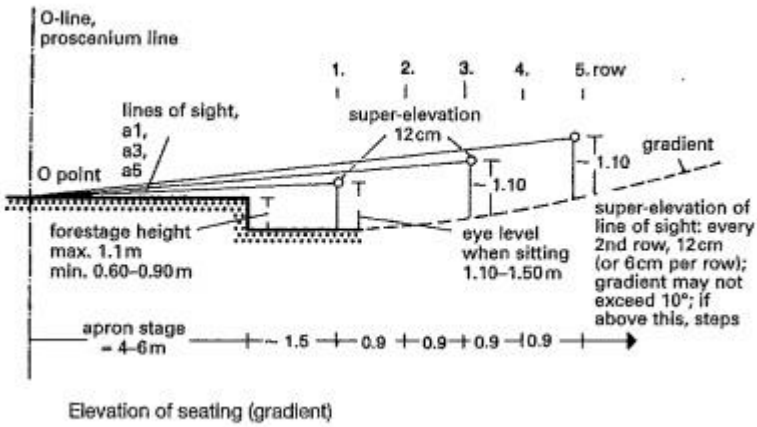
(Fig.61)



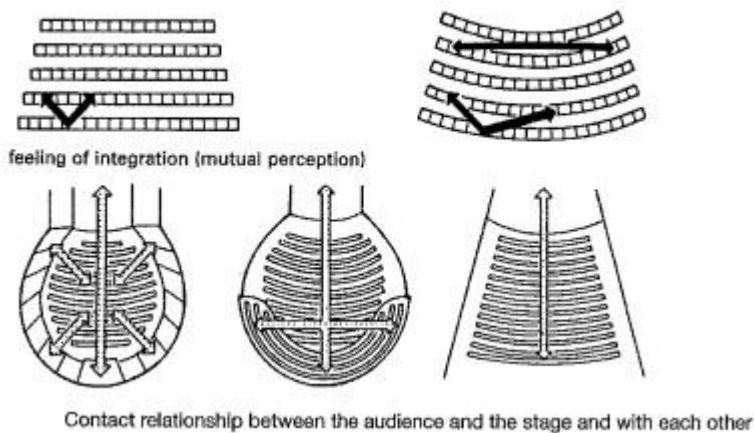
(Fig.62)



(Fig.63)



(Fig.64)



(Fig.65)

Overall layout of the auditorium:

Firstly, the height of the proscenium needs to be determined. In stalls theatres, the relationship should be:

$$\frac{\text{proscenium height 1}}{\text{proscenium width 1.6}}$$

For tiers, it is important that there is also a sufficiently deep view of the stage from the uppermost level. This may render it necessary to make the proscenium higher.

Proportions of an experimental space:

These are neutral or open theatre spaces, which permit different arrangements of spectators and stage areas. This variable arrangement is achieved through:

1. Mobile stage platforms and mobile stands for the audience on a fixed floor.
2. Mobile sections of floor, which consist of moveable podiums. This solution is technically more elaborate and is therefore used only in larger spaces for min. 150-450 or more people. The simpler option number 1 is particularly suitable for smaller theatres and for unused spaces, which normally do not have extensive space underneath. Size: up to max. 199 places, because the regulations apply from 200.

$$199 \text{ seats} \times 0.5 \text{ m}^2 = 100 \text{ m}^2 \left(\frac{2}{3}\right) + 30 \text{ m}^2 \left(\frac{1}{3}\right) \text{ stage area} = 130 \text{ m}^2.$$

References:

- Bagnall, R. et al. The Encyclopedia of Ancient History. Wiley-Blackwell, 2012
- Hornblower, S. The Oxford Classical Dictionary. Oxford University Press, 2012.
- Kavvadias, G. & E. Giannikapani. South Slope of the Acropolis. Hellenic Ministry of Culture, 2004
- Wheeler, M. Roman Art and Architecture. Thames & Hudson, 1985.
- 5th book of De Architectura, Vitruvius, 1988.
- Principal western Theatre Forms and chronology(McGraw-Hill Book Company)

Theater Types. *LATSE Local 470 - Stagehands in NE Wisconsin* [online]. Copyright © 2002, 2013 Mick Alderson [cit. 04.01.2022]. Available from: <https://www.ia470.com/primer/theatres.htm>

History of Theatre Architecture timeline | Timetoast timelines. *Timetoast timeline maker* | Timetoast timelines [online]. Copyright © 2007 [cit. 04.01.2022]. Dostupné z: <https://www.timetoast.com/timelines/history-of-theatre-architecture>

<https://prezi.com/kzp3u1fufi-l/1650-1900-history-of-the-stage/>

What is Architectural Heritage | IGI Global. *IGI Global: International Academic Publisher* [online]. Copyright © 1988 [cit. 04.01.2022]. Available from: <https://www.igi-global.com/dictionary/architectural-heritage/48665>

[online]. Dostupné z: <http://Agora of ancient Greece – source- athenskey.com>

[online]. Available from: <http:// The interior of the Pantheon at Rome- source-tripimprover.com>

The interior of the Pantheon at Rome- source-tripimprover.com

<https://www.architectureofprague.com/index.php/2021/03/13/theatre-new-stage-nova-scena-in-prague/>

<https://www.narodni-divadlo.cz/en/stages/the-new-stage>

<https://www.visitpilsen.eu/location/new-theatre/>

NEUFERT, E., NEUFERT, P. , 2012. Neufert Architect`s Data. 4ed . West Sussex: Black well publishing Ltd.