THE RICE INSTITUTE

THE ACTOR-AUDIENCE SPACE RELATIONSHIP IN THEATRES

by

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Preface

The concept of theatre architecture presented in this thesis is a result of an eight-month graduate research program under the direction of Professor Edward R. DeZurko at The Rice Institute in Houston, Texas, the thinking of Professor Paul Baker and his associates at The Dallas Theater Center and Baylor University in Waco, Texas, and my personal experience in college drama and theatre design at Miami University in Oxford, Ohio.

I developed an interest in the theatre as an undergraduate while acting with the Miami University Theatre group. During the two and a half years I was active in this organization, I played in three different theatres on the Miami campus, all of which presented the actor (in my opinion) with considerable difficulty by their architectural arrangement. At this time, however, I did not connect the building with the difficulties of the audience-actor relationship, assuming that the problems in that intangible relationship were what constituted the task of the actor. Later, I became more aware of architecture's effect on drama as I undertook the study of theatre architecture as an extra research project. Professor C. E. Stousland provided information on where to begin the research, and was instrumental in my early thinking about the theatre. To this early advice was added many stimulating conferences with Professor Rudolf
Frankel, noted European theatre architect and current head of the graduate program in City Design at Miami. At the request of Professor Homer Abegglen, director of the theatre group, I was asked to draw preliminary studies for a theatre which the university trustees were planning to build. Professor Abegglen presented me with the program which he later used in conjunction with a Cincinnati firm of architects to design the structure. Although my sketches proved inconclusive in the university's building program, my interest in theatre design was gaining to such an extent that, when I reached the fifth year of architecture school, I felt that I would like to attempt once more to design a theatre under Miami's program. I undertook this project in the Spring semester and submitted a solution to the problem as part of my undergraduate thesis.

It was while I was doing research for this project that I became aware of the work of Professor Paul Baker at the Baylor Theatre in Waco. When I came to The Rice Institute the following year, I was fortunate to find that Mr. Baker could serve as an "area specialist" in theatre under the graduate program in architecture at Rice. My ideas about theatre before I began working with Mr. Baker consisted of many unanswered questions. It seemed as if theatre design was no longer an art but was dominated by research and selection of established patterns. The spark that makes design worthwhile and stimulating was gone. At the same time, the work of Mr. Baker appeared to have unending possibilities for archi-
tecture and the theatre. At the first conference with Mr. Baker we established the area of study on which to concentrate my research. It was pointed out that the actor-audience relationship was a key factor in the theatre and that it was a problem which needed attention. It was my privilege in the following months to be able to visit The Dallas Theater Center and the Waco theatres with Mr. Baker, and to discuss with him, his associates and students the architectural aspects of their buildings and something of the nature of the work they were doing.

The statement of thesis which Professor Baker, Professor DeZurko and I established in our February conference was subsequently discussed at Dallas among the members of the theatre company. As a result of these discussions I have received correspondence from members of that group concerning the thesis idea. Mr. Tom Hebert wrote, "...In the Dallas Theater Center we have a unique example of the intrusion of a third ego into the circle that demands recognition above those of actor and director-- that of an artist-architect, who has committed the sin of making a theatre the work of art. Hence, having its own personality, everybody has to cope with that un-neutral lady. This stage is a living space, not a de-limited one."

Mr. Baker has established at Dallas a permanent repertory theatre. He emphasized to me the fact that no new theatre has been constructed on Broadway since 1927 and that New York can
no longer claim to be the center of the theatre world in the United States. One thing that American theatre lacks is a permanent home from which actors may operate. Thus, American actors are for the most part itinerant, however successful, and hindered in their development by lack of even reasonable economic security. This system, with which we are all familiar, has not given theatre buildings a chance to develop any close affinity or "personality" with a resident group of actors. Wright and Mr. Baker working together developed a theatre which may prove a remedy to this situation.

The subsequent research under the direction of Professor DeZurko at The Rice Institute consisted of personal observation in the Houston theatres (The Alley Theatre, Theatre Incorporated, and The Playhouse) and reading. Of particular note in the bibliography of this work are the books by Edward Gordon Craig entitled On the Art of the Theatre and Toward a New Theatre. I found these, along with Adolphe Appia's writings in the Theatre Arts Monthly, 1932, to be an early stimulus to my thinking in this area. The philosophy set forth by these two men has played a large part in the theatre of the last fifty years, and its manifestations were clarified by reviewing books on theatre history up to the present day. The Living Stage, by Macgowan and Melnitz, served as a useful history and the UNESCO publication, World Theatre, presented a good picture of the current state of theatre architecture and its relation to drama. Two works which were especially helpful in completing my concepts are a
master's thesis by Mary Sue Birkhead (now Mrs. Mary Sue Fridge), An Analysis of Advanced Integration of Abilities, and John Gassner's book, Form and Idea in Modern Theatre.

I would like to express my appreciation and gratitude to the following for their aid and encouragement which they gave: Professor E. R. DeZurko, Professor Paul Baker, The Rice Institute, and Miss Dorthea Lovejoy.
"...all buildings are caves, and the theatre is the cave at its best—the last arena in which ALL IS ALWAYS POSSIBLE. In the caves of the government and the church, for instance, all has long since stopped being possible in favor of a pattern of formal repetition which some of us find amusing and monotonous by turns.

...the world is a cave. Here and there it is a nicely decorated cave, but the better part of it is a shambles. Man made and decorated the world, his cave, on behalf of his kids.
Note: The quotations on this and other chapter dividers similar to this page are taken from a playbill for "The Cave Dwellers" and are written by William Saroyan.
Introduction

The purpose of this thesis is to investigate that element of theatre architecture which is essential to the art of the theatre and which the architect must understand and deal with in order to make a contribution to theatre design. At the present time many theatres are being built across the world. The new-found prosperity with which we are faced has given man more and more leisure time to enjoy the so called "good life." Although the theatre as an art is an essential part of society, it is only in recent years that there has been a sufficient demand by the general public to justify the cost of new theatre buildings. The effects of the motion picture industry and popular television are beginning to wane and more people are seeking the intangible quality of the live performance. Thus the theatre has enjoyed an upswing in public support and interest; this has brought about not only the need but the money for new theatre construction. Unfortunately, the architect has done little to assist the growth of theatre art. In most instances in this country, good theatre occurs in spite of the stage on which it is presented. Some critics feel that architecture has, to some extent, brought on a staleness in the modern theatre. Brooks Atkinson, writing in January of 1960, expresses his opinion that American theatre is strait-jacketed by its conventional picture-frame stages. Of this picture frame arrangement he writes, "No theatre man controlled its origin. But such is the power of tradition that for three centuries
architects have been building theatres with picture-frame stages (except Frank Lloyd Wright's new Dallas theatre and a few others) and dramatists have been writing plays that would fit inside them.\(^1\)

From the review of new theatres dutifully published and praised by the current architectural periodicals, the architectural profession seems unaware that there is any discontent with their architecture among theatre people. It would appear that architects may be contributing something to architecture with their new theatres without giving anything to aid in the growth of the theatre art which is housed by their work. This is the problem which I have set out to study. My research is aimed at uncovering some of the basic elements in architecture which are essential to the art of the theatre in order to achieve a greater understanding of this problem. As a base from which to operate in this investigation, a positive statement of thesis is made:

**THE THESIS IS THAT THE ARCHITECTURAL SPACE IN WHICH THE ACTOR-AUDIENCE RELATIONSHIP TAKES PLACE OR IS DEVELOPED, CAN AND SHOULD IN ITSELF BE A LIVING VITAL FORCE IN ORDER TO CONTRIBUTE MOST FULLY TO THAT RELATIONSHIP.**

The investigation which follows is organized into three chapters. Four viewpoints or approaches to the theatre will be discussed in the first chapter. At the end of this discussion it will be seen that to consider theatre design in these four ways is but to discuss what it has been or what

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it should be. What becomes necessary is a viewpoint which
cites what the essential element of the theatre is when re-
lated to architecture. This is the space relationship of
the actor and the audience. The actor-audience space is
discussed in the second chapter in terms of its essential
elements and relationships. These consist of: first,
communication in general and its close integration with
dramatic communication; second, dramatic communication with
respect to its content and relation to the art of the the¬
atre; and third, the relationship of architectural form to
theatre art. In this section a criterion for theatre spaces
will be developed which serves to demonstrate how architec-
ture is a vital force in the art of the theatre. It will be
seen that architecture and the theatre are so closely inter-
locked in their basic elements that neither can assume a
passive role in relation to the other. In the final chapter,
several examples of this point will be shown in word-sketch
form to illustrate the ideas developed in the preceding pages.

The writer realizes that he is committed to a certain
philosophic position by the manner in which the investigation
is conducted and that a definitive section on a philosophy
of drama could have been included in the work to some advantage.
However, it is felt that this philosophy of drama is of such a
nature that to expand upon it would go beyond the scope of
this thesis. Thus the reader will be confronted with a dra¬
matic philosophy which is established by implication rather than
by definition.
"...on behalf of the animals, on the other hand, nature made and decorated the earth, be it the world of men, ... who being always so near danger and death are fussy. They want things just right. So much is wrong that they insist on having at least the details exactly right. They measure everything down to the finest point in a desperate and comic aspiration for meaning, method, and manner. .... whether the measuring is in architecture, dreaming, thinking or just being.

"...man is obsessed by a need or a compulsion to be picayune. He wants even God to be only his own size. He wants the universe to have limits, ... because his head has them. He wants time to move in a line from start to stop, because he believes he does something of the sort, starting at birth and stopping at death, neither of which he understands."
Chapter 1

Viewpoints and Approaches

The problem of architecture for the theatre has proved to be a fertile ground for investigation and experimentation by theatre people and architects. The written works resulting from these experiments and investigations are numerous and somewhat varied in their usefulness to contemporary thinking in architecture. A reading of some of these works has revealed what would appear to be four points of departure or approaches in exploring the architectural space in the dramatic and lyric theatre. First is the historical approach, a factual account of theatre building with its influences and origins. Next, the question of the proscenium arch-stage versus the open-stage is one of the most controversial topics in recent thinking and writing. This area of discussion yields a definite viewpoint on the physical aspects of the audience-actor relationship in two specific forms of theatres. Then, there is the approach inherited from the early European architects of this century, both within and outside the Bauhaus school. In their work with the space relationships inherent in all architecture, these people sought a variable space form which has given rise to the flexible theatre concept. Finally, there is the current opinion poll, so typical of our contemporary society, which seeks a broad outline of everything that everybody -- architects, directors, and actors -- wants in a theatre building.
For purposes of exploration, let us examine each of these four viewpoints briefly. Let us conduct a short historical review, consider the open stage in favor of the proscenium arch, and observe the values of the flexible theatres. In conclusion, let us look to current opinion. Perhaps in this way, a few areas of common knowledge and understanding can be brought to light which will clarify the problems inherent in the space relationship of the audience and the actor.

Historical

"The theatre is twenty-five hundred years old -- if we mean by the theatre a written drama played by actors on a specially arranged stage."¹ The thread of theatre history can be picked up with the advent of Western civilization in Egypt. "The demise and resurrection of Osiris -- forerunner of Dionysus -- were symbolic of the death of nature in autumn and its reawakening in the spring."² Plays depicting scenes about Osiris were performed, perhaps, seven thousand years ago and carvings depicting a scene from one of them were made at Abydos in 1300 B.C. This and other bas-relief works establish in general the origin of performed plays and something of their content. But unfortunately, because of the stylized form in Egyptian carving, we have no evidence of the stage itself or the placement of the actors and spectators.

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For this we must follow the worship of deity to Greece, where the first archeological evidence of a specially arranged stage is found.

The Greek ritual and religious ceremonies connected with the cult of Dionysus, god of fertility, probably took place in dance and play form in the grain fields. "All over Greece and its islands are flat circular threshing floors still used by villagers as they pound their grain and dance their round dances. (See Fig. 1) These threshing floors or alonia may well have been the first Greek theatres."¹ This simple circle for the performers, as we may call the worshippers, surrounded by spectators has been classified by Richard Leacroft as a primary theatre form. (See Fig. 2). There is some conjecture that Stonehenge in England can also be identified as a form for the setting of early drama. Leacroft points out that "Stonehenge, for example, provided the necessary setting for the enacting of a particular drama of ritual sacrifice, and it is interesting to note that it embodies in its shape the fundamental plan which is characteristic of the classic (primary) theatre design -- the circle."² This circular form, then, would appear to be the link between the age of primal dramatic ritual and the time when man began to construct permanent physical settings for his ceremonies. As an organized drama

grew out of the pagan ritual, this setting developed into what is generally accepted as the classical theatre.

The classical theatres, according to Professors Macgowan and Melnitz of the University of California, are those built from the 5th Century B.C. in Athens through the end of the Roman Empire. Of the nature of the Roman and some of the Hellenistic and later Greek theatres we have some idea from archeological investigations. But, "we have literally no record -- written or archeological -- of what the theatre of the fifth century in Athens looked like."\(^1\) The fifth century in Athens was its greatest period, and scholars lament the fact that no written record exists to tell of the theatre in which the great plays of that time were performed. Only seven plays by Aeschylus remain as testimony of that period of classic drama. We must depend upon a few scenes painted on vases, the writing of Aristotle of some one hundred years later, and the written works of Vitruvius and Pollux to form a mental picture of what the theatres were like. It is generally agreed that the transition from the primal form included the use of wood for theatre seats and whatever backdrop there may have been. Architectural ruins indicate the placement of the theatres in the hollows between hills, thus taking advantage of the natural slope for ease of stage visibility. We can, of course, refer to the words of Vitruvius

\(^1\) Kenneth Macgowan and William Melnitz, *The Living Stage*, p. 22.
to get a very clear picture. (Not only a clear picture, but exact specifications!) However, because there still remains a question as to the specific time in which Vitruvius lived and wrote, and the fact that he describes Greek theatres in terms of Roman building, allowances should be made for inaccuracy when referring to his works. Nevertheless, as his writing is the only specifically architectural reference among the extremely scant literary sources, let us consider what he wrote.

Vitruvius describes the theatre in three aspects: site, foundations, and acoustics. He considered first the over-all plan and orientation of the city which includes theatre site planning in a discussion of the forum. Intent on placing buildings for reasons of physical health, he clearly states that for

...the purpose of seeing plays or festivals of the immortal gods, a site as healthy as possible should be selected for the theatre....For when the plays are given, the spectators, with their wives and children, sit through them spellbound, and their bodies, motionless from enjoyment, have the pores open, into which blowing winds find their way. If these winds come from marshy districts or from other unwholesome quarters, they will introduce noxious exhalations into the system.1

He continues by pointing out that one must beware of exposures to the south because the hot sun dries out the air which in turn "impairs the fluids of the human body."2 The discus-

2. Ibid., p. 138.
sion of foundations refers the reader back to his third book on temple foundations and, of course, has little bearing on the subject at hand.

Vitruvius' most important contribution to the history of the theatre is his section on acoustics, entitled *Sounding Vessels in the Theatre.* In this and other passages he cites how the architectural form of Greek and subsequent Roman theatres sprang from a need for acoustic facility.

Voice is a flowing breath of air, perceptible to the hearing by contact. It moves in an endless number of circular rounds, like the innumerably increasing circular waves which appear when a stone is thrown into smooth water, and keeps on spreading indefinitely from the centre unless interrupted by narrow limits, or by some obstruction which prevents such waves from reaching their end in due formation. In the same manner the voice executes its movement in concentric circles; but while in the case of water the circles move horizontally on a plane surface, the voice not only proceeds horizontally, but also ascends vertically by regular stages. Therefore, as in the case of the waves formed in the water, so it is in the case of the voice: the first wave, when there is no obstruction to interrupt it, does not break up the second or the following waves, but they all reach the ears of the highest and lowest spectators without an echo. Hence the ancient architects, [i. e., the Greeks] following in the footsteps of nature, perfected the ascending rows of seats in theatres from their investigations of the ascending voice, and by means of the canonical theory of mathematics, endeavored to make every voice uttered on the stage come with greater clarity and sweetness to the ears of the audience.

The canonical theory referred to in the above passage

THE GREEK THEATRE
ACCORDING TO VITRUVIUS

THE ROMAN THEATRE
ACCORDING TO VITRUVIUS
is the musical scale of harmonics, developed by Pythagoras, which is assumed to have been used by the Greeks. Resonating bronze vases of graduated sizes were placed in compartments in the seating areas. As Professor Henry Montgomery points out, "There are to be thirteen of these acoustical cells in smaller theatres, arranged transversely. The two outermost cells should have bases tuned to resonate the highest interval, and so on to the single central vase to be tuned to the lowest note of the scale. In a small theatre, only one row of vases tuned to the enharmonic scale would be necessary. But in larger Greek theatres there should be three rows of thirteen vases, and two scales should be added, the chromatic and the diatonic."

Thus the concave circular form of the classical theatre had its beginning. Vitruvius lists a set of rules for the design of Greek theatres and one for the design of Roman theatres. As seen in Fig. 3, the principal differences lie in the depth of the stage and the geometric determinations of the orchestra. In the Roman theatre, the stage was deeper and the acting was done in this area alone, the senators sitting in the orchestra area. The roomier orchestra of the Greeks was used by the chorus and other artists while the comic and tragic actors performed on the narrower stage. "Of one thing we can be sure: the height of the stage floor at various

periods. The classic Greek stage was on a level with the orchestra or raised by only one or two steps. The Hellen-istic was about twelve feet high and the Roman about five feet high. The Hellenistic was shallow, the Roman deep.¹

The individual differences between the various types of theatres of the classical era are significant for conducting an exhaustive search into the subject of that period. However, let us conclude this phase of the historical survey with a summary of the classical form in words and diagram. (See Fig. 4).

For dance or ritual the audience seated all around the area made an ideal arrangement, but when the drama proper began to develop, the need for the story-teller and his assistants to address themselves to the audience, caused the latter to arrange themselves around two thirds of a circle facing the actor, whilst the area directly behind him was left empty. A valley in the hillside became the chosen ground area, and the audience looked down towards the actor, while the countryside stretched out behind him, a natural and beautiful setting which, in later ages, came to be replaced by the scenery with which modern audiences are familiar. This hillside was soon built up with wooden seats for greater comfort; later these in turn were replaced by stone. The actor was raised on a platform so that he could be seen and heard more easily while the chorus stayed on the flat ground at his feet.²

From the end of the classic era through the Middle Ages, the theatre of Europe was a homeless art. The classic drama, so formal and distinct in its manner, was dead, and it was left to the story tellers and minstrels to keep the theatre alive. Much of the richness and tradition in the theatre

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2. Leacroft, op. cit., p. 12.
comes from those years of the traveling players and the strolling minstrels. They were the chroniclers of the day, spreading by song and tale the news of the life and times of the country. "The theatre of the Middle Ages was a strange theatre -- if, indeed you can call it a theatre at all. If it had any continuity, this lay in the eternal desire of men to act and watch acting. Strolling players learned to be acrobats, jugglers, minstrels, and puppet masters, and to live outside the law of church and state. Then the Catholic church, that had condemned the Roman theatre -- and rightly -- brought it to life again."\(^1\)

As the Church grew in its scope and interpretation of Christianity during the Middle Ages, it began to depict within the churches scenes of the life of Christ. The performance of these passion plays came to be performed on the steps outside the cathedrals or in the market square of the town. In pre-Renaissance England, where the town guilds gained control, the courtyard form of theatre becomes discernible. "(There)...the spectators did not have to go to the plays since the plays came to the spectators."\(^2\)

Each guild had a wagon-stage and performed one scene over and over again. The onlookers gathered at various vantage points to view each wagon as it traversed the town. "The wagon was two stories high, the lower level serving as a dressing room

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and the upper as the acting area, usually surrounded on three sides by painted cloth."¹ (See Fig. 5). Richard Leacroft identifies the courtyard theatre as the medieval form. However, his following statement illustrates the fact that this form is not unique to the Western World. "The general architectural aspect of this new form of drama adhered very closely to the primary theatrical arrangement: the actors appeared on a raised platform set in the center of an open space, entirely surrounded by their audience."² The very term medieval and its European connotations is somewhat misleading, for in other parts of the world the theatre was taking on a similar form. The Bugaku plays in seventh-century Japan were performed on a raised stage in the open surrounded by the spectators. (See Fig. 6). A similar arrangement of audience-stage position can be seen in the seventh-century plays of Tibet. (See Fig. 7). As is pointed out in Theater Pictorial, "In Iran, since the tenth century, the martyrdom and murder of Massan and Hussein have been commemorated in a passion play given in the holy month of Muharram. In patios, ... a primitive platform is erected. Around it, ... there is an open space for processions."³

Thus we can identify this rather loose and transitional theatre as the courtyard form and diagram it in general terms. (See Fig. 8).

1. Ibid.
Theatre Set Up In The River-bed At Kyoto In 1464.

Key

A. The Shogun
B. His Attendants
C. His Litter
D. His Wife
E. Her Ladies
F. Her Litter
G. Auditorium
H. Stage
I. Musicians
J. Hashigakari
K. Gakuya, served as actor's dressing room and musician's room.

With the advent of the Renaissance in Europe, our historical survey must broaden its scope to include theatre forms in countries on all sides of the globe. Two countries in particular, Japan and England, demonstrate the next step in theatre evolution. The form that the theatre took in these countries was typical of the open-stage concept. These forms were closely parallel in that each had their beginnings in the courtyard type theatres and both were closely interwoven with a great and lasting form of drama. In Japan, the earlier Bugaku became the traditional Noh or Nō drama. In England, of course, it was William Shakespeare and the heritage in literature and drama which he left to mankind.

"Out of Bugaku...there sprang the first and most distinguished form of drama in Japan. This was the Noh. Within a generation in the early fifteenth century, a priest named Kanami and his son Zeami set the form of play, theatre, and performance which has remained virtually unchanged to the present. From a temple courtyard, where the Noh was accessible to the populace, it was transferred to the palace of the shogun....Here, Kanami and Zeami developed a special type of playhouse, and here, much later, in the homes of aristocrats and wealthy commoners, the Noh became the diversion of a special and cultivated audience."¹ There appears to be an earlier variation of the now established form in Nō theatres. This can be seen from the illustration, see Fig. 9, which shows

¹ Macgowan and Meinitz, op. cit., p. 312.
NO COURTYARD THEATRE

MODERN NO STAGE
Modern No Stage

Key

A  The Stage.
B  The Shite's Pillar.
C  Shite's seat, also called "Name-saying seat."
D  Metsuke-bashira, Pillar on which the actor fixes his eye.
E  Sumi, the corner.
F  Waki's Pillar, also called the Prime Minister's Pillar.
G  Waki's seat.
H  Waki's direction point. (The point he faces when in his normal position).
I  Flute Player's Pillar.
J  Atoza, the Behind-space.
K  Kagami-ita, the back wall with the pine tree painted on it.
L  The musicians. (represented by the four small circles)
M  The stage-attendant's place. (A stage-hand in plain clothes who fetches and carries.)
N  Kirido, "Hurry-door, also called "Forgetting-door," and "Stomach-ache door"; used by the chorus and occasionally by actors making a hurried exit. Vide Hokaze, p. 205.
O  Chorus, the leader sits near the Noble's door (now seldom used).
Q  The Hashigarkari.
R  The Kyogen's seat.
S  The three pine branches.
T  Shirasu, a gravel path.
U  Kizahashi, steps from stage to auditorium, formerly used by an actor summoned to speak with the Shogun.
V  Actors' dressing room.
X  Dressing-room window.
Y  Musicians' room.

a stage set up in a river bed at Kyoto in 1464. Although there are no existing buildings of this arrangement, it can be assumed from the Japanese way of exactness and adherence to tradition that this was typical of the theatres of some of the older Nō performances. The theatre of the Shogun's palace became more angular in plan and new elements such as the runway became apparent. When the courtyard theatre, seen in Fig. 10, went indoors, the form became set and is the Nō stage of the present day. See Figs. 11 and 12. Beatrice Suzuki describes the Nō theatre in this way:

Nō theatres are much smaller than ordinary theatres. The Nō stage is simple, but it is contained in a building by itself with its own roof, entirely detached from the audience which sits on three sides of it, the sides being open. The stage is made of cypress wood eighteen foot square, and supported by four pillars. On the boards at the back of the stage is painted an old pine tree in bright emerald to represent the pine trees at the Kasuga temple in Nara.

Leading to the stage from the dressing room is a gallery nine feet wide and about eight feet long, on which the actors pass to the stage. Three pine trees are set before this passage. The members of the chorus sit on the bare floor at the right of the stage, the musicians at the back. Under the stage are pots buried in order to give resonance to the dance.

Unlike the drama of the Western World, the Nō is symbolic and non-realistic in its nature. There is great emphasis placed upon poetic expression of mood in voice and action. In turn, the stage structure itself was built to enhance the sound of voices and the rhythmic stamping of

feet on the stage floor. Ezra Pound points this out in his description of the Nô stage. "Under the stage are set five earthen jars, in the space bounded by the pillars, to make the sound reverberate -- both the singing and the stamping. There are two more jars under the musicians' place and three under the bridge... The ground is hollowed out under the stage to the depth of four feet.

The jars are not set upright, as this would obstruct the sound. They are set at 45 degrees. Sometimes they are hung by strings and sometimes set on posts.

Hideyoshi or Ieyasu put the back on the stage. It is made of a double set of boards in order to throw the sound forward. They didn't like having the sound wasted. The innovation was, on that score, aesthetic."

The innovations behind the Elizabethan stage in England weren't nearly as much for aesthetic reasons as they were for convenience. The stage-wagons were pushed against one of the buildings in a courtyard to gain the use of dressing rooms and balconies for the plays performed. When the permanent theatres were built, they were in essence a miniature courtyard of several stories surrounding an open area into which projected a stage platform. Richard Burbage built the first of the Elizabethan theatres in 1576 and the form was not greatly altered after that. There is no question of the contribution that Burbage's Curtain Theatre and the later Globe

1. Ernest Fenollosa & Ezra Pound, Noh, or Accomplishment, p. 58.
OPEN STAGE FORM

THE KABUKI THEATRE
and Fortune playhouses of Shakespeare made to the written and
acted drama. "They gave the playwrights a form of stage that
suited their current needs, and led their successors to
splendid new fecundity. . . . No drama ever made such swift, extra-
ordinary progress." 1

Whatever the differences in cause and dramatic form may
be, the architectural form of the Japanese Nō theatre and the
Elizabethan stage is basically the same. The performance
takes place on a raised platform which is surrounded on three
sides by spectators. There is a rudimentary roof over the
stage. The audience area takes circular or near circular
form (the similarity here alludes mainly to the earlier Nō),
and shelter is provided for people of higher social rank.

In general, then, this form can be identified as the
open stage form and illustrated as in this cutaway drawing
of the Globe. (See Fig. 13).

Important as it was to the development of the drama in
the Orient and Europe, the open-stage concept did not retain
its architectural form as the theatre changed with the times.
In Japan the popular theatre of the Kabuki was founded. As
the classic Nō has its origins in the Bugaku and in the tea
theatres of China, so the Kabuki borrowed its form from the
Nō playhouses. -The Kabuki as seen in Fig. 14 had lost the
surrounding audience of the Nō while retaining the runway or
"flower way" as it is called. The room is longer and the

rectangular shape holds the boxes or galleries at two levels for better viewing. The Kabuki also developed a type of proscenium arch, and a fairly elaborate system of representational scenery. As Macgowan and Melnitz observe:

The Kabuki theater began with a Noh stage and rear runway, but its stage is now very wide and quite deep and permits a great display of scenery. To make scene changes easier, a Japanese invented the revolving stage during the 18th Century. With the sets moving in front of the audience, the actor walks from one room of a house to the other, or is left struggling in the sea as the boat he jumped from turns away. A feature of the theatre that breaks the proscenium picture frame is the so-called "flower way," running from the left side of the stage to the back of the auditorium.

The establishment of the proscenium arch in English theatre came about after the closing of the public theatres by the Puritans (1642) and sprang from the influence of the Baroque theatre of Italy. In Parma, about 1618, the architect Aleotti built the first proscenium arch in the Theatre Farnese. The influence of this concept along with the use of scenic effects spread quickly across Europe to England. "...Inigo Jones, an English student of Continental stagecraft, particularly the Italian, introduced the new movable and painted settings into England."\(^2\) When the Restoration reopened the theatre, a form quite different from that of the Elizabethan playhouse was in evidence. This is identified as the Restoration form and can be seen in Fig. 15. When the acting of plays in public was banned by Puritan decree,

the theatre was forced to exist as a private venture, and moved indoors. Thereafter, certain changes occurred. Theatres took on a long, rectangular shape for ease of roof construction, and artificial light became necessary. The audience no longer sat at the sides of the stage, which now occupied one end of the theatre enclosure. The stage kept its broad size from the previous form and rudiments of the proscenium became evident when a back-stage was introduced to provide for new-found scenery effects. "The scenic effects were cut off from the audience by the proscenium arch; this, however, was no elaborate construction as we know today (sic), but was simply the point at which the side walls (forming the front of the boxes) and the ceiling of the auditorium ended, and the stage widened out to the full width and height of the building to provide accommodation for the machinery which was needed to work the scenic effects."1 The actor performed mostly on the forestage area, in front of the scenery and some distance from it. The candle-light used for general illumination was introduced into the stage area for added effect with scenic devices. It also served, by the quality of its soft light, to give a certain intimacy to the theatres and acted as a means of concentrating attention on the stage area.

This small and still relatively simple form of the Restoration theatre is the basis from which the typical picture-frame playhouse of today has developed. To it were added

1. Leacroft, op. cit., p. 53.
many innovations of stage machinery and theatre production. As time passed, classical architectural motifs were incorporated both on the stage and within the auditorium proper. However, even after the stimulating technical advances of the Industrial Revolution, there was little change in the basic theatre form developed in the Baroque period until the early part of the twentieth century. What change there was appears to be an increase in the size of the audience and the further development of the proscenium in fourth-wall, or picture-frame theatres.

These developments within the fundamental Restoration form are illustrated in Fig. 16 in a diagram of a typical picture-frame theatre, the form still in most general use today. The common factors in the audience-stage relationship arrangements of the Oriental and the Western picture-frame theatre can be seen in the interior view of the Kabuki playhouse in Fig. 14.

Thus we have traced theatre form from its beginnings in the Mediterranean through its development in Europe and England. We have seen the similarities in evolution between the Oriental and the Western stage. As can be seen on the following page in Chart 41, we now come to the point after which growth in the theatre form no longer follows a single evolutionary pattern. It branches into four significant arrangements: projecting stage, central audience, arena, and flexible. These in conjunction with the picture-frame stage, constitute the background from which the theatre of the twentieth century functions.
SCHEMATIC EVOLUTION OF THEATRE FORM

PRIMARY FORM
- greek threshing floor, Stonehenge.

CLASSIC FORM
- greek, hellenistic, roman.

COURTYARD FORM
- england, wagon stage, iron, tibet.

OPENSTAGE FORM
- elizabethan stage, no theatres, japan.

RESTORATION FORM
- restoration theatres, europe, england, kabuki theatres, japan.

PICTURE FRAME FORM
- schuman theatre.

ARENA
- alley theatre, playhouse theatre, baylor theatre.

PROJECTING-STAGE
- dallos theater

CENTRAL AUDIENCE
- baylor theatre.

FLEXIBLE
- gropius, "total theatre" 1927.
Let us now turn from our brief history to the second approach to theatre design. This approach involves the proposal that the open stage is better than the proscenium arch form of theatre.

Open-stage versus Proscenium

There is a school of thought, particularly among those persons connected with Shakespearean productions, which strongly favors the so-called open-stage theatre over those with the proscenium arch arrangement. Richard Southern, noted English scene designer, considered this problem in a series of four lectures at the University of Bristol in 1952. In Mr. Southern's lectures, he does not propose that the open-stage is the only proper form of theatre. However, he does point out that it is a very fine form and cites some of its advantages over the proscenium arch stage. He was motivated by "...a wish to see the 'urgent figures' of modern drama served by an adequate acting place."1 Understanding his goal, let us examine Mr. Southern's viewpoint on how the open stage is more adequate than the proscenium or picture-frame arrangement.

At one time in his career, Mr. Southern points out, he attempted to connect all of the theatres throughout European history in a diagram of the evolution of the theatre. He found this to be not entirely consistent, however, for there were breaks in the evolving stream. One point, nonetheless, did stand out. This was that there appeared in the booth

THE ESSENTIAL QUALITY OF THE OPEN STAGE
stage something common to the theatres of all time, past and present. This booth stage form was "...the little strolling-player's stage which is much the same on the Greek mime vases, in the simpler medieval fit-ups, in the quack-doctor, or the mountebank, stages, the simpler Commedia dell' Arte platforms, the booths of the Victorian fairs, some of the penny gaffs, and the pierrot's home on the sands at any seaside resort today." He establishes the natural eminence of the three-sided stage. It would appear to be a spontaneous arrangement of people performing or addressing an audience for effect. These stages were raised out of the necessity for the actors to be seen and heard, for the audience of the booth stage was a standing audience. The actor on the three-sided stage has a very close contact with his audience, and a freedom to move from the front to the back of the stage while still maintaining a feeling of intimacy. In Fig. 17 we see that which Mr. Southern considers to be the essential quality of the open stage. In conjunction with this illustration he states, "What is needed for the freedoms I have suggested is not a stage before an audience, but a stage in an audience."2

Whether it is considered as a picture-frame stage, a prosenium, or a peepshow stage, the definition of a theatre with a prosenium arch is essentially the same; there are two rooms, the stage house and the auditorium. The actors act

1. Ibid., p. 16.
2. Ibid., p. 42.
and the scenery is displayed in the stage room. This has one wall removed and a rather undefined high ceiling. The spectators sit in their room, one wall of which has a rectangular opening in it. Through this opening they watch the action of the players in the play. Regardless of the architectural arrangement, there is a certain sense of separation between the actor and his audience. The proscenium arch has come to symbolize this removed quality and thus many consider it "something to be done away with."

To those who would abolish the proscenium arch, Mr. Southern points out two inescapable facts. In the first place, when the very word "proscenium" is considered in the light of its origin, it is found that the open stage and the proscenium mean the same thing — that they are fundamentally alike and equal. This point is established by citing the drawing of the Swan Theatre by De Witt-Van Burchell dated 1596. (See Fig. 18.) This drawing labels the raised three-sided stage as the "proscaenium." Secondly, it would be virtually impossible to do away with the proscenium stage. What would be abolished if this were done? Would it be the architectural trim around the framework, or the framework itself? Either alternative leaves an opening in the wall. Does it mean to tear down the wall which holds the frame? There are certain technical devices back-stage which would suffer considerably from such an arrangement. No, it would appear that no alteration is feasible. There have been occasions when alteration was attempted, such as the instance of Terrance Gray's
Festival Theatre in Cambridge. However, he ran into technical difficulties which required remodeling into the proscenium form he had in the first place. As Mr. Southern points out:

"There is only one possible true course in the abolition of the proscenium. You must abolish walls, opening and all, and you must therefore abolish wing-space at the sides, and flying space above, (thus cutting out most scenery); you must leave only the back wall of the stage as a screen for the actors to enter through. To abolish the proscenium means only one thing -- and nothing else is possible -- that is, a return to the open stage."

Thus, in a position of the detached observer, Mr. Southern expanded the first of six points of controversy which he feels are inevitable in a consideration of the question. He lists these points as follows and develops his argument around them.

One, on the architectural side: you cannot in general have an open stage technique unless you radically alter the whole architectural planning of the stage auditorium unit from top to bottom.

Two, on the visual side: you cannot bring actors forward on a forestage without bringing them out of the picture.

Three, on the acting side: the actor cannot, on an open stage, remain unconscious of the presence of the audience. It is there and inevitably visible.

Four, on the spectator's side: you cannot sit at

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the sides of an open stage and delude yourself into forgetting that when you look across the stage past the actors you see rows of spectator's faces just like your own.

Five, on the dramatic side: you cannot, in general, fairly produce upon an open stage a play which was expressly written for presentation upon a picture-frame stage. (There may be some qualifications to this.)

Six, on the scenic side — and here there is no qualification, you can never on an open stage provide scenery in such a way that an illusionistic picture is created and that so that you may suppose you are looking not at actors on a stage, but at real people in a fragment of the actual world. 1

When the last five points are considered from the architect's viewpoint, they would appear to be outside of the realm of architectural decision, and so they are. They are questions to be answered among those who are to produce the plays in the theatres, the actors, the directors, and the writers. Can anyone, particularly an architect, decide that realistic theatre is not right? Is it necessarily bad for an actor to come out of the picture by passing beyond the confines of the proscenium arch? The architect-designer will say this is up to those in the theatre field, or that the playgoer who doesn't like to look across the stage at his fellow spectator needn't go to that kind of theatre. Certainly, whether or not the actor should feel intimate with or detached from his audience is a question for consideration by the performers themselves. Finally, who is the judge of the "urgent figures of modern drama"?

So these controversies tend to place the architect in the position of being extremely arbitrary if he takes a definite stand on each of these six points, or providing a stage situation which is compatible with a general range of opinion and need. "What is, therefore, called for, is an adaptable theatre,"¹ states Mr. Southern, and cites the London Hippodrome as an example. (See Fig. 19.) This building is considered to be of perfect open-stage-theatre design because it is restricted to neither proscenium nor open-stage production, but adapts itself readily to either form without a great deal of difficulty.

We close now our consideration of Mr. Southern's presentation of the open-stage theatre viewpoint. In order to clarify the difference between the two types, a noteworthy example of each theatre type, the proscenium and the open-stage, is included in Figs. 20 and 21.

As we move to the next approach, it is necessary to establish at the outset the difference between adaptable theatre and flexible theatre. Adaptable theatres are those which change dramatic form without changing architectural arrangement. Flexible theatres, on the other hand, use mechanical means to actually move the parts of the building in order to provide for a new dramatic form.

¹. Ibid., p. 57.
This theatre has seating for 2,200 people, none of whom is more than 70' from the stage. Architects, Fairfield and Rounthwaite....
...The architect has created one of the largest and most modern theatres on the Continent....It seats over 3000 persons in orchestra floor and gallery.

...The generous curves, the clear lines and the proportion of the circular auditorium—to which even the proscenium and curtain are adjusted, are impressive....The walls are covered with honey colored velvet in vertical strips; the stage curtain is of deep blue satin, and chromium plated metal chairs are upholstered in lighter blue. The suspended ceiling is painted light grey and from the dome play blue lights over the auditorium while strong projectors working behind narrow slits shoot down yellow sunbeams.1

1. reprinted from Building, February-March, 1946.
Flexible Theatres

When, in 1935, Walter Gropius called for "a great and flexible instrument which can respond in terms of light and space to every requirement of the theatre producer; and instrument so impersonal that it never restrains him from giving his vision and imagination full play," he clearly defined the thinking behind most of the theatre design of the first half of the twentieth century. As the world of art and architecture became aware of the technical possibilities brought to light in the Industrial Revolution, the theatre became the scene of spatial interpretation and experimentation. "The problem of complete identification through sensory experience demanded a dynamic space relationship between stage and audience and a new technical apparatus -- of projection and lighting. Stage events were to happen in all parts of the theatre space. This was to be solved by mechanization, not backstage and not in order to simulate naturalistic events, but mechanization for the purpose of physically changing the relationship of the spectators and stage action." It was the people of the Bauhaus at Weimar who explored this fertile area of spaces and abstract relationships in theatres. In Fig. 22 we see in Andreas Weininger's ideogram for a spherical theatre "new psychological, optical and acoustical relationships of spec-

145. THE "TOTAL THEATER"
In deep-stage position. Plan.

146. THE "TOTAL THEATER"
With stage in front of prosenium.
tator to the stage. 1 Here also is seen Farkas Molnar's "U" Theatre, a project which attempted an "invasion of the audience area by the stage scene and action." Of course there was the famous Total Theatre, the epitome of the flexible theatre movement, designed by Walter Gropius for Irwin Piscator in 1927.

About the Total Theatre Siegfried Giedion remarks, "The dimensions of Walter Gropius' 'total theatre' arise from such a clear perception of the possibilities of spatial transformation and are so exact that they could be protected by a patent." 2 This masterpiece of architectural coordination can be seen in Fig. 23. Gropius describes it in part thus:

A complete transformation of the building occurs by turning the stage platform and part of the orchestra through 180 degrees. Then the former proscenium stage becomes a central arena, entirely surrounded by rows of spectators! This can even be done during the play... This attack on the spectator, moving him during the play and unexpectedly shifting the stage area, alters the existing scale of values, presenting the spectator a new consciousness of space, and making him participate in the action. 3

Gropius qualified his description when he established his object as "not to assemble a number of ingenious devices. All of these are merely means to attain the supreme goal -- to draw the spectator into the drama." 4 "All technical means

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1. Ibid.
2. S. Giedion, op. cit., p. 63.
3. Ibid., p. 157.
4. Ibid., p. 64.
have to be subordinated to this aim and should never become an end in themselves."¹ In his book, Walter Gropius, Giedion quotes the philosophy which Gropius set down in 1931 as a basis for theatre design.

The principles of the new theatre are...a 'community theatre' linking the people together -- 'architectural integration' of all space, forming elements with the intention of bringing about a 'human integration' between actors and spectators -- 'abolition of separation' between the 'fictitious world' on the stage and the 'real world' of the audience -- 'audience participation' in the action of the drama to stir up and waken their dormant creative capacities -- by erasing the distinction between 'this side' and 'that side' of the footlights, between the stage and the auditorium; by bringing the events of the drama among the audience; by animating the theatre through the creation of a three-dimensional space instead of a flat 'stage picture;' by giving an appearance of movement to the walls and ceiling with the aid of projections and films to extend the scene being enacted on the central stage, so as to encompass the spectators and bring them in some way within it; also by creating a projection 'space' instead of a projection 'screen' whereby the entire auditorium, being surrounded on all sides by the built-in projection lights, itself becomes a stage, an area of illusion.²

There were, it must be noted, people besides Gropius and the Bauhaus school who investigated the problem of the theatre space. "Partial encirclement of the audience by the side stages had been attempted in Cosimo Morelli's Theatre at Imola, 1779. Van de Velde's Exhibition Theater, Cologne, 1914, and Auguste Perret's Theater at the International Exhibition at Paris, 1925, presented modern solutions of this kind."³ Complete encirclement of the audience by the stage

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was proposed in 1952 for a theatre by Perottet von Laben and von Stoecklin. Architect Frederic Kiesler is noted for his work dating from the early twenties in which he formulated his "Endless Theatre" idea and for his flexible theatre project for Woodstock in 1933. "This consists of a large auditorium and a small one for intimate production, the two joined by a stage house which instead of the usual stage tower uses an extensive side stage for the preparation of sets....The large auditorium can be mechanically altered for proscenium-type, arena-type or angular staging methods."

Thus in the late twenties and early thirties the movement toward flexible theatres had its beginning. When Glen Hughes built the Penthouse Theatre at the University of Washington in 1932, he established the arena theatre form in America and the need for central staging became more common and pressing. The growth of interest in theatre demanded more and more playhouses that could do more and more things. Prior to World War II, the search for new discovery in theatre took place mainly in Europe. When many of the people connected with the arts were forced to flee the Continent and the theatre buildings were destroyed in the war which followed, the world relied upon England and the United States to keep the theatre alive. After the war, growth in American theatre took place mainly in the schools and universities. In Europe, the rebuilding of social and physical order included a surprising

1. Ibid.
The Cherry Orchard
Ah, Wilderness
Mourning Becomes Electra
Blithe Spirit
Suspect
The Late Christopher Bean
Twelfth Night
Volpone
The Great God Brown

THE UNIVERSITY OF CALIFORNIA THEATRE
SET UP IN NINE WAYS
number of professional theatres. Regardless of place, however, the financial situation and a growing public interest in the theatre brought about demands for economical structures to house a wide range of theatrical productions. These demands, added to the necessity of teaching all forms of theatre for educational purposes in American universities, have brought about the current state of the flexible theatre.

Thus we have such theatres as the one at Malmö, Sweden, and Mannheim, Germany, as seen in Fig. 21. The University of California presents a theatre which can be set up in nine different positions. (See Fig. 25.) From Antioch College in Ohio to the Ring Theatre at the University of Miami in Florida, to small town projects in France, the quest has been for a playhouse which can be transformed into any form of theatre.

Writing for *World Theatre*, a UNESCO publication, Horace Robinson states, "As a general type flexible theatre offers great stimulation to both audience and theatre personnel. It is particularly provocative for the playwright who often wishes to make an unconventional approach to a dramatic problem but feels that he is imprisoned by the rigidity of the architectural picture frame. For the designer, the flexible stage provides another dimension in addition to the usual pictorial composition and the added opportunity for performer-spectator fusion. Flexible theatre extends its influence over the theatre audience and another facet is added to the complex problem of emotional contigation."¹

The contemporary concept of flexible theatre design has shifted in many respects from the treatise of Walter Gropius and its fundamental approach. More recent examples of the flexible idea have resulted from a desire to have an interior which can be adjusted to fit any play that a director might care to produce. The architectural arrangement has become dependent upon the demands of the playwright, past or present, and the opinion of theatre people in general. Acting in the best interest of his client, the present day architect has attempted to use flexible theatre forms as a means of getting the most space uses for the least amount of money. To do the best job requires a knowledge of what directors, actors, and playwrights would like to do in theatre design. One means of securing this knowledge is by canvassing opinion of those involved in theatre production, and thus benefiting from a wide range of information. This then leads us to current opinion -- the final approach in our consideration of viewpoints on theatre design.

Current Opinion

In 1955, the British Centre of the International Theatre Institute sent a questionnaire to a representative group of architects, designers and directors and asked them three questions. Let us review these questions and some of the replies that followed:

The First Question: Do you strongly favor the open stage as opposed to the picture stage?

The Second Question: Do you consider that one form of stage is more suitable for some work and the other for
others?

The Third Question: Do you believe, concerning the theatres to be built in the next few years, that picture frame stages should be installed? Or that adaptable theatres should be built?1

In reply to these inquiries, André Barsaque of Theatre d'Atelier in Paris made several comments, "...I prefer the open stage which puts the actor in relief and given him a kind of presence impossible to attain in an enclosed stage....Provided there is an orthodox stage at the back for the use of scenery, the open stage is suitable for all the works in the repertory....I think that in the theatre of the future we should adopt the principle of a stage jutting out boldly into the audience, with a main stage behind where the normal system of scenery would be possible. This provisional set-up would give us a chance of discovering later on a formula that might be purer architecture, on the lines of the tiring house facade."2 M. Jean Vilar expresses his opinion that "Just as the imagination itself is abstract and limitless, so the stage ought to be limitless and not enclosed — and if possible bare. Then the imagination can rejoice and be glad, whether it is the playwright's imagination, or the spectator's, or the player's."3 Margo Jones, founder of the first professional arena theatre in America, appeared equally catholic in her views as she stated, "I like various forms of writing. I like any number


2. Ibid.

3. Ibid.
of types of people, and I love all forms of theatre. I could not possibly say that I favor a particular type of production."\(^1\) The American designer Donald Censlager and the German theatre engineer Walter Unruh are strong in adhering to the proscenium theatre form. The former is of the opinion that "to look across the acting area of an open stage and view the banks of spectators is most confusing and distracting. The picture stage can be effectively contrived so that the stage and theatre are more closely joined together."\(^2\) Norman Marshall points out that "Unruh considers that the optical limitation of the picture frame aids the concentration of the audience."\(^3\) Censlager further states quite bluntly that the open stage is merely "a passing fad." The Dutch director, Johan de Meester, is a hearty proponent of open staging but qualifies his view with respect to dramatic content and considers it "snobbish and absurd to perform plays by such authors as Racine, Molière, Ibsen, Strindberg, Shaw or Eliot on an open stage."\(^4\) The outlook of Jo Mielziner, American scene designer, is in agreement with director Elia Kazan's opinion that "all stages should be made as flexible as possible. Theatres now are much too rigid in construction and have to be practically torn down to do our best plays."\(^5\)

\(^{1}\) Ibid., p. 6.
\(^{2}\) Ibid.
\(^{3}\) Ibid.
\(^{4}\) Ibid., p. 7.
\(^{5}\) Ibid., p. 8.
The consensus in this questionnaire established that most of those people questioned were reluctant to favor the open stage over the proscenium. Nevertheless, the influence that the open stage could have upon the art of playwriting was thought to be great enough that general opinion favored a policy of building theatre plants which had open stages in them in one form or another. Two people, however, Gordon Craig and Andres Villiers, stood apart from the main body of thought. Though the flexible form appeared as a satisfactory solution to most, M. Villiers stands firm in his objection. "I have the deepest distrust for adaptable theatres. It is so important in any work of architecture that it should express even in its slightest details its precise intention. We have to do in the theatre with visual impressions that are very subtle but are profound and essential— and which only too easily upset the technical ingenuities of 'all purpose solutions'. I reject— however hopeful they seem in their intentions— deliberate schemes for multiform halls and adaptable theatres which, as I see it, only betray a culpable indecision."

Gordon Craig would not answer the question posed, but replied, "I feel strongly that somehow these questions somehow won't do. Open stage, frame stage— why not both— and twenty more. It's all too fussy for us to 'or' about it. 'And' is the right word I feel. For whatever we build or do, one stage will be all right 'if very well done'. If not— then not."

1. Ibid., p. 10
2. Ibid.
With these final observations, let us bring our examination of current opinion and the various approaches to a close. It can be said that the historical viewpoint informed us of what the audience-stage relationship was in the past. We can also state that current opinion surveys consider flexible, open stage, and other forms of theatre with respect to what ought to be done in future building. There appears to be a point which is reached, when the audience-stage relationship is considered in these ways, wherein the discussion covers the same factors over and over, only from different viewpoints, a point where an ideal architectural form for theatres is sought. Although knowledge of past achievement and prophesies of the ideal theatre of the future are to some extent valuable and interesting, they fail to give a working understanding of the heart of the theatre design problem, the audience-actor space relationship. What is now necessary is to deal directly with this actor-audience space and to attempt to more clearly define its essential elements and relationships.
"...he wants the order of everything to be the order he is able to conceive.

"...he is unwilling even to suspect that perhaps his broadest terms are meaningless and mistaken at the outset, and that time is not the thing he believes it to be, a movement with light from day to night for instance; and that space is not something that absolutely has got to start somewhere and stop somewhere, and so on.
Chapter 2

Actor-Audience Space: Essential Elements and Relationships

The essential elements of the actor-audience relationship are contained in that which happens when the arts of the theatre and architecture come together. The desire to communicate ideas as theatre art is served by the necessity to have a place in which to carry out the act of communication. Thus, for purposes of examination only, let us separate theatre art communication from theatre architecture space in order to gain a better understanding of their relationship. First, we shall investigate something of the nature of communication in general and see how closely it is tied in with a concept of dramatic communication. Then, let us consider dramatic communication as it relates to the art of the theatre. Finally, we shall turn to architectural form and see what relation it has to the theatre space it defines.

Communication

As man is endowed with a power beyond that of animal and physical function, he is capable of experiencing feeling or emotion. We have within us something which we cannot specifically define but call "soul" or "life" or "mind"; regardless of its name, we are aware that it gives rise to emotional sensation which provokes us to physical or mental action. The intensity of emotions can be very slight, but in a given person, "when an emotion is strongly felt, there is generally an immediate desire to communicate it to others to the best
of his ability." So communication would appear to be a basic part of living and inseparable from a concept of human existence.

When man attempts to communicate he is confronted with space, in which he must carry out whatever he wishes to perform. Put in the terms of Isaac Newton's assumptions, "space and time were given to us absolutely. They are, as it were, fixed boxes in which the events of the world occur." Although this concept was formulated for thinking in the field of physics, it is of such fundamental nature that it is worthy of consideration here; so are some of the discoveries which followed Newton's thinking in that science. These two elements, space and time, were not questioned by Einstein as being absolutes. As Dr. Jacob Bronowski points out, "What Einstein, from the beginning of his thinking, asked about this majestic view (Newton's theory) was not whether it is true, in some abstract sense -- whether it can be metaphysically held -- but whether it is practical....Physics as we actually practice it does not consist of events; it consists of observations. And between the event and those who observe it, there must pass a signal, a ray of light perhaps, a wave or an impulse, which simply can not be taken out of the observa-


2. Jacob Bronowski, Nobel Prize Winners, p. 155.
tion. Event, signal, observation: this is the relationship
which Einstein saw as the fundamental unit in physics. 1
From this progression — event, signal, observation — a
parallel with communication can be drawn. The thoughts which
occur to the human mind are "events" which use the voice or
the body as a "signal" which is "observed" by those at whom
the process is directed.

There are similarities in this concept of event, signal,
observation, as communication, to Mary Sue Birkhead's outlook
that "through an investigation of creative artists working in
various fields of endeavor there appeared a kind of basic
structure, a spine, that linked together these creative artists
and their various areas of work. This unifying structure
begins with space; the act of creation; and the manifestation
of form in space. (We must state that form is not always the
tangible object, as a statue or a piece of machinery, but it
also can be an idea, law, or philosophy.) 2 Thus we can
further relate (but by no means equate) "event" to space,
"signal" to the act of creation, and "observation" to form.

The inter-relationship of these concepts has a certain human
significance in that "all men to a certain degree have an
awareness and a certain feeling for space, that area in which
they perform the movements of life. But the creative man is
particularly sensitive to space. The space he uses is not

necessarily larger or more exciting than that space used by
the non-creative man, but through selection, using rhythm,
line, and color, sound and movement as implements, the creative
man manifests forms in that space. Therefore his space may
assume any direction, and it is, of course, more clearly de-

So the thing that man is essentially doing when he
communicates is making a definition in space. Space defini-
tion can occur by changing the state of the space in which the
act takes place. Thus we emphasize three states of being
which man is at liberty to manipulate: space itself, time,
and silence. These come of use to the theatre artist when
he uses sound and movement for dramatic expression. A sound
is made in silence and a movement takes place in space.
Space and time cannot be separated, for, as Moholy-Nagy points
out with reference to the theory of relativity, time is a
space coordinate. "The speed of light is constant; it is the
absolute speed of the universe. It is the 'fourth dimension'--
a physical measurement." Recognizing the co-existence of space
and time, Adolphe Appia posed the question:

Do time and space possess some reconciling term,
some common denominator? Can form in space take
part in the successive durations of time and can
these durations of time in turn manifest themselves
in space? The problem resolves itself into this,
if we wish to unite the arts of time and space in

1. Ibid., p. 94.
2. Moholy-Nagy, Vision in Motion, p. 266.
one single object.

In space a duration of time is expressed by a succession of forms, that is movement. In time, space is expressed by a succession of words or sounds, that is by various intervals of time which dictate the extent of the movement.

Movement, mobility — here is the directing and reconciling principle which will regulate the union of the art forms to make them converge simultaneously on a given point — dramatic art. And as it is the only indispensible principle, it will determine the hierarchic order of those forms, subordinating some to others to effect a harmony which, left to themselves, they would have been unable to achieve.¹

Truly movement is essential to communication — both dramatic and general, for without movement there would be no perception that space or time or silence exist. Movement breaks into space as sound breaks into silence.

We say that sound breaks silence because silence is basic rather than sound. Although it is a plausible point for consideration that silence is merely the intervals in a constant state of sound, we will allude to the fact that human experience assumes silent periods to be similar while periods of sound are different, thus establishing silence as a basic state. As Paul Baker points out, "The prime factor of creation is silence. Actually, it should be considered with the other factor, space, for they are integral. As movement and activity presuppose space, so sound presupposes silence."²

The effect of movement is apparent in all art forms. In

² Paul Baker, Interview, 1959.
music, architecture, the dance, literature, poetry and all forms considered to be art, we find movement as an underlying principle. The basic elements of dramatic communication demonstrated in *A Statement of Planning for the Dallas Theater Center* all show their dependence upon movement for recognition. The *Statement* points up the fact that "lying dormant in the space for use are the basic elements of time—rhythm, direction and silhouette. Also available to the theatre artist for his use is silence and sound; and the third large element, darkness and light. While these primary elements have areas of difference, the staff of the Dallas Theater Center looks upon the ingredients which make up these elements as similar and parallel. This attitude toward the basic elements brings together and coordinates some common denominators of theatre communication. For example, movement has direction, rhythm, intensity, texture, timbre and color. Sound has movement, intensity, direction, rhythm, pitch, texture, timbre, and simulates color. Light to dark states itself in space and silence: it has direction, intensity, color, movement, rhythm, and form. Hence we make the general statement that movement is to space as sound is to silence, and as light is to darkness."¹

Thus we have looked into the nature of the things which constitute the process of dramatic communication and perhaps have touched briefly the essence of theatre art; let us now turn to a consideration of the content envolved in dramatic

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communication.

Dramatic Communication, its Content and Relation to the Art of the Theatre

"In the communication process a central position is occupied by the content. By communication's content is meant that body of meanings through symbols (verbal, musical, pictorial, plastic, gestural) which makes up the communication itself. In the classic sentence identifying the process of communication -- 'who' says 'what' to 'whom,' 'how,' with 'what effect' -- communication content is the 'what'."1 The "what" in dramatic communication is generally considered to be the written and acted drama which is the play. This form of dramatic expression derives its origin from prehistoric times much the same as the art of the theatre itself did. The cave drawings of a masked medicine man recently discovered in Southern France are thought to be from ten to fifty thousand years old, and are cited by Professors Macgowan and Melnitz as part of the far distant beginnings of the drama. They outline the development of the play as follows:

Drama and theater are older than religion. They begin with the first man who thinks that by imitating animals around the camp fire he can increase the game and insure good hunting. Drama and theater grow and become more elaborate as man moves beyond imitative magic. He discovers how to use dance and music, as well as masks, in rituals that he hopes will bring rain and increase his crops. He invents initiation ceremonies that require dialog. His ancestors become gods, and he worships them with dance and song.

Worship breeds myths, and myths must be acted out if his race is to live. At last he is devising tragedy, and after that Bacchic comedy, and then plays that are acted...."1

Thus the play is a vehicle which man has developed to express his ideas and thoughts to those around him. In early times a hunter returning from the hunt, successful and proud of his achievement, needed to communicate the events of the kill to his family and friends in the native village. He told his story, how he stalked the beast, the struggle, and finally the kill. In relating his adventure time and again, he developed a set way of telling it for a certain effect; in essence he was performing a play much as the actor of the modern drama does. The similarity lies in the fact that the scene to be enacted was planned out ahead of time and consisted of a sequence of events. The form, of course, is always changing in drama, but the aspect of planning and order remain.

The play, then, regardless of the form it takes, is the structure upon which the theatre artist builds. It is not the result of theatre communication, rather it is the beginning; it is a device for displaying ideas. When Shakespeare’s Hamlet says, "The play’s the thing, wherein I’ll catch the conscience of the king,"2 he points up the use of the play as a means to an end. So the play is not an end in itself, but is, as Professor Paul Baker points out, "...the raw

2. Act II, sc. ii.
material of the theatre...and this raw material which is the play must be brought to life to make its own statement through the use of space, direction, silhouette, sound and silence, light and dark, all receiving the emphasis and the importance which the director and the actors have discovered through experimentation."

It can be stated that dramatic communication is a part of the art of the theatre and that the form of theatre now in use is the written play or drama. The concept of theatre art as an actor-on-a-stage-in-a-play is entirely valid with respect to the theatre of contemporary times. However, there appear in several written works, ideas which indicate that the art of the theatre is not limited to the written play, that there is a greater freedom available to the theatre artist. This visionary aspect of theatre art will now be examined as a further indication that the play is a means to an end, and as an insight which helps to remove some of the self-imposed limitations of the architect and the theatre artist.

In his work, On the Art of the Theatre, Gordon Craig illustrated his vision of the nature of the true art of the theatre. He puts forth a dialogue between a stage-director and an inquiring playgoer:

STAGE DIRECTOR: Hamlet has not the nature of a stage production. Hamlet and the other plays of Shakespeare have so vast and so complete a form when read, that they can but lose heavily

1. From a letter from Paul Baker to Frank Lloyd Wright, August 2, 1955.
when presented to us after having undergone stage treatment. That they were acted in Shakespeare's day proves nothing. I will tell you, on the other hand, what at that period was made for the theatre -- the Masques the Pageants -- these were light and beautiful examples of the Art of the Theatre. Had the plays been made to be seen, we should find them incomplete when we read them. Now, no one will say that they find Hamlet dull or incomplete when they read it, yet there are many who will feel sorry after witnessing a performance of the play, saying, "No, this is not Shakespeare's Hamlet." When no further addition can be made so as to better a work of art, it can be spoken of as 'finished' -- it is complete. Hamlet was finished -- was complete -- when Shakespeare wrote the last word of his blank verse, and for us to add to it by gesture, scene, costume, or dance, is to hint that it is incomplete and needs these additions.

PLAYGOER: Then do you mean to say that Hamlet should never be performed?

STAGE-DIRECTOR: To what purpose would it be if I replied, "Yes"? Hamlet will go on being performed for some time yet, and the duty of the interpreters is to put their best work at its service. But, as I have said, the theatre must not forever rely upon a play to perform, but in time perform pieces of its own art.

PLAYGOER: And a piece for the theatre, is that, then, incomplete when printed in a book or recited?

STAGE-DIRECTOR: Yes -- and incomplete anywhere except on the boards of a theatre. It must needs be unsatisfying, artless, when read or merely heard, because it is incomplete without its action, its colour its line and its rhythm in movement an

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The possibility that written drama could be outside the realm of the art of the theatre is further supported in this excerpt from an essay, *On the Tragedies of Shakespeare, considered with reference to their fitness for Stage Representation*, by Charles Lamb:

...So to see Lear acted, to see an old man tottering about the stage with a walking stick, turned out of doors by his daughters in a rainy night, has nothing in it but what is painful and disgusting. We want to take him into shelter and relieve him. That is all the feeling that the acting of Lear ever produced in me. But the Lear of Shakespeare cannot be acted. The contemptible machinery by which they mimic the storm which he goes out in, is not more inadequate to represent the horrors of the real elements than any actor can be to represent Lear: they might more easily propose to personate the Satan of Milton upon a stage, or one of Michelangelo's terrible figures. The greatness of Lear is not in corporal dimension, but in intellectual....On the stage we see nothing but corporal infirmities and weakness, the impotence of rage; while we read it we see not Lear but we are Lear, -- we are in his mind, we are sustained by a grandeur which baffles the malice of daughters and storms....Lear is essentially impossible to be presented on a stage.

Gordon Craig sought to remove all human weakness from the art of the theatre in an effort to visualize a true art form. He devised the scheme for an Über-Marionette, a super puppet which would replace the actor on the stage. He states "...that the Stage must be cleared of all its actors and actresses before it will again revive,"2 and supports his proposal by quoting Eleonora Duse as having said, "To save the theatre the theatre must be destroyed, the actors and actresses must all die of the plague. They poison the air,

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1. Charles Lamb, in *Shakespearean Criticism*, Edited by D. Nichol Smith, pp. 204-205.

they make art impossible'.

These and other of Craig's ideas about the theatre have proved both perplexing and stimulating to the theatre world since he published them in the early 1900's. The proposals he makes should be considered less from a practical sense and more in the light of the thinking which they stimulate. Craig used his exciting but at times preposterous innovations and theories as a means to uncover the essence of theatre art and to convey this essence to others. It is at this point of essence in art that architecture can gain significance in the theatre art. Hence, from the abstract stimulation of Gordon Craig a ray of insight falls to reveal something of the relationship of architectural form to the art of the theatre. As a basis for discussion of this relationship, let us conclude this section on theatre art as the content in dramatic communication, with a definition of the art of the theatre as Craig saw it:

No; the Art of the Theatre is neither acting nor the play, it is not scene nor dance, but it consists of all the elements of which these things are composed: action, which is the very spirit of acting; words, which are the body of the play; line and colour, which are the very heart of the scene; rhythm, which is the very essence of the dance.

1. Ibid., p. 79
2. Ibid., p. 138.
The Relation of Architectural Form to the Theatre Art

There are two aspects of the relationship between architectural form and theatre art to be considered. First, the dynamics of the relationship; and second, the aspects of aesthetic experience.

It has been stated on page 70 how Adolphe Appia considered the reconciling principle in art relationships to be movement. Movement in theatre art is essential and real, as a change of state is required if movement is to be noticed. In architecture, however, movement is only implied, for the forms which set aside spaces are static. Nonetheless, as spaces set aside by static form are inseparable from time in human experience, they have a four-dimensional aspect. It is time which gives to architecture a quality of life; it is time that moves finite stone, steel, and glass toward the infinite realm of human interpretation. It is this boundless area of possibility, that, when it is given order, stimulates the mind and gives architecture meaning.

On the other hand, the art of the theatre is essentially dynamic; it is always moving. Dramatic art is witnessed in succeeding segments of time and is never the same. Once a line is spoken or a movement executed on the stage, it can never be repeated, it is finished and gone. It existed for only an instant and was given its meaning by a relationship to the preceding and following lines and movements.

So the quality in dramatic communication is a continuous change which requires the static three-dimensional state for support in order to become a part of human experience. Archi-
tectural form begins as a static state of three dimensions — length, breadth and height; it is time which transforms architecture from its static state to a dynamic reality. Theatre art form is basically dynamic; it is the art of time. To be rational it needs the other three dimensions of length, height and breadth. In the case of architecture for a theatre art, then, there is an inter-dependency — a necessary state of co-existence — between architectural form and theatre art.

As the art of the theatre is the art of time, so it can be said that architecture is the art of space. Bruno Zevi considers architecture as space and emphasizes the importance of the enclosed void. He states, "Architecture does not consist in the sum of the width, length and height of the structural elements which enclose space, but in the void itself, the enclosed space in which man lives and moves."1 The importance of the potential in this void is brought to light because void is a prerequisite of movement. The significance of void cannot be overemphasized, for this is the place, the locus, where dramatic communication takes place. It is not in a three dimensional auditorium of four walls, a floor and a ceiling that theatre communication develops its infinite capacity, but in the "void" of space-time. "How many dimensions does this void have? Five, ten, an infinite number perhaps. For our purposes it is enough to establish that archi-

tectural space cannot be defined in terms of the dimensions of painting and sculpture. Taking advantage of the endless dimension of void is the province of both the architect (the artist of space) and the theatre man (the artist of time). This receives philosophical support in the following verse expressing Lao-Tse's insight into the potential of void in tangible matter:

"Moulding clay into a vessel, we find utility in its hollowness.

"Cutting doors and windows for a house, we find the utility in its empty space.

"Therefore the being of things is possible; the non-being is serviceable. (Chapt. 11)"

This insight can be further related to architecture and the theatre in the following example: two objects are placed upon a table, a pitcher of water and an empty drinking glass. The glass represents the theatre building, the pitcher the play (or any form of dramatic communication), and the water the sum total of the things (words, actors, scenery, etc.) used to communicate the idea. The void in the glass has great potential for it represents the infinite number of ways in which the glass may be filled. As the water slowly is poured into the glass the potential of the glass to be filled is reduced. When the glass is full, it has lost this capacity for fulfillment. The theatre building, which is the glass, is filled with the means of communication and has lost

1. Ibid., p. 28.
2. Amos Chang, Intangible Content in Architectonic Form, p. 7.
potential. But, the pitcher, which is the play, is now empty and it has infinite potential. Two things are noted: (1) in the act of exchanging the potential from the tangible to the intellectual, the glass was an indivisible part of the act; without the glass the act of pouring water would have resulted in chaos, (2) as the act of pouring depended on the glass and the water (i.e., the theatre and the actors) it also relied on there being a void in the glass in the first place.

The lesson in this example and Lao-Tse's verse serves to illustrate the influence which architectural elements exert on the space they define by their relationship to that space. For in the theatre it is a relationship in space-time between the actors and the audience which must be dealt with. "The theatre must be conceived as an atomic reactor, each element of which exists only in function of its association with others. The heart of the edifice, which is precisely this association of stage and auditorium, must not only reflect the mobility of our behavior in life, but itself possess this mobility and assist in its representation."

Architectural form relates to theatre art by substantiating and emphasizing the basic elements of theatre communication. In the Dallas Theater Center report, three areas were set apart as essential elements. They are (as mentioned on page 71 of this work) "time-rhythm, direction and silhouette, silence and sound, and light and darkness." These

are all held in conjunction with their aspects of movement. Although it has been established that architecture and theatre relate in space-time and that their reality is dependent upon human experience, a diagrammatic study can be made of theatre spaces to illustrate how these elements in theatre communication are supported and enriched by their architectural surroundings.

The consideration must be a case for support and enrichment, for the role of architecture cannot remain passive and still be a contributing factor. If architecture merely provides for silence and sound with an excellent acoustic system (the perfect one of which has yet to be developed), or makes provision for any possible lighting situation or stage arrangement the theatre technician demands, then architecture fails by default. If sight-lines and orchestra pits and fly galleries become the architect's aim, then architecture fails by misdirection. If architecture acts solely as a large tool, it has changed itself to a building exercise and has lost its human quality. Of course, a theatre which is without proper technological development is a misfortune at once, and becomes virtually useless. Proper lighting, acoustics, and seating are as essential as the stage itself, and can never be omitted from a consideration of theatre space. Technical devices will only be useful, however, when they contribute to the essence of theatre communication.

How, then, the question is raised, is this essence of dramatic communication manifest in the architectural spaces
of the actor and the audience? What is the effect of time-rhythm, direction and silhouette upon these spaces? What is the influence of silence and sound, of darkness and light?

These elements must be regarded as principles common to both arts. The theatre artist is concerned with line, movement and direction. He thinks in terms of light and dark, he considers silence and sound. But the architect also works with these fundamentals as he defines space. Regardless of his period of history, of his style or manner of design, the architect is confronted with rhythm, with light and dark, and with color and movement. These same things which test the work of the artist of space form the criteria for judging the efforts of the artist of time, the theatre artist. These principles which are inherent in both endeavors cannot be discussed as things which stand alone. They must be regarded in terms of something else, something tangible. Movement is simply movement, it can be defined by discussion. But to understand movement, or any of the basic elements in the audience stage relationship, we must cite an example and say, look to this, this has movement. So we shall look to the tangible architectural forms in several theatres and consider how the following are manifest in them: (1) sound and silence; (2) time-rhythm, silhouette and direction; (3) light and dark.
"...man is a limited slob, not a free one. Nature is a free slob. It isn't stingy, as man must be. It has no care for petty details. It deals in countless earths which man hopes to count, even if the act of counting is beside the point and only likely to further inhibit his eventual... emancipation from matter, his arrival at grace.

"...Nature is vastly, infinitely, inconceivably. But man wants to know what so much enormity means. What is it for? Vast space. Uncountable... earths immeasurable distances away, existing in a silent, secret and inconceivable but unknown order... of action. Man also wants to know who he is. What is the earth, what is all that crazy stuff out there in space beyond the earth? When and where will it stop? And so on.". William Saroyan in a playbill for "The Cave Dwellers" seen in February in the year....1960
Examples of Essential Elements and Relationships in Use

In the Baylor theatre (see Fig. 26) the audience can be surrounded by the stage. Sound can come from one direction or from all sides.

The audience is in the midst of the silence which the sound interrupts in its movement.

This architectural arrangement not only provides good hearing by stage proximity, but increases the effectiveness of sound by locating its source around the audience and its path through them.
In the Japanese Nō theatre (see Fig. 11) the sounds in verse and the inflection of voice had great meaning. At times the spoken poetry is halted and the idea continued by hand gesture, foot stamping and song. In an attempt to gain a unity of mind and form, the verse is interrupted with periods of silence to permit the meaning to carry on in the imagination of the audience.

In these theatres vessels were placed beneath the stage to reverberate the sounds of stamping feet on the floor above and of song and verse recited in the play. The back screen of wood helped to give direction to the sound, the vessels gave it quality.

In the Greek theatres sounding vessels were placed in the spectator area to increase the clarity and quality of sounds from the stage. Professor Montgomery points out, "The goal then was one of improvement in tonal quality as well as in amplification."¹

¹ Henry Montgomery, op. cit., p. 242.
Consideration for sound enrichment was a determining factor in architectural form. 

In turn, completed architectural form enhanced the quality in the song and music of the Greek drama. 

In Rudolf Frankel's Schuman theatre (see Fig. 21) velvet was placed upon the walls as an acoustical control for a very large space. Colored velvet was also placed on chair bottoms which, when folded up replaced the absorbing effect of the person who would ordinarily sit there. Here, architectural texture, color, and simplicity of form are related to their physical properties which control and modify sound and silence. Velvet has an implied quality of silence about it.
In the Dallas Theater Center, (see Fig. 27) the balconies for musicians do not interfere with stage action. Placed close to hard-surface back wall and ceiling shapes the sound source is effective and still unobtrusive.

Time-rhythm, Direction and Silhouette

In the Schuman theatre the circular forms set in motion a vision line with a curved path. There is orderly and constant movement of form which leads the eye to the stage. The curve of the wall allows no abrupt break in the rhythm of the architectural movement.

In the Dallas theatre the experience of time-rhythm begins at the edge of the site when the theatre is approached. The change of pace from the busy city streets of Dallas to the narrow road which winds through a wooded area quickens the spectator's interest before the building comes into view. To enter the building the spectator must follow a changing direction. This spiral path.
which carries the audience around part of the building ascends gradually, requiring physical exertion and increasing rhythmical body movements. The structure's location above the level of the road, plus its boldness of form, tend to heighten the dramatic sense of the spectator's experience. Thus the architecture............ serves to excite the audience, physically and mentally, by increasing body rhythms and by constant change of direction.

The diamond shaped windows imply a directed path which continues into the auditorium.................
The prominence of curved line in the seating area continues to the stage and there finds its origin. Thus the introduction of the spectator to the theatre space has consisted of a rhythmic spiral movement culminating in a focus on the stage.

Silhouette is facilitated in this theatre by the revolving stage and the circular synchronous winch system over the stage area. The turntable has varying speeds and reversible direction which facilitates movement. "The revolving stage is another actor." Scenery can be moved from any point which the gridiron covers and is controlled in speed and combinations from a central panel. Off-stage access at the sides provides for horizontal movement of actors off of and on to the stage. Thus silhouette and movement are assisted and enriched by technical devices working in combination with architectural arrangement.

1. Paul Baker, from unpublished lecture given at The Rice Institute, Feb.'60
In the Stratford-Ontario theatre (see Fig. 20), the open stage allows the actor to come forward into or move back away from the audience, thus expressing his three-dimensional quality.

This flexibility of esthetic distance which is given the actor allows him to extend both his body and voice within a greater range than if he were part of a tableau stage.

Not only his front silhouette but back and sides, the form of the body comes into full play.
The openness of the stage and the pitch of the auditorium floor bring the stage floor behind the actor instead of under him. With his shadow on the floor visible, the actor has a clearer silhouette—he has a definite place to indicate the stability of his position.

The Baylor theatre provides the audience with swivel chairs. They are given facility of movement—they have mobility.

If a scene is played across the seating area, the spectator is free to move and change his viewpoint; the action meanwhile is transmitted through the space he occupies.
A RECONSTRUCTION OF THE GLOBE
In this way the time-rhythm of the actors flows through and is a part of the audience space. In this theatre arrangement there is no rigid direction established by the architecture which in this case is simply the seating arrangement. Rather, the direction of audience attention is left to the skill and control of the performers.

Light and Darkness

In Shakespeare's Globe theatre (see Fig. 28) the open stage gives the actor eminence by raising him over the groundlings.

and yet a relation to the floor behind him when viewed from the raised galleries. Open to the sky, the play of sunlight during the course of the performance added a dynamic quality to the production.
(It is interesting to note that the Elizabethan producers began with a lighted stage and were forced to indicate darkness by the lines of the play..................

whereas the modern theatre begins with a darkened playhouse and manipulates light to serve the play.)....

In the Dallas theatre there is a lighting system designed by the noted theatre engineer, George Izenour, which provides one of the greatest controls of lighting in contemporary theatre. An adequate lighting plenum above the auditorium is fitted with light mounts arranged
in concentric rings above the light slots in the ceiling of the auditorium below. A central control panel for pre-setting lights provides a system of light combination and change by push-button control from the vantage point of the projection booth.

The walls are simple in shape and treatment and serve with the permanent cyclorama as a background for projected scenery—dependent of, or in conjunction with, flown scenery. The strength of line and form within the auditorium-stage gives the theatre artist a wide range of uses for light and dark in dramatic production. The lighting in this theatre is an example of an advancement in lighting technology. This innovation is increased in value by the harmony of visual movement in the architectural form upon which it functions.

This ends the examples of the essential elements and some of their related uses in theatres. It should be noted that no attempt is indicated which would analytically determine the extent of these elements in each; rather, the theatres cited are used to demonstrate the points under discussion.
Summary and Conclusion

Summary

There are many ways in which to conduct a study of the theatre. Scholarship and investigation in the field of history can yield much worthwhile information about the architecture of the theatre in other years. The theatre has always been an art of great and lasting traditions which enrich the dramatic art and its architecture of contemporary times. Throughout time, history has evolved several different forms, five arrangements being apparent -- picture-frame, arena, projecting stage, central-audience, and flexible -- in theatre usage today. Within the last ten years there has been a re-birth of the open staging used in Shakespeare's time, and a growing discontent with the picture frame stage. These have been placed in opposition in Richard Southern's book, *The Open Stage*, which favors the style indicated in the title of the work. The new movements in architecture and theatre in the twentieth century give rise to the quest for many forms of theatre buildings. Growing interest in the theatre brought on a demand for economical structures which could adapt to all forms that dramatic art required of the architecture which contained it. Led by Walter Gropius' Total Theatre in the 1920's, the design world turned its efforts to attaining a flexible form of playhouse to meet the needs of the theatre.
In the rebuilding after World War II, there arose many new and conflicting schools of thought in the theatre field itself and the architect turned to surveys of current opinion as an information source. He entrenched himself in the safety of all-purpose solutions in an attempt to satisfy the desire of all — actors, spectators, directors and the profession of architecture.

All of the viewpoints mentioned can be classified as either being what theatre architecture "has been" or a prophetic outlook of what architecture for the theatre "should be." A need becomes apparent for an approach which reveals what the art of the theatre "is" in its relation to architecture. The main relation of theatre and architecture occurs in the actor-audience space. This space is said to have certain essential elements and relationships which are pertinent in order to understand something of its nature.

Communication in general is the first of these essential elements. Communication is a basic part of life and an essential aspect of contemporary society. When man attempts to communicate he is confronted with space in which he must carry out his act of communication. What man is doing when he communicates is defining space; and, the states of silence, space and time are at his disposal. These are elements common not only to the theatre artist but to all of the arts, architecture included. Adolphe Appia reconciled all of the arts in terms of time and space by identifying movement as a unifying principle. Movement is essential to all com-
munication because it is only through movement that silence, space and time are revealed to man.

Dramatic communication, — its content and relation to the art of the theatre — is the second essential element in the audience-actor space relationship. Dramatic communication as it is known today consists mainly of the play. The play appears to be as old as man himself and has always been a factor in the formulation of theatres. However, the play is only one facet of the art of the theatre for it would appear that some plays are not suited to stage production (being infinitely greater in the mind when read rather than witnessed), and that a day may come when the art of the theatre no longer depends on the play form for dramatic expression.

The relationship of architectural form to theatre art was the last essential element considered. Architecture depends upon time to give its three dimensions meaning in human experience while the art of the theatre is essentially an art of time and relies on corporal dimensions to establish its existence.

Architecture, then, is said to be an art of space and theatre is said to be an art of time. These arts are united in space-time and their harmony is dependent upon the extent to which they use the potential of the void which is modulated by their physical characteristics. As emphasis is placed upon their relationship and not separate acts, the vital quality of architecture is revealed. That architecture is vital in the theatre space is emphasized by its support and enrichment.
of some of the essential elements of theatre communication. These elements have been identified by the Dallas Theater Center as: (1) time-rhythm, direction and silhouette, (2) sound and silence, and (3) light and darkness.

These elements are considered common to both architecture and the art of the theatre and their use for mutual support and enrichment can be seen by studying examples of theatre architecture with these principles in mind.

In conclusion, the architectural space in which the audience-actor relationship takes place is a vital force in that relationship because it is integral with the art of the theatre in principle. The space with which the theatre artist defines his dramatic message cannot be separated from its surroundings because the value of each depends upon the successful application of basic elements which are common to both; the fundamental principles which go to make up architecture are the same as those which constitute the art of the theatre. Hence, architecture is a part of the theatre art and it is the province of the architect to determine by what means and to what extent it will be a contribution to that art.

"For whatever we build or do, one stage will be all right 'if very well done'. If not -- then not."

Edward Gordon Craig
"In the music, the most important part is the vacancy." from Pai Chu I, Chinese poet, related by Wang Chi Chang, Chinese friend.

Altman, George; Greud, Ralph; Macgowan, Kenneth; and Melnitz, William; *Theater Pictorial*, Berkeley and Los Angeles. University of California Press, 1953.


Baker, Paul, (The following is a list of papers borrowed from the personal files of Professor Paul Baker of Baylor University.)

3. Newspaper clipping on theatre in Caen, France.
7. A quote by Arch Lauterer on the transverse rigging system.
10. A series of twelve documents concerning the Dallas Theater Center. Copies of letters to Frank Lloyd Wright.


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figure 29