

TABS

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Cover picture: The Forum Town Centre, Billingham.

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What are you going to do with it?

What are you going to do with it? With what? Not unusually for TABS we are thinking of theatres so the question is "What are you going to do with your new theatre?" This seems a silly question, because everyone must know what to do with a brand new theatre, otherwise all that money would not have been spent on building it. After all it is not as if it were an old theatre—a legacy from the past like the Jubilee Clock or worse still a portrait of the mayor at the time the said clock was unveiled. No, the theatre we have in mind needed people to say, *we must* have a theatre and people to say *we shall* pay for it. The foundation stone was then laid and as this was not the national theatre, in no time at all and without even moving it once, workers began to lay brick upon brick or more likely in today's architectural terms pour inexpensive permanent concrete between expensive temporary shuttering. Topping out followed and the splendid edifice or at any rate a brutal symbol of our age was completed. Then someone put the question, "What are you going to do with it?" This is no fairy story but a real life case that has just come to our notice. In fact the question is even more complicated

for apparently it is not known *who* the *you* is!

This particular theatre got built as a condition imposed on the firm developing the site and now we are told there is an eight-hundred seater awaiting a user. The civic authority does not want to run it and no commercial impresario wishes to take the risk—especially with today's shortage of good touring material. So the distress signal goes out, "What shall we do with it?" "What about Repertory, is that any good?" This latter question being prompted no doubt by some vague notion that this is a cheap form of theatre not requiring too much money. So it may be in some little theatres but 800 seats is not a little theatre.

This is an extreme example of what can and has in fact happened but we suspect that in a milder form perhaps, the dilemma is present rather more often than one would hope. The impulse in the first place is to build a theatre, the modern symbol for culture—entertainment being a dirty word—and the readers of TABS and certainly its editor should be the last to decry any move to provide such a building. However, it does seem to be the case that its ultimate purpose is often too obscure when planning begins. The attitude can be summarised as "It will be nice for our amateur companies and perhaps Sadlers Wells will come or maybe a Repertory Company would be a good thing; anyway see what you can do Mr. Architect." The happiest situation is where a resident company already exists as a nucleus and this suggests that, where no such thing is there, a pilot mission theatre such as the Phoenix, Leicester, should begin in a temporary building while the big theatre is a-planning and a-building.

A theatre building can have no life without play and players nor, contrary to the theories of some pundits, can play and players survive without a theatre building—not for long anyway. The inspiring but rainy market place and the stimulating but draughty street corner may have been "vital" once upon a time, though your editor for one has doubts, but before long playhouses were built and actors and audience gratefully took shelter therein. Desire did not end there and the demand for better conditions backstage and out-front is still with us—as yet only partially satisfied.

What we have to do is to match our new theatre to all those who will use it; whether to put on a show or to see and hear when "assisting at a performance" as an audience. It is obviously difficult to do this if the building is designed and perhaps even built without any idea of the nature of use. It is no good asking what size of stage and what size of auditorium and what relationship they should have to each other if one cannot see fellow creatures strutting therein and journeying thereto. It is not even any good putting the question to the Arts Council or the A.B.T.T.

A theatre can be too big or too small and the wrong type nor should it be imagined that an insurance policy can be taken out in the form of an adaptable theatre. The question "What are you going to do with it?" is the one to put first before all else, before even looking for a site or the money.

Regina v Scipio

Three delightful performances of *Scipio* by the Handel Opera Society in costume, with props and lighting were given in the Queen Elizabeth Hall this autumn. Thus seven months after it opened the second concert hall of the G.L.C.'s cultural complex put on a theatrical performance. As with the Royal Festival Hall, now a makeshift theatre for some months each year, the architect's brief gave no recognition to this possibility. Yet did it? The concert platform in the Queen Elizabeth Hall has an elaborate arrangement of motor-driven lifts to make it flat or stepped to quote the official handout, "when chamber opera is being performed".

This part worked well but it was let down by the fact that no proper provision has been made for access to the stage and for lighting. A public exit had to be pressed into service as the major entry actors' right and the total lack of entrances at the sides and rear stage had to be covered by a descent into the bowels of the liftwork.

Considerable use was made of lighting, mainly from the concert vertical overhead spots, which remained set on their concert marks, plus imported long range profile spots crammed in TV balconies on the side walls to the rear of the hall. The flat angle of these made side lighting all the more necessary but as there are no wings the audience was treated to the spectacle of six Strand Electric Patt. 223 Fresnel spots standing each side on the tallest telescopic stands to be found in the hire dept. These stood literally on stage since there are and can be no wings and in fact the walls of the stage turn inwards upstage.

All in all the production represented a very creditable attempt by all concerned to overcome obstacles presented by the design of the hall. The question arises, however, should this standard of makeshift exist in the heart of London and in a building in which the highest standards of design and workmanship otherwise prevail. Was it not obvious at the outset with the experience of the Royal Festival Hall to go on that theatrical performance was bound to take place in the new hall. In your editor's opinion it was and there was neglect to take a few elementary precautions in planning and equipment . . . mad, 'tis true; 'tis true 'tis pity; And pity 'tis 'tis true:

Lines of communication or do you or don't you?

Nearly one in a hundred of each issue of TABS finds its way back to us rubber stamped unknown or something of the sort. We recognise the right of every man to go into hiding or to adopt this simple means of intimating that he does not want TABS any more, though we feel warmer towards those who write us to say so. The plate is removed and melted down, chucked into the wastepaper basket,

sold in the antique market or whatever it is one does with old Addressograph plates. Unfortunately nine times out of ten there follows, weeks, months or even years later a lamentation "I used to get TABS, but you stopped it for some reason", thereby implying meanness or censorship on our part. The answer is we did nothing of the sort, the fault dear Brutus is not in ourselves but in your lines of communication. Therefore *please notify us here of change of address* and put no reliance on the G.P.O. to forward. In so doing please give your old address as well because our plates are filed in geographic order.

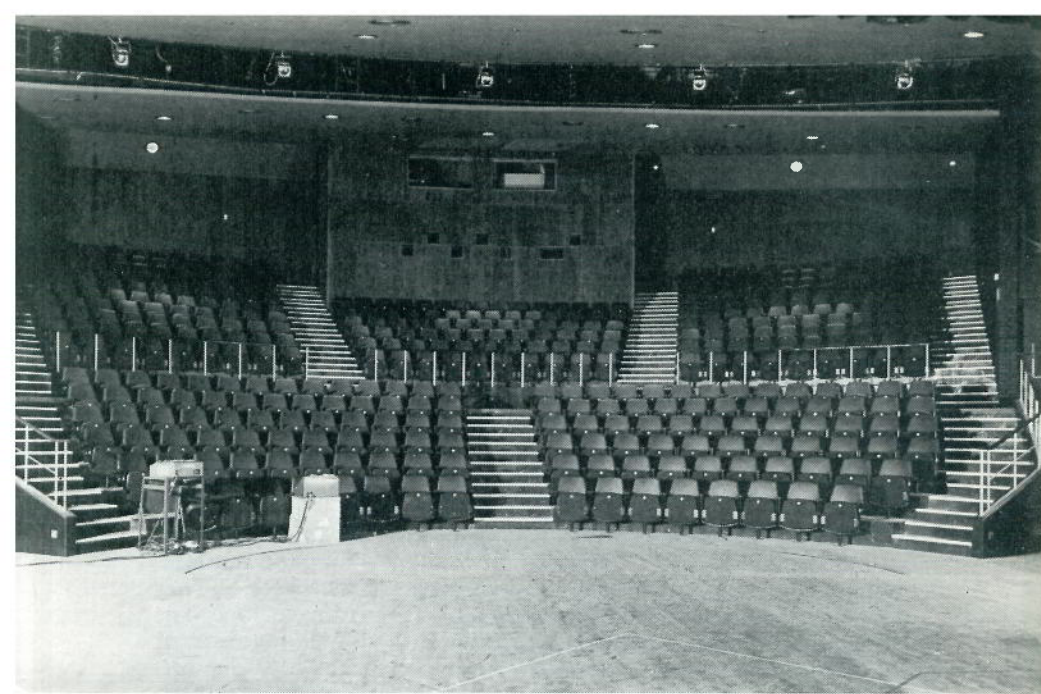
STEPHEN JOSEPH

Stephen Joseph, whose death at the age of forty-six was announced last month, will be sadly missed by all who knew him and not least by those who had only met him in his articles in the pages of TABS or in the many books of his we reviewed from time to time. His writing style was very like the man himself, a stimulating director and teacher boiling over with enthusiasm, but all the time one was conscious that here was an expert who really knew his subject. Literature and acting were literally in Stephen's blood and he studied widely spending much time in the United States. He was a trained scene designer which came as something of a surprise due to his apparent espousal to a theatre with no scenery. His spirit of adventure got him the D.S.O. with his command in the R.N.V.R. during World War II and got him into battles of another kind afterwards. He was *the expert* on how to start and run theatre on the slenderest of financial and physical resources. This made his writings helpful to a very wide circle indeed. The booklet* he wrote at my request in 1962 is a very typical example of his lively style and of the economy of means suggested to practice what he preached.

Stephen Joseph founded the successful Victoria Theatre, Stoke-on-Trent (a neat conversion by him of a cinema into a theatre-in-the-round of 345 seats) and although managerial dissent featured in the press a while back we should remember that Stephen was by then a very sick man indeed—an active man caged by his bed. What his friends, and he had so many, would like to remember him by would be a permanent theatre for his Studio Company in Scarborough. The tours of this company and the many annual summer seasons in the ingeniously converted but cramped quarters of the library in Scarborough were most characteristic of this enthusiastic pioneer. A "Stephen Joseph" theatre, in the round, in that town would be a true and deserved memorial.

EDITOR.

* "Planning for New Forms of Theatre."



FIVE HUNDRED OR FIFTEEN HUNDRED

by Frederick Bentham

A visit to Devon provides an interesting contrast just now in the Northcott Theatre, Exeter, and the Festival Hall, Paignton. The first seats less than 500 in its normal form—433 to be precise—and can quite legitimately call itself a theatre while the second functions for most of its time as a theatre but was built as a multi-purpose hall. Quite apart from the question of capacity, the types of show are likely to differ considerably, but in all cases the end product will be theatre. Paignton is a seaside resort and is a useful reminder, rather necessary nowadays, that theatre is entertainment and that theatre still exercises a popular appeal and that it is not necessary to conduct a crusade to entice the workers into it. The workers (and aren't we all or nearly all workers) like going to the theatre. Paignton has been packing them into the "Black and White Minstrels" and some are said to go to the same show time and time again. If the show were Berg's *Lulu* what could be more laudable, but if Romberg's *Desert Song* then what a peculiar taste; or is it? In any event the audience should have at its disposal an excellent theatre for its purpose; there should be no second-class theatres. Are the audiences of our seaside theatres getting a square deal? I must confess that while there are exceptions I feel that there is a tendency to regard the pier pavilion as the starting point and whereas almost anything drawn on paper represents a great step forward, the final result as built falls far short of a true theatre but

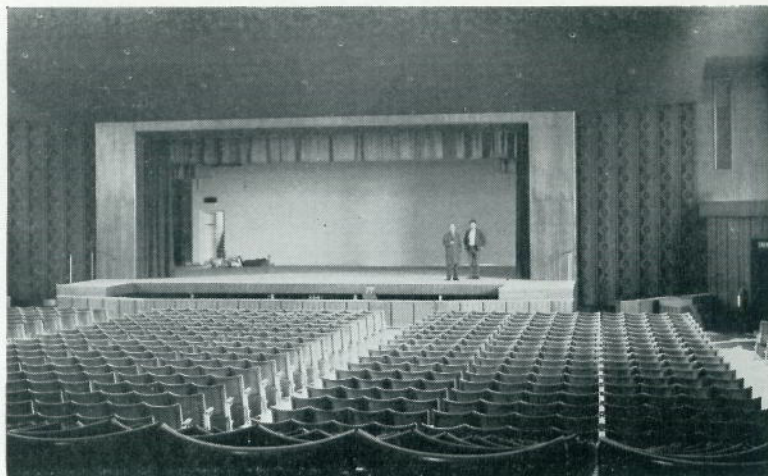
is near enough to one to ensure that that is what it gets used for. There is no reason why the seaside audience should be expected to tolerate the sight lines imposed by a flat floor. Indeed it has been the experience at Paignton that even where they count themselves lucky to be able to get in, such is the draw, they are driven to protest at the rotten view for their money. In consequence a raked floor designed to fold up is now to be installed in the Paignton Festival Hall only six months or so after it opened.

This should finally ditch the notion that an audience can be seated on the flat just because the place is supposed to be multi-purpose. In the case we are considering nearly two-thirds of the 1500 (rows A to S) are on the flat with 12 stepped rows of 48 beyond. It has been found that these seats go first, a clear view being preferred even though it means a more distant one. Such a large capacity all on one floor is a tough proposition to resolve anyway and in Torquay* a mile or so away one can see exactly the same capacity housed in much the same proportion but on a sloping stalls floor and stepped balcony. Of course, in this case we are not dealing with a multi-purpose hall; or perhaps we are. Surely straight plays, musicals, the Royal Ballet and concerts by the Halle are multi-purpose enough without throwing in flat-floor activities like dancing. They certainly find it so at the Princess, Torquay. In fact the stage there is pitifully shallow and off-stage space and working areas virtually non-existent. By the standard of a pier pavilion it represents a great advance, but as the stage of a theatre it simply will not pass.

At the Paignton Festival Hall the stage represents improvement but not enough. The grid, as we shall find again at the Northcott, Exeter, is far too low. What is the good of a grid with counterweight sets if one cannot properly fly out the scenery—what is the purpose of it? At Paignton no stage traps are possible in the stage floor and it is obvious that the principal design intention of the large under-stage area was simply to serve as a chair store when the hall floor had to be cleared. A reasonably good lighting bridge runs right across the main ceiling but access to it is difficult, to some terrifying. We have now reached the stage when it seems no longer necessary to argue for lantern access in the shape of a bridge, but the problem of access to the access seems to remain. One must get to lighting bridges quickly and easily and a good head for heights should not have to be an essential for a lighting man.

Paignton has a reasonably full permanent lighting equipment and the 100-channel 3-preset system LP thyristor control made it unnecessary to use four portable dimmer boards with which the "Black and White Minstrels" tour for extra lighting. Paignton has a restaurant and a Panorama Bar but in relation to the large seating capacity, these are relatively small. However, with ice-cream being consumed in the auditorium to the tune of £100 a night, the bulk of the audience do not feel the urge to go out to the bar.

* Princess Theatre, Torquay. TABS, Vol. 24, No. 3.



Festival Hall, Paignton. Architect: C. F. J. Thurley F.R.I.B.A.

At Exeter the theatre is magnificently sited in the University. Amid these glorious surroundings one can see why the architect, Sir William Holford, should attach such importance to the exterior and a very fine concept in brickwork has resulted. Nevertheless the shell with its sweeping curved rear wall to the auditorium has already conspired to drive the projection room forward to invade space which should rightly belong to the centre block of seating. The symmetry of the brick shell is going to make it all the more painful when additions are made, as they surely will be one day. Except for a scene dock misleadingly labelled workshop, space backstage is minimal. The stage itself is large but the scheme assumes in its concept that a very wide (wall to wall) opening between the stage and the auditorium will frequently be used and this will eat up the wings.

The best way to explain the lines on which the Northcott is to work is to say that it is a larger version of the very successful LAMDA adaptable theatre in Kensington.* The moment one enters, one instinctively says, "Ah, Michael Warre!" and indeed he was the theatre consultant. As at LAMDA, there is no raised stage at all and the audience should they so wish can walk straight on to it. When the orchestra pit is brought into action by lowering the lift, a partial break is provided. This kind of pit does constitute something of a problem, for a rail must be put around it—3 ft. 6 in. high originally but to be reduced to 3 ft. An uneasy suggestion of an isolated enclosure or fenced-off sheep dip results, but the architect is to design a curtain to hang therefrom which will continue the theme of the splendid house tabs. Probably an orchestra will only

* *TABS*, Vol. 24, No. 2.

be used occasionally and the lift serves another purpose namely to facilitate the shifting to store of extra seating of which more anon. The permanent seating for end stage presentation is sharply stepped with everyone looking down on the stage floor. There are 16 rows but only 12 in the centre block. There is no fire curtain and wall to wall at that point is 52 ft. No moving walls or other such device are provided to reduce this, the intention being to use scenery or drapes for the purpose. For the main ceiling spots and side wall spots there are very good positions, though in detail there are some faults; for example there are several very low head clearances on the journey there and I could wish that one felt safer when leaning out to reach the front of the lanterns. There is also a metal floor on which it is impossible to kneel instead of wood boarding. The lighting control, a 60-channel SP 3-preset, has obviously been tailored to a budget as a stage of this width and potential needs more channels if full use is to be made of lighting. It shares a large room with the sound equipment, but the film projector hogs the much better lower level which in any case would belong more appropriately to audience. A projection room means that valuable grid hanging space is occupied by a cinemascope screen and all the rest. None of us know the answer to this one and film institute activities have to be admitted as a perfectly legitimate amenity in this case.

The grid equals twice the proscenium height plus 2 ft., which is of course not enough but not quite as bad as it sounds because there is no raised stage. Thus no one is forced to look upwards.

The stage floor is of wood with a clear understage, so that removal of sections or the formation of traps will be easy. Unloading of scenery into the dock and thence onto the stage is all arranged for. Less happy is the intention to place seating on the stage to provide thrust stage and theatre-in-the-round forms. This works

Northcott Theatre, Exeter, showing house tabs and forestage lowered to form orchestra pit.



well at LAMDA but that is a small-scale theatre of the studio type. Apart from actual physical difference in scale there is also a psychological difference in the amount of concession one is prepared to make. From the moment one enters this building with the ceremonial ascent of stairs into a very impressive architectural foyer and bar circulating space, the mind is conditioned to "finish" and not to "makeshift". Entry to the auditorium reveals the great terrace with rows curving round in widening arcs. So far so good, but for the theatre-in-the-round form two-thirds of the encompassment will be represented by a mixture of two and four rows accommodated on rostrums on the stage itself. The figures speak for themselves—the seating is now 547 instead of 433. Are the actors really going to play fair by the thinly spread 100? All instinct is in favour of the massed ranks of "the four hundred".

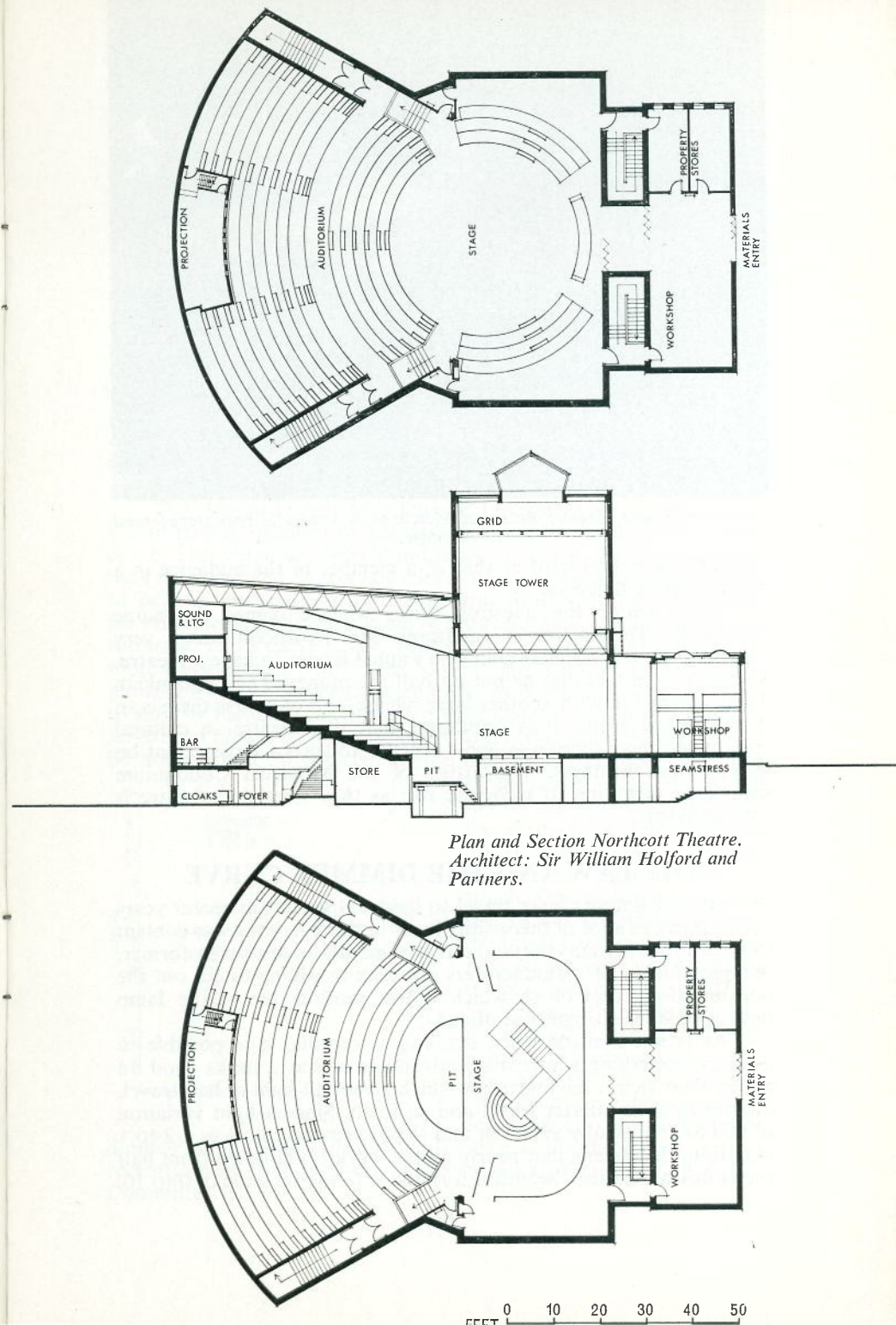
Then again architecturally the 100 will appear to be accommodated in the annexe. The ultimate result will be far from the ideals of that great protagonist of the form—the late Stephen Joseph. He stressed the idea of five rows all round the stage bringing all the audience equally close to the action. To stress this he used a quotation from J. B. Priestley's *The Art of the Dramatist* in his book* on *Theatre-in-the-round*:

"In order to concentrate on ideas, words, subtly intimate acting, I would make a clean break with our picture-frame stage and all its clutter of canvas, paint, carpets and curtains, leaving designers and sets to the movies. I would write for a theatre-in-the-round, the opposite of the movies both in its cost and its art, the theatre where everything visual, except the close and vivid faces and figures of the players, is left to the imagination."

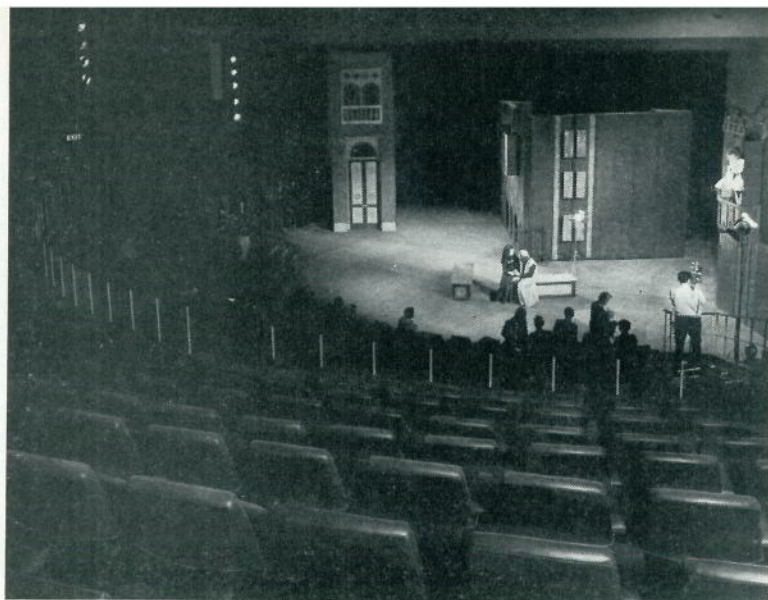
Much of this would seem to go for nothing if most of the audience are many rows away from the stage. Theatre-in-the-round will be no more intimate for them than any other endstage or proscenium stage. No provision has been made to screen off part of the auditorium to restore the balance. What we see at Exeter is once again that outside the small studio theatre adaptability will not work. Examination of the particular design under review shows it to be particularly suited for endstage with variations, the others are beyond it.

At this point one is forcibly reminded of another adaptability often demanded namely conversion from large seating capacity to small—the 500 and 1500 of our title. The management now in possession at Exeter say they would have liked "500 plus" rather than "400 plus" as at present. Removal of the projection room would permit this, so one is in fact imagining a Northcott which has on occasion to treble its capacity and take the Paignton or Torquay audience. Where can the extra 1,000 seats come from? Even if we reduce the top demand to 1,000, i.e. double, the problem is considerable. Truly the lot of a designer of an adaptable theatre is hard

* Published by Barrie and Rockcliff, London.



Plan and Section Northcott Theatre.
Architect: Sir William Holford and
Partners.



Northcott Theatre, Exeter: Rehearsal Merchant of Venice in open stage format with forestage.

but perhaps not so hard as that of a member of the audience in a multi-purpose hall even so.

To conclude the question arises whence comes the name Northcott? The answer is significant. Mr. Northcott was a very successful Devon business man who wanted Exeter to have a theatre. So much so in fact that he put up half the money. The Gulbenkian Trust weighed in with another large whack, and of course there is an Arts Council grant. It is significant that this theatre—a cultural enterprise if ever there was one—depends to such a large extent on money from business. The artists of the Montreal Colloquium seemed as unwilling to recognise this as they were that theatre is entertainment.

THE LAW AND THE DIMMER CURVE

The ratio of dimmer lever travel to light output has in recent years been subject to a lot of theorising. Prior to this everyone was content to take a dimmer curve straight as it came off an auto-transformer. A large number of manufacturers not even troubling to cut out the bottom 10 per cent or so which is lost motion due to the lamp having become extinguished already.

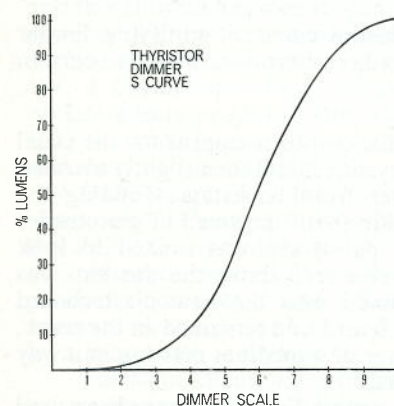
As is not unusual when devising a formula, it is possible to produce something whose main advantage is that it looks good on paper. One such is the linear law which gives half light at half travel, quarter light at quarter travel and so forth. Since a light variation of 600 to 1 is usually aimed at and the eye scarcely notices a 2 to 1 variation, this means that nearly all the work is crammed from half travel down. Another beautiful formula is to take a scale of 0 to 10,

square each mark and call it per cent light: thus—0, 1, 4, 9, 16, 25, 36, 49, 64, 81, 100 per cent light. Some find this not gentle enough for theatre and ask for each mark to be cubed.

There is nothing except paper purity to be had from curves devised in this way and if we are not careful extra money can be wasted on additions to a basic thyristor dimmer control circuit simply to provide a variety of curves for a user who has either no or at most slight preference for one curve or another.

Just as the electrical characteristics of the auto-transformer were allowed to influence the form of dimmer curve, so we believe that the curve that the latest dimmer—the thyristor—produces most naturally and simply should be used unless any good reason can be found to the contrary or the customer particularly requests something different. This natural thyristor law can best be described as an S curve and it has now been automatically supplied in the case of over 10,000 Strand J.T.M. thyristor dimmers without a single adverse comment as to the nature of the control it affords—in other words it gives satisfaction. The situation can be summed up as follows:

The standard curve for all Strand Electric thyristor dimmers unless otherwise specified by the customer will be that known as the S curve. This curve has been found more satisfactory for theatre work than the linear and square law curves both of which have been found to be too fierce in use. In the bringing in of light on a dark stage, for example dawn at the bottom of the cyclorama, the light comes on too soon. The S curve is very gentle at this critical point and furthermore has a definite “off” area so that light is not inadvertently left glowing when working a large number of dimmer levers hastily down to zero by hand. At the top end a slow start is also provided, but a large dead area is no longer required and is therefore omitted. It will be noticed that 50 per cent of the light comes at approximately 6



on the scale instead of 7 in the case of the square law and 5 in the case of the linear law—a useful compromise. Twenty-five per cent light comes at 5 which is the same as the square law. In fact, generally speaking, the result has been to superimpose slower ends while keeping the best part of the square law. Such a curve is pleasant to use, giving a good response without banging in and out at the ends. The bottom end particularly suits operators who have been accustomed to transformer type dimmer curves. The claims of the S curve as the theatre curve have recently been put forward at international discussions of C.I.E. Committee E.3.1.9.2.

UP WITH STRAND

Our contributor wishes to remain anonymous for reasons which will be obvious.

It had taken a long time to get the new Village Hall—but there it stood—shining brightly (with the aid of Patt. 23s), smelling of new paint, and as multi-purpose as they come. . . .

For our Grand Opening Production we Proudly Present—(for G.O.P.s are always Proudly Presented) *Lord Arthur Savile's Crime*. (Someone unkindly suggested that Lord Arthur was the architect, but let it pass.)

This particular play is enlivened not only with the rapier wit of Oscar Wilde, but also with two explosions (*off*), and the following dialogue ensued at an early rehearsal:

PRODUCER to Electrical Genius (*anxiously*): These—er—bangs—what do you propose to do?

E.G.: Maroons of course—Strand maroons.

PROD.: I suppose they're safe—I mean this new hall—I shouldn't like anything to . . .

E.G.: Of course they're safe. Fire 'em in a dustbin.

The dress rehearsal was going well—no tantrums, laryngitis, or blown fuses to report so far. The set stood, firmly braced, and didn't so much as tremble when the first maroon fired with a satisfying BOOM!

E.G. to Producer, in interval: Was that explosion OK?

PROD.: Fine—could the second one be a bit louder, do you think?

E.G.: Oh, sure, that was only a small one—I've got a medium for the next act. . . .

The cue for the second explosion came, a gratifying louder BOOM disturbed the peaceful Sunday afternoon, and the curtain fell.

But the producer, waiting for the cast to re-appear for the usual pep-talk, was first intrigued, then mystified, and then slightly alarmed by the peals of hysterical laughter from backstage. Finding the entire cast gathered around a dustbin (with the smell of gunpowder competing strongly with the new paint) she was invited to look upwards. . . . And there, a full twelve feet above the dustbin, was the hard rubber lid. Firmly jammed into the new plasterboard ceiling, its handle having split the board and remained in the crack, it demonstrated the percussive power of a medium maroon in a way none of us would be likely to forget.

We know now, of course, that a mesh lid should have been used—the Electrical Genius provided this hastily after having been invited to hold the dustbin lid in place by sitting on it. . . .

Exactly what the producer said to the local authority in explana-



" . . . demonstrated the percussive power of a medium maroon."

tion of the extraordinary damage to their brand-new ceiling was not, unfortunately, recorded.

MINISPOTS AND THE THEATRE

At the beginning of the year we introduced the first of this range and this autumn has seen its completion. Minispots are not primarily **designed for the theatre but so that stage lighting principles can be applied elsewhere.** To this end there is a Profile spot Patt. 100 and 101, a Fresnel spot Patt. 103 and 104, and the latest a miniature optical effects projector Patt. 102. All are 100 watt and the Patts. 101, 102 and 104 use low voltage tungsten halogen lamps for extra and more consistent light.

Quite apart from the obvious application to puppet and the bigger model theatres, there will be times on the full-size stage when the ability to conceal extra light sources at close range on a table or desk or other piece of furniture will be useful. The Mini-Fresnel in particular comes to mind for this purpose—a valuable counter to the common over-representation of top lighting in areas supposedly lit by a prop table or desk lamp.

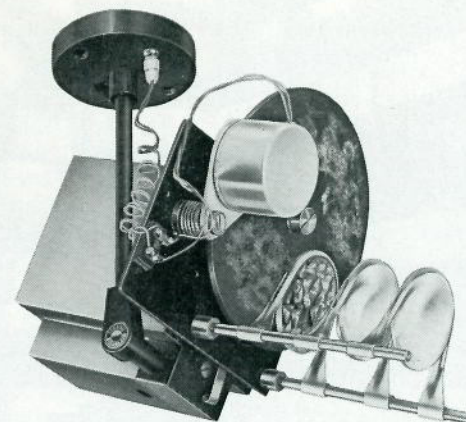
The Mini Effects are something quite new: so good are they that we are also providing a brighter source for use when necessary. This is known as Patt. 202 and uses a Patt. 23 housing. Inside, however, is a 250-watt tungsten halogen lamp and a built-in transformer. Being so like a Patt. 23 externally, it will be finished black instead of the

usual grey as a reminder that the transformer makes it *very much* heavier. The Mini Effects and projector have been combined to make a set which is marketed as a Kaleidospot.

This Kaleidospot must surely be the most unusual lighting instrument ever produced. It is not of course that the production of moving and dissolving colour effects is anything novel. Strand Electric, for example, has been producing such effects for over 50 years; the with-it name "psychedelic" can claim some novelty for the press and publicity boys have but recently awakened to the potential. Suddenly the dissolving colours which used to meander aimlessly across the screens and curtains of the super cinemas of the 'twenties and 'thirties have become invested with a new image. Such colours go along happily with mini-skirts and swinging Britain on the one hand and sadly with drugs and despair on the other.

In using the colour effects the extremes of choice are equally wide and it is here that the novelty of the Kaleidospot shows itself. The Kaleidospot can be all things to all men—or to all women for that matter. In a small box are the bits and pieces to create what the Americans might call "personalised lighting mobiles".

The basis is a projector version (Patt. 102) of the original Patt. 100 Minispot. This is only $3\frac{1}{2}$ in. by 3 in. square and takes a 100-watt lamp. In the front runners is placed an attachment, which we have called—for better or worse—an optiscope. This carries a tiny motor driving on the rim of a plastic disc of $4\frac{3}{4}$ in. diameter. The disc is black with a random arrangement of small circles in



strong and varied colours on it. Two rods project in front, and on to these one can fix one or two patterned glasses and one or two lenses. Six glasses, of plastic in fact, provide six different foundations on which to build. They can also be combined. The effects themselves are produced by the movement of the coloured circles across the **broken surfaces of the glasses. The key to the whole result is the amount of in or out of focus used. The glass patterns can be set nearer or further from the disc and the focus aimed at the pattern or the revolving disc. Furthermore the two lenses can be used together to get a wider picture. Thus by altering the position of one lens to another and to the glass or the disc a wide range of differing effects is obtained. All such effects have movement, the rate of change being governed by the diameter of motor drive pulley used. (The Kaleidospot set includes alternative drive pulleys as well as the six patterns and two lenses and all the rest.)**

Use of two or more projectors to create a composite picture plus variation in the angles of throw also give individuality to the ultimate composition. Nor need the effects be limited to projection on white screens, back projection into a wall of glass or plastic bricks gives colourful scintillations to soothe, rouse or madden according to taste.

The whole assembly is, like the Patt. 100 Profile spot and Patt. 103 Fresnel spot, really small and can justifiably be called a *Mini-Kaleidospot*. Other optiscope attachments have storm cloud, fleecy cloud, rain, snow and flame discs. The last three are fitted with a faster motor-drive—in other respects the discs and other bits are completely interchangeable. These naturalistic effects will obviously have great value in animating museum dioramas and other of the smaller scale displays which have hitherto been completely unable to use the common stage effects machines for this purpose due to their large size. Where a more powerful light source is required the self-contained transformer 250-watt low voltage tungsten halogen (quartz) lamp projector Patt. 202 can be used.





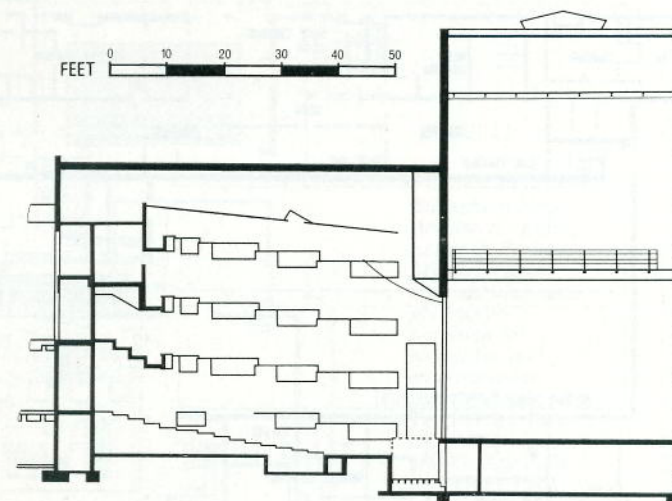
BILLINGHAM FORUM

by Percy Corry

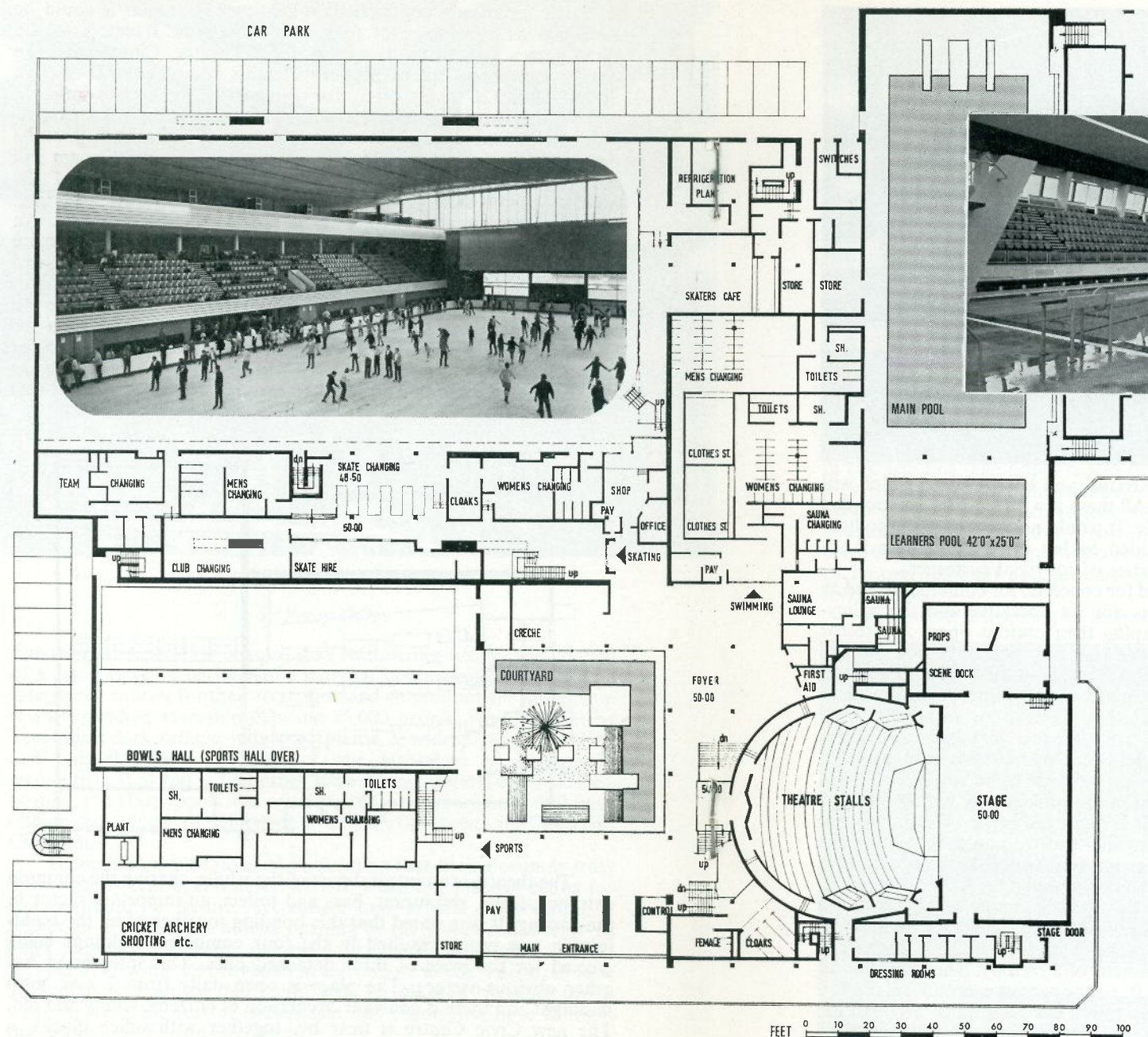
This Forum represents a novel and stimulating use by the council of a small town of parliament's paternal permission to use its own ratepayers' money for their recreation and entertainment. Billingham is an expanding township of some 35,000 people, ringed about by Tees-side's dark satanic industrial plants, a widespread demolition and "development" of part of our Jerusalem of anonymous mediocrity. It is but a few miles from Stockton-on-Tees, Middlesbrough, the Hartlepoons and other less known urban areas that have obliterated much of North-east England's green and pleasant Cleveland.

Billingham is well justified in claiming that their Forum is truly a community centre. It is described as "a meeting place or centre for the community's leisure, recreation and artistic appreciation". Although it justified an official opening by the Queen it has received scant publicity nationally, due no doubt to the usual metropolitan myopia in viewing the provinces in the remote north. This is, in fact, a courageous example that could well be followed by other towns where there is the sort of enthusiasm and vision that have brought the Billingham Forum into being.

It is amazingly comprehensive: in current jargon it could be described as a complex of four main buildings. It caters for 25 listed games and sports as well as for "Theatre, Cinema and the Arts". Extensive, but of no very obvious complexity. There is a Sports Hall 120 ft. by 60 ft. for gymnastics, tennis, badminton, netball, etc. Another hall 115 ft. by 14 ft. caters for Indoor bowls (not mechanised skittles); archery, cricket, golf and shooting can be practised in a hall 100 ft. by 24 ft. A small 40 ft. square room will accommodate all kinds of activities by the interchange of the necessary props such as judo mats, tennis tables, weights for lifting, foils for fencing and so on; there are three squash courts. An international size ice-rink has a seating capacity of 1,000; the ice can be removed to provide an arena for competitive sports or it can be turned into a symphony concert hall by increasing the seating to 2,500 with portable units. A large swimming pool 110 ft. long has seating for 450 and is augmented by a smaller 3 ft. deep pool for learners. There is a pleasant restaurant, a separate catering area for parties of 160, snack bar facilities for 600 and licensed bars. In addition there are strategically sited vending machines for hot and cold drinks.



The theatre is an integral part of the whole, sharing the common entrance, foyer, restaurant, bars and toilets, an important factor in the costing. It was stated that this bonding together of all the buildings in one group resulted in the four combined buildings being erected for the price of three detached ones. This integration has other obvious virtues. The place is open daily from 7 a.m. until midnight and there is constant circulation of citizens, young and old. The new Civic Centre is near by, together with office blocks, a



*Billingham Forum.
Architects: Elder,
Lester & Partners,
Middlesbrough.
Plan showing com-
prehensive
provision for
recreation and
entertainment.
Among these are:
Top left Ice Rink
(also inset photo-
graph). Top right
Swimming Pool
(also inset photo-
graph). Bottom
left Bowls Hall
with sports hall etc.
over. Bottom
right Theatre.*



shopping area exclusive to pedestrians, and a large hostel which will have 100 beds when completed. All these are, of course, surrounded by the homes of the townspeople. It would not be surprising to hear that the management had decided to lay on a Billingham Anti-Breathalyser Bus Service for parties of convivial customers.

The theatre will also be used for concerts, for conferences and as a cinema with wide screen. It is not yet operative and the policy-makers would appear to be keeping their options open. A director has been appointed and it is stated that he "will be responsible for the programme but it is anticipated that at first he will rely on visiting companies of a high standard. At the same time a resident company will be formed to exchange productions with other civic and national theatres of repute". So far, the workshops and stores that would be needed by a resident company have not been provided but there is adjacent space available for these to be built if and when the need is established. This cautious approach may well be justified by the long-term development. It is suggested in the official brochure (price 2s. 6d.) that in five years this theatre could be one of the leading provincial theatres. One sincerely hopes that this may be a consummation of the devout wishful thinking.

The theatre has interesting features. As is now usual there is no actual proscenium frame. The side walls and ceiling of the auditorium provide a maximum opening of 44 ft. wide and 24 ft. high. The height can be reduced by adjustment of a canopy. The stage has an overall width of 70 ft. giving 13 ft. wing-space at each side; it is 40 ft. deep and 2 ft. 9 in. high. The fly-tower has a height of 58 ft. to the grid. Unfortunately cost limited the number of counterweighted lines

installed but these can be added to later if necessary.

The first 20 ft. of the auditorium floor is flat and is partly constructed in sections which can be manually removed to create an orchestra pit of 33 ft. by 9 ft. plus 6 ft. underneath the stage. When required a 16 ft. deep apron can be created by means of interlocking rostrums. As the centre has a staff of about 100 it is assumed that there will not be any serious problem in obtaining the necessary labour. The apron when erected extends the full width, concealed doors in the side walls giving access to the open stage.

There is a total seating capacity of 675 which is reduced to about 600 when the full apron stage is erected. As will be seen from the photographs there is a very interesting arrangement of multi-level seating. The two shallow balconies create a series of boxes; the upper balcony provides a lighting gallery with access to the control and projection room at the rear of the second balcony. No seat is more than 60 ft. from the stage and although there have been a few tricky sight-line problems it is possible to see most of the extended apron at about knee height from the few most difficult positions. In addition to the rear lighting gallery there is a lighting bridge over the centre of the auditorium. There are no low-level wall slots but there is provision for lanterns behind the concealed doors which are in two sections. The upper halves can be opened separately, if necessary, for side lighting. One-hundred and sixty socket outlets and fixing positions have been sited to give considerable flexibility with a 72-channel 2-preset thyristor control. The basic lighting equipment consists of 48 Bi-focal and Fresnel spots, 34 floods (25 of them for cyclorama lighting) and ground-row units. At present there are no follow spots.

It is rather surprising to learn that the cost of this theatre was



something like £130,000. There has been an economical use of material but there has been no loss of essential comfort or congeniality. There is a feeling of pleasing intimacy which audiences will certainly find attractive. In making any comparisons of cost it must be remembered that the Billingham theatre shares the many facilities referred to earlier and that there are no scenic workshops and stores. There will also be some additions of equipment. There is dressing room accommodation for 40 performers with shower-bath facilities in each room, several of which are adequate for one but rather restricted for two.

Billingham has provided the country with a stimulating social experiment at a total cost of a million pounds. It should be studied with interest during its early years of operation. It should be visited now by those who are trying to make up their minds about the action that should be taken to cater for leisure. Billingham is right to provide for the entire community and to regard the theatre and the arts generally as a part of communal life, not an activity to be operated exclusively in isolation. The Billingham Council must be congratulated on its vision and on its choice of architects who could translate that vision into effective reality.

THE MIDDLETON HALL UNIVERSITY OF HULL

by Martin Carr

Anyone who assumes, having glanced but briefly at the plans accompanying this article, that this is another comment upon the Nuffield Theatre, Southampton, may be forgiven for his error, for there is indeed more than a passing likeness between the two buildings. However, though appearances may be similar, function is not, and it is important for the reader to appreciate at the outset that, whereas the Nuffield proclaims itself as a "theatre" supposedly with all facilities that this implies, Hull is more modest. Perhaps one should say more realistic in naming its new building the Middleton Hall. Hall it is in name and hall it is in fact. Though designed and equipped for the staging of some theatrical events, its main function is nevertheless as a lecture theatre and a concert hall for the University. As a lecture theatre it is suitably equipped with projection equipment and can therefore be used by film societies, for whose purposes it must surely also be admirable. In TABS, however, it is the theatrical aspect with which we must concern ourselves.

The most striking feature of this building upon first entering the auditorium is the absence of theatrical atmosphere. The lighting is rather hard and of an overall high intensity. The light wood panelling on all wall surfaces and the white painted ceiling, all are the exact opposite of the cosy warmth of plush and subdued lighting that is to many so much a part of theatre going. Personally I am never sure that this sort of light level is good for any of the varied functions of such a hall except of course if examinations are held there. To my



Photograph by Marshall, University of Hull

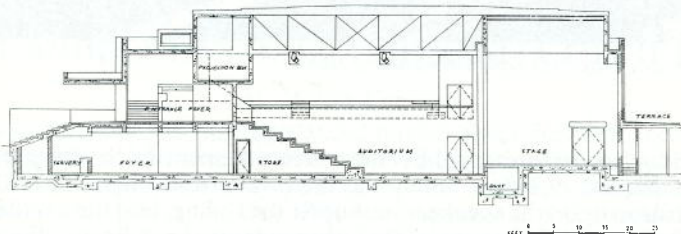
mind every lecture should contain some element of the theatre and the simplest of aids is surely the use of controlled lighting to focus attention upon the speaker—not upon the ceiling, and the ventilation grilles, or the audience on the other side of the gallery. Clinical is the word that springs to mind in this auditorium and whilst the effect is no doubt perfect in respect of lumens per square foot I could wish for more of the artist and less of the engineer in the design of the house lighting.

Having said this, one must immediately praise the arrangement of the main seating banked in a steep tier. The maximum capacity of the hall is said to be 514, of which about 200 are on the tier, 144 in the three rows of the horseshoe-shaped gallery and the remainder on portable seating placed upon the flat area between the permanent stage and the tiered levels. This area is naturally flexible, but with a low stage riser (2 ft.) sight lines must be something of a problem after the first three rows on the flat. The sightlines from elsewhere, however, seem excellent and adequately cope with all reasonable extensions of the apron stage over the flat-floored area. At the forward end of the gallery horseshoe one might feel a little isolated from the rest of the audience—it gives one the feeling of viewing the rest of the audience as much as the play—but none the less there are those who do not wish to get too involved physically in the stage action and these may be the seats for them. The plans on page 27 show

the arrangement of seats but fail to suggest the spaciousness of the auditorium which is a major feature.

One particular credit in the auditorium is the quietness of the air-conditioning system—which is said also to be efficient. The fluorescent house lighting is built into the ceiling and, for simple maintenance, the control gear has been separated from the tubes, which can easily be reached from the roof catwalks.

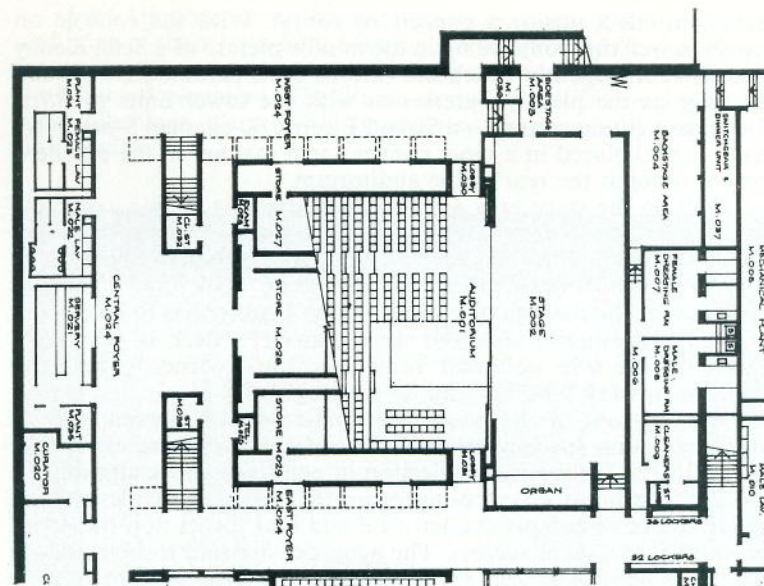
Whilst on the subject of catwalks, a double row of spotlight openings have been provided in the ceiling and give excellent lighting angles from the stage. However, a not uncommon fault is present in that because the lanterns are suspended below ceiling level in short hoods, an operator focusing a unit cannot see what he is doing with the light. This is a problem which will always arise when a flat ceiling is required and it is an added complication here that the lantern enclosures themselves are insufficiently large to be truly flexible. Another common fault is that the catwalks themselves are floored in expanded metal of extreme sharpness of profile making it impossible to kneel down to attend to the lanterns without acute discomfort.



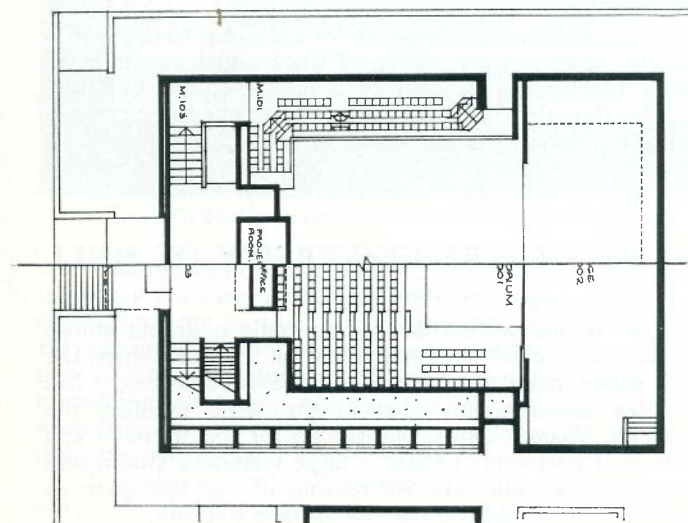
Section of Middleton Hall Hull University. Architect: Sir Leslie Martin FRIBA.

The stage is of a very good size, although it lacks full flying facilities. However, the roof beams are there and there is height enough for borders, spot bars and so on. The panels of the acoustic ceiling required for concerts are something of a hindrance to stage use and, with their two sets of lines to each, tend to block most of the available grid space. The proscenium arch is variable with sliding shutters up to a maximum of 38 ft. width and is considerably less dominant here than at the Nuffield. Nevertheless the pale coloured panelling does introduce problems of light reflection from F.O.H. spots. The back wall is plastered to provide a nice full cyclorama area, but why spoil it by placing two sets of electric socket outlets in full view of the audience on this back wall, at about 18 ins. above stage level?

Off stage to the right there is plenty of wing space, but to the left half the area is given over to the storage of the concert organ. This instrument is ingenious in that two-thirds of its "works" are mounted on wheeled towers which can be brought on to the stage for



Plans of Middleton Hall. (Top) stage floor level shown for proscenium stage and thrust stage. (Bottom) composite of stalls and balcony levels.



maximum effect during a concert or recital. With the console on wheels as well this conjures up in the mind a picture of a Sean Kenny Concerto for Organ in which the various units perambulate around the stage as the piece progresses as with the tower units in *Blitz*. The stage lighting console—a Strand Electric 60-channel 3-preset SP desk—is well placed in a more conventional manner in the excellent control room at the rear of the auditorium.

Outside the stage area are two good dressing rooms, complete with showers, but a very narrow corridor connects them to the stage. Ladies with crinolines would have a serious problem. There is a small workshop/storage area, but the scene dock doors are not adequate for the passage of scenery, which I gather has to be carried in through the auditorium. The stage manager's desk is perversely placed on the side wall well away from the "corner", and the S.M. has to work with his back to the stage.

At the front of the house the public are well served, with a large circulation space which includes coffee servery and exhibition rooms for the University's collection of paintings and sculpture.

Lest one should leave the impression that this hall provides a never-ending source of complaints, let it be said that for its non-theatrical functions it is a great success. The acoustics are said to be excellent and it has been used very successfully by the BBC for live concert broadcasts. For lectures there can be little to complain of—if one accepts the clinical atmosphere previously described—and the relationship between lecturer and class would seem to this non-expert to be ideal. These are clearly the main functions of the building for music is very strong in the University. In any event, the drama department will shortly have its own new premises so that theatrical performances as such may be very much in the minority in the Middleton Hall.

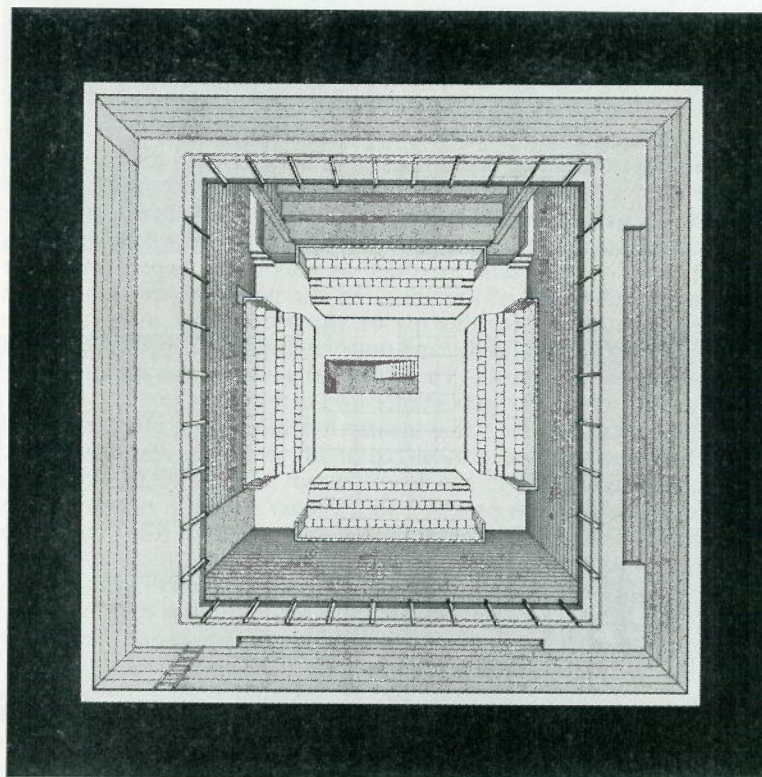
No doubt many theatrical companies would welcome this hall as an improvement on their usual places of work and it is surely an advance above the general concept of a multi-purpose building. However, in detailing the theatrical elements one has to be critical, and it is indeed a pity that this should be so.

GULBENKIAN CENTRE UNIVERSITY OF HULL

by Peter Moro FRIBA

Hull University decided some time ago to build a drama studio seating 200 for the use of its Department of Drama. Since the original brief, which included in addition a television studio, it has been decided to accommodate also in the same building the university's Audio Visual Centre. The reason for this decision was simply that both departments needed a large television studio and it was clearly out of the question, for reasons of cost and space, to provide two television studios on the site of the university.

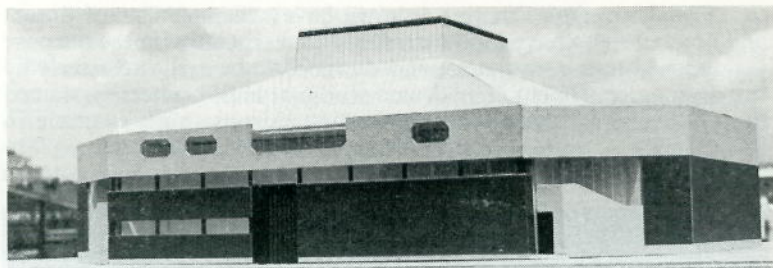
Few Universities in this country have a department of drama and none of these have built a drama studio specially for the purpose (as opposed to a conversion) and designed to be used exclusively by the drama department. The drama studio at Hull University, named the Gulbenkian Centre, will be the first purpose-built example in this country.



Gulbenkian theatre arranged for theatre in the round.

Quoting from the university's prospectus "a university course on drama must embrace at once the history and written literature of drama and the various theatre arts involved in its performance. Plays are studied not only in seminar and lecture but also in production". A drama studio in this sense therefore is first and foremost a teaching laboratory and must not be confused with the kind of university theatre which, at some universities, houses amateur dramatic activities.

In order to study all aspects of drama past and present it is obviously of the greatest importance that such a theatre should be

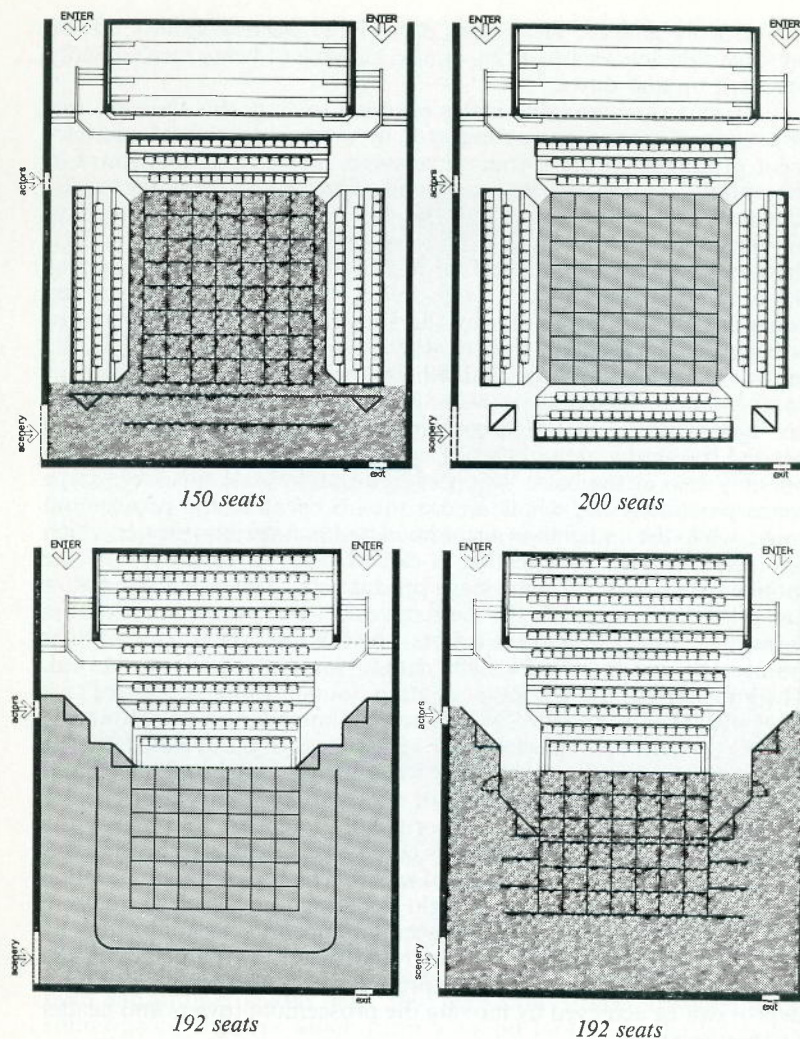


Model of Gulbenkian Centre showing central fly tower.

as flexible as possible. It is essential that it should not only be possible but also easy to change from one stage/audience relationship to another, so as to simulate the various forms which characterise the historical development of dramatic presentation. Such flexibility is of course also important in order to encourage experiment. The emphasis in this kind of theatre is on the performance rather than on the spectator and for this reason the production areas form the main part of such a building, and must be dimensioned and equipped to professional standards. The front of house areas, on the other hand, are of secondary importance and can be small.

The adaptable or flexible theatre has often been attempted and is, in theory at any rate, considered highly desirable. Unfortunately, with large audiences, it has been found impossible to achieve a satisfactory solution in practice. In a drama studio, however, where audiences are small and where flexibility is essential, it is possible to achieve this to a high degree of perfection.

The Gulbenkian Centre, which is now under construction, is attempting to solve maximum flexibility at minimum building cost. The drama studio is placed centrally in the building and because it has a fly tower, forms the highest part of it. The remaining accommodation is placed around it. The drama studio itself consists of a square space measuring 57 ft. The square was chosen as it is essential for a theatre of this kind to have no bias or direction which could inhibit flexibility; this is particularly important when staging theatre in the round. The acting area is placed centrally in this space. The floor of the acting area is removable in sections; in this way traps can be made almost anywhere. Under the stage is a basement connected by a passage to the dressing rooms so that actors can make their entrances, if required, from below. Above the acting area at a height of 40 ft. is a grid for flying, operated by a double purchase counterweight system. A new feature of this is a travelling motor hoist at fly gallery level which moves on a rail up and down stage and can be attached to any line which needs operating. This reduces the time and effort needed for loading lines with counterweights. At a height of 17 ft. lighting galleries are arranged around the four walls of the square. The lighting gallery on the OP side acts



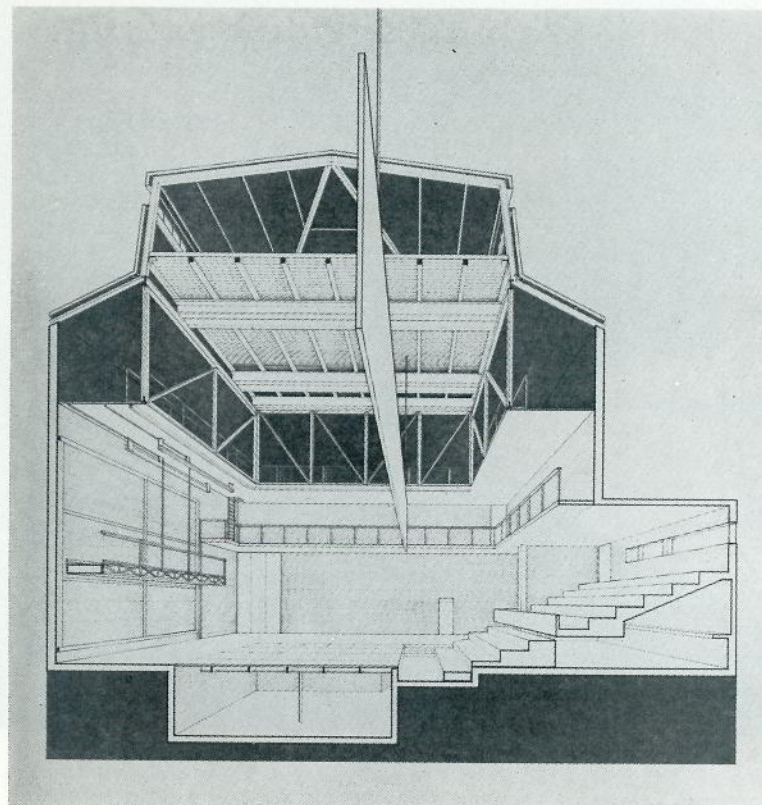
Stage & Seating plan of Gulbenkian Theatre which shows from left to right:—Thrust Stage, In-the-round, Proscenium, Forestage. The small triangles show the four stage towers in various positions, their hinged flaps forming screens and doors.

also as a fly gallery. The centre part of the lighting gallery on the up stage side acts as a painting cradle, capable of being mechanically operated up and down.

By means of movable rostra carrying seating, the audience can be arranged around the acting area in various degrees of encirclement producing either a transverse stage, thrust stage or theatre in the round. As the seating rostra are kept away from the walls, screened access for actors to the various entrance positions is provided behind these units. It is of course essential that such a theatre should also be suitable for proscenium productions. Whereas the open stage is essentially a one-space theatre with the acting area being encircled more or less by the audience, the proscenium stage is basically a two-space theatre where the actors and audience are in two connected spaces and where their relationship is one of confrontation. In the open stage situation the stage and acting area are synonymous; in the proscenium form the stage extends well beyond the acting area in the form of wing space on either side and possibly also at the back. In order to accommodate this large stage space practically the whole studio square becomes the proscenium stage, while the audience is accommodated in a permanent tier which is outside it. The fixed seating is extended forwards by one of the mobile rostra used for open stage productions. The remaining rostra are stored away underneath the fixed rake. The proscenium itself is formed by four mobile stage towers—periaktoi—constructed of light framework and faced with light panels, some of which are hinged. The hinged flaps in themselves contain doors forming entrances to a forestage when required. The two towers immediately on either side of the proscenium opening also carry stage lighting fixed to the framework. When not in use the stage towers can be either parked in pairs in convenient positions or they can be removed altogether into the workshop area. It was originally intended to remove the towers by flying and although this could easily be done, the idea was in this case dropped for reasons of safety. The top of the proscenium consists of a header, again of light construction, which is flown in from the fly tower and the proscenium opening is completed by a stage riser resulting from the removal of a number of rostra immediately in front of it. An apron stage or forestage of various depths can be achieved by moving the proscenium towers and header further up stage.

One feature of this design is that the acting area for all stage forms remains the same and thus has the same relationship to the stage lighting installed on the lighting galleries. The acting area can, in all forms, be seen clearly from the lighting and sound control room at the rear of the fixed seating. The lighting control room has a Strand Electric type SP 3-preset control desk operating 80 dimmers.

The drama studio is also to be used as a cinema. There is a projection room next to the lighting control room at the rear of the fixed seating. The cinema screen is flown into position from the fly tower.



Gulbenkian Centre, Hull, showing proscenium header dropped in and on the left paint frame with movable cradle; on the right fixed seating extended by bleacher units as for end stage.

Television and film are now considered essential for the teaching of drama and for this reason a large television studio is included in the building. The workshop where scenery is made gives access to both the drama studio and the television studio through large sound-proof shutters which form a sound lobby. As the workshop is at ground level it is easy to move large objects in and out. It would, for instance, be possible to drive a car via the workshop into either the TV studio or on to the stage of the drama studio. A small sound studio has also been provided and there are, of course, workshops for making properties and costumes and a wardrobe. The remaining accommodation consists of rehearsal room, dressing rooms, offices for both departments, telecine, preview theatre, editing rooms, photographic and graphic studios, animation room and so on.

Architects for the Gulbenkian Centre, Peter Moro & Partners.
Consultants for stage lighting, sound and equipment, Theatre Projects Ltd.



OCTAGON THEATRE, BOLTON

In a quarterly like TABS it is always touch and go whether an important new theatre will be complete and open in time to catch press day. In the case of the Octagon it is doubly difficult as being adaptable to take up open stage forms as different as 180° and 360° audience encirclement one should get photographs showing the theatre arranged for productions in both if one is to make a true assessment. Particular interest lies in the fact that this is no make-shift or token conversion but using Watts and Corry retractable seating tiers each form presents a uniform appearance. There are nine permanent rows with seats at 3 ft. back to back and 1 ft. 5 in. risers. Used in conjunction with four wedge shaped retractable tier units the seating capacity varies from 340 to 400 depending on the form. The photograph shows the end (space stage) variant with which the theatre has just opened.

We hope to give fuller treatment in our next issue.

CORRESPONDENCE

A Multi lantern complexity

Dear Sir,

From all sides we are assured that the ever widening gulf between the actor and his audience is due to the failure of the proscenium arch to lie down and die: but I grow daily more convinced that the barrier is due to the steady progress of that most persistent of our modern theatre movements, the "Theatre of Subtlety".

Mr Richard Pilbrow's article in the September TABS is logical and persuasive and I found myself only too ready to believe his arguments. Indeed it summarises the sort of approach that I (with much less fluency than Mr Pilbrow) try to put over to my RADA students.

But surely the real excitement in lighting comes when one starts to *remove* some of the elements from a "multi-lantern complex" and gets down to a picture of heavier contrasts and slashes of light and shade.

The effect may be more crude than the subtleties achieved by Mr Pilbrow and myself and those who sit with us carefully balancing for hours in darkened auditoria: but it is meaningful to the audience. Of course most of the subtleties in lighting are intended to operate at sub-conscious level, but with the general move away from a production commitment to any form of positive theatrical statement, the average chap in the audience has a pretty battered sub-conscious.

Most of my own better work has happened when I have been severely restricted in number of lamps and control ways and certainly by far the worst lighting I ever produced was in a musical where I was allowed an unlimited budget. This may of course merely prove that I have not yet learned how to use a large pallet: but I don't think so for, several times, a perceptive director, usually German or Italian, has looked at my subtly composed picture obeying all the rules, muttered something like "too much apparat" and brought the stage to life by removing at least half the lanterns.

If my arguments are enthusiastic rather than coherent, let me only recall the light-conscious director who said to me recently "lighting is like sex, very dull to talk about but great fun to do".

Mr Pilbrow's article states "... so it can be seen that thirty lanterns have really only 'laid on' the picture. Visibility has been achieved, but very little else. ..."

I can only reply, "take thirty lanterns and some imagination and see just how much theatrical excitement can result".

FRANCIS REID,
Baldwins,
Laughton,
Lewes,
Sussex.

PAINTING WITH LIGHT

The introduction to Chap. II of a new book "The Art of Stage Lighting" by Frederick Bentham to be published by Pitman in the new year.

Assuming a layout exists to provide illumination, it is necessary to consider what to superimpose upon it to paint a particular lighting picture. To do this, it will be both necessary to add something to suggest a reason or motivation for the dominant effect and also to mould the sources already existing for illumination mainly by the use of dimmers and/or colour filters to back up this effect.

The whole basis of using light to convey a dominant idea or to provide motivation, call it what you will, is observation. Once one tries to go beyond mere illumination, the lighting for perception or deception, the position is analogous to the process of memory drawing. In that case, instead of sitting down before the actual scene with pencil and paper, the image is first committed consciously or unconsciously to the brain. So too with lighting there must be a picture stored somewhere in the head as to what sunlight itself looks like and what it does to its surroundings before one can set about producing sunlight on the stage. The whole time it is a matter of observation, keeping the eyes open and storing for future use. What does a night sky really look like? One thing is certain: it seldom looks like the conventional No. 19 or 20 dark or deep blue often used in the theatre. In the suburbs of a big town, a night sky may often look brown or grey-pink, not blue at all. Likewise a fine day sky may present difficulties unless it is realised that the particular grey-blue often seen only looks summer-like so long as some building, some scenery, is brightly lit in the same picture.

Observation and the Painter

A short cut to this eye-training is to do some of it second-hand by visiting art galleries to see things through an artist's eyes. The Dutch painters, for example, knew all about light. De Hooch provides good examples of how stage lighting could have been used in the fifteenth century had there been any. Rembrandt's "The Woman Taken in Adultery" is a perfect piece of dramatic lighting. Spotlighting from the left side, with full value made of contrast and of the scarcely seen. Of course, if the producer were to make the characters play out the big scene down-stage left, or on some infernal apron, instead of on the altar steps, then it could not be lit that way. But then, if he knows how to use lighting effectively he will realise the much better result of playing it up-stage. The notion that principals must be brought down-stage with the crowd in the background seems to arise from the lack of realisation that down-stage can be the least important area if it is not lit. Provided always the various levels are arranged to avoid masking. Many crowd scenes of this kind would gain if no front of house lighting were used at all. We should then get the dark foreground figures silhouetted



Reniement De Pierre by Georges de la Tour

against the others. Georges de la Tour, the painter of Louis XIV's time, often uses this effect in his obsession with artificial light in the latter years of his life. Stage lighting from the front of house is vital, but try leaving it off sometimes. Hogarth is a painter whose pictures seem to be the very embodiment of stage scenes. Constable can be compared with Canaletto to find the distinction between English and Italian light. The latter's habit of putting half the scene in shade to stress the sunlight is particularly instructive.

All through this chapter, light and shade to give contrast is going to come up time and time again. Without it the lighting is going to be mediocre—just illumination, and not very good illumination at that. As we saw in the previous chapter, flat lighting does not assist perception. To use lighting dramatically is to *position the characters to suit the light*, not the other way round. Only the producer can do this. Which brings us back once again to the fact that he must *see the lighting in his mind's eye when working out* any moves at even the earliest rehearsals. "He, elated, goes over to lean against the pillar (mid-stage left) in the shaft of sunlight, while she, depressed, moves over to the shade (down-stage right)." The alternative will be: "He and she leave pool of light centre to arrive at their respective pools mid-stage left and down-stage right." This will light them right enough, but without a message for anyone because the producer himself had none to convey—he was just "doing the lighting."

The first thing that will be noticed—in real life—is the large diffused component in all lighting, and particularly daylight. Outdoors the source is obviously the sky. The light from this enormous surface is soft and absolutely shadow-free. This does not mean that there is no variation in intensity, no light pattern over the earth. There is less light under the spreading chestnut tree, for example, but the boundary is not defined at all. To take an extreme case, there is of course less light in a room, the amount depending not only on the size of the window but on the amount of sky by which the window is backed when seen from the various parts of the room. Diffusion not only involves the original source but everywhere the light strikes there is further diffusion to a greater or lesser degree depending on the nature and colour of the surface. This kind of light does, in fact, turn corners; not nearly as well as sound, but in much the same way. Even the most defined and parallel ray of light—sunlight shining through a chink in the shutters—still introduces diffusion for the odds are that the ray will strike a diffusing surface and scatter back into the room. Even if by chance it impinged on a mirror, the diverted beam would land up on a diffuser eventually.

Nor does this diffusion only apply to daylight. The chandelier hanging over the table is supplemented by its own light returned from the tablecloth, and shadows in the eye-sockets and under the chins of the diners are softened thereby.

Softlight

A serious problem is posed by all this diffusion in the world we are to imitate for we have to keep light in its place and cannot permit it to reveal everything. What, therefore, is the answer? Before giving this, some methods of providing diffused or softlight might be examined. The first and commonest in the theatre is the compartment batten. Some 40 or so lamps of 100 or 150 watts hang in a line as close together as their reflectors allow. Subdivided for colour one is reduced to using, say, every third lamp and this puts up the centres. However, using diffusers or frosts the apparent area of each light source can be increased somewhat and the result becomes tolerable. What, however, cannot be tolerated is the way this light behaves if used as the principal source of illumination.

The trouble can be summed up as going all over the place and lighting the top of the scenery to a brighter level than the acting area itself. This latter can be overcome to some extent by suitable reflectors or even by using sealed-beam PAR lamps. These latter do, however, involve extra weight and expense which seriously limits their field of use. Nor is a narrow angle beam reflector or the concentrated beam of the PAR, which is necessary to get the light down on the acting area, really equivalent to diffuse light; rather it equates to a series of close centred spots. Instead of every character receiving some light from all the compartments, from, if not one large surface at least a number of small surfaces, in fact only some are actively concerned. On the whole, while these PAR battens have

some special applications, I think they had better be disregarded in the present context and battens should be taken to mean a wide angle light as soft as possible.

In these, it will be the object of the reflector to prevent waste of light which otherwise would not be used and thereby to back up this effect. To prevent the top of the wing scenery receiving a splash of direct light from one or two close-range compartments, these can either be killed or never put there in the first place by keeping the batten shorter; all the rest receives an amalgam of everything. Such a system has the advantage that although there is some drop-off with distance the drastic inverse square law does not apply. These battens should never be hung close to and in front of the borders except for special effects, as in some light entertainment where these are featured as part of the décor. In other applications one would hope that borders, if necessary, would be few and retiring. A batten may be required immediately behind the proscenium to make soft-light available and on really comprehensive adaptable installations not only would this be essential but it should be supplemented by the traditional rows at intervals up and down stage though these are only found in opera houses nowadays.

Before the reader rushes off to buy a complete set of these things or accuses me of going back on the doctrine of spotlights I have preached for years, I shall remark that while this is the inevitable logic of trying to imitate the principal light in nature, it is a paradox that this kind of light is only of secondary importance in stage lighting, being used for accompaniment and seldom for solo work. Another piece of accompaniment equipment which should never get a solo role is the footlight.

Footlights

This source of lighting has got itself a bad name in the past through being too bright. Thus, more lighting was ruined by its use than was in fact aided. On small stages all the money was squandered on battens and footlights first and one was lucky if any spots were included at all. To counter this, the conversation was kept on the other essential equipment and any reference to the floats was omitted. It was to redress the balance that the Junior footlight, a simple open trough of one circuit of silica-sprayed lamps, was introduced. It just clips on the front of the stage without any special trough, has no great power and occupies only one dimmer, but a touch from this can make all the difference to those shadows in the eye sockets, under the chin and the hat brim. Where do these shadows come from? Why, from the spots which form the principal lighting.

Impressionism and Naturalism

How does one justify the use of these sources so different from the diffuse light of nature? Simply by the fact that this is Theatre and to use the words *imitate* and *reproduce* a few pages ago was

quite wrong. It is our job, even in the most naturalistic play and setting, to give an *impression* of the light of nature. This involves discrimination to select what is important and discard what is not. It also puts our lighting in an interpretative role for it is our own impression that is put over.

It is possible to argue the philosophy of naturalism versus all the other "isms" in the scenic side of the production, for real rooms can be built and even if real live trees are not used (and they have been), then passable imitation ones with fabulous individual plastic leaves and all the rest can be made. With stage lighting the situation is different: we cannot even remotely approach nature. Intensity and distribution is completely wrong, so it is Hobson's choice—impressionism or nothing. Just take intensity: real daylight is 100 times as bright as the most optimistic level we might achieve; real moonlight is 100 times lower than the level we can put up with in order to sit through a scene.

So it is that the question which has to be added to the needs of illumination is: "What impression do we wish to convey?" The answer should be capable of being written down and may consist of a long or short sentence, or even a single word. It is interesting that this dominant idea is not necessarily tied to naturalist phenomena. The answer may be "hopelessness", even though it is a fine sunny day in a garden like that of *A Month in the Country*. On the other hand, the reverse could easily apply. Some farces have depended on bad and gloomy weather for their comic situations. "Is the sunlight kind or hurtful?" is likely to be a far more important question than: "Does sunlight really behave like that?" So one is launched on a deep sea of psychological lighting without a single violet or green spot or other expressionist aid—merely the afternoon light gently caressing the curtains at the open french window.