

Proceedings of the Institute of Acoustics

LIVE PERFORMANCE - CATERING FOR SPEECH, SOUND AND SOCIAL CHANGES IN THEATRES, OPERA HOUSES AND CONCERT HALLS

A Minors

Consultant

This paper poses a series of questions which will be expanded on and illustrated at the conference.

Introduction

Here we are at the end of the 20th century undergoing the biggest boom in performing arts buildings in the UK since the mid-19th century, and what is different from the buildings of 150 years ago?

What are we contributing to the development of forms for live performance?

What changes in social structure and behaviour are being reflected in the new buildings of today, and are the expectations of the audience any different?

Consistent factors

The design of any performance space derives from the type of performance on the stage and the audience's relation to it. The correct analysis of the range of performances and their spatial and technical needs is essential to the successful operation of the completed building.

Either that, or enough built-in flexibility for the unpredictable developments in performance.

The constants so far through history have been the distance which we can see clearly within and the amount which we can hear over a background noise level. That, and relating to other human beings.

The noun 'intimacy' has become overworked in relation to theatre design yet few other words exist which express the sense of one-ness which an audience can feel with the performer if the conditions for viewing and hearing well are provided. To experience at first hand the intense energy that is required to project to the back of the audience is impressive indeed.

Many desire to experience that energy in smaller halls, but few are able to pay the price to support it. In the future, there is the possibility that a larger audience outside the hall can be reached through broadcasting or with the internet, or via existing technology as the giant projection screen or video wall.

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The Originators of Performance

A few writers of successful musicals have had sufficient confidence in the prospect of a never-ending audience that they have built their own auditoria especially for one production, tailoring the technical facilities exactly to the needs of the show and the audience capacity that they require.

Several leading theatre & opera directors are turning away from conventional theatre spaces to produce installations and productions within a 'found-space', a space having a characteristic, be it acoustic, atmospheric or architectural, that fits with the interpretation of work which they propose staging there. Audiences are arranged in an adhoc way, near to the action. The directors are sometimes reacting against the rigid audience seating and predetermined stage location of a conventional performing space, or looking for a more involving audience form than the confrontational stagehouse and audience chamber.

Festivals such as LIFT are introducing performances of different cultural backgrounds to the UK. These move away from our litera-centric culture towards the combination of music, movement and drama with their own requirements for staging and sightlines.

Commercial pressures to maximise revenue in receiving houses, by reducing the number of dark days, can lead to the need for flexible seating arrangements to accommodate a wide range of activities, thereby broadening the audience base.

Within the opera and music world, the 'star' system of performers' remuneration has led to a demand from performers' agents for larger audiences to support the stars' fee structure at affordable prices to the audience. For those stars popular enough to command a large audience a 21st century rival to the concert hall is emerging in the form of arenas with over 2500 seats in spite of the poorer sound quality and greater distance to the performer. Concert halls fortunate enough to be able to remove stalls seating and replace it with standing space can increase their seat count for such occasions. Those with fixed seating cannot.

Meanwhile a number of actors, having been successful in the film industry, are rediscovering the art of live acting on stage and revel in the buzz of a live full-house even if it means a smaller audience following and subsequent tighter budget.

The opening of the Globe theatre is reintroducing a generation of actors brought up in television, (where the raising of an eyebrow is captured on screen), to the art of the grand gesture in epic drama.

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The Audience

As for the audience - are there any discernable changes in behavior recently?

Outside of the performance space, computers and the internet are having a fundamental effect on the way in which we interrelate nowadays.

For some people, the number of social exchanges is decreasing as their actions relate to the machine they are operating and the attention which it demands of them. Offices which have one computer per employee are now characterised by silence punctuated by the clicking mouse and keyboard. Interaction between people is as likely to be via the computer screen as between people in the same room. E-mail enhances one's ability to carry out one's task when one wants to rather than when the other person is available, although this can lead to feelings of isolation in one's tasks and needs because there is less communication directly with the people around.

Within this context, the idea of live performance with the sharing of real time events may become a novel experience and one for which people may not always be prepared. The social behaviour of sitting passively through a concert, opera or play, may not always be accepted by those being brought up to do what they like, when they like in the rest of their lives. The need to be more physically active after a day of physical inaction in the office is apparent in restless audiences, as is the desire to participate in the performance, as demonstrated from the many television shows with studio audiences.

Audience culture goes along with the performance and multi-use spaces now have to cater for audiences who sit through each half and then need to be fed and watered in a 15 minute interval; audiences who wander in & out to the bar throughout the performance; audiences who want to imbibe within the auditorium etc. Toilet and bar provision has to respond to these.

The commercial importance of corporate entertainment has led to the relaxation of rules on drinking through performances, particularly in boxes where it is regarded as a privilege.

For those for whom the main reason for attending an event is to experience the corporate entertainment, arenas have led the way in providing boxes separated by glass to avoid the distracting behaviour of such people on the rest of the audience.

In some theatres with amplified sound for musicals, drinks and popcorn are provided in the same way as in the cinema and on the same basis, that the stage sound will mask the audience.

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The Design Team

Having given a broad overview of the trends and external pressures on the nature of performance and the audience, what is the design team's role in providing auditoria for the 21st century?

Firstly it has to be to provide space which can be adapted in the longterm with time and with production if required.

Secondly the design team's strategic decisions should not preclude the flexible use of the space on a day-to-day basis.

How does the design team prioritise their design criteria to give the best balanced solution of quality within budget?

In the days of actor/manager and architect/master builder, priorities were easy to establish because the number of parties involved in the building of performing spaces were fewer. How do we ensure that, with large multi-disciplinary teams, the solution is well-balanced between parties?

The rigid interpretation of formulae for sightlines and clear soundlines can lead to a large volume for a given audience. Do the regulations add on dimension per row which, when multiplied by the seat count, creates too large a volume? Do expectations of audience comfort conflict with retaining 'intimacy' especially when we are all growing in height and require more legroom.

Does the need for ambient quietness affect the size of ducts required for a given air volume per minute? Can the location and size of ducts be such that it does not disturb the sightlines or increase the overall volume of the auditorium? Have both systems of air from above and below been considered before arriving at a conclusion?

The mechanical engineers' preferred solution of displacement air entering under the seats is mostly appropriate where the seats are fixed. Where seats are regularly removed for broadcast cameras, wheelchair positions, proms concerts, the location of outlet grilles becomes expensive and problematic. The design team must be sure that the location of air is not limiting the future operation of the auditorium and increasing production costs and turn-around time.

Are we building as finely today as the cast iron cantilevered balconies of Sachs survey of opera houses 100 years ago suggested?

Is our enthusiasm for concrete and its flexibility during the building process creating problems of inflexibility in the future? Materials used in the stage area should be put together so that they can be altered without causing noisy disruption to the whole building. This is particularly pertinent in urban areas and where the performance space is part of a greater complex.

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Are we building backstage areas of the performing arts complex in concrete where a more indeterminate structure would allow future change by users?

Are we incorporating communal and private space backstage in the right proportions to allow for different cultural expectations of performers preparing for a performance?

Have any changes in technology fundamentally altered our approach to performance space design?

Do moving walls or ceilings to alter volume, operate economically and easily enough to remain in use once the building is completed? What is the increase in capital cost over the cost of separately designed purpose-built halls?

The Community

Are we building monuments whose economics allow only the established artists to perform in them? Are we balancing these with sufficient seed-houses for young performers to grow up through and become great artists?

Whilst these strategic decisions are often beyond the role of the design team, we can influence the brief to ensure that the spaces we design are supportive of young talent and inviting to the public.

