THE MYSTERY OF THE DISAPPEARING FORESTAGE IN THE 18th AND 19th CENTURY OPERA HOUSE AND ITS RELEVANCE TO BOTH MODERN STAGING AND THE AUDIBILITY OF THE SINGER OVER THE ORCHESTRA TODAY

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I Stand here as Daniel in the lion's den, a theatre consultant among acousticians. Each time I have risked appearing before you: at Cambridge, Glyndebourne, Birmingham and now Imperial College, I have asked you to be gentle. I do not understand your language but, by golly, I understand the intent of some of you and the consequence of some of your ideas.

Theatre architecture – theatre includes both opera house and playhouse – used not to need consultants. Architects did not need acousticians. They did not need theatre consultants. They knew it all. Even today some architects look at both acoustician and theatre consultant as servants to be kept behind the green baize door, to speak only when spoken to. Actors too are sceptical. It was Albert Finney who was the first to walk on the stage of the Lyttelton Theatre at the National, in 1975, face a full audience for acoustic test and say, "……." It was Albert Finney who in the Olivier Theatre, some years after his unhappy appearance as Tamburlane in the opening production of the same name, turned down Richard Eyre's offer of a return visit. Eyre, standing with Finney on the stage of the Olivier: "Architects today understand that a theatre auditorium is an instrument for the actor to play upon". Pause. Finney, eyes swivelling around the arc of the Olivier, "And who would make a violin out of fucking concrete?"

It is sometimes said that architects did not need you or me in the past because theatre architecture was a living tradition: so many were built that an architect reused what was successful in an earlier design and innovated only when he could introduce an element which would refine that design. Certainly that was true of Frank Matcham who built over 150 theatres between 1875 and 1912, of Fellner and Helmer, the Viennese partners, who built nearly 80 in the same period and of Americans JB MacElfatrick and Thomas Lamb who, successively, were responsible for over 200 each. Theatre architecture between 1860 and 1920 was an empirical art, not a theoretical one.

Not so between 1740 and 1860 or today. In the 17th, 18th and early 19th centuries there were a number of highly influential theatrical treatises as well as *paralléles* prefaced by theoretical treatises. Arguments raged which we would recognise today.

Some of the more important treatises are:

Trattato supra la struttura de teatri e scene Fabrizio Carini Motta. (1676)

L'Encyclopédie (theatre section)
Diderot et D'Alembert, theatre text Jean Francois Marmontel. (1760)

Essai sur l'opéra (in Italian, French and English)
Count Francesco Algarotti. (1755, 1769 & 1773)

Essai sur l'architecture théâtrale. Pierre Patte. (1782)

A treatise on theatre. George Saunders. (1790)

Paralléle des principaux théâtres modernes de l'Europe.
Clement Contant et Joseph de Felippi.

It is Contant and Felippi whom I have quoted in the summary of my paper. I will not repeat what I wrote then but you might glance at it later.

Architects from 1730 to 1830 were under pressure from patrons who had also read the treatises, from theatre designers such as the Bibienas, who often designed the auditorium and from musicians (it must be remembered that in this period actor meant opera singer as often it meant an actor in drama. And of course every playhouse had an orchestra). Actors, that is singers as well as actors, were never

consulted.

There were many debates. I want to talk about one of these: the forestage in opera houses: why some thought it essential, others an abomination and why the latter finally won. I suggest it is relevant today to the design of larger opera houses.

This painting (**1.**) by de Stephano is of the reopening of the San Carlo, Naples in 1817 under the direction of the composer Rossini, who led the theatre from 1815 to 1822. The San Carlo burnt in 1816 and was rebuilt by Nicolini, who had already partially remodelled it in 1806. But in every remodelling the vast horseshoe line of the auditorium remained. Today the decoration of the house is 1854 but the form of the auditorium is basically the original of 1737.

Except in the area of the proscenium. I am not referring to the giant order of Corinthian columns, which are 1816. I refer to the extent of the forestage which extended in 1816 4.7m beyond the line of the present stage edge, which today is on the line of the upstage giant columns.

Observe in 1817 the soprano Isabella Cobrun, who was the wife of Rossini. Beside her two principals. Upstage the chorus, half of whom are standing where the orchestra pit is today. The most distant member of the chorus is about 2m upstage of where the great house curtain falls today. Beyond is a hazy and romantic wood occupying most of the vast scenic stage beyond.

Why so far forward? It was not only a question of lighting – you could best be seen close to the footlights though matters improved in the 19th century. This forestage of 1817 is even bigger than the original forestage of 1737, which is strange because in the early 19th century most opera houses found themselves with a small forestage when a fire had presented the opportunity to remodel the auditorium and stage.

Of the 18th century one San Carlo, an English Tourist, Samuel Sharp wrote in 1769,

> "The King's Theatre, upon first view, is, perhaps, almost as remarkable an object as any a man sees in his travels: I not only speak from my own feeling, but the declaration of every foreigner here. The amazing extent of the stage, with the prodigious circumference of the boxes, and height of the ceiling, produce a marvellous effect on the mind, for a few moments; but the instant the Opera opens, a spectator laments this striking sight. He immediately perceives this structure does not gratify the ear, how much so ever it may the eye. The voices are drowned in this immensity of space, and even the orchestra itself, though a numerous band, lies under a disadvantage: It is true, some of the first singers may be heard, yet, upon the whole, it must be admitted, that the house is better contrived to see, than to hear an Opera."

Did this have an effect on the audience? Samuel Sharp, who had a low opinion of Italian fondness for music, having tried to hire a harpsichord fit to play upon both in Venice and Naples where few in his view had any proficiency, had an even lower opinion of the audience:

> "They do not seem in the least to attend the music, but laugh and talk through the whole performance without any restraint; and it may be imagined that an assembly of many hundred entirely cover the voices of the singers."

We can show this loss of 70m^2 of forestage in Naples (**2.**) by colouring in that part of the 18th century stage where the singers stood and sung. This is now given over to the orchestra. We can do the same with La Scala, Milan of 1778 (**3.**). There 78m^2 is lost and the stage cut back 5.2m.

The singer today can be heard over the orchestra which enjoys the architectural benefit of being in the same space as the audience. Have we bred a race of Olympic tenors and sopranos who have phenomenal voices which can carry over the band? Or are these super voices exceptional which allow their owners to demand phenomenally large fees? Meanwhile can those who are not the 'first singers', so described by Samuel Sharp in 1765, always be heard from behind the proscenium when asked to sing far upstage. Certainly the opera companies who occupy the larger houses must compete for the huge voices.

The huge houses in America from the Met (**4.**) to the converted movie palaces of the mid-West, have fuelled the problem. The new lyric theatres being built across the world also lack forestages and confine the singer within that 19th century invention, the picture frame proscenium arch.

It would be easy to suggest that the forestage dwindled as the orchestra pit got bigger, as the conductors more interested in the sound of the orchestra and as the managers scented an opportunity to increase the number of expensive front stalls by putting the orchestra where the forestage once was and stealing the area of the orchestra pit for seating. But it is not as simple as that. It is essentially an aesthetic argument.

In 1755 Algarotti, in his treatise published, ultimately in English and Italian as well as French, inveigled against the forestage. He criticised architects,

> "who made the stage whereon the actor performs to be advanced into the parterre several feet; by that expedient the actors were brought forward into the middle of the audience and there was no danger of their not being heard…. But who that reflects does not see such a proceeding is subversive to all good order and prudent regulations? The actor, instead of being so brought forward, ought to be thrown back at a certain distance from the spectator's eye and stand within the scenery of the stage in order to make a part of that pleasing illusion for which all dramatic exhibitions recalculated."

"Within the scenery". 1755 is too early to talk of the picture frame although this phrase was in use by the end of the 18th century. Algarotti was probably not familiar with an opposing view, held nearly a century earlier by, fellow Italian Fabrizio Carini Motta. Motta was in charge of theatres for the Gonzago courts on Mantno, Sabbionetta, Parma, Ferrara and Modena. In 1676 Motta called for a 13m wide proscenium arch with a thickness of between 1.4m and 2.8m for acoustic reasons (**5.**). Motta wrote of this acting and singing area as the front of the stage as the area:

> "in which the payers and speakers who walk onstage, that is to say those who do not have to depend on machines, perform. Voices that are usually restricted by being upstage of it gain added projection toward the audience because of the shaping of the opening…. Some say that performing in the aforementioned space is to come out of the stage picture and consequently not to be a part of the scene, but in order to be heard in the auditorium it is best to do this, a lesser evil than to be behind the proscenium arch and not be heard."

Last year Nicholas Edwards of Acoustic Dimensions joined architect Michael Reardon and both Gavin Green and myself for Theatre Projects Consultants in the preliminary design for a baroque theatre to be built within an 'agricultural Neo Palladian shed' (**6.**). This was designed for the contemporary creation of baroque opera which is so difficult at Drottringholm or Cesky Krumlov, both built in 1766, where the machinery are museum pieces or at Munich or Bayreuth where the machinery has been removed. Our design owed much to Motta as well as the 1748 Margravine's Opernhaus at Bayreuth.

Nick's computer model (**7.**) placed the singer on the forestage, showed how the surfaces of Motta's deep arch were illuminated by the singer's voice (**8.**). He then compared this with a slender proscenium arch (**9.**) installed in the same auditorium (**10.**). Conclusion: Motta was correct and the singer today at the Margravine's Opernhaus, Bayreuth – of which more later – stands too far upstage.

The battle raged for nearly 200 years. In the middle of the 19th century theatres in Italy were still being built with deep forestages while in the 18th century there were theatres without forestages, as this illustration from Pierre Patte's treatise of 1782 shows (**11.**).

My research has revealed an interesting and very simple conclusion. The theatres which had no forestage were smaller than the ones that had forestages. The theatres of Mannheim and the Teatro Argentina, Rome (1732 which survives today) had prosceniums of between 7.5m and 10m. This illustration from Saunders of 1790 (**12.**) suggests how small were both the Teatro Argentina and the Grand Theatre, Bordeaux compared with the San Carlos, Naples.

Scale is crucial. How often I have been lectured by acousticians, often American, saying that it is impossible to design a house which works equally well for Mozart and Shakespeare and then gone to hear both at such medium sized theatres as the Theatre Royal, Bath or the Opera House, Buxton. (The latter was not designed as an Opera House by Frank Matcham in 1903, but simply christened an opera house as were many American theatres in New England or in the Rockies, simply because it sounded more respectable than calling such dangerous buildings a Theatre or Playhouse. Such was the power of certain

churches.) Buxton has 3000m^3 of auditorium for an audience of 900 and has proved over the last 25 years to be equally good for speech and music). But being a product of its time there is no forestage. Both Bath and Buxton are small theatres in operatic terms. Mozart and Donizetti sound wonderful at both. So do Shakespeare or modern plays.

To conclude, let us look at three 18th century theatres which have lost their forestages and have otherwise been magnificently restored.

First the Margravines Opernhaus, Bayreuth of 1748 (**13.**). There the forestage had vanished at the end of the 19th century. Then in 1961 they flattened the stage and removed the baroque stage machinery. This illustration compares 1748 to the present day. In each case the acting stage is shown red and the scenic stage blue.

One of the results of this is this Disneyland staircase (**14.**) from what were the stage boxes down into the enlarge pit which occupies the area where once was the forestage.

Or take the Cuvillies or Resideuz Theatre of Munich, built in 1753 (**15.**), used by Mozart for the premiere of *Idomeneo* in 1781. It was dismantled in 1942 and re-erected in the 1960s – without its forestage.

The evidence for that forestage was incontrovertible (**16.**) as this engraving of 1771 reveals.

Or take the Nostitz Theatre in Prague, built in 1783 and the scene of the premiere of *Don Giovanni* in 1787 (**17.**). The theatre was gutted in 1882 and the present theatre, though decorated in Renaissance style, has nothing to do with Mozart. It has no forestage.

More important is the present. We have today emerged from the long tunnel of Romantic theatre which confined the actor and singer behind the proscenium arch that had in the 19th century become a picture frame. Modern directors, designers and some composers want to reach out to a new audience, both metaphorically and literally, out from the confines of that picture frame. Modern conductors are not always convinced that the orchestra's position is always in the wide moat between audience and stage, as is shown in this 1930 watercolour of *Die Meistersingers* at the Vienna Staatsoper (**18.**). The need now is for great flexibility in this zone. This throws a great responsibility on all of us.

Acousticians must stop analysing opera houses as two room spaces and must start considering the benefit to be gained by getting the singer out in the forestage. We theatre designers must be more persuasive of our clients and the architects with whom we work: the late John Bury and I failed to convince either George Christie or Michael Hopkins of the merit of our design for a flexible proscenium zone at Glyndebourne. It was, I think our only failure. Subsequent directors and designers have questioned why it is not easier to get the singer and the scenery out from under the arch.

Let the last image be from the 18th century. It is from Pierre Patte in 1782 who illustrated his ideal theatre with the singer on the forestage (**19.**). He showed the pattern of reflections. Not only did he address the acoustic issue but he also showed in this drawing the first stage light, that could be directed at the singer by using, behind the light source, reverberators which have nothing to do with sound but are reflectors of light.

It bears study !

Thank you.

Illustrations

1. San Carlo, Naples in 1817 by C. de Stephano. Bibilio theque de l'Opera Paris. Reproduced in *Les Temples de l'opéra* by Thiery Beauvert and Michael Parouty, Gallimard, 1990.

2. Plan of San Carlo, Naples from *Parallelo di alcuni Teatri d' italia* by Giocoma Mercoli, 1798, with overlay by Theatre Projects Consultants, showing missing forestage.

3. ditto of La Scala, Milan.

4. Metropolitan Opera House, New York.

5. Proscenium arch proposed by Fabrizio Carini Motta in his *Trattato Sopra la strutturu de teatis e scene,* 1676.

6. Design by Theatre Projects Consultants and Michael Reardon for a modern baroque opera house.

7,8,9,10. Analysis by Nicholas Edwards of Acoustic Dimensions of a proposal for a baroque opera house by Theatre Projects Consultants and Michael Reardon Architects, 2001.

11. Plate III from *Essai sur l'architecture théâtrale* by Pierre Patte, 1782.

12. Plate VI from *A Treatise on Theatre* by George Saunders, 1790.

13. The Margravine's Opernhaus, Bayreuth. Comparison of 1748 and today by Theatre Projects Consultants.

14. Photograph of inserted stairs from stage box to enlarged orchestra pit at Bayreuth, Plate VV in *Baroque Theatre* by Margarets Baur – Heinhold, London 1967.

15. The Residenz (Cuvilliés) Theatre, Munich. Comparison of 1753 and today by Theatre Projects Consultants.

16. Illustration from *l'architecture Bavaroise*, 1771.

17. The Nostitz Theatre, Prague. Comparison of 1783 and 1882 by Theatre Projects Consultants.

18. Watercolour of a rehearsal of *De Meistersinger* at the Vienna Staatsoper in 1930.

19. Plate I from *Essai sur l'architecture théâtrale* by Pierre Patte, 1782.