

Impact of Theatre Architecture on Performing Artists

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Abstract—Theatres have always been the platform for the representation of society. Design of a space has a psychological impact on the behavior of the users using the space. The ambience of theatres is different from other spaces. Performing spaces are of different sizes, shapes, and are constructed using different materials with varied acoustic properties. They might be open air, semi open or closed spaces. This paper aims to explore the relation between theatre spaces and performing artists. This study focuses on understanding the effect that characteristics of performing spaces have on performance attributes such as preparation, quality of performance and response of the audience. It also attempts to explore the effect of performing spaces on psychological attributes such as comfort level, stress, concentration and sense of connection with the audience. For this purpose, a survey of performing artists practising a variety of arts at different levels is conducted. A survey is conducted with 40+ performing artists in the form of a questionnaire circulated via emails. The respondents sample consist of actors, singers and dancers. An analysis of the collected data and observations on how spaces affect the performance and psychology of performing artists is conducted. Preliminary suggestions and directions for improving theatre spaces for enhancing performance quality and well-being of performing artists are given based on the results of the research.

Keywords—psychological effect; comfort; performance quality; types of theatres; audience

I. INTRODUCTION

The built environment is designed to be experienced by the senses and to create psychological impact [6]. Experience of a space is dependent on how it is perceived by various human systems - visual, auditory, basic orienting, taste smell and haptic systems. It is related to the body, memory and architecture. A space is felt by people through the details residing in it [1]. The impression of the space governs their behavior in those spaces. Lights, smell, heat, scale, shape, colour, etc. set a mood and a level of comfort that controls a person's behavior [2].

A workplace can be a source of stress, health issues as well as relaxation and job satisfaction. Its design has a major impact on the psychology of a worker. The openness, layout, furniture, individual control, greenery, noise and lights are some of the factors that affect individuals in an office workspace. But for performing artists, theatres are their workplaces. Given that

their nature of work is different from industrial and office work, analysis of their workplace requires factors other than the above to be taken under consideration [5].

Since ancient times, performing arts have been a representation of society and a part of human culture. Even though some methods of showcasing the performances have changed, the longing of people for recreation through performing arts has not changed. Theatre is a place to showcase their talents and skills, and their performance will be affected by the conditions of the workplace. It might not be that performing artists perform the same piece or act in the same place every time and have to be exposed to a variety of performing spaces.

For artists to give their best, they should be comfortable and focused. Our contribution to this area of study is finding out about the effect of relevant architectural elements on performing artists and their performance. The results will help design theatres that not only take the audience into consideration, but also the performers so as to enhance the quality of performance and the wellbeing of the performers.

II. LITERATURE REVIEW

A. Performing Arts

Performing arts include a range of arts performed in front of a live audience - dance, music, opera, theatre and musical theatre, magic, illusion, mime, spoken word, puppetry, circus arts, and performance arts. A theatre typically has a stage where the artists perform, seats for the audience, and a backstage area for preparation. A theatre can be closed or open air. It can also be classified according to the seating arrangement of the audience - proscenium, thrust, arena and site specific/found theatre spaces. Proscenium theatres have the stage at one end and the seating in front of it with only one side directly visible to the audience. It has a proscenium arch/ frame around the stage. In a thrust theatre, the audience is seated on three sides of the stage, with only one side of the stage not visible. Whereas, in an arena theatre, the stage is in the middle with the audience on all sides. Found theatre spaces are locations that go with the story of the act. These places can be hallways, warehouses, gardens, streets, houses, classrooms, etc. These can also be immersive theatre spaces, where artists are performing among the audience.

B. Factors Affecting Performance

It has been found out that small rooms are generally perceived to be more pleasant, calmer and safer than big rooms. This is because people want to keep people at close proximity to one another [7]. Hence, theatres of various sizes, shapes and capacities, will have some effect on the performance of an artist. It is found that greenery and nature keep people calm and relaxed [8]. Hence it is speculated that performing outdoors may be more relaxed than performing indoors.

Thrust and arena spaces were created for bridging the gap between the artists and the audience, resulting in intimate spaces [9]. Performers are more likely to fail when observed by non-supportive audiences, audiences that are not responding well to the performance [10]. Therefore, being able to connect with the audience is an important factor to be considered for a good performance. Hence being able to establish that connection and being comfortable with the audience's seating arrangement will be key for a successful performance.

Essential elements of spatial design of theatre architecture are - an auditorium, a stage and backstage work areas. Some other architectural factors that come into play during performances are lights, noise from backstage and audience, thermal comfort [4].

III. RESEARCH METHODOLOGY

A questionnaire was created by considering psychological factors and architectural elements. Psychological factors such as the performance pressure, comfort level, concentration, energy level and ease of expression were considered. Response and connection with the audience, sound and acoustical factors were also reviewed. All these factors were related to the type, size, seating arrangements, lights, acoustics, materials, backstage and thermal comfort.

This questionnaire was circulated to a sample size of 46 respondents. Even though performing artists of many kinds exist, the survey is limited to actors, dancers and singers/musicians. Their age, experience, profession (actor, dancer and singer/musician) were asked. Whether or not size, type of theatre and seating arrangement have an impact on performance pressure, connection and response of the audience, feedback and throw of voice of a performer was put to question.

IV. OBSERVATIONS

The following are the observations from the responses from the questionnaire. The results are represented graphically in the form of tables, bar charts and pie charts.

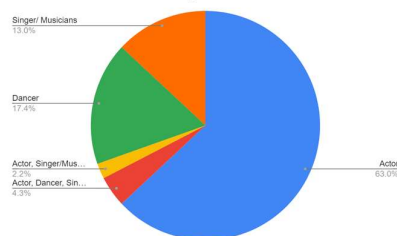


Fig.1. Column chart showing ages of the respondents

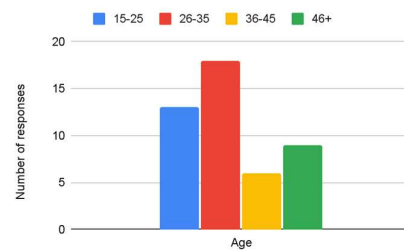


Fig.2. Pie chart showing type of performing artists that responded

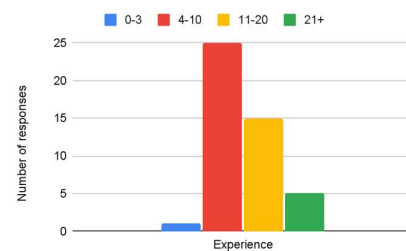


Fig.3. Column chart showing experience of the respondents

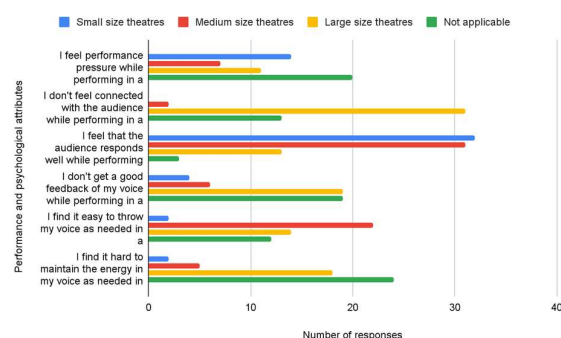


Fig.4. Bar chart showing effect of size of theatre

It was observed that the performers felt that the audience did not connect and respond well in large size theatres and it was harder to maintain energy levels, throw and get the feedback of their voice in a large size theatre. Singers / musicians had an issue with getting the feedback of their voice in large size and medium size theatres. For most people the size of the theatre was not a concern with regards to their performance.

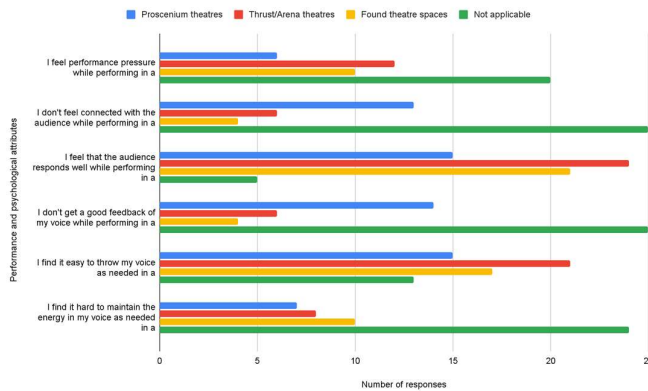


Fig.5. Bar chart showing types of seating arrangements and its effects on the performer

It seems to appear that the audience responses are better in a thrust or arena and found theatre spaces even though the performers feel more connected with the audience in proscenium type of theatres. It can also be seen that performers find it easy to throw their voice in an arena or thrust type of theatre. Majority people felt that seating arrangements did not impact them or their performance.

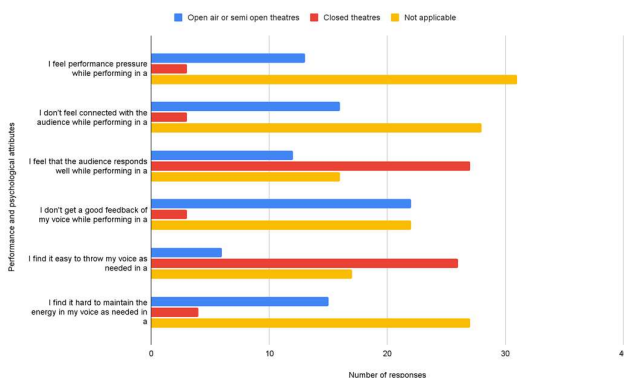


Fig.6. Bar chart showing types of theatre and its effects on the performer

It is seen that the audience responds well in closed theatres and performers also find it easy to throw their voice in a closed theatre. Most of the performers say that open and closed theatres do not have much of an effect on their performance. Although singers/musicians answered that they do not get good voice feedback in open air theatres.

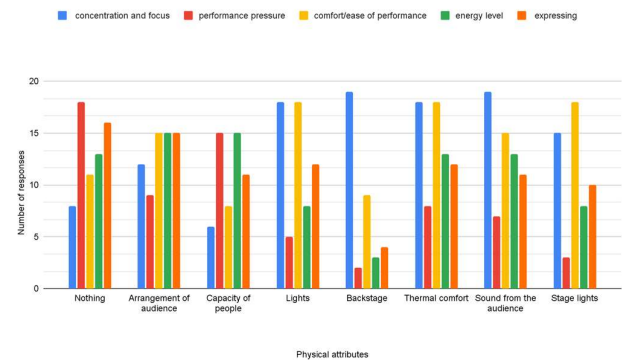


Fig.7. Column chart showing physical attributes and its effect on the psychology of performer

Lights, stage lights and thermal comfort can be seen as the factors that seem to govern the comfort level of a performer. It was found from the survey that the concentration and focus of a performer is lost due to thermal comfort, backstage commotion, lights and sounds from the audience. Except for the capacity of people, architectural elements did not affect the performance pressure on a performer. It was seen that the majority of singers/musicians were affected by thermal comfort. Whereas dancers were affected by stage lights.

It is found out using the Likert scale (Table 1) that the height of stage, colour of theatre spaces and materials used for stage affect performances of performing artists. For dancers especially, material of the stage mattered the most and for singers/musicians it was the thermal comfort.

Upon further discussions with some performing artists, It was found that cleanliness of the theatre, be it backstage, also affected the behavior of a performer. Psychological effects are not just limited to the visual or haptic senses, the smell of a place can be a ruling factor in a performer's mood. Large backstage and stage areas could be physically exhausting. For every person, the script, the choreography, the number, the routines are different. Hence, the act also relates with the architectural attributes.

Table I. TABLE SHOWING THE IMPACT OF PHYSICAL ATTRIBUTES ON BEHAVIOR OF PERFORMING ARTISTS DURING PERFORMANCE USING LIKERT'S SCALE

	Mean	Mode	Median
Height of stage from the first row of audience affects my behavior during a performance	2.67	3	3
Number of floors that the audience sits on (balcony) affects my behavior during a performance	2.15	2	2
Size of backstage area does not affect my behavior during a performance	2.37	3	2
My thermal comfort does not affect my behavior during a performance	2.26	2	2
Height above the stage affects my behavior during a performance	2.39	2	2
Colours of the theatre spaces affect my behavior during a performance	2.52	3	3
Materials used for the stage affect my behavior during a performance	2.59	3	3

V. ANALYSIS

The research showed that some elements of theatre architecture do have an impact on performing artists. It brought to notice that small details in theatre architecture can have a huge impact on the performers and the performance. Even though the performance quality of an act is dependent on a lot of different factors, the design of the theatre should aid in improving performance rather than adding onto the list of stresses of a performer. The research conducted tells that lights, thermal comfort, seating arrangement, backstage and acoustics play a major role that usually goes unnoticed by most, in the performance. As performers get more and more experienced in the field, as their age increases, they are able to perform without many factors affecting them.

VI. CONCLUSION

In conclusion, it can be proposed that designing a space that is somewhat flexible in terms of backstage and materials, can help create a space that is comfortable for the performers to perform in. The theatre space can be designed such that the performer is shielded from distractions but is still functional. The services can be designed taking into consideration the heat given out by stage lights as well as body heat generated while performing.

The research in this field can be further expanded by studying theatres, the performers, performances and the audience using it to get a better understanding of how people experience theatre spaces and propose designs accordingly. The survey was of a limited number of people, hence the number of people surveyed can be increased to get more accurate results.

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APPENDIX

1. Name
2. Which of the following performing artists do you categorize yourself as?
3. What is your age ?
4. How many years of experience do you have?
5. Which all sized theatres have you performed in. Select all that is applicable
 - a. I feel performance pressure while performing in a
 - b. I don't feel connected with the audience while performing in a
 - c. I feel that the audience responds well while performing in a
 - d. I don't get a good feedback of my voice while performing in a
 - e. I find it easy to throw my voice as needed in a
 - f. I find it hard to maintain the energy in my voice as needed in a
6. Which all types of theatres have you performed in
 - a. I feel performance pressure while performing in a
 - b. I don't feel connected with the audience while performing in a
 - c. I feel that the audience responds well while performing in a
 - d. I don't get a good feedback of my voice while performing in a
 - e. I find it easy to throw my voice as needed in a
 - f. I find it hard to maintain the energy in my voice as needed in a
7. Have you performed in closed and/or open theatre
 - a. I feel performance pressure while performing in a
 - b. I don't feel connected with the audience while performing in a
 - c. I feel that the audience responds well while performing in a
 - d. I don't get a good feedback of my voice while performing in a
 - e. I find it easy to throw my voice as needed in a
 - f. I find it hard to maintain the energy in my voice as needed in a
8. Select option based on your comfort level
 - a. Height of stage from the first row of audience affects my behavior during a performance
 - b. Number of floors that the audience sits on (balcony) affects my behavior during a performance
 - c. Size of backstage area does not affect my behavior during a performance
 - d. My thermal comfort does not affect my behavior during a performance
 - e. Height above the stage affects my behavior during a performance
 - f. Colours of the theatre spaces affect my behavior during a performance
 - g. Materials used for the stage affect my behavior during a performance
9. What physical factors of a performance space affect your
 - a. concentration and focus
 - b. performance pressure
 - c. comfort/ease of performance
 - d. energy level
 - e. expressing
10. Other thoughts or experiences that you would like to share