



The CURIOUS project

Culture as a Unique Resource to Inspire, Outreach and Understand Science

Funded by the Creative Europe - Culture Programme, 2020-2023

Theatre of Wonder Festivals - Final Performance and Engagement Report

This document attempts to accomplish the ambitious task of doing justice to two years of the Theatre of Wonder (ToW) festivals implemented within the CURIOUS project (www.projectcurious.eu). It is meant as the culmination of all that we have learned, analysed, improved and succeeded in over the past years, and as such it will inevitably come short.

Nevertheless, we wish to at least provide the reader with a compendium to the project, an insight into all that we have achieved with the Theatre of Wonder Festivals, and a glimpse of what remains to be done.

The structure of this document will mirror that of the singular Performance and Engagement Reports (PERs) that each partner has received after their own local festival:

1. Introduction and key take aways
2. Demographic data
3. Audience impression, anticipation and retention
4. Interest and understanding
5. Conclusion

However, the data and takeaways contained within this analysis will encompass the project as a whole and discuss its strengths and shortcomings, as well as the future developments and potential offshoots of the project.

Those who wish to familiarise themselves with the subject matter without delving too deep may restrict themselves to the first and last section of this document.

INTRODUCTION and key takeaways

The Theatre of Wonder Festivals featured a total of 23 in-person Augmented Lectures (hereafter referred to as ALs) and 3 online ALs over two years and eight editions, for a total of **955 questionnaire compilations**. These questionnaires have allowed us to gather feedback and aggregate data for various uses, from better understanding audience demographics to planning marketing initiatives and even offering constructive advice to the AL organisers. As per usual, here are the key takeaways from the past two years:

- **More than half of responders are under 34 years of age.** We found that approximately **57%** of responders fall in this age group, though with stark differences among the partners, meaning that different regional festivals may want to prioritise different topics to cater to specific audiences.

- In a similar fashion, we have seen a statistically significant difference in the gender identity of responders, with **women making up over 55% of the audience overall.**¹ Here too we find significant differences among the partners, which we won't report in full for brevity, but have been used to instruct future developments of the project.

- Word of mouth was the preferred avenue to spread awareness of the Theatre of Wonder festivals and events, but even more interesting is the proportional impact over the years: while in the 2021 edition it only accounted for approximately one third of responses, the 2022 edition saw its rise to around 60% of the total, leading us to believe that the project's strong regional focus managed to garner interest at the local level.

¹

Assuming no selection biases in questionnaire answers, which is something that we will take as given throughout this report.

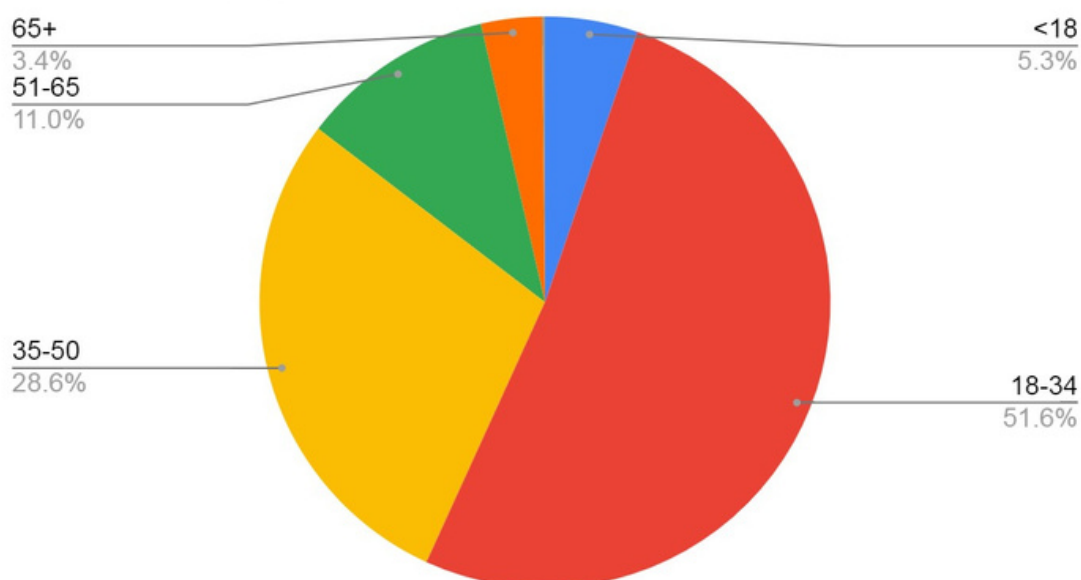
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DEMOGRAPHIC data

Here are the charts related to the age groups and gender identity distributions of the audience. In an effort to portray changes in demographic trends, we will highlight key differences between the first and second year of the Theatre of Wonder when necessary.

Let us begin with the **age group** charts:

Audience age group

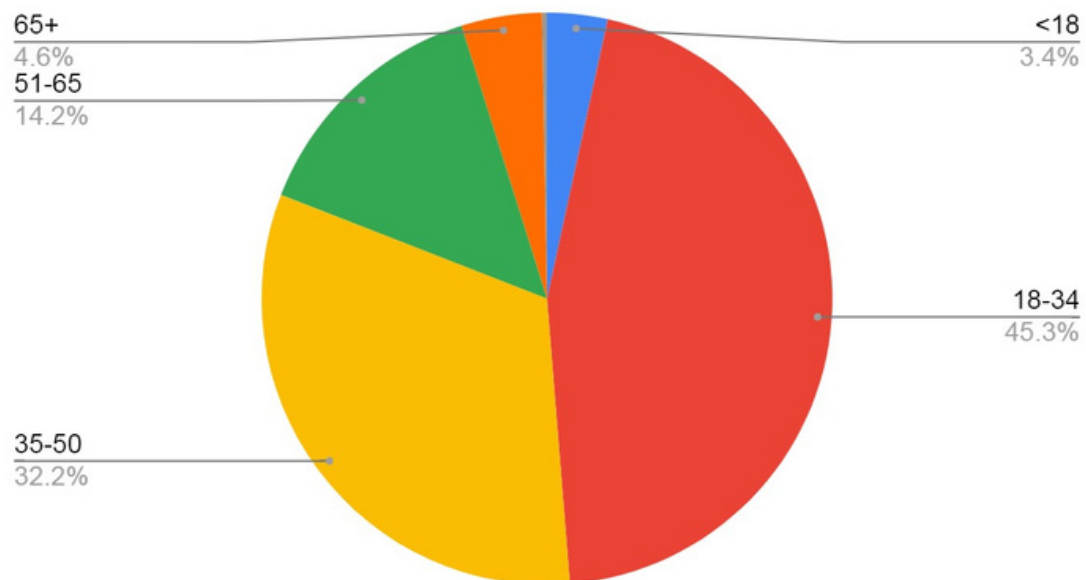


Audience age group chart - Overall data

As previously discussed, we note that people aged 18 to 34 make up more than half of our audience, though here too we wish to highlight a key difference between the two years.

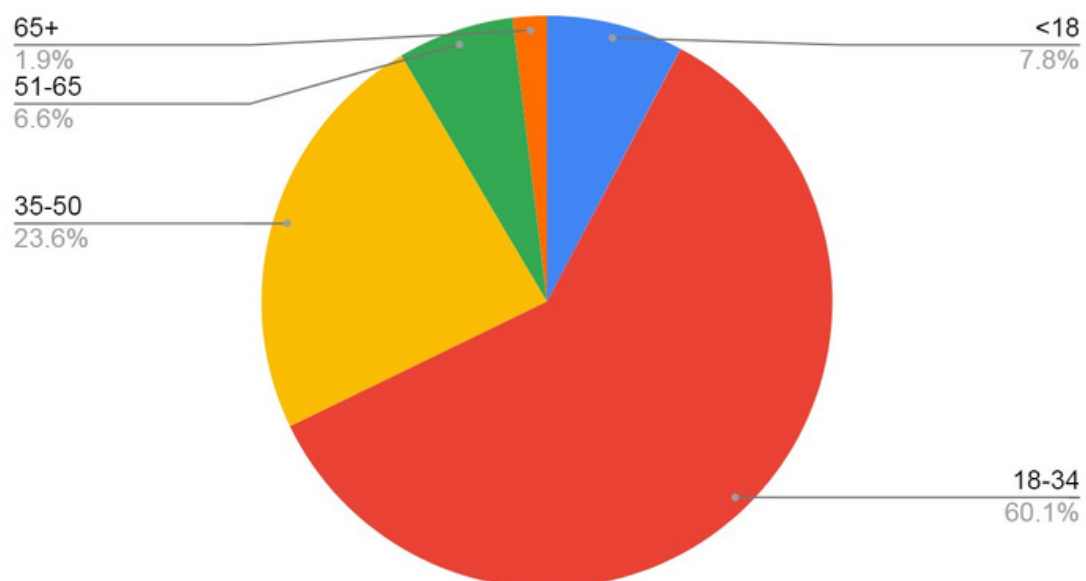


Audience age group (2021)



Audience age group chart - 2021 data

Audience age group (2022)

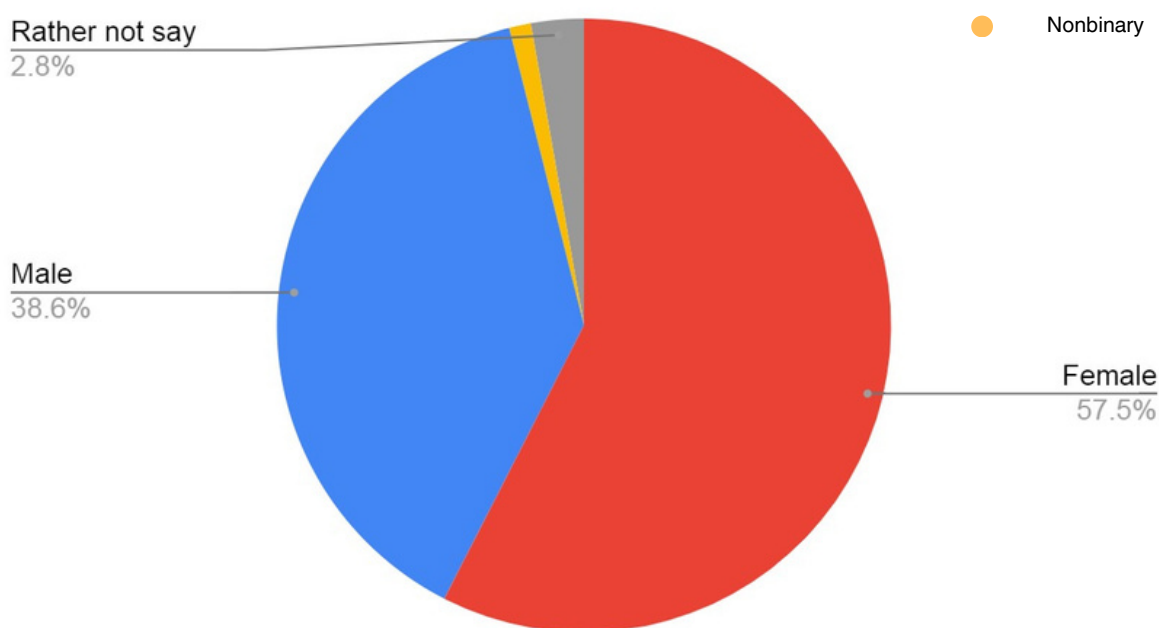


Audience age group chart - 2022 data

The attentive reader will immediately notice that the age group sizes have shifted considerably from one year to the next, and this has led to valuable insights concerning the causes of these variations, which we won't delve deeper into for brevity's sake.²

We proceed with the audience **gender identity** chart.


Audience gender identity



Here we find another interesting result, seeing that there's a consistent female majority throughout all editions of the festival. Nevertheless, we again observe marked differences among the festivals, with Belgrade and Sofia reaching a two-thirds majority of women, and Trento and Antwerp barely clearing the halfway mark.

This data, combined with the age group information gathered at the local level, has been largely attributed to different focal points of the regional partners as well as variations in the age distributions of the different cities the partners operate in, and can be used to instruct the development of targeted ALs that cater to regional sensibilities and audience makeups.

² Further information on all topics discussed is available upon request.



One last statistic we wish to draw attention to is the educational and professional background of the attendees: the data gathered via the questionnaire tells us that **36.7% of responders has pursued or is in the process of pursuing either secondary or tertiary education in STEM.**

This figure is interesting in many ways, which we will briefly explore:

- First, the composition of the audience will be a crucial piece of information in an upcoming section, as we discuss the reliability of the quiz data and the observed increase in the scientific literacy of responders.
- Furthermore, from both a marketing and an outreach standpoint, it's extremely important to gauge whether we are expanding into other sectors than that of science *aficionados*, since our project is concerned mostly with scientific outreach aimed at science "outsiders".

In that last regard, the previous figure of 36.7% is encouraging, as it means that almost two thirds of attendees have a scientific background comparable with the average theatregoer. As such, we can gauge the effectiveness of the ALs more precisely, and even comment on the qualitative implications of the data with a coherent view of the actual scientific literacy of our public as well as the biases it introduces in the data.

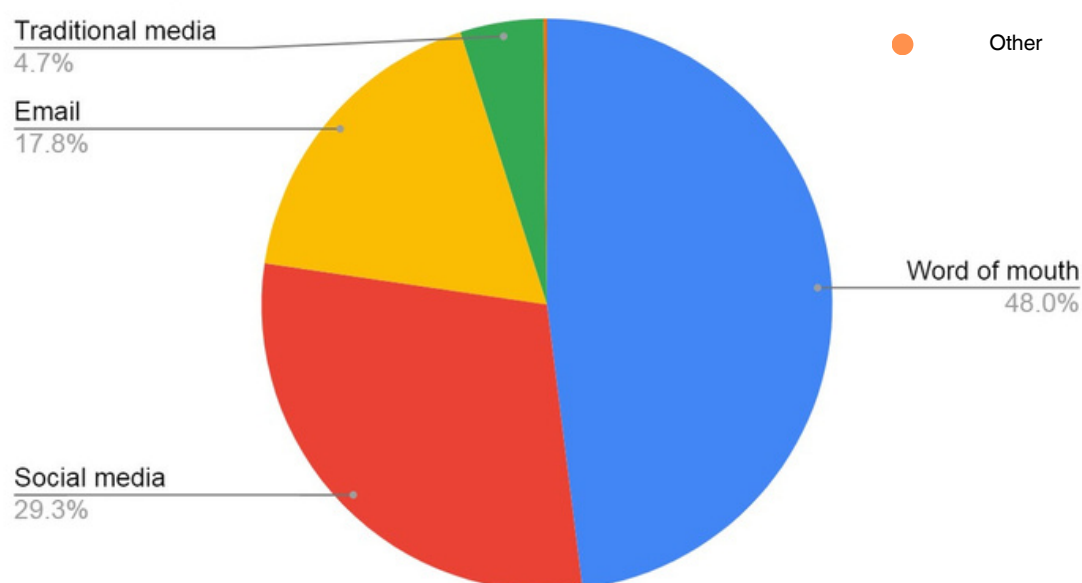
AUDIENCE impression, participation and retention

For the benefit of the reader, we will reiterate the definitions given in the previous PERs:

- *Audienceimpression*: the reach of the AL. For example, an AL with high audience impression is one that a lot of people are aware of, have heard of or have seen in social media feeds, newspapers and such.
- *Audienceparticipation*: the involvement of the audience in the AL. For example, an AL with high audience participation is one that a lot of people decide to take part in, for one reason or another.
- *Audienceretention*: the recurring investment of the audience in the AL. For example, an AL with high audience retention is one that convinces a lot of attendees to be more involved in the other activities of the festival, or return for future events.

We begin as usual with audience impressions:

How did you find out about this event?



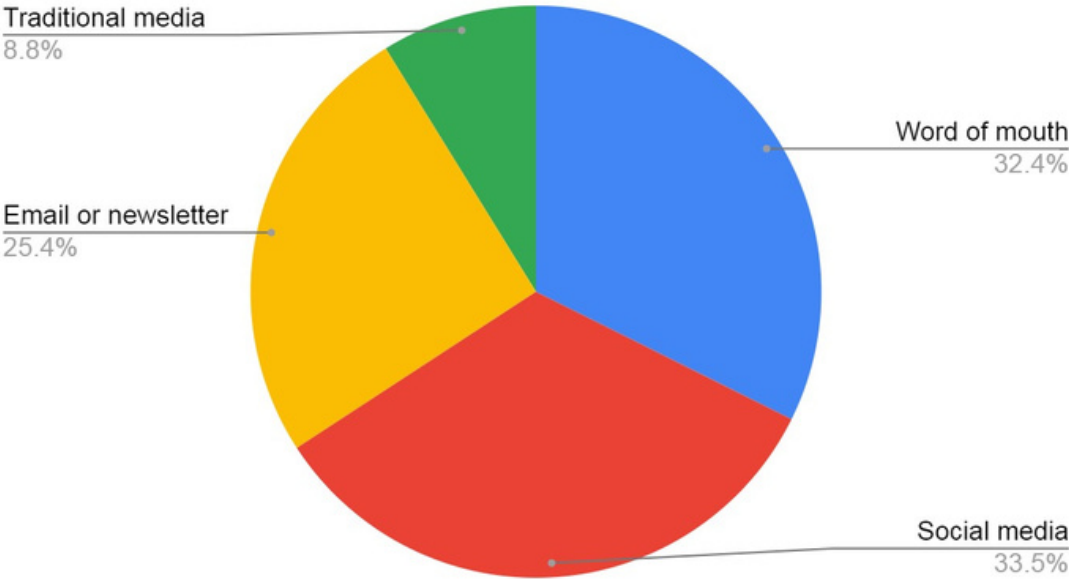
Audience impressions chart - Overall data

As previously stated, we note the preponderance of word of mouth as the preferred avenue of information concerning the Theatre of Wonder.



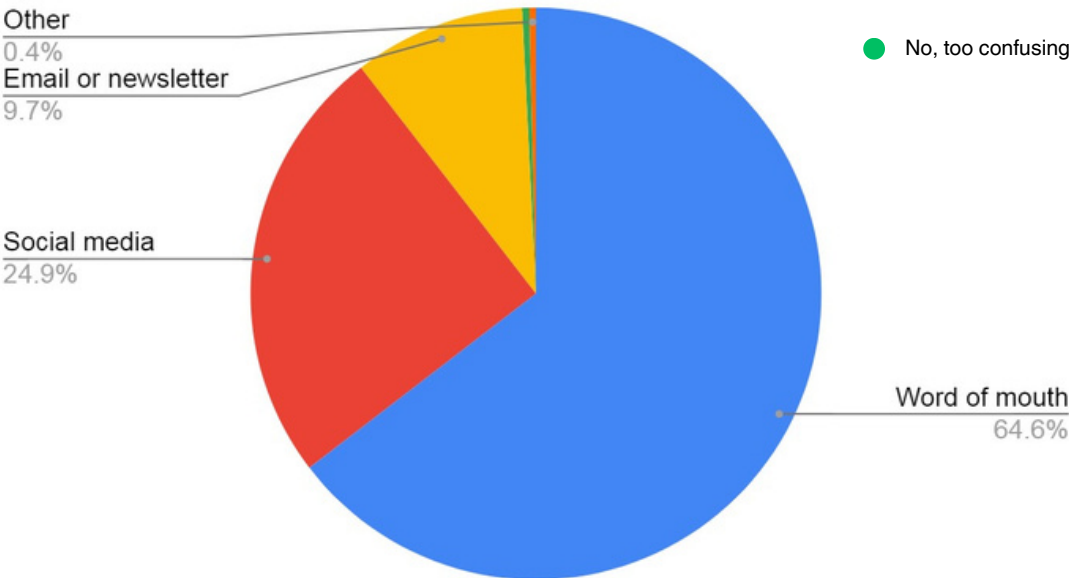
Here too we can highlight considerable differences between the two years.

How did you find out about this event? (2021)



Audience impressions chart - 2021 data

How did you find out about this event? (2022)

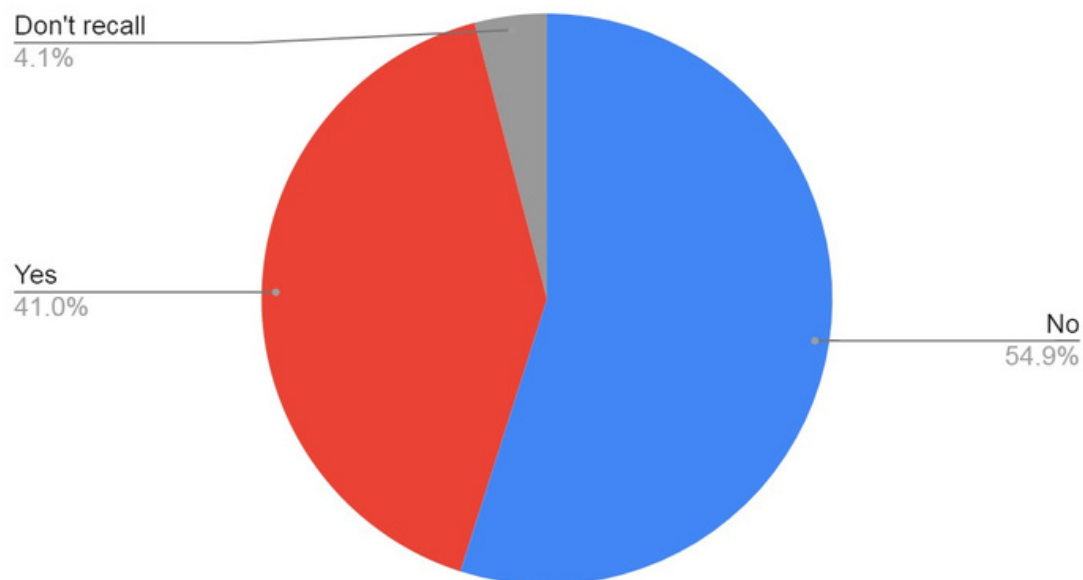


Audience impressions chart - 2022 data

The reader can clearly see that while in 2021 all avenues were essentially evenly distributed, **2022 saw a sharp increase in the importance of recommendations from friends and families**. This could be interpreted as a sign that the first year helped the festival in becoming an important part of the local theatrical scenes, insofar as significantly impacting the distribution of its main avenues of communication, but we would advise against this reading of the data: as we will see soon, the data concerning audience retention doesn't support this hypothesis, so this result may well remain a mystery.

As anticipated, let us move on to audience retention:

Have you taken part in other CURIOUS activities?



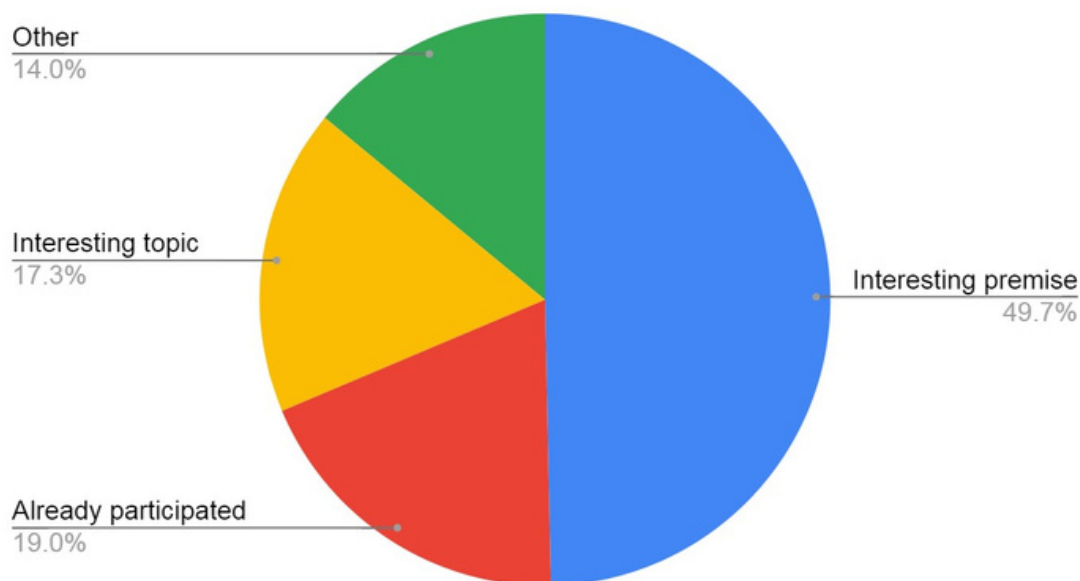
Audience retention chart - Overall data

As we can clearly see from the chart, almost half of respondents had participated in another activity organised by the ToW partners by the time they took part in the festival. This is a significant figure by itself, but this data also disproves the hypothesis that the ToW has taken root in the local scene within a year, since **we cannot find significant variations in audience retention from one year to the next**.

As such, while we celebrate the achievement that this chart presents, we remain uncertain as to the effective impact of the festivals on the regional theatrical scenes.

Throughout the festivals we also analysed the deciding factors behind audience participation, so as to know the driving motivations of attendance to events. Since we observed no significant differences between the two years, here is the complete breakdown:

What convinced you to take part in this event?



Audience participation chart - Overall data

We found that an event's premise has been the deciding factor in almost half of all cases, something that might push us towards covering more exotic or unconventional topics in the future, in a bid to attract people looking for novel concepts and ideas. Time and again we also found a tendency to rely on "trust", as people who have previously taken part in other events often returned and even considered it a crucial factor in their decision.³

³

Most common answers for the "Other" category include personal knowledge of one of the organisers, chaperoning someone and "saw it on a bulletin board at the university".

INTEREST and understanding

Among the various data we gathered, there is also the topic of audience understanding and interest. Was the AL too difficult? Were the scientific concepts explained clearly? Was the AL able to retain the audience's attention until the end? We sought the answer in two different ways:

- First, as part of the questionnaires, we administered a brief multiple-choice quiz both before and after the show, to gauge the audience's ability to understand the points made during the AL.
- Second, we asked specific questions pertaining to the audience's interest and ability to interpret the facts presented, and compared it with the data gathered in order to assess whether there are significant differences between the two results.

The data gathered over the entire 26 ALs of the project indicates an average increase in quiz scores of approximately 30% which, while quantitatively hard to defend,⁴ are nonetheless qualitatively hard to ignore: we found a marked improvement in the scientific literacy of responders in all but one post-AL questionnaires, and the 30% figure is not just an average but a figure that most single ALs adhere to with little variation in between.

As such, while a strictly quantitative analysis of the data gathered was likely unfeasible, due to a lack of resources and a large enough pool of responders, the prominence of this figure is hard to ignore and it lends credence to the argument that ALs are a powerful and effective tool to improve scientific literacy and communicate complex scientific concepts in a more easily understandable way.

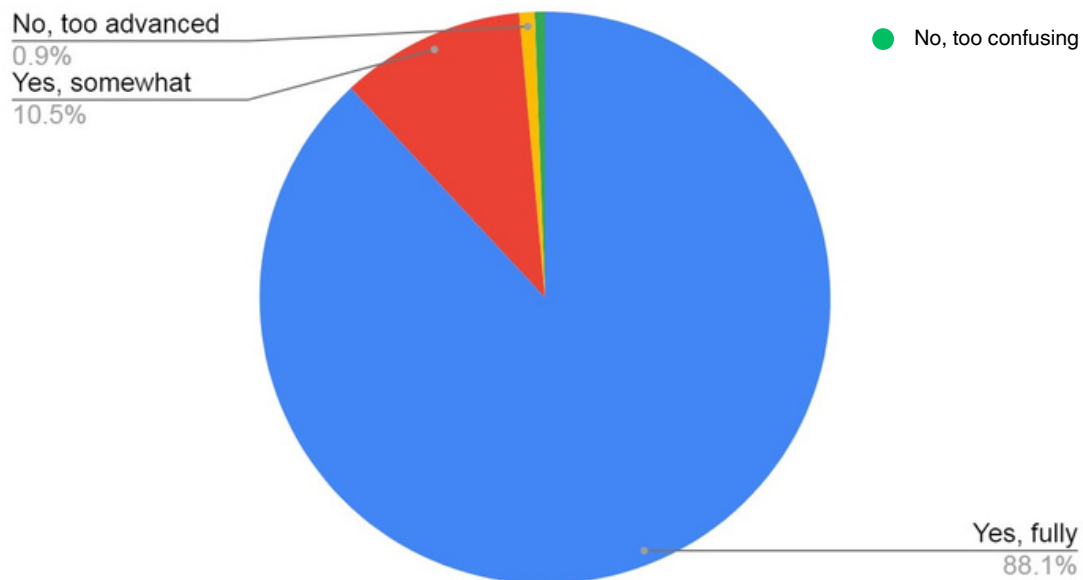
Finally, in the next page are the graphs pertaining to audience interest and understanding.

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Since we'd have to control for various factors which we are naturally unable to predict, such as the increased likelihood in post-activity responses by people who feel like they understood the key concepts, to quote but one.

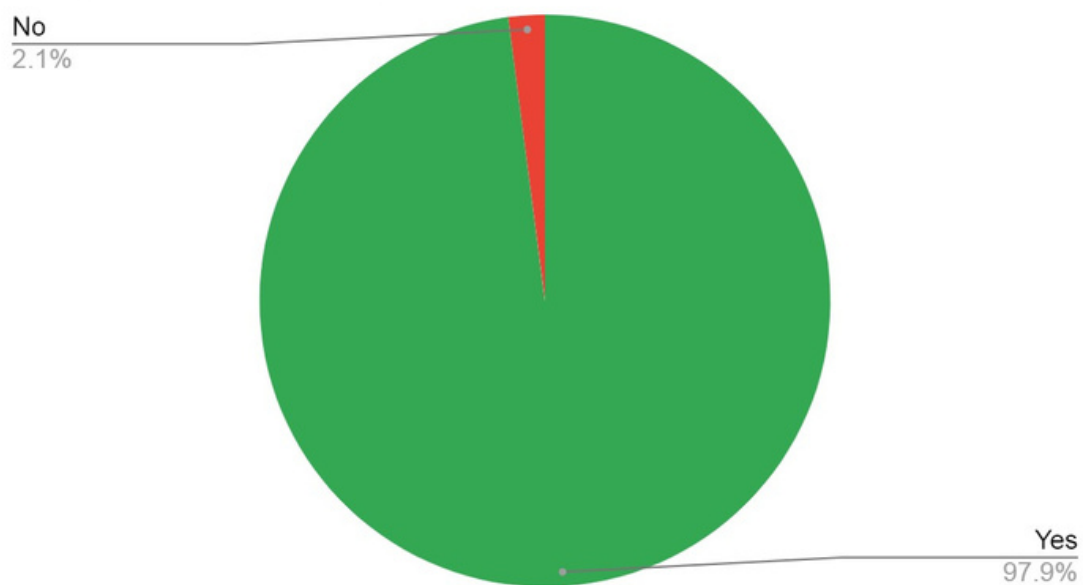


Did you manage to follow along?



Audience understanding chart - Overall data

Did you follow along until the end?



Audience engagement chart - Overall data



As the graphs show, while the vast majority of the audience managed to follow the AL, there is still a small percentage of responders that either didn't grasp much beyond the fundamentals or flat out got lost during the event, and reducing this percentage is an important challenge for a project that focuses on facilitating scientific understanding.

Furthermore, having a high percentage of people who managed to follow along without any problems is grounds for further examination: it may be that the topics presented were too simple, or that we did not account for selective biases in audience composition, such as those highlighted in the section pertaining to the audience's average level of education and scientific literacy. The data gathered warrants a more in-depth look.

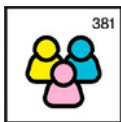
All these questions were taken into account, and partly assuaged via the use of the multiple-choice quizzes and the audience feedback sections of the questionnaires. While we are presently unable to verify with certainty and precision the true level of understanding of each audience member, we are if anything more secure in the knowledge that the ALs have had a positive impact on the attendees' knowledge of the topics at hand and their ability to interpret the facts and information presented.

The Theatre of Wonder has ultimately been an experimental project, aimed at spearheading a novel method of scientific outreach and storytelling, and as an experiment we can consider it undoubtedly successful.

While we have encountered several obstacles in our way, first and foremost having to confront a global pandemic and the resulting de-emphasization of the arts and culture, we have never failed in adapting and learning from our mistakes in a constant process of improvement of both the methodology and our own skills and capabilities, and the participation of diverse audiences in the ToW is testament to the project's growth and value.

The result is not just a rich library of events and lectures that we prepared in conjunction with partners from around Europe, but also a powerful tool of scientific communication that can evolve beyond the original scope of this project and aid us in sharing the knowledge of novel discoveries and phenomena with audiences that would normally be excluded by the mere complexity of the topics at hand. As such, the Augmented Lecture is a successful step forward in our ability to bring about a richer and more inclusive understanding of science within society, and we look forward to developing this method in future.

As a proof of how much we value the work that we have done and the results obtained three of us, Arditodesio (Italy), Arte Urbana Collectif (Bulgaria) and the Interactive Arts Laboratory at the Faculty of Dramatic Arts Belgrade (Serbia), have partnered up with other european key players to create a new project: WONDER — Working On Novel Designs to Extend Receptiveness by Connecting Theatre with Science. This new project has just been proposed to Creative Europe (CREA-CULT-2023-COOP-2 — European Cooperation projects) and we are eagerly waiting to see if it will be financed. The project builds on CURIOUS with an increased emphasis on stage art education of scientists in order for them to become more proficient at communicating complex subjects in an engaging way. We believe that, albeit still in its experimental phase, our approach has a large potential for creating tomorrow's art-science communicators able to engage society in novel and surprising ways.



Are you CURIOUS?

Do you want to stay in touch? Or do you have a general inquiry?

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