

## **Applying Neuroscience and Psychology frameworks to Theatre Audiences**

**Clore Leadership Programme/AHRC research project, supervised by Professor Patricia Riddell,**

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### **Introduction**

In recent years there has been increasing focus on Theatre (and arts) audiences, driven by two key perspectives. The first is aligned with Diversity and Inclusion. In this perspective, the focus has been on under-represented audiences, by demographic. For publicly-funded theatres this is particularly important as funders have pushed for audiences to match the UK's population.

The second perspective is one of financial sustainability. With state and local authority spending on arts and culture in decline, Theatres need to make more money from ticket sales. As a result, there has been more focus on analysing audience data from a marketing perspective – market penetration and customer loyalty. In the last twenty years there has also been substantial development of audience databases – both ticketing databases and aggregated databases that track the nation's arts-going behaviour.

All of this means that there is more focus on 'who' is attending theatre (in demographic and loyalty terms) than 'why' they are or are not attending.

Applied Neuroscience offers frameworks which have yet to be applied to theatre audiences. Psychology has been used in areas of leisure, and Neuroscience in areas of satisfaction and reward. So, the frameworks may have something to offer in terms of analysing Theatre.

By testing the application of some of the new frameworks, it is hoped that it may be possible to open up a new area of study, which will lead to new academic discoveries, and help policy makers and theatre-makers alike. In particular, Applied Neuroscience may help fill in the following gaps in knowledge

- Beyond seeing under-represented audiences simply as 'lacking' theatre in their lives (the deficit view), it will bring a richer understanding of diverse values and reward frameworks
- It will help policy-makers understand how Theatre is different (or the same) to other forms of leisure and culture in terms of psychological and neurological effect
- It will get beyond simple attendance statistics and point towards how, through programming, marketing and investment, theatre-makers can diversify and increase their audiences

Finally, from an academic view, there is a benefit in seeing how learning from the fields of psychology and neuroscience can be applied in a new area. If the arts are important, then do we not owe it to ourselves, to our curiosity, to seek out the latest thinking in other fields, and indeed science to analyse deeply the ways in which the arts are held in the audience's mind?

### **Literature Review**

A literature review was carried out, encompassing research in:

- Psychological drivers behind TV and film-watching
- Psychological and neuroscientific studies of human motivation

- Audience motivations to consume arts and theatre
- Neuroscientific studies of theatre-watching specifically
- Neuroscientific theories of creativity

The review led to five theoretical frameworks being selected as key to understanding Theatre audience behaviour.

Theoretical framework	Description
Self-Determination Theory (Intrinsic / Extrinsic motivation and Relatedness, Competence and Autonomy)	Contrasting the effects of internally and externally driven motivation, and analysing the 'core' intrinsic motivations, and how audiences find ways to satisfy these motivations
Uses and Gratification	How audiences use different forms of media to meet specific psychological needs
Mood Management	How audiences actively seek to balance the intensity of their moods to reduce negative feelings
Hedonic and non-Hedonic motivation	Contrasting the situations when audiences seek simple pleasure, and when they seek more educational, artistic and thought-provoking experiences
Theatrical competence and Neuroscience theories of creativity	Theatrical competence is a particular form of creative competence.

### *Self-Determination Theory*

Self Determination Theory (SDT) was proposed by Ryan and Deci (2000). In the SDT framework, people are motivated by either Intrinsic or Extrinsic factors, with Intrinsic factors being 'internally-driven' and Extrinsic factors being 'externally-driven'. SDT theory has had an impact in fields such as Management Theory and Public Health Services. Indeed, they have been demonstrated to contribute to key performance indicators including customer satisfaction and staff engagement (McGregor & Doshi, 2016). For this reason, consideration is now given to enhancing Intrinsic factors of motivation, as they are theorised as being more powerful:

“Comparisons between people whose motivation is authentic (literally, self-authored or endorsed) and those who are merely externally controlled for an action typically reveal that the former, relative to the latter, have more interest, excitement, and confidence, which in turn is manifest both as enhanced performance, persistence, and creativity” (Ryan and Deci, 2010)

Three 'core' intrinsic factors were proposed by Ryan and Deci, namely 'Relatedness' (seeking connection with others), 'Competence' (seeking to gain skills and knowledge for intrinsic reasons), and "Autonomy" (seeking independence to make one's own choices).

While there is lots of evidence for importance of intrinsic motivation, extrinsic motivation has also been shown to have a role in Facebook usage (Reinecke et al, 2014)

### *Uses and Gratification and Mood Management theories*

Uses and Gratifications is an audience theory and theoretical framework. It assumes that audiences are aware of their own social and psychological needs and are able to select media to meet those needs. In the 1973 paper 'On the use of Mass Media for Important Things' Katz, Gurevitch and Hass used surveying to analyse and rank different forms of media according to how they meet perceived audience needs:

"Regardless of whether it is one of understanding or pride, confidence or connectedness, the rank-order of media helpfulness is uniform. Newspapers come first, followed by radio, then television. Books and film are far behind." (Katz et al, 1973)

This theory suggest that audiences see communications forms as distinct in 'gratification' terms - each media is seen as having different uses. This leads to a question - using this framework, how 'useful' is Theatre to audiences, and in what different ways to different audiences?

One particular gratification is 'mood management'. In neuroscience research it has been discovered that people act to moderate their level of 'arousal'. Mood management suggests that this influences audiences' entertainment and cultural choices:

"... studies support the idea that individuals use media content to regulate sub-optimal levels of arousal (stress and boredom), that they show a preference for comedy when in negative mood states, and that they have a greater tolerance for negative or bad news content when in positive than negative moods." (Oliver and Bartsch, 2010 p5)

### *Hedonic and non-Hedonic motivation*

'Hedonic' experiences and motivations are centred around simple enjoyment and pure pleasures. In the context of Theatre, a hedonic motivation might be to attend an accessible comedy. A non-hedonic motivation might be to attend a thought-provoking play with a troubling or educational theme, such as racism. Oliver and Bartsch (2010) conducted a study into the non-hedonic motivations to watch films with artistic intentions, which they titled 'appreciation':

"Study 1 provided first evidence that in addition to well-researched entertainment gratifications such as mood management and sensation seeking, audiences are attracted by a more varied spectrum of gratifying movie experiences that seem to include appreciation of moving and thought-provoking experiences." (Oliver and Bartsch, 2010)

### *Theatrical competence and creativity*

Studies of theatre audiences have acknowledged one of the unique facets of watching Theatre, which is the strong 'willing suspension of disbelief' which is required:

"Indeed, in opposition to story readers or listeners, drama viewers instead of being urged to generate representations of the different narrative components, are invited to perceive the intended meaning of the performance and accordingly to cross the "fourth wall", the invisible wall at the front of the stage, to enter in or adhere to the world of the play, that is the fiction." (Metz-Lutz et al, 2010, p9)

This ability to analyse and decode creativity is a competence and may even require creative thinking itself. Matthew Reason's (2008) research with young audiences highlights how this 'theatrical competency' requires the ability to access multiple parts of the brain:

"Additionally, the children exhibited clear pleasure in exercising this specialist knowledge of reading and analysing the performance and it enhanced their ability and willingness to engage with the theatrical experience. In the exchange below, for example, Robbie is asked about his drawing of a sunny day:

IV: And the sun is shining. How did you know it was a nice day?

ROBBIE: Well, I heard noises so I thought it was like a nice day.

IV: What kind of noises?

ROBBIE: Sort of seagulls and I heard a wee bit of sun. Because I hear some things a lot.

This evocation of synaesthesia – 'I heard a wee bit of sun' – may be unusually poetical, but it is also completely factually accurate. Robbie's perception of the sun in the performance was produced through auditory clues – sound effects of sunny-day-ness such as seagulls calling or of people having fun on the beach. These were supported by other visual signs – such as the hanging up of washing or characters wearing shorts or sunglasses – that together built a comprehensive idea of sunshine." (Reason, 2008)

By analysing activity in different sections of the brain while subjects were engaged in different creative activities, scientists have developed theories of different types of creativity. For example, divergent creativity involves generating a wide range of new ideas, while convergent creativity is focussed on selecting from a limited range of options. Research suggests that divergent creativity may require the brain to inhibit habitual responses, and in the case of theatre audiences, they may be exhibiting defocussed attention and inhibition of facts about the real world - all factors which increase access to creative thinking.

A study by Metz-Lutz et al monitored changes in the body and mind of research subjects while they were experiencing live theatre. This study suggested that live theatre can induce the mental dissociation of experiences, in order to 'adhere' to the fiction of the play.

"This parallel lead us to hypothesize that, like hypnosis, viewing live drama induces a subtle alteration of consciousness allowing to dissociate components of behaviour. The hypnotic state typically results from an induction procedure based on suggestions of relaxation or imaginative or ideational experience, during which critical judgment is suspended. As an outcome of the full involvement in such experience, the subject may experience changes in the perception of peripheral inputs, such as pain reduction. In live theatre, the induction procedure that urges the spectators to divert their mind from incoming factual information and enter the dramatic fiction could be either the theatrical events, the plot or "arrangement of incidents" in Aristotle's words (Aristotle, 350 B.C.E), or the "willing suspension of disbelief" proposed by Coleridge." (Metz-Lutz et al, 2010, p9)

Taken together, the evidence suggests that theatre audiences need to dissociate or inhibit factual information while watching theatre. They also need to use their imagination, their 'mind's eye', to fill in the gaps. Watching theatre therefore requires an interactive engagement with creativity, and uses different parts of the brain, in unusual ways. In the context of motivations and barriers, this raises questions - how are different theatre audiences motivated, if at all, by this interaction with creativity, and to what extent is it an acquired competence?

## **Methodology**

A survey was designed to provide data on the following areas

- What leisure activities audiences had pursued in the last 12 months

- What leisure activities audiences valued, and also what was their favourite leisure pursuit
- What motivated them (what benefits they recognised) in their favourite leisure activity
- Their perceptions of Theatre
- Whether or not Theatre had left a lasting impression on them

### *Understanding Motivations*

Survey questions were designed to explore and categorise different types of motivation, namely:

- Intrinsic vs Extrinsic motivation
- Hedonic vs Non-Hedonic motivation
- The components of Self Determination Theory (Relatedness, Competence and Autonomy)
- Motivations linked to Mood Management

As far as possible, question wording was taken from past psychological studies. This resulted in nineteen questions (see table overleaf)

### *Audiences of interest*

In 2016 Arts Council England published the report 'Analysis of Theatre in England' which identified the following audiences as under-represented:

- BAME audiences (non-white)
- Younger audiences
- Audiences with disabilities
- Audiences from lower social groups

These were therefore identified as audiences of interest for this research project, with audiences from lower social groups defined as those with lower income, and those without a degree.

### *Survey sampling*

A large sample size of 3,500 people was achieved. The respondent sample was broadly nationally representative of UK adults by geographical location, education level, gender and age. Although non-white audiences were under-represented in the sample, there were 436 non-white respondents, giving a good sample for analysis

## **Analysis**

### **How audiences value Theatre compared to other leisure pursuits**

There are specific reasons for understanding how Theatre differs from other culture/entertainment. These could allow funders and investors to target their investments better. They could also help Theatre-makers understand ways in which they could innovate the artform. Finally, there is a greater volume and depth of research on TV and Film audiences than there is on Theatre audiences and this research could balance this deficit. By understanding the similarities and differences in the viewing experience, we may find ways to apply TV and Film research to Theatre.

Motivational questions for arts / leisure activities
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	Extrinsic	Intrinsic	Relatedness	Competence	Autonomy	Hedonic	Non-hedonic	Mood-management
I enjoy it		x				x		
It helps me escape from the reality of everyday life	x					x		x
It allows me to spend time with others		x	x			x		
It allows me to experience creativity		x		x			x	
It has a positive impact on my mental health		x				x		x
It helps me grow and learn new things		x		x			x	
It gives me an emotional release	x					x		x
It teaches me something new		x		x			x	
It offers a stimulating challenge		x		x			x	
It's easy to do	x							
It raises my morale		x				x		x
It releases tension	x					x		x
It changes my perspective		x		x	x		x	
It delivers what I expect	x					x		
It helps me understand other people		x	x	x			x	
It helps me build friendships		x	x			x		
It helps me know myself		x		x	x		x	
It helps me express my ideas and opinions		x		x	x		x	
To get closer to my own traditional background		x	x	x			x	

## *Benefits of watching Theatre*

Respondents were asked to pick, from a list of fourteen leisure pursuits to select those that they felt were a valuable use of their leisure time, and then to select one pursuit that was the most valuable use of their leisure time. They were then asked to indicate which benefits they derived from their 'preferred' pursuit, from a list of nineteen options. This provided a dataset to analyse objectively differences between pursuits in terms of derived benefits. Two of the options, 'Attending an opera' and 'Listening to a podcast' were removed from this analysis, due to very low numbers of respondents choosing these options, leaving a total of twelve leisure pursuits to compare.

This method appears to offer a distinctive way to understand motivations (see Table 2, overleaf). Within each leisure pursuit, there is considerable variance in benefits, for example of those who selected 'going to a museum or gallery' as their preferred leisure pursuit, 76% said that 'it teaches me something new' was a benefit, whereas only 7% indicated that 'it helps me build friendships.'

There is also considerable variation across leisure pursuits when comparing benefits. The frequency of selecting 'it releases tension' ranges from 73% for "dancing in a club or with friends" down to 18% for 'going to a museum or gallery'.

It is beyond the scope of this report to provide a full analysis of this data since the main objective was to consider theatre specifically. Comparing the recognised benefits chosen by those who preferred Theatre against those who preferred other leisure pursuits allows a perspective on what makes Theatre distinctive in the minds of audiences.

The benefits 'It helps me escape from the reality of everyday life' (selected by 70%) and 'It allows me to experience creativity' (54%) were selected more by the Theatre subset than for any other leisure pursuit. Crudely, if a random person asked advice on which leisure pursuit would be the best way for them to realise any of these benefits then, without knowing anything more about them, 'Theatre' would be a good answer, based on this evidence.

Theatre also ranks very highly for the simple benefit 'I enjoy it', just one percentage point lower than the most 'enjoyed' leisure pursuit which is 'Attending a live music concert'.

There are also indicators of the benefits it is least likely to distinctly offer. For the benefit 'It releases tension' (28%), Theatre ranks within the bottom two. This is not surprising: the phenomena of 'dramatic tension' is often a feature of a good play. The leisure pursuit 'Watching a drama on television' similarly attracts a low percentage for this benefit (29%)

Theatre also scores low, relatively speaking, on 'It's easy to do' (selected by 24%). In this sense Theatre is not like television or book-reading (which both score ease of use highly as a motivational factor, 60% and 50% respectively), and is more like live music, museums and galleries (23% and 26% respectively). Regular theatregoers appear to not be driven by this extrinsic motivation and so it does not act as a barrier to their attendance.

## *Patterns in the Theatre 'motivation profile' compared to other Leisure pursuits*

It is instructive to compare the benefits of watching Theatre with those of watching a film (see Table 2, overleaf). Across almost all of the intrinsic and extrinsic motivation questions, Theatre 'scores' higher.

Table 2 - What motivations (benefits) do people associate with their preferred leisure activity?

	Reading a book	Watching a film at the cinema	Watching a play or musical	Attending a live sporting event	Watching TV- generally	Watching a drama on TV	Attending a live music concert	Playing a video game	Going to a museum or gallery	Eating in a restaurant
n = number of respondents selecting an activity as the most valuable use of their time	843	213	194	264	323	137	318	137	224	425
I enjoy it	82.0%	68.1%	86.3%	82.2%	79.3%	78.1%	86.8%	70.1%	72.8%	83.5%
It allows me to experience creativity	30.8%	24.9%	53.7%	12.1%	11.5%	16.1%	52.2%	34.3%	49.1%	11.3%
It allows me to spend time with others	1.9%	45.5%	50.0%	60.6%	21.4%	18.2%	53.8%	27.7%	29.5%	78.4%
It changes my perspective	35.6%	18.8%	24.2%	8.0%	16.4%	18.2%	12.6%	14.6%	41.5%	4.9%
It delivers what I expect	21.9%	21.6%	31.1%	28.0%	23.8%	25.5%	35.5%	23.4%	14.7%	26.1%
It gives me an emotional release	30.6%	33.8%	45.3%	51.9%	20.7%	27.7%	60.4%	34.3%	14.3%	18.4%
It has a positive impact on my mental health	49.1%	33.3%	48.9%	40.5%	18.0%	16.8%	61.3%	35.0%	41.1%	39.1%
It helps me build friendships	2.7%	15.0%	11.1%	34.8%	5.3%	4.4%	23.9%	32.8%	7.1%	32.5%
It helps me escape from the reality of everyday life	68.6%	50.2%	70.0%	52.7%	52.9%	59.1%	64.5%	55.5%	38.8%	40.5%
It helps me express my ideas and opinions	11.5%	13.6%	12.1%	15.9%	7.4%	5.8%	11.0%	15.3%	17.9%	7.8%
It helps me grow and learn new things	54.4%	16.0%	35.3%	9.8%	35.3%	21.2%	15.1%	19.0%	67.0%	8.7%
It helps me know myself	13.9%	10.3%	12.1%	7.2%	6.2%	7.3%	15.7%	15.3%	15.2%	5.4%
It helps me understand other people	28.5%	13.6%	19.5%	13.6%	20.4%	18.2%	8.5%	10.2%	35.3%	12.5%
It offers a stimulating challenge	32.4%	23.9%	35.3%	20.5%	14.9%	29.2%	19.2%	48.9%	36.2%	3.3%
It raises my morale	18.5%	26.3%	40.0%	39.8%	13.9%	13.1%	53.8%	29.9%	21.0%	33.9%
It releases tension	40.2%	31.5%	27.9%	44.7%	34.7%	28.5%	44.3%	58.4%	17.9%	31.3%
It teaches me something new	54.1%	19.2%	28.9%	9.1%	44.9%	19.0%	10.1%	19.7%	75.9%	8.5%
It's easy to do	50.1%	44.1%	23.7%	27.7%	60.1%	42.3%	23.0%	41.6%	25.9%	44.2%
To get closer to my own traditional background	5.1%	3.3%	4.7%	17.8%	3.7%	9.5%	8.5%	4.4%	17.4%	4.5%

Table 3 – Absolute differences in motivation between Theatre and other arts / leisure pursuits

	Reading a book	Watching a film at the cinema	Attending a live sporting event	Watching television generally	Watching a drama on television	Attending a live music concert	Playing a video game	Going to a museum or gallery	Eating in a restaurant	Dancing in a club or with friends	Listening to the radio
<b>SUM OF ABSOLUTE DIFFERENCES</b>	<b>2.39</b>	<b>2.06</b>	<b>2.40</b>	<b>2.89</b>	<b>2.50</b>	<b>1.73</b>	<b>2.50</b>	<b>2.94</b>	<b>3.13</b>	<b>3.34</b>	<b>2.70</b>
I enjoy it	0.04	0.18	0.04	0.07	0.08	0.00	0.16	0.14	0.03	0.08	0.14
It allows me to experience creativity	0.23	0.29	0.42	0.42	0.38	0.01	0.19	0.05	0.42	0.36	0.36
It allows me to spend time with others	0.48	0.04	0.11	0.29	0.32	0.04	0.22	0.21	0.28	0.27	0.42
It changes my perspective	0.11	0.05	0.16	0.08	0.06	0.12	0.10	0.17	0.19	0.16	0.01
It delivers what I expect	0.09	0.09	0.03	0.07	0.06	0.04	0.08	0.16	0.05	0.13	0.07
It gives me an emotional release	0.15	0.11	0.07	0.25	0.18	0.15	0.11	0.31	0.27	0.01	0.17
It has a positive impact on my mental health	0.00	0.16	0.08	0.31	0.32	0.12	0.14	0.08	0.10	0.11	0.14
It helps me build friendships	0.08	0.04	0.24	0.06	0.07	0.13	0.22	0.04	0.21	0.57	0.03
It helps me escape from the reality of everyday life	0.01	0.20	0.17	0.17	0.11	0.06	0.15	0.31	0.30	0.06	0.37
It helps me express my ideas and opinions	0.01	0.02	0.04	0.05	0.06	0.01	0.03	0.06	0.04	0.04	0.03
It helps me grow and learn new things	0.19	0.19	0.25	0.00	0.14	0.20	0.16	0.32	0.27	0.24	0.03
It helps me know myself	0.02	0.02	0.05	0.06	0.05	0.04	0.03	0.03	0.07	0.21	0.02
It helps me understand other people	0.09	0.06	0.06	0.01	0.01	0.11	0.09	0.16	0.07	0.11	0.06
It offers a stimulating challenge	0.03	0.11	0.15	0.20	0.06	0.16	0.14	0.01	0.32	0.08	0.19
It raises my morale	0.21	0.14	0.00	0.26	0.27	0.14	0.10	0.19	0.06	0.02	0.13
It releases tension	0.12	0.04	0.17	0.07	0.01	0.16	0.30	0.10	0.03	0.45	0.03
It teaches me something new	0.25	0.10	0.20	0.16	0.10	0.19	0.09	0.47	0.20	0.11	0.16
It's easy to do	0.26	0.20	0.04	0.36	0.19	0.01	0.18	0.02	0.21	0.27	0.27
To get closer to my own traditional background	0.00	0.01	0.13	0.01	0.05	0.04	0.00	0.13	0.00	0.05	0.06

In fact, for the six benefits that audiences most frequently associated with watching a film, Theatre scores higher for five of them (the benefit where Film scores higher is “It’s easy to do’). It is possible to consider that the ‘liveness’ contributes to this. For example, Theatregoers are more than twice as likely as fans of cinema to agree that ‘It allows me to experience creativity’ is a benefit of their artform. They are far more likely (with a gap of twenty percentage points) to say that their preferred artform allows them to ‘escape from the reality of everyday living’. In these areas the scores for Theatre are much more in line with those for ‘attending a live musical concert’ than they are with watching film.

The comparison of Theatre with watching Drama on TV show a similar pattern to those with a film - TV scores lower in sixteen of the nineteen categories. This would seem to support the evidence that watching live actors does involve a shift in consciousness, which would involve, in neuroscience terms, increased ‘arousal’ and attention.

There could be other reasons behind this. It may be that the extra effort and consideration involved in going to the theatre or a concert, compared to watching TV or film which are both rated as much easier to do, might cause the arousal, the shift in consciousness and greater engagement.

A simple way to compare Theatre to other leisure pursuits is to take the mean value of the absolute differences across all of the motivational questions (see Table 3, prior page).

Using this method, the closest leisure pursuits to Watching a Play or Musical (expressed in percentage points) are:

Attending a live music concert	8.9pp
Watching a film at the cinema	11.1pp
Reading a book	12.6pp
Attending a live sporting event	12.6pp
Watching a drama on TV	13.2pp
Playing a video game	13.2pp

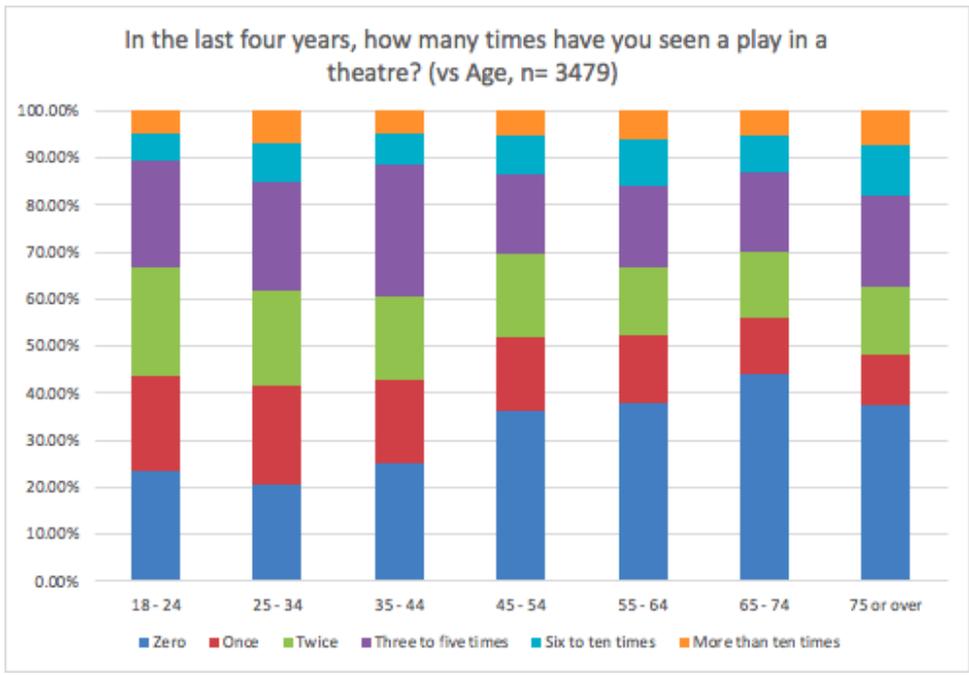
### *The links between valuing Theatre as an activity, and actual attendance of Theatre*

Only 65% of people who consider Theatre a valuable use of their leisure time had attended a play or musical in in last 12 months. While only 50% of people who agree that they would like to go the Theatre more often, had been to the theatre in the last 12 months.

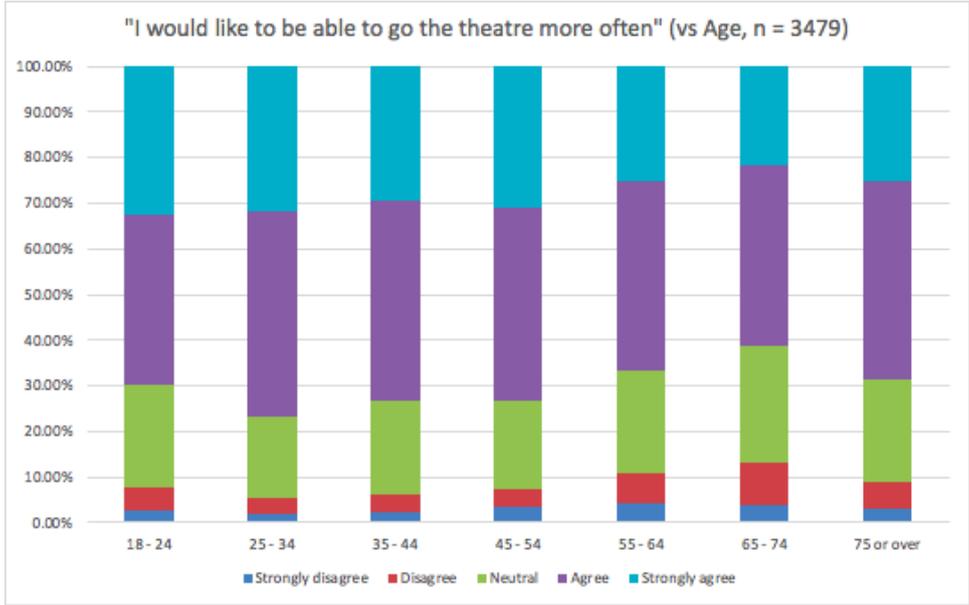
Thus, by focussing on those who attach a value to theatre, rather than simply those who attend on an annual basis, we increase the size of population we are considering.

### **Perceptions of Theatre from infrequent and non-attendees**

Analysing the responses of ‘Theatregoers’ has pointed towards their being clear, distinctive benefits associated with Theatre. What about audiences who attend theatre less frequently, and who do not regard it as their favourite leisure activity?

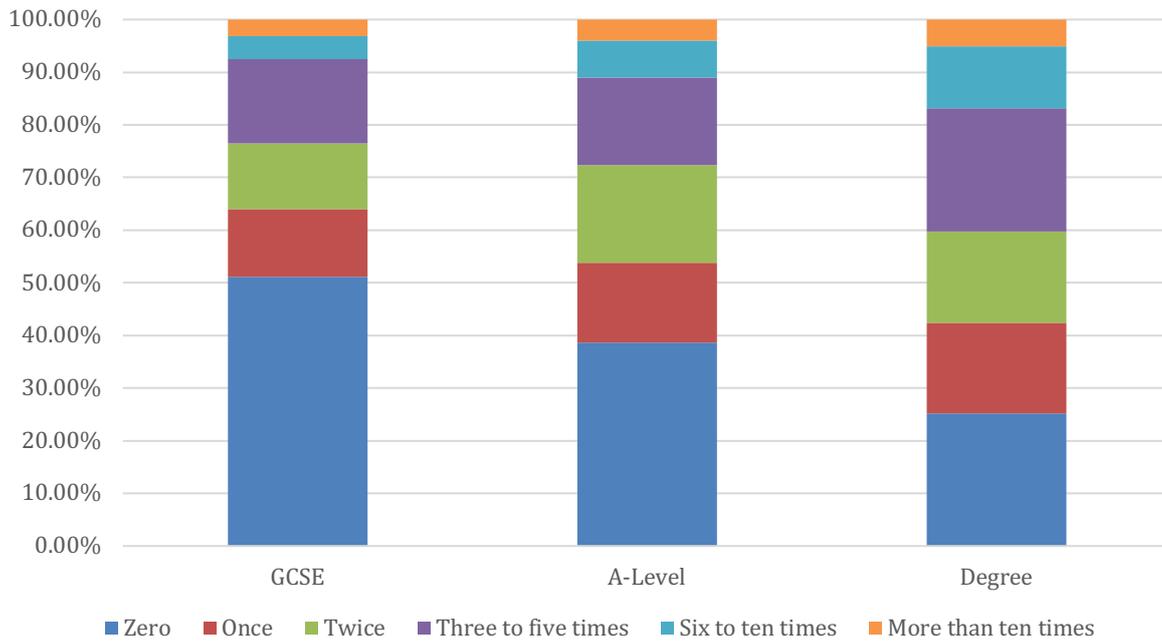


Graph 1 - Play attendance vs Age



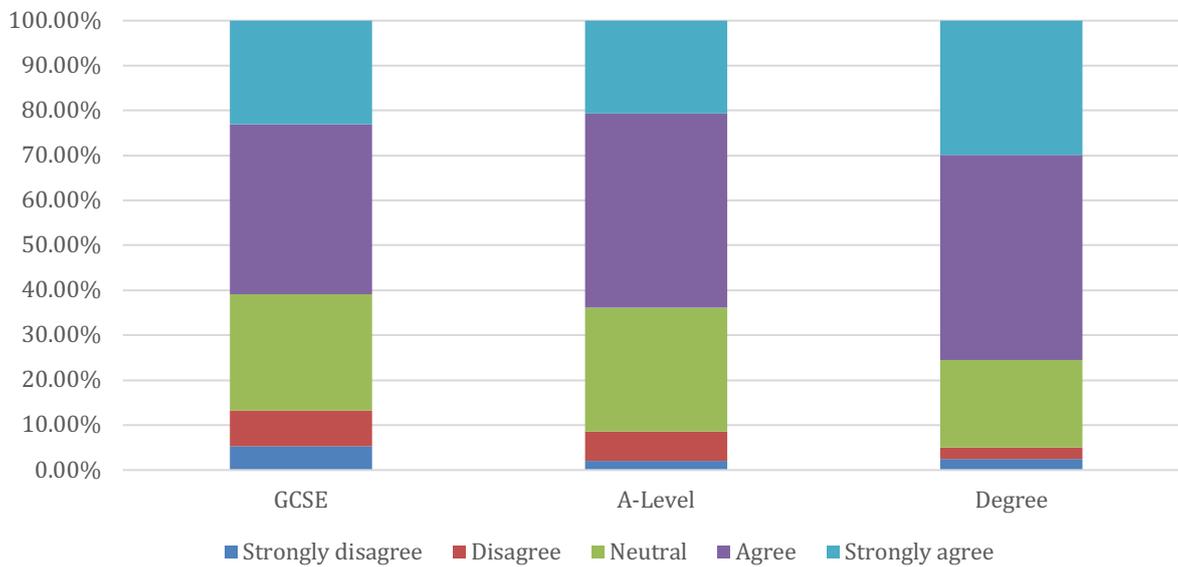
Graph 2 – Desire to attend more vs age

In the last four years, how many times have you seen a play in a theatre?  
(vs Education level, for respondents over 25 only, n= 691)



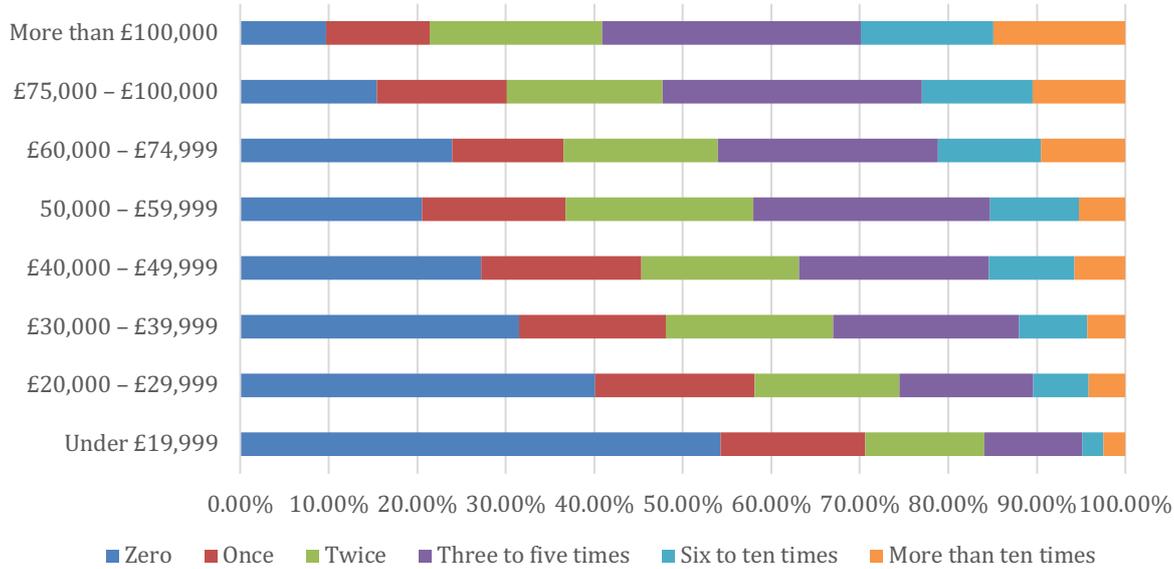
Graph 3 -  
Play  
attendance  
vs  
Education  
level

"I would like to be able to go the theatre more often", vs Education level, for  
respondents over 25 only, n= 691



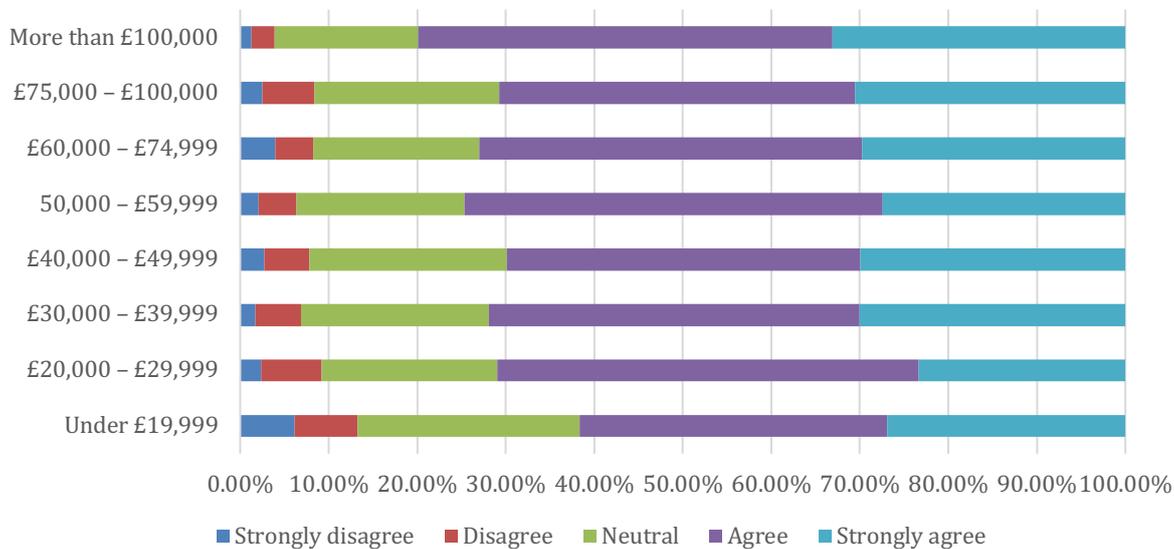
Graph 4 -  
Desire to  
attend more  
vs  
Education  
level

In the last four years, how many times have you seen a play in a theatre? (vs Household Income, n = 3,367)



Graph 5 - Play attendance vs Household income

"I would like to be able to go the theatre more often" vs Household Income, n = 3,367



Graph 6 – Desire to attend more vs Household income

The 'consistency' of motivations to watch Theatre was tested across the key demographic and behavioural types. This was in order to verify to what extent the hierarchy of Theatre motivations was consistent, and to what extent variations in motivational hierarchy could help explain patterns of attendance.

Demographically, across the ranges of age, household income and education level, there is consistency in the top four motivations to attend theatre. For all groups in these demographics the top four motivations were:

- I enjoy it (Hedonic motivation)
- It helps me escape from the reality of everyday life (Hedonic, Extrinsic motivation)
- It allows me to spend time with others (Relatedness motivation)
- It allows me to experience creativity (Creative motivation)

These were also the top factors for audiences with low frequency of theatre attendance as well as those with the highest frequency. These factors should therefore be considered 'core' motivational factors for Theatre.

Applying theory to this 'motivational profile' for Theatre, the following observations can be made:

- Hedonic, Extrinsic motivation clearly appears to play a part in specifically motivating Theatre attendance. By comparison, to pick just one example, Museum and Gallery attendance would appear to be less extrinsically driven.
- 'Relatedness' would also appear to factor into Theatre motivation.
- The desire to experience Creativity requires more complex analysis. It could indicate an intrinsic, non-hedonic motivation towards developing 'competence', but could also be a more aesthetic, hedonic motivation.

### *Ethnicity*

Ethnicity is the one demographic where the top four motivators are different (see Table 4, overleaf). South Asian and (in particular) Black audiences were significantly less likely to select 'It helps me escape from the reality of everyday life' (non-white 34% vs white 57%) and significantly more likely to select 'It teaches me something new' (non-white 40% vs white 28%)

Although this report simplifies 'non-white' audiences into one group in order to work with the biggest sample possible, and although there are clear trends which differentiate non-white audiences from white audiences, there are also differences in the data between, for example, South Asian and Black audiences – future research could analyse ethnicity in a more nuanced way.

### **Motivational Groupings**

Respondents answers to the motivational questions were analysed to see if they correlated into expected groups (see Table A5 for an example analysis). Based on the correlations, the following Motivational groups were proposed (note that 'I enjoy it' and 'It helps me escape from the reality of everyday life' were excluded from the groupings, as they were so commonly selected that they would have made it impossible to form groupings.)

Table 4 - Differences in motivation for attending Theatre between non-white and white audiences

	Non-White	White British
I enjoy it	60%	72%
It helps me escape from the reality of everyday life	34%	57%
It allows me to spend time with others	37%	50%
It allows me to experience creativity	46%	46%
It has a positive impact on my mental health	30%	33%
It helps me grow and learn new things	31%	30%
It gives me an emotional release	27%	30%
It teaches me something new	40%	28%
It offers a stimulating challenge	27%	29%
It's easy to do	24%	29%
It raises my morale	24%	28%
It releases tension	31%	26%
It changes my perspective	30%	24%
It delivers what I expect	19%	25%
It helps me understand other people	24%	20%
It helps me build friendships	19%	14%
It helps me know myself	14%	11%
It helps me express my ideas and opinions	20%	9%
To get closer to my own traditional background	12%	7%
<i>n</i> =	193	2033

Table A5 – Correlations between motivations for Theatre attendees

		It has a positive impact on my mental health 778	It helps me grow and learn new things 721	It gives me an emotional release 720	It teaches me something new 693	It offers a stimulating challenge 690	It's easy to do 678	It raises my morale 652	It releases tension 632	It changes my perspective 591	It delivers what I expect 582	It helps me understand other people 488	It helps me build friendships 339
		778	721	720	693	690	678	652	632	591	582	488	339
It has a positive impact on my mental health	778		1.59	1.69	1.42	1.45	1.30	1.73	1.65	1.57	1.36	1.63	1.61
It helps me grow and learn new things	721	1.58		1.48	1.93	1.71	1.27	1.49	1.32	1.87	1.27	1.93	1.65
It gives me an emotional release	720	1.69	1.48		1.45	1.43	1.27	1.73	1.68	1.63	1.40	1.54	1.57
It teaches me something new	693	1.42	1.93	1.45		1.61	1.26	1.38	1.43	1.84	1.23	2.03	1.62
It offers a stimulating challenge	690	1.45	1.71	1.43	1.61		1.18	1.42	1.26	1.65	1.32	1.83	1.41
It's easy to do	678	1.30	1.27	1.27	1.26	1.18		1.44	1.45	1.19	1.63	1.32	1.51
It raises my morale	652	1.73	1.49	1.73	1.38	1.42	1.44		1.74	1.62	1.51	1.66	1.64
It releases tension	632	1.65	1.32	1.68	1.43	1.26	1.45	1.74		1.47	1.58	1.47	1.56
It changes my perspective	591	1.57	1.87	1.63	1.84	1.65	1.19	1.62	1.47		1.23	2.13	1.70
It delivers what I expect	582	1.36	1.27	1.40	1.23	1.32	1.63	1.51	1.58	1.23		1.38	1.49
It helps me understand other people	488	1.63	1.93	1.54	2.03	1.83	1.32	1.66	1.47	2.13	1.38		1.99
It helps me build friendships	339	1.61	1.65	1.57	1.62	1.41	1.51	1.64	1.56	1.70	1.49	1.99	

The figures in each box tell us – by what factor does the likelihood of the motivation in the column being selected increase above the average when the factor in the row is also selected. The higher the number, the more the two questions are correlated

Non-Hedonic, Competence	Extrinsic and Hedonic	Mood Management
Offers a stimulating challenge	Allows me to spend time with others	Raises my morale
Helps me grow and learn new things	Helps me build friendships	Has a positive impact on my mental health
Helps me express my ideas and opinions	Easy to do	Releases tension
Teaches me something new	Delivers what I expect	Gives me an emotional release
Changes my perspective		
Helps me understand other people		
It helps me know myself		

This analysis suggested the following groupings of motivations:

- Non-Hedonic, Competence
- Extrinsic, Hedonic
- Mood Management

By creating motivational groupings it became possible to analyse audience perceptions and attendance in a new way. Rather than focus purely on differences in past demographic attendance, through the use of motivational groupings it is possible to flesh out the drivers for future attendance. Two detailed analyses were carried out:

- Variance across key demographics by motivational grouping
- Variance in attendance desire and actual attendance by motivational grouping

### Variance across key demographics by motivational grouping

The key demographics were analysed to see how well they fit into each motivational grouping (see Table 6 overleaf) for detailed breakdown

#### *Extrinsic Hedonic*

- Audiences educated to a lower level (A Level or GCSE) clearly scored **higher** than Degree-educated audiences across all of the Extrinsic Hedonic questions.
- Non-white audiences scored **lower** than White audiences in all of the Extrinsic Hedonic questions except 'It releases tension'
- Younger audiences, likewise, clearly scored **lower** than older audiences in all of the Extrinsic Hedonic questions except 'It releases tension'
- Audiences with lower Household income demonstrated a less clear pattern
- Disabled audiences / those with health problems exhibited a mixed pattern

#### *Non-Hedonic, Competence raising*

- Audiences educated to a lower level (A Level or GCSE) clearly expressed **lower preferences** than Degree-educated audiences across all of the Non-Hedonic, Competence Raising questions.

Table 6 – Audiences of interest profiled by difference in motivational profile

		GCSE / A-Level compared to Degree educated	Non-white compared to White audiences	18-34 year olds compared to over 55's	Household income - Up to £30k.p.a. vs higher than £30k p.a.	Limited by health a lot compared to not limited at all
Extrinsic Hedonic	Helps me escape from the reality of everyday life	+8%	-23%	-15%	-2%	-7%
	It gives me an emotional release	+1%	-4%	-1%	+0%	-5%
	It's easy to do	+9%	-5%	-10%	+4%	+1%
	It releases tension	+6%	+4%	+0%	+1%	+4%
	It delivers what I expect	+7%	-6%	-9%	+2%	+2%
Non-Hedonic, Competence	It allows me to experience creativity	-6%	-1%	-4%	-4%	-3%
	It helps me grow and learn new things	-3%	+0%	+8%	+0%	+1%
	It teaches me something new	-1%	+11%	+4%	+1%	-1%
	It offers a stimulating challenge	-6%	-2%	-12%	-3%	+3%
	It changes my perspective	-11%	+5%	+10%	-4%	-1%
	It helps me understand other people	-1%	+4%	+1%	+1%	-4%
	It helps me know myself	-9%	+3%	+6%	-1%	+2%
	It helps me express my ideas and opinions	-7%	+11%	+10%	-0%	+3%
To get closer to my own traditional background	-5%	+5%	+5%	-1%	+4%	
Mood Management	It has a positive impact on my mental health	-1%	-3%	+4%	-1%	-2%
	It gives me an emotional release	+1%	-4%	-1%	+0%	-4%
	It raises my morale	+1%	-4%	-1%	+1%	-5%
	It releases tension	+6%	+4%	+0%	+1%	+3%
Relatedness	It allows me to spend time with others	+12%	-13%	-7%	-1%	-4%
	It helps me understand other people	-1%	+4%	+1%	+1%	-4%
	It helps me build friendships	-9%	+5%	+5%	+3%	+2%

The table shows difference in percentage points for each Audience of Interest, for each question, when compared to a contrasting demographic

- Non-white audiences clearly expressed **higher preferences** than White audiences in most of the Non-Hedonic, Competence Raising questions. The only exceptions were 'It offers a stimulating challenge' and 'It allows me to experience creativity, where they expressed slightly lower preferences
- Younger audiences expressed **higher preferences** than Older audiences in most of the Non-Hedonic, Competence Raising questions. There were two significant exceptions: 'It offers a stimulating challenge' (younger audiences expressed 12 percentage points lower preference) and 'It allows me to experience creativity' (younger audiences expressed 12 percentage points lower preference)
- Audiences with lower Household income demonstrated a mixed pattern of preferences
- Disabled audiences / those with health problems exhibited a mixed pattern of preferences

#### *Mood Management*

- None of the audience groups expressed a clear pattern in terms of Mood Management

#### *Relatedness*

- None of the audience groups expressed a clear pattern in terms of Relatedness

### **Variance in attendance desire and actual attendance by motivational grouping**

The data was analysed to see whether 'revealed motivations' had any bearing on Theatre attendance and desire to see Theatre. Respondent data was split into six groups, based on whether or not they had positively selected benefits within each of the three motivational groupings:

- Respondents who had associated zero Extrinsic Hedonic benefits with Theatre (group EH0)
- Respondents who had associated at least one Extrinsic Hedonic benefit with Theatre (group EH1+)
- Respondents who had associated zero Non-Hedonic, Competence benefits with Theatre (group NHC0)
- Respondents who had associated at least one Non-Hedonic, Competence benefit with Theatre (group NHC1+)
- Respondents who had associated zero Mood Management benefits with Theatre (group MM0)
- Respondents who had associated at least one Mood Management benefit with Theatre (group MM1+)

Respondents can be present in more than one group (for example, if they had selected a range of benefits they may be in several of the positive motivational groups)

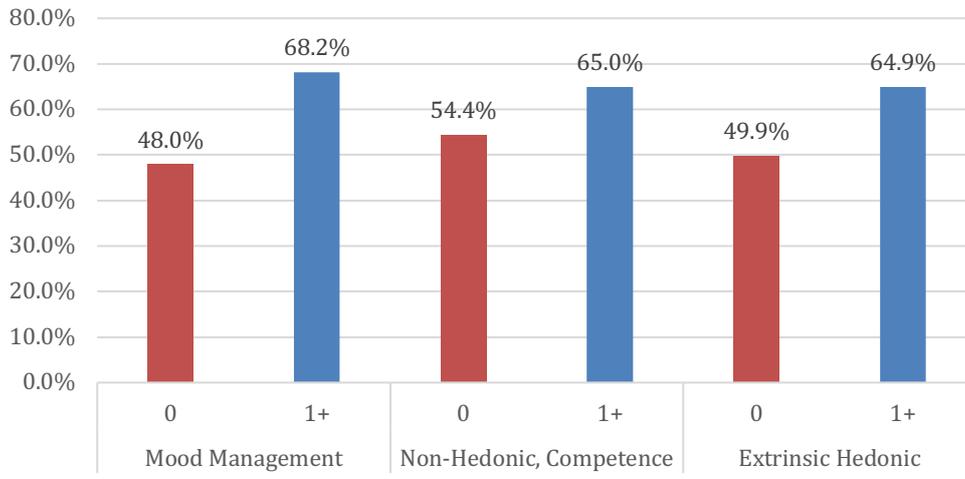
#### *Valuing Theatre*

Across all three motivational groups, positively associating into a motivational group increased incidence of selecting Theatre as a valuable use of their time. The biggest difference was seen in MM1+, which had twenty percentage points higher incidence of valuing Theatre, when compared to MM0

#### *Attending Theatre*

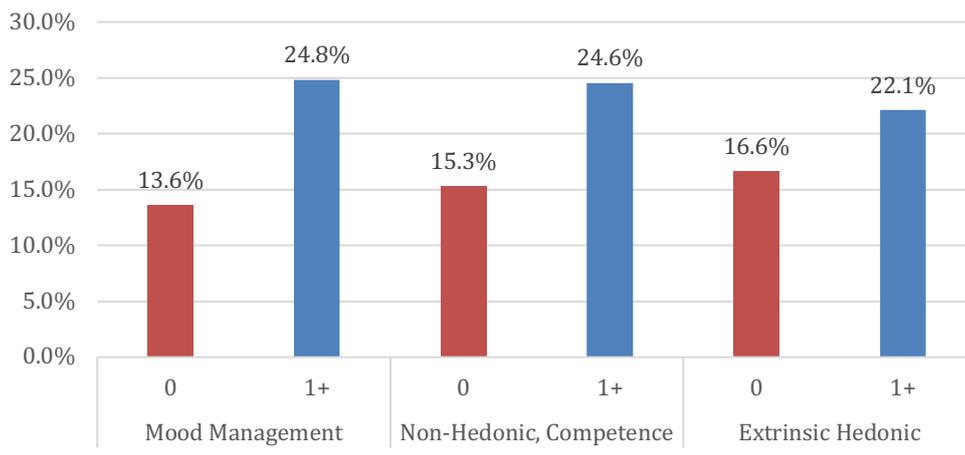
Across all three motivational groups, positively associating into a motivational group increased incidence of being a frequent Theatre attender (over six times in the last for years). Again, the biggest difference was

### Audiences who say that "Theatre is a valuable use of my time"



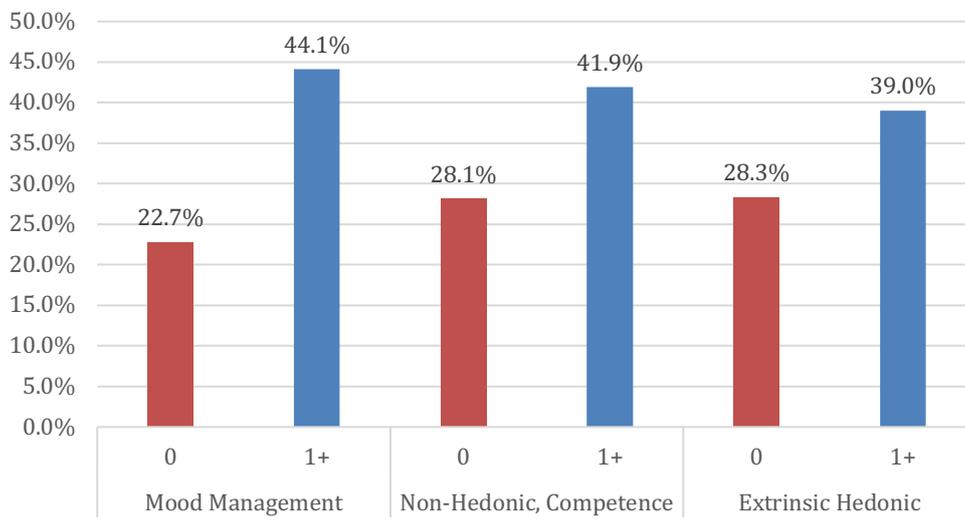
Graph 7 – Theatre Value vs Motivational grouping

### Audiences who have attended 6+ plays in the last four years



Graph 8 – Play attendance vs Motivational grouping

### "I would like to go to the Theatre more often" - Audiences who strongly agree



Graph 9 – Desire to attend more vs Motivational grouping

seen in MM1+, which had eleven percentage points higher incidence of being a frequent Theatre attender, when compared to MM0

#### *Desire to attend Theatre more often*

Across all three motivational groups, positively associating into a motivational group increased incidence of agreeing with the statement “I would like to go to the Theatre more often”. Once again, the biggest difference was seen in MM1+, which had 23 percentage points higher incidence of wanting to see more Theatre, when compared to MM0

Whereas Extrinsic Hedonic and Non-Hedonic, Competence motivations proved helpful in understanding differences in Theatre attendance in demographic terms, Mood Management appears to be a more useful tool in understanding overall motivation to attend Theatre.

### **Understanding Lasting Impressions - describing ‘standout’ theatrical experiences**

Audiences were asked if they had seen a theatrical production in the last four years that had left a lasting impression. They were then asked to look at from a number of qualitative statements and choose which were true about this particular production.

The top three statements were each selected by over 50% of people answering the question:

- It was creative (65%)
- It was fun (51%)
- It stimulated my imagination (51%)

The six revealed motivational groupings were again used to analyse how audience motivations changed the incidence of them selecting these

#### *It was creative*

Across all three motivational groups, positively associating into a motivational group increased incidence of selecting ‘It was creative’. The biggest difference was seen in EH1+, which had twenty-two percentage points higher incidence of selecting ‘It was creative’, when compared to EH0.

#### *It was fun*

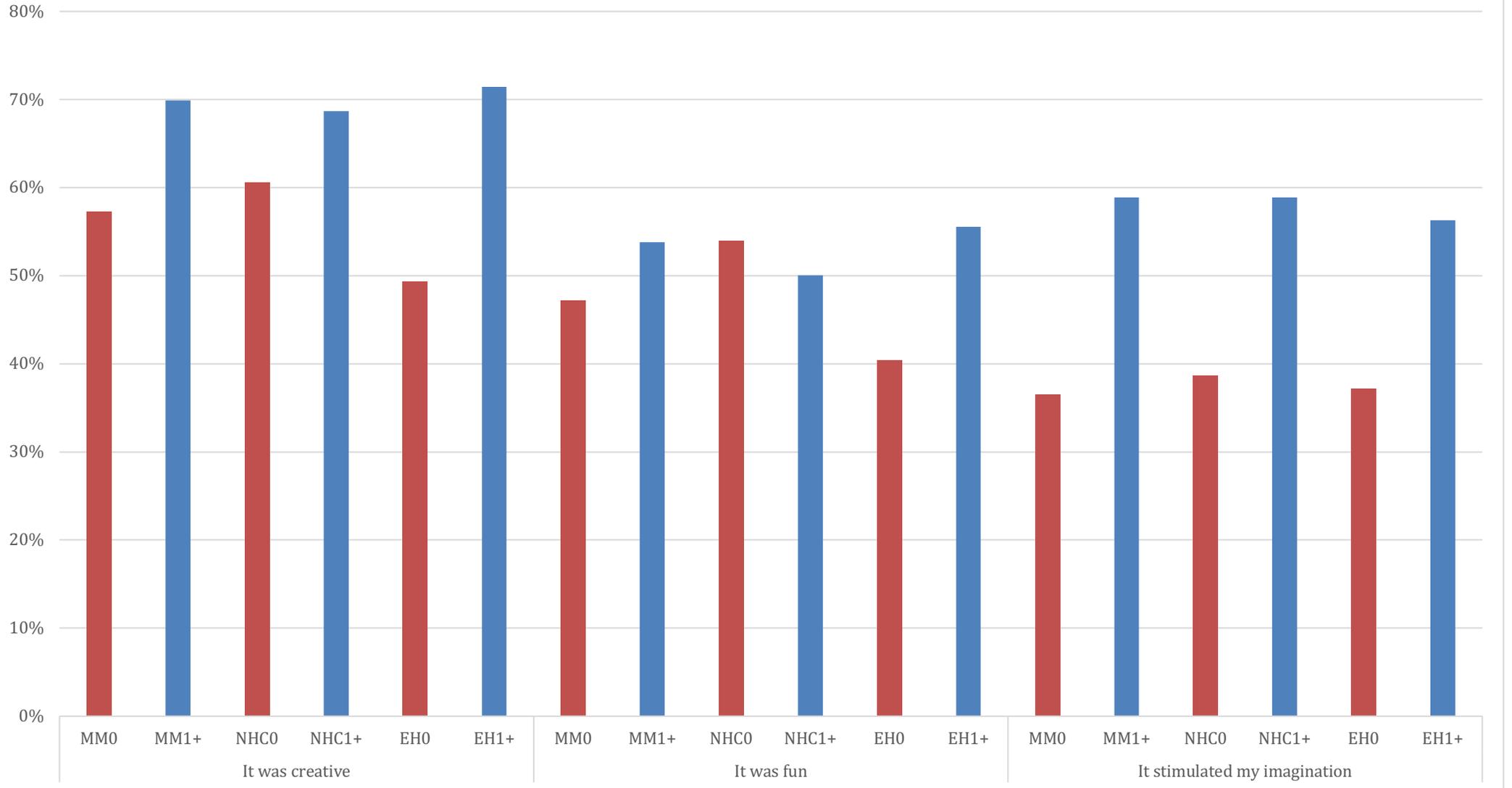
In this case positively associating into the Non-Hedonic, Competence group decreased incidence of selecting ‘It was fun’. The biggest difference was seen in EH1+, which had fifteen percentage points higher incidence of selecting ‘It was fun’, when compared to EH0.

#### *It stimulated my imagination*

Across all three motivational groups, positively associating into a motivational group increased incidence of selecting ‘It stimulated my imagination’. The biggest difference was seen in MM1+, which had twenty-two percentage points higher incidence of selecting ‘It stimulated my imagination’, when compared to MM0.

Extrinsic Hedonic motivations led most strongly to describing standout theatrical experiences as ‘creative’. By contrast, when audiences described general benefits of Theatre, creativity was associated principally with Non-Hedonic, Competence drivers.

Descriptors of a Theatre production that left a lasting impression, by revealed motivational grouping



This implies that those who find their standout theatre experience to be creative are not necessarily those audiences who generally find Theatre creative.

This is indeed the case - 'It's easy to do' (rather than 'It allows me to experience creativity') is the general benefit of theatre that correlates most strongly with describing a standout experience as creative.

### *Discussion and Conclusions*

The number of people valuing Theatre, and wanting to see more of it, far exceeds the number attending theatre in any given year. For many audiences Theatre is not easy to attend, compared to other pursuits, but is nevertheless significantly valued as a way to escape from the everyday, and experience creativity, as well as offering a distinctive and valued social experience.

The liveness of theatre may make it harder to access than TV or books, but also contributes significantly to its appeal. There is some support for the theory that watching live actors does involve a shift in consciousness, which would involve, in neuroscience terms, increased 'arousal' and attention. Across the motivations measured in this study, Theatre is closer to live music than it is to cinema, and just as close to attending a live sporting event as it is to reading a book, in terms of audience motivations.

In understanding the distinctive values that audiences place on theatre, it is possible to understand how it plays important roles as a cultural choice in people's lives. For some audiences, including significantly high proportions of graduates and non-white audiences, Theatre is an artform that allows them to learn new things, and develop a more nuanced view of the world. For other audiences, with a greater representation of non-graduates, the Extrinsic Hedonic value of Theatre is significant – particularly the affordance of building friendships, and delivering entertainment where the audiences know what to expect.

Essential to understanding the appeal and value of Theatre is understanding how it helps audiences in terms of 'Mood Management'. The ability of theatre to raise morale, release tension and provide an emotional release is a major part of what makes it attractive, and, on the basis of this study, the most essential motivation to appeal to in order to increase ticket sales.

If we are to take a more audience-centric view, informed by neuroscientific and psychological frameworks, then we may do well to analyse the 'broad church' of theatre in terms of its specific motivational groupings: Non-Hedonic Competence, Extrinsic Hedonic and Mood Management rather than simply relying on historical genre conventions such as New Writing', 'Classic Drama', 'Musicals' and 'Revivals'.

One of the intentions of this study was to examine the role that creativity plays in drawing audiences to Theatre, and this study shows it to be one of the most significant factors. For Theatre audiences the study suggests that creativity works in multiple ways. Theatre itself is seen as one of the best ways to experience creativity. Those who value theatre for its creativity are more likely to also value the ability of theatre to teach and increase competence, suggesting that theatrical creativity may be a non-hedonic, competence raising benefit. At the same time, Extrinsic Hedonic audiences were most likely to describe their standout theatrical experience as 'creative', suggesting that Creativity can have an even bigger impact on audiences who are looking to use theatre as an escape rather than a learning tool.

It seems very important to understand the importance of creativity for audiences in neurological terms, and this should be a fruitful area for future study.

Finally, a key aim for this study was to test the application of scientific theory to Theatre. In this case, the use of applied neuroscientific frameworks has simultaneously opened up a new perspective on Theatre audiences and also reinforced humanities-based views of audiences.

The salience of the results of this research – finding clear distinctions between audience motivations for different leisure activities, and finding non-demographic dependant ways of explaining differences in Theatre attendance - should encourage other researchers looking to find ways to bring Science into the field of Arts.

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