

# Science in culture: audiences' perspective on engaging with science at a summer festival

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## **Abstract**

10 In this commentary we explore the factors that contributed to festival-goers' choice to attend science-based events at a summer cultural festival. We evaluated the impact of such events on the audiences; their levels of engagement, reasons for participation and their views on and reactions to the events. Presented with a variety of cultural events, attendances at science-based events was strong, with high levels of enjoyment and engagement with scientists and  
15 other speakers. Moreover, audiences did not see science as something distinct from other cultural events, but as just another option: science was culture.

**Keywords:** informal venues, science communication, public engagement, generic venues, audience, festivals

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## **1 Introduction: the British summer festival scene**

Festivals, of music, literature, science and more, are ubiquitous on the British summer scene (BAFA, 2015; The Festival Calendar, 2015; British Science Association, 2015). They range from small, local events that attract just a few hundred people to nationwide events that reach  
25 millions (Bultitude, et al., 2011).

While some festivals are renowned for a focus on one aspect of cultural life, many have expanded their remit. For example, the [Edinburgh International Festival](#), held in the city since 1947, covers theatre, opera, music, dance and the visual arts; the [Glastonbury Festival](#), which

began in 1970, while best-known for music, includes theatre, poetry, spoken word and comedy.

Festivals are celebrations of common culture. They are also places of meeting, movement, interaction and the exchange of ideas (Quinn, 2005) and thus locations where culture can evolve. Festivals do more than bring together contributors and audiences; they bring audiences and contributors into the same space as community groups, activists, policy-makers, institutions, businesspeople, funders and sponsors. Such numbers suggest that people are much more likely to be prompted to make changes as a result of attending a festival than by being part of a policy-making dialogue (Davies, 2009).

10 Summer festivals can be lengthy. The Glastonbury Festival lasts five days, Cheltenham Science Festival a week and the Edinburgh International Festival a month. This prolonged pursuit of ‘serious leisure’ (Stebbins, 1996) – the search for and participation in new cultural experiences (Begg, 2011) – demands considerable commitment of participants. However Stebbins (1996) himself challenged this highbrow description; suggesting, rather, that  
15 participants are ‘cultural dabblers’, picking and choosing the activities that attract them most.

The pursuit of serious leisure has roots in the nineteenth-century concept of ‘rational recreation’ (Plunkett, et al, 2011); recreation that, particularly for the working class, should be improving, enriching, educational and non-trivial. Rational recreation was promulgated by middle- and upper-class reformers who believed that the working classes were intrinsically  
20 motivated towards self-improvement and would naturally seek routes to learning. The importance of leisure learning was noted more recently by Fogg-Rogers, et al. (2015), who showed that formal learning activities such as lectures were valued by festival visitors as much for the opportunity to learn as for their enjoyability.

The locations of summer festivals can typically be divided into two types. The first – which  
25 we dub ‘festival-in-a-field’ – take place somewhere outside audiences’ normal experience. The Glastonbury Festival, for example, happens on what is normally a farm. The venue of a ‘festival-in-a-field’ is temporarily wholly dedicated and participants are physically isolated from the everyday, camping on site, with access and egress tightly controlled. This separation accentuates the sense of serious leisure: a specific social milieu, adversities to be overcome  
30 (e.g. the notorious Glastonbury mud!) but equally, opportunities for self-enrichment, self-expression and interaction (Stebbins, 1996) and enhanced emotional experiences, pleasure and excitement (Lee, et al., 2011). The second – which we style ‘urban festival’ – takes place

in a town or city centre, making use of multiple permanent and temporary venues. Thus, participants remain in the normal urban social environment, attending events and going home afterwards.

5 Festival-attending can be expensive. A ticket for the 2014 Latitude Festival cost approximately £200. However, as is typical for a festival-in-a-field, the single ticket permitted entry to almost all events over its four days. Urban festivals normally sell tickets for individual events; ticket prices at the 2014 Edinburgh Festival ranged from around £15 to £45 or more.

10 Both kinds of festival offer participants a huge choice of events but their differences affect participants' choices. Participants in a festival-in-a-field invest considerable time and money but face low barriers to attending events, with little pre-meditation. However, crucially, participants can readily leave and go to another activity if it fails to hold their interest, so participants' engagement and interest must be maintained. At an urban festival, although the prices are much lower, a ticket cannot easily be changed and once an event is in progress,  
15 there is unlikely to be a concurrent alternative. Thus, in a festival-in-a-field, a dull or unenjoyable event can be seen as merely a waste of time; in an urban festival, it can be seen as a waste of both time and money, with inevitable effects on participants' attitudes to the events.

## **2 Public engagement with science: the role of venue**

20 Public engagement with science can happen in traditional venues, both formal, such as schools, universities, theatres or galleries, and informal, in places associated with science, such as science centres and museums. While popular, traditional venues have limitations in terms of their audiences, tending not to attract people with no interest in science or those who feel intimidated by it (Falk, 2006).

25 To engage with a wider, more diverse audience, new approaches and different types of venues must be explored. Thus, a third type of venue has arisen: 'generic venues'; familiar locations, such as cafés, parks and shopping centres, where publics naturally congregate for leisure (Bultitude and Sardo, 2012). Generic venues are fundamentally different from informal, in that visitors do not normally expect to encounter science there and they are thus  
30 not obviously locations for rational recreation.

However, a generic venue can be a neutral nexus for engagement between scientists and publics and a location for serious leisure. Activities in a generic venue can thus use the element of surprise and the novelty of encountering science and exploit the informal and communal nature of their environment (Bultitude and Sardo, 2012).

### 5 **3 Science in a ‘festival-in-a-field’**

The [Latitude Festival](#) takes place annually in the grounds of Henham Park, Suffolk, UK, attracting ‘approximately 35,000 people, from babies to people aged 70 and over’ (Harrison, 2014), from across the UK. Latitude offers more than 200 events, covering music, theatre, art, comedy, dance, cabaret, poetry, politics and literature, in semi-permanent and ‘pop-up’  
10 venues. In other words, the Festival offers myriad cultural activities and the environment, atmosphere and ambience contribute to the creation of informal spaces.

The 2014 Latitude Festival, in collaboration with the [Wellcome Trust](#), included a series of science-themed events, most involving Trust-funded researchers. These events sought to explore the Festival theme from a contemporary scientific perspective. We were  
15 commissioned to conduct an evaluation of the science-themed events, to explore why festival-goers chose to attend them. With a plethora of events, of many kinds, what led people to choose science? Secondly, were audiences viewing science as ‘other’, an alien visitation to an arts event or as part of culture (Sacks, 1998)?

We used a variety of methods to capture the audiences’ and presenters’ perspectives,  
20 deliberately selecting methods that did not impinge on their experience: observation, comment cards, face-to-face exit snapshot interviews with audience members and post-festival face-to-face and phone interviews with presenters. The research covered a sample of events in different venues and different formats: collaborations between artists and scientists, panel discussions, interactive events and performances. All the events were covered by at  
25 least one evaluation method and several by more.

Ethical approval was given by the Faculty Research Ethics Committee, Faculty of Health & Applied Sciences, University of the West of England, Bristol.

#### **3.1 Setting the scene: reflections on venues**

Most events took place in the Science and Secrets Hub (SSH), a modestly-sized marquee set  
30 up in a relatively quiet area of woodland, designed as an intimate venue, with theatre-style seating for approximately 40 people. Other events took place in: the Literary Arena (central

area of the Festival) a much larger marquee capable of holding 2–300 people, seated informally; the Waterfront Stage, an open stage used for dance performances; and the Dance East location, an open-sided dance floor with no dedicated audience space.

[Figure near here]

5 We noticed that audiences attending events in the SSH had largely specifically chosen them from the programme. With one exception, all the events in the SSH were full to capacity and beyond. Once the chairs were occupied, people filled the remaining space, so that there were rarely fewer than 60-70 people in the marquee, with more clustered around the doors (see Figure). While this popularity was gratifying for presenters and organisers, it caused physical  
10 problems (heat and overcrowding) and logistical problems (people couldn't get in): those outside were frustrated and those inside uncomfortable:

*it's a b—y small tent – that was my least favourite thing [...]they have a theatre tent that big, they have a cinema tent that big, a comedy tent that's huge, a separate literary and poetry tent, and their science tent is the size of a f—ing shed  
15 what the f—k? (Interviewee0020)*

*They were sitting on the floor and standing at the back and standing outside and trying to hear (Presenter05)*

Crowding undoubtedly affected visitors' experiences; with basic physiological needs unmet, it was harder for audiences' articulated or unarticulated social and cognitive needs (Maslow,  
20 1970) to be met, yet:

*... the talk was great! (Interviewee0012)*

We noticed that, typically, audiences moved freely in and out of most venues. Although events had advertised starting times, people arrived during events and left when they wished. Such behaviour was clearly the Festival norm. However, the overcrowding in the SSH meant  
25 that audiences were unable to behave normally; they were effectively jammed in, unable to make an unobtrusive exit.

The crowding also affected the planned format of the events. Informal conversations became standing, formal interchanges, needing a hand-held microphone for audibility; experimental events became non-interactive presentations. One presenter had planned a series of small  
30 experiments but in the over-full tent, this proved impossible:

*I was planning on a target audience of sort of 30 or 40 that we were expecting to fit within the tent, but I wasn't thinking of all the people who would be crammed around the outside. We had planned a kind of semi-installed demo thing but in practice [...] it wasn't feasible (Presenter02)*

- 5 Some participants developed strategies to make sure they got in; several attended a previous event to be on-the-spot for a chair at the next: '[I] wanted to come to the next talk, but I came to the one before because it was a good way to get to the next one' (Bultitude and Sardo, 2012, p.12).

### **3.2 It's how you present it: format**

- 10 Most SSH events followed a classic scientist-presentation, or scientist(s)-host conversation, followed by audience-questions format. Events in the Arena were more broadly programmed, including two or three speakers from politics, literature, journalism and the arts, as well as Trust-funded scientists offering a scientific perspective, either in conversation with a host or presenting in series, followed by questions.

- 15 Thus, by accident or design, the science events reflected the dominant cultural mode of the Festival. Whether a writer talking about his latest book, a conversation about the elements of freedom or a neuroscientist discussing her research, the common format was presentation-and-questions. Audiences did much the same things in a science-labelled event as they did in those labelled literature, poetry or politics. Audiences knew what to expect; there were no  
20 surprises; their expectations were met and they found events accessible:

*Fantastic - made so easy and I felt so comfortable (Feedback card)*

- Although the dance and promenade performances had greater intensity of engagement than the SSH or Arena events, with extended interaction between performers and audiences, the fact they were science-themed was not remarked upon; they were just another opportunity for  
25 audiences to speak and performers to listen:

*I liked that there was a somewhat interactive and performative aspect but also time to talk with the artist about the work she was doing and why she was doing it and so it was a nice kind of three-pronged experience (Interviewee0011)*

Presenters also noted that events fitted neatly into the cultural milieu of the Festival:

- 30 *The combination of people being there for fun and also being really seriously interested in the subject matter was very nice, it felt like people didn't see any*

*divide between having a good time and getting to grips with some serious ideas*  
(Presenter02)

Despite the perceived informality of the venue and normality of the delivery, audiences nevertheless saw events as places of rational recreation, where they could learn:

5 [The SSH is] *hidden in the forest and all the people who are getting a bit world weary of all the music might be coming across and then learning something new*  
(Interviewee0016)

### **3.3 It's all about them: audiences**

A happy audience experience is undoubtedly linked to happy presenters' experience.

10 Presenters had high opinions of their audiences, describing them as interesting, receptive, open and ready to tackle difficult topics and able to ask interesting questions:

*People obviously chipped in from the audience and asked questions during the event and then after the event I was approached by various members of the audience still asking questions* (Presenter06)

15 Audiences were happy with content at quite a high level (Fogg-Rogers, et al 2015), highlighting the value of interacting with scientists and the use of accurate, content-rich and appropriate language:

*To see someone talking there and then and be able to have questions, questions and answers, is really important* (Interviewee0019)

20 [the presenter] *unashamedly used pretty good academic language, it didn't feel as though he was spelling everything out but equally he could throw away a sentence like 'correlation does not equal causation' without having to stop and make sure everyone understood [...] he was quite rigorous about picking up on anybody who tried to steer him towards slightly erroneous science*  
25 (Interviewee0014)

This appreciation of rigour is unsurprising, as the interviews showed that audiences were people already engaged with science; a large proportion being scientists, science teachers, engineers or doctors (Sardo & Grand, 2015).

### 3.4 The power in their hands: choice

At ‘festivals-in-a-field’, such as Latitude, once audiences are inside the fence, almost all events are free. Multiple events happen simultaneously, so competition for audiences’ attention is fierce. Facing huge choice, what leads people to choose science events? For some, it was serendipity:

*We were up in the woods and we just passed by and it looked fantastic so we sat down and had a look it was great (Interviewee005)*

For some, it was more planned:

*My eleven-year-old son flicked through the one-and-a-half inch programme for the whole festival and he found this thing, and he said we should go and watch (Interviewee0016)*

Audience members recognised the science events offered emotional values of experience, pleasure, novelty and desire for knowledge:

*This is the first time I’ve been to Latitude and I don’t know much about it and I was surprised that the thing that has engaged me most of all has been science (Interviewee0018)*

*it’s always good having this kind of stuff, I mean it’s all good watching TED talks online getting information in that respect but it doesn’t really have the same effect (Interviewee0019)*

## 4 Conclusion

Including science-themed events in an arts festival is not unique; Einstein’s Garden – a ‘fizzing cauldron of experimentation where artists and scientists [wait]’ – (Green Man Festival, 2015) has been part of the Green Man Festival for several years. However, the ‘science theme of Einstein’s Garden causes a sense of dissociation’ (Venugopal and Featherstone 2014, p.79). In contradistinction, the science events at the Latitude Festival were, as we noted above, seen as ‘very normal’.

Difference is exciting and the festival context encourages audiences to seek novelty and presenters to innovate. Nonetheless, while variety is important, we found there is nothing to be afraid of in the classic format of presentation-and-questions. In a festival-in-a-field, the juxtaposition of classic presentation and informal setting worked well; indeed, it was comfortable for audiences. Science-labelled events met the same expectations as literature- or



poetry-labelled events. The simplicity mattered less than the opportunity for audiences to interact directly with scientists: to question, to converse, to proffer opinions. If audiences liked interacting with presenters, presenters found it easy to relate to confident and articulate festival audiences. The expectations of cultural exchange supported natural engagement  
5 between scientists and audiences.

CP Snow (1965), the English physical chemist and novelist, wanted bridges to be built between the ‘two cultures’ of arts and sciences. The warm response of audiences to science at the Latitude Festival indicates that bridges may not be needed; for them, science is not separated from mainstream culture. This has implications for science communication: the  
10 formats in which science is encountered should meet audiences’ cultural expectations; that is, formats that match encounters in poetry, literature and politics, not special, ‘science-y’ formats. Whether they are serious searchers or cultural dabblers, Latitude Festival audiences appear to accept science as a natural part of the cultural landscape.

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