

Review of the Science Festival Landscape for Oxford

Dane Comerford, Director of Oxfordshire Science Festival, September 2017

Summary

An independent science festival is well placed to harness growing appetites for public engagement. It can support communication of science, technology, engineering and medical subjects in new and meaningful ways and incorporate all areas of knowledge into its programming. It can expand a traditional audience base, and by identifying and working with underrepresented voices in society, it can attract entirely new audiences. A science festival, while seeking content for its programming, can also provide a networking and consultation service to the innovation sector. It can enrich Oxford as a place to live, do business and visit, and via broadcast and social media, can present to the world a new image of Oxford as *the* place where new ideas come from.

Background to activity

The Oxfordshire Science Festival (OSF: Charity #1151361) is a high-profile opportunity for existing and new audiences to explore the dynamic research and creativity in, and around, the city of Oxford. There has been a science festival in Oxford since 1992 with 500,000 members of the public visiting over the past 25 years.

There are over 30 science festivals across the UK of various sizes, operating with three main funding, logistic and curatorial models:¹

- A. Museum-led; eg. Dundee (in-person audience numbers: 12k), Manchester (120k)
- B. Quasi-independent; eg. Bristol (11k), Cheltenham and Northern Ireland (both 60k)
- C. University-driven, eg. Cambridge (75k), Leeds and Swansea (both 5k-10k)

The model for Oxford is a hybrid of B/C: ample academic, cultural and innovative content, a rich ecosystem of talent, impressive venues, a valuable 'Oxford' brand and a demanding audience. Alongside Science Festivals are various literature and thought festivals, such as Hay, TED, Festival of Ideas and BBC Free Thinking, all of which accommodate STEM subjects. The new Director has relevant extensive UK/global experience, previously Cambridge-based for 4 years. His team and Trustees recognise recent turbulence and future risks, mitigating these with a compelling Business Plan and an exciting scheme of work for 4+ years.

There has been much consultation over a date for an Oxford/Oxfordshire science festival, with October as the most appropriate time of year. Several Oxford/Oxfordshire-based festivals exist in late spring or early summer that are beginning to bring 'science' into their programming, which may play to the advantage of a science-led festival towards the end of the year. Additionally, there are events around Oxford that, even though many are free, present 'science' in a very traditional way and therefore may not appeal to new audiences.

Why apply a strategic approach to developing the science festival model?

Several factors have triggered a change of pace, including: requirements for public engagement exchange in research grants, a rising appetite for accessible science information, rapid introduction of new technologies, growth of the SME economy, skills shortages, entrenchment of social divides and issues related to Brexit.

1. **Competition for attention is intensifying.** Distinctions between public relations and journalism are blurring as media channels and consumption fragment. Although broadcasting remains a dominant force in science communication, online sources, including news websites and social networks, are growing in popularity and are more regular information sources among young adults.² A crisis of traditional business models for newspapers in a world of digital media has been one factor in the strengthening of universities' and research institutes' communication functions, now offering strategically prepared information competing for public attention nationally and globally, which professional media and universities alike see as a risk.

Research-intensive UK universities typically have 25-40 communications professionals to service several thousand research staff, with a ratio of one communications staffer for 150–240 researchers.³ By this measure,

¹ UK Science Festivals Network; sciencefestivals.uk

² Written evidence submitted by the Chartered Institute of Public Relations to the House of Commons Science and Technology Select Committee (2016)

³ Data gathered from top ten UK universities according to QS World University Rankings 2018

and assuming the 1,500 high-tech firms with a focus on R&D⁴ (a third of business in Oxford) are uniformly distributed across the entire Oxford business-size spectrum (Table 1), around a thousand tech SMEs may be unable to justify in-house communications staff.

Business size	0-4	5-9	10-19	20-49	50-99	100-249	250+	Total
Oxford	3,435	605	360	170	70	70	40	4,750
Oxford	72.3%	12.7%	7.6%	3.6%	1.5%	1.5%	0.8%	
UK	77.7%	11.4%	5.8%	3.1%	1.0%	0.6%	0.4%	2.5M

Table 1. Business by Employment size (all types), ONS (2016)

2. **Awareness of necessity is increasing.** Attitudes from the UK (academic) research community towards public engagement with science have become more positive over the past ten years, including the arts, humanities and social sciences (AHSS) community. Many researchers consider public engagement more important relative to other aspects of their roles: 37% in 2015, up from 28% in 2006 (STEM) and 52% in 2015 (AHSS).⁵ In terms of selecting an audience with whom to engage, policy-makers, general public and journalists were placed as the top three by researchers and public engagement support professionals (enablers).⁶ It is worth noting that researchers working in non-university settings such as SMEs and market research were underrepresented in these figures. Being closer to customers and commercial activities, therefore, appetite for meaningful dialogue in the private sector may also be high. Locally, some SMEs valued OSF support when developing their activities for the 2017 Science Festival, which would be subsequently used elsewhere (eg. trade shows and other public events.)
3. **Enable face-to-face encounters between people.** Often overlooked as a key communications tool, live events have flexible resource needs and can leap socio-cultural obstacles by innovative presentation of topics.^{7,8} Festivals represent the second largest 'once' experience for researchers,⁹ offering a relatively safe environment for testing out new ideas or messages meanwhile contributing an outreach, public engagement or CSR initiative.^{10,11} Knowledge transfer organisations in Oxford see huge value in a science festival.¹²
 - a) "Because we want to retain and develop our position **internally** (to Oxford) as key components of the Oxford Innovation ecosystem
 - b) "Because we want to be seen **externally** (from Oxford) as major components of the Oxford wider innovation system (not just university focused) and a gateway / primary route for international entry into the Oxford innovation community
 - c) "We want to bring our international experience and networks to support future development of Oxford as a global leading centre for tech and innovation."

By exploring cooperation with other business support organisations, such as Venturefest or OxLEP, a public-facing festival could present and stimulate discussion around some of the leading ideas and innovations generated and developed in Oxford.

4. **Reach new audiences.** Live encounters with researchers contribute most to the enjoyment of people attending events and also to the likelihood that a young person will consider a STEM career pathway.¹³ When designed to reach new audiences, live public science events successfully involve people who do not self-identify as science enthusiasts or participate in other forms of informal learning.¹⁴ Additionally, they are powerful tools for building long-term relationships with many types of communities: showing up in person when and where it works best for an audience can go a long way to building trust. This is especially true when communities are either not interested in a subject or actively avoiding it because it (can be packaged in a way that) is intimidating or

⁴ The Oxfordshire Innovation Engine Update, SQW (2016)

⁵ Exploring Barriers to Public Engagement by UK Researchers, Consortium of UK public research funders including Wellcome, Royal Society, RSC, IoP, RAEng, RCUK, HEFCE, BIS, NIHR (2015); in response to: "In relation to other things in your working life, how important is it for you to find time to engage with the public?"

⁶ Ibid.; in response to: "Which groups or sectors outside academia do you think it is important for researchers in your subject area to engage with?"

⁷ Review of informal science learning, Wellcome Trust (2012)

⁸ Science live: Surveying the landscape of live public science events (2016); eprints.uwe.ac.uk/29112

⁹ Exploring Barriers to Public Engagement by UK Researchers (2015) – see reference 6

¹⁰ University of Oxford: Public Engagement with Research Strategic Plan (2013-2018)

¹¹ National Coordinating Centre for Public engagement; publicengagement.ac.uk/explore-it

¹² Private communication with Director of Development, Oxentia (2017)

¹³ ASPIRES project (2009-2013) kcl.ac.uk/sspp; ASPIRES2 project (2013-present), ucl.ac.uk/ioe

¹⁴ USA Science Festival Alliance report 2009-2012 (2013) sciencefestivals.org

threatens their identity. The British Science Association (BSA), working with the Kings College London Culture Tracking survey, identified four groups of adults with differing relationships with science: Table 2.¹⁵

Group	Relationship with science (UK adult population)	2015	2016
A: Committed	Professionals who produce or curate scientific knowledge	9 %	8 %
B: Enthusiastic	Enthusiastic about science, actively seek content / events	13 %	15 %
C: Interested	Open to science but make no particular efforts to engage	52 %	53 %
D: Distant	See science as not for them (as is usually packaged)	26 %	24 %

Table 2: Groups of people with distinct relationships with 'science'; survey size: 2091 adults.

Science Oxford and other organisations have an extensive schools programme together with a range of out-of-school activities. These take place across Oxford, reaching children from families with and without an existing science connection. A festival designed for adults / families may improve the environment for engagement with science in the home and, by coordinating efforts across multiple years, enhance the effectiveness of what goes on throughout the year.

Oxford

Over 350 people were involved in producing the 2017 Oxfordshire Science Festival, including 275 researchers from a range of research, industrial and charitable organisations. Seven financial sponsors and 19 other independent contributing organisations (including several SMEs) shared their work with a large and interested face-to-face audience.

Around 8,000 visitors came to 34 Science Festival events 16-21 June 2017 held in a dozen venues, with 77% visiting the Festival for the first time. Our activities included:

- talks, discussions and debates including **Richard Dawkins** and **Yan Wong**, **Tom Kerridge** and **Susan Jebb**, and **Emily Mayhew**, **Harry Parker** and **Ross Moy**;
- a hands-on science 'Explorazone' with 33 different exhibits (with adult-only entry on Saturday evening, when there was a cash bar and entertaining Theremin music);
- several live art interventions across Oxford city centre including a two-metre periscope backpack and a scientific photography exhibition in University Parks;
- a schools science poetry competition that received over 400 entries; and
- **His Royal Highness The Prince of Wales**, unable to be present, made a short video message that was screened during a conversation between the Festival Director and **Tony Juniper**.

Over half of attendees to ticketed/paid events came from Oxford (52%) or Oxfordshire (69%) with London as the next most frequent home for ticketholders. In exit surveys, 85% of visitors rated the event they had attended as 'good' or 'very good'. The Festival website had around 35,000 page views from bookings opening on 3 May to the end of the Festival and made 80,000 Twitter impressions during the same period. Despite attracting a more varied demographic in 2017 compared with 2016 (Figure 1), there is more to be done to attract a more complete Oxford Festival audience.

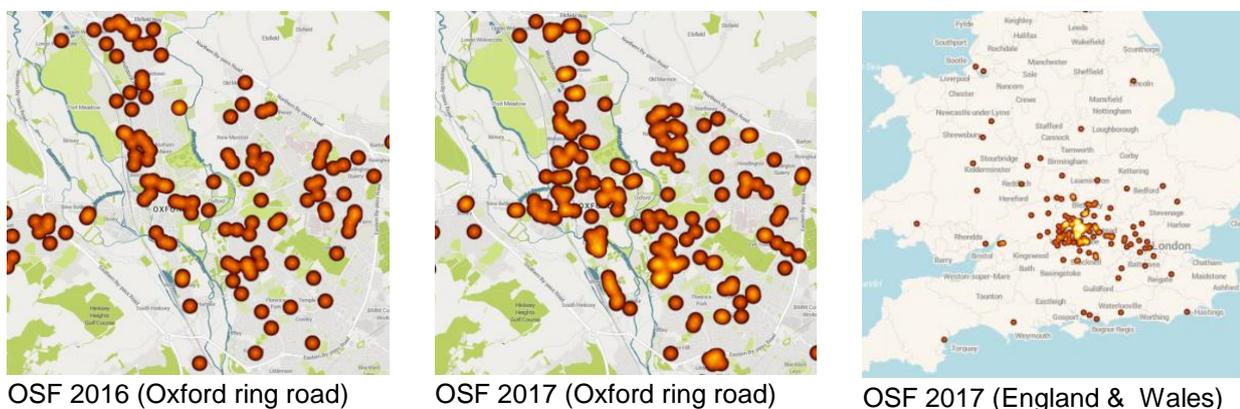


Figure 1: Audience residential heat maps for pre-booked events at Oxfordshire Science Festival: unique postcodes display as a single (darker) data point, overlapping data points are brighter and represent greater unique audience numbers. More attendees came to OSF2017 from within the Oxford ring road compared with OSF 2016; national coverage was equivalent for both Festivals 2016 / 2017.

¹⁵ Leading Science Communication in a Changing World, BSA (2017)

Vision

The Festival should stimulate and meet the needs of the City-region by approaching science communication in a much more responsive way. It could highlight local examples of research and package them in ways relevant for mainstream and targeted groups of people. These audiences and methods are described in the **Business Plan**, and may include partnering with the City Council Locality Officers to run Festival planning workshops in south east Oxford; or working with business support organisations to develop an autumn innovation conference.

OSF can find and celebrate the best of what Oxford has to offer. It will build the existing mainstream audience base by intensifying the marketing effort related to quality Festival events, experimenting with new event formats and attracting more high-profile speakers to Oxford. Follow-up activity for this audience group may include extension or skills development directing people consider STEM qualifications.

OSF can expand the Festival's audience profile and diversity of content by finding ways to develop events with and for underrepresented audiences, working with distinct groups to develop activities throughout the year to feature within an annual celebratory festival window. Compared with mainstream programming, this will represent a smaller audience size, but investing in such an audience platform would be a valuable outlet for many of our partners.

OSF can combine market research and business intelligence services to identify and generate new innovation case studies for festival activity. We anticipate a relationship of trust and confidence with the Festival will encourage people (contributors and audiences) to experiment with other subject areas, and within and between BSA Groups A, B, C and D (see Table 2; Figure 2.) This should increase openness to explore new science and innovation subjects, enrich the SME sector¹⁶ and open pathways for underrepresented communities to enter the STEM careers market.

Festival stakeholder priorities are therefore proposed to be:

- Developing a quality festival for new and existing audiences (groups B/C; see Figure 2)
- Extending the catchment of two harder to reach groups:
 - the innovation sector, supporting their profile and recruitment needs (BSA Group A)
 - those communities not fully engaged, or actively disengaged with research and innovation (D)
- Mainstream and specialist media and culturally connected Oxford residents and visitors (B)
- Opinion-formers and policy makers outside the region and other cultural providers anywhere (B)

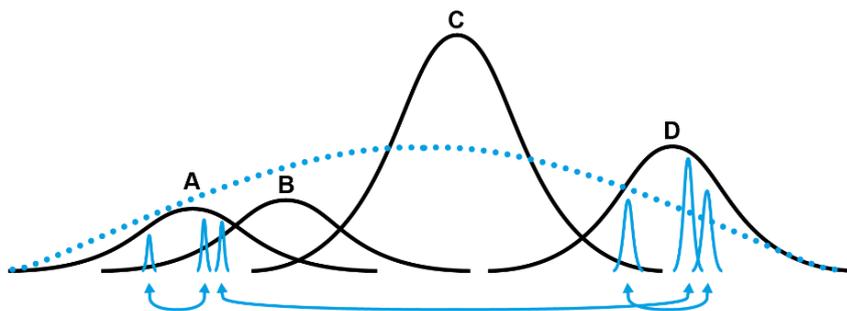


Figure 2: (Black solid curves, illustration of Table 2) Normal distributions of four populations with different relationships with science A: *Committed*, B: *Enthusiastic*, C: *Interested*, and D: *Distant*. (Blue solid curves) Communities within society that could be brought together once common interests are identified. (Blue dotted curve) A broader relationship with research and innovation with science repackaged appropriately.

¹⁶ Enriching the Ecosystem, Harvard Business Review (2012) hbr.org/2012/03/enriching-the-ecosystem