SCIENCE FESTIVALS

Celebrating Science as Culture

Lawrence M. Krauss

Even as many of us bemoan the sorry state of scientific literacy among the general population, the public nevertheless remains fascinated by science. The proof of this is the remarkable success of a relatively new phenomenon cropping up in cities around the world: science festivals. From Genoa to Edinburgh, from Ireland to the United States, such gatherings of scientists and the public are drawing hundreds of thousands of visitors, who are treated to everything from popular lectures to science-related operas. For periods ranging from a weekend to a full week, cities are transformed into places where science briefly attains what should be its natural place in popular culture.

This year witnessed the newest, and perhaps flashiest, entry into this club: the World Science Festival in New York City (*1*, *2*). Named with characteristic American hubris, the activities in New York were as much a "world" festival as baseball's "World Series" is a true world championship. Never mind that, though. During 4 days (Thursday, 29 May, to Sunday, 1 June), some 42 sold-out events, at over 20 locations around the city, drew some 25,000 people, and an estimated 100,000 people attended the festival's science street fair that weekend. Given the media clout of New York, and the efforts of the two chief festival organizers (mathematician-physicist Brian Greene and his wife, Tracy Day, a former TV producer), attendees were treated to events that included scientist-presenters as well as Hollywood types—from Sam Shepard to Alan Alda, who himself played a major role in helping organize and promote the festival.

The organizers scrambled to put together a program at what seemed (from a participant's perspective) to be a nerve-racking last-minute pace, but all of this was invisible to the paying public. The event I appeared in was tightly produced and choreographed—a general characteristic of the polished and entertaining menagerie of performances, readings, panel discussions, and lectures that made up the festival, which led to rave reviews from critics and audiences alike.

The New York festival differed from many of its European counterparts by charging up to $40 for a single event, whereas many of the European events were free or had minimal entry fees. But for New York audiences used to spending hundreds of dollars for Broadway plays and concerts, the ticket prices proved to be no barrier. And this is what makes the science festival phenomenon so exciting. Each one seems to be naturally tailored to the cultural milieu in which it is produced.

Lining up for science. After all 680 seats for the World Science Festival's event "Invisible Reality: The Wonderful Weirdness of the Quantum World" were reserved, more than 300 people waited for extra tickets or no-shows.

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Over the years, I have been fortunate enough to participate in five festivals: the Genoa Science Festival (*3*), the Trieste International Science Media Fair (*4*), Science Week Ireland (*5*), the Edinburgh International Science Festival (*6*), and New York. The New York festival was patterned on that in Genoa, Italy, one of the oldest and most popular. In a city of merely 300,000, each year over 250,000 visitors enjoy at least one of the events taking place in palaces, churches, art galleries, and concert halls sprinkled throughout the city (so Genoa is literally taken over by the festival). When I arrived to present my lecture, I was flabbergasted to find over 1000 people who had been waiting for up to 2 hours to enter the hall. What all of these science festivals have done is to let people indulge their natural inner fascination with the world around us in a context that is neither intimidating nor culturally remote, as a university lecture hall too often seems.

What works particularly well—and was common to Trieste, Genoa, and New York—is to intersperse very different types of standard events (like lectures and panels) with musical compositions or storytelling and to ensure that each day there are hands-on activities for children. Both Genoa and Trieste set up central halls with interactive exhibitions for kids that remained open throughout the festival.

Probably the biggest concern, which each festival dealt with in different ways and with varying degrees of success, is to try and ensure that the science does not get completely subsumed by the spectacle. A similar problem occurs in many science museums, where the effort to demonstrate that science can be fun sometimes gives the sense that it is primarily a series of experiential games. Properly conveying the process of science is the hardest aspect of popularization, but it may also be the most important.

Every major urban center boasts concert halls, art galleries, and theaters. In forcing us to reexamine our place in the universe, science is fundamentally no different from music, art, and literature, and it should be equally integrated into our cultural fabric. All should be celebrated for demonstrating the unique features of the human intellect that make up what we commonly refer to as culture.

Music festivals, film festivals, and art openings are so common as to be unremarkable. It is high time that our scientific cultural heritage was similarly experienced as entertainment, worth devoting one's weekend to enjoying. One can only hope that science festivals will become so varied and so common that no one would feel it necessary to remark upon their existence in a magazine such as this.

The author, who was on the advisory board for the World Science Festival, is at the Center for Education and Research in Cosmology and Astrophysics, Case Western University. This month, he is moving to the School of Earth and Space Exploration, Arizona State University, Box 871404, Tempe, AZ 85287–1404, USA. E-mail: lawrence.krauss@asu.edu

References and Notes

1. www. worldsciencefestival.com.
2. AAAS is among the World Science Festival's 23 program partners.
3 http://festivalscienza.it.
4. www.festrieste.it.
5. www.scienceweek.ie.
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