

Café Scientifique—Déjà Vu

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Is the Café Scientifique a fashionable by-product of a comfortable age or an indicator of the changing relationship between science and society?

The Café Scientifique is defined as a place where, for the price of a cup of coffee or a glass of wine, anyone can meet to discuss the latest ideas of science that are impacting society. Launched in Leeds, UK in 1998, there are now 180 Cafés Scientifiques worldwide, with 30 of these held in the USA and Canada. From Japan to Argentina, from South Korea to Bangladesh, Café Scientifique provides an opportunity for scientists and the public to meet face to face in a congenial atmosphere to discuss scientific matters.

ence—finds a suitable venue, usually a café-bar with a side room. The Café Scientifique meeting is arranged during a quiet period, often a Monday or Tuesday evening and perhaps once a month. The venue is usually free because the audience buy drinks, and the average number of people attending is around 50.

The organizer or organizing committee select a scientific topic and invite the speaker, usually an academic scientist from the local university or an author of science books. The topics all have a scientific basis

dead?), historical (coffee houses and the rise of science), cutting edge (can machines imagine?), relevant (bird flu: what can we do?), or problematic (the evolution of human cooperation). My experience is that it is usually not difficult to get scientists to talk about the subject of their research or a topic that they have written about. However, it has proven harder to find someone to discuss a scientific issue that is currently in the news, such as the recent debate about what constitutes a gene.

Usually the invited speaker talks for about 20 min without any visual aids, followed by a break for drinks and then questions and discussion for about an hour. Although the discussions are often in café-bars, they can take place anywhere outside of an academic context—in wine bars, theaters, bookshops, shopping malls, restaurants, pubs, and, in Poland, even in woodland glades in the summer (see Figure 1). A unique characteristic of the Café Scientifique is that changing the venue changes the tone and nature of the discussion. In a lecture theater you expect to be lectured to, in a café-bar you expect to discuss scientific matters on equal terms, and that is what people like.

The audience is usually informed of the event by email, and possibly a poster in a library or other local venue. The only expense is the speaker's travel, and this is paid for by voluntary contributions from the audience (a hat is literally passed around—le chapeau scientifique). All the Cafés are run locally. Although there is a website (<http://www.cafe-scientifique.org>) and a discussion list, as well as a list of possible top-



Figure 1. Café Scientifique Goes Global

A café in Hokkaido, Japan, called Pa o8oo64 (left), and a café at Kashubian Lake in Poland called Biblia (right). Photos courtesy of Duncan Dallas (left) and Marek Kulczykowski (right).

How are the Cafés organized and where do they take place? The format, finances, and organization are simple. An organizer—either a scientist or more usually a member of the public who is interested in sci-

and usually have relevance to everyday life. The topics can be controversial (the science of belief), intriguing (the future of alchemy), political (the collapse of healthcare research in the UK), informative (Mars, red or

ics, there is no bureaucracy or top-down central organization.

With this loose structure, what would prevent someone with a political or antiscience agenda setting up a Café to spread their own opinions? Their topics of choice would give away the agenda and once that was established their meetings would not be posted on the website and the discussion list would warn people. In the same way, if one person tries to impose themselves in a Café discussion, the audience respond by laughing or ignoring them.

The Café Scientifique does not have a remit to promote science. The aim is to discuss and question, in an open-minded manner, how science is being practiced and the consequences of scientific research. Thus, the audience is not made to feel that there is a hidden agenda, either for or against science. It is left to audience members to make up their own minds.

What works best? Most Cafés discourage Powerpoint slide presentations because this tends to provoke a series of text images suitable for a lecture class. When the scientist is just using the power of the spoken word, then the audience feel more on equal terms and not overwhelmed with outside material. This may be more difficult for the speaker, especially a mathematician, but it helps to crystallize the main points of research in everyday language, always a good mental discipline. Another aid to a successful event is if the speaker has a controversial thesis to express and sticks to the argument all evening. I remember the author Rachel Carter talked about brain imaging at a UK Café. She concluded boldly that the data suggested that humans may be self-deluding robots. This produced a lively discussion and disagreement from audience members and opened up the subject in a revealing and dramatic way. In this way, the audience come to realize that science is not just a body of knowledge but is a process of enquiry that is constantly challenging received wisdom.

Probably the most popular subjects for Cafés are those where the

audience feel they have some experience to contribute—subjects such as medicine, psychology, pharmacology, and genetics. But it is often difficult to predict what sparks the imagination. After rather a long struggle, I found someone from the local mathematics department at the University of Leeds, UK to talk about infinity and, to my surprise, the audience found it fascinating and continued talking about it late into the evening. At other times, it is not always obvious which way the discussion will turn. For instance, a talk about research into female promiscuity among some bird species led to a long discussion about whether one can carry over ideas from animal behavior into human society.

Those who participate in the Cafés want to have a stimulating and entertaining evening. They learn to be open minded yet also have the opportunity to question any ideas expressed. The break for drinks after the talk is helpful because audience members can discuss the talk among themselves and feel more confident about posing questions to the speaker—unlike a lecture, where people often feel inhibited about asking questions in case they look stupid. Although some scientists have to be coaxed to speak at a Café, they usually say that they have enjoyed the event. Often scientists don't have the opportunity to address open-minded and attentive groups in a relaxed environment.

One great advantage of having a network structure that is locally independent but informed via the Internet is that individual Cafés can take initiatives that are inventive, instructive, and often witty. In Belgrade, they bake a cake representing the topic of each monthly talk—when the subject was evolutionary biology, the cake was an Australopithecus! In Rio de Janeiro, the Café joined up with a Samba group to produce a scientific theme in the Carnival and won second prize. In Denmark, they always have two speakers, a scientist and an artist, so that a complementary view of the subject is on hand. In France, they are often wary of giving one view of any subject, such as global warm-

ing, so there are often four speakers with each speaker only given a couple of minutes to introduce themselves before the audience pitch in with questions. In Argentina, Cafés have been held in the Parliament building, and in the UK, the Leicester Café produced a cabaret evening at the local comedy festival.

Some people think that the Cafés are science education, others consider them science communication, and yet others think of them as public engagement. I prefer to think of them as a cultural investigation of science. My experience of them has been that the interesting part of the evening is during the questions and discussion, after the talk. It is impossible to find good speakers on every science topic, especially good speakers who are knowledgeable about the subject. But provided the subject is interesting and relevant, and the speaker is well informed, it is the audience who make the evening. In an academic context questions are fairly narrow, but in the Cafés questions come from a much broader front, making speakers think on their feet. Most speakers are slightly wary of this arrangement and may feel anxious about the discussion, but by the end of the evening they have enjoyed the event and are often surprised at how perceptive the audience is. This provokes the kind of discussion and debate that make the evenings unexpected and unpredictable. Whenever the subject addresses the audience's experience—whether it is hormones, the neuroscience of déjà vu, or biological clocks—then the cultural fault line between science and society is discussed, explored, and negotiated.

Rapid advances in the biological sciences are creating dilemmas for the present generation, but future generations will face much tougher choices. So five years ago, in France, the idea of the Café Scientifique was imported into schools and has proved a success. There are now about 100 Junior Cafés in France, and they are springing up in the UK and USA as well. The principles of

the Junior Cafés are these: the pupils choose the subject and organize, advertise, and chair the meeting. The meeting must not be held in a classroom—it can be held anywhere else, the canteen, library, common room. Speakers usually come from a local university, and the meetings take place at lunchtime or after school. As one teacher in France said, “What surprised me was that the best questions came not from the geeks, but from the long-haired rastas.” Finding out what attracts teenagers is tough but subjects such as “The Physics of the Matrix” and “Can Men Have Babies” have proved popular. The important point is that the Junior Cafés are not debating societies, with a formal structure, but rather present discussions on topics of current relevance. A study by London’s Science Museum reports that children prefer to choose subjects that can be discussed. Bringing discussion back into the science curriculum to complement rote learning might encourage more pupils to study science at university.

The Café Scientifique was not founded to defend science, and I

think the audience recognize there is no underlying agenda to debate. Rather the Café Scientifique is a way of engaging scientists and the public in open dialog. It has crystallized an agreeable format that is not top heavy. I believe it is a symptom of a real change between science and the rest of our culture because Cafés are spontaneously springing up around the world—there is no guru, no political theory, no vision statement, no PR companies, and no profit. Science is universal but the cultures are unique, and that is why different initiatives take place in different countries. One of the most interesting recent developments is a Muslim Café in an ethnic area of Blackburn in the north of England. The conversation is in English and the Café is run by a young Muslim woman who is not afraid to take on highly contentious subjects. The first two meetings addressed transplant surgery (problematic for any religion that believes in bodily resurrection) and evolution. Although there were murmurs from some that these subjects are part of doctrine and not open to discussion, the meetings passed off well. If Café

Scientifique extends to the Islamic world it could make a difference there. Another intriguing idea from the Café in San Diego is the idea of setting up an Internet Café TV station, where people could record their meetings and those in developing countries would get the chance to eavesdrop on (and perhaps participate in) Café meetings.

Science no longer can rely solely on government support, it needs the support of the public as well. Otherwise science will continue to suffer in the wake of health scares, technology breakdowns, and fierce ethical debates swirling around, for example, cloning and human embryonic stem cells. Science has lost control of the discussion of science, and over the next decade there are going to be many more interactions between scientists and the public. Café Scientifique is a step toward bringing scientists and the general public together in a friendly environment to discuss the big scientific issues that concern us all. Perhaps Café Scientifique can be viewed as a barometer of the changing relationship between scientists and the general public.