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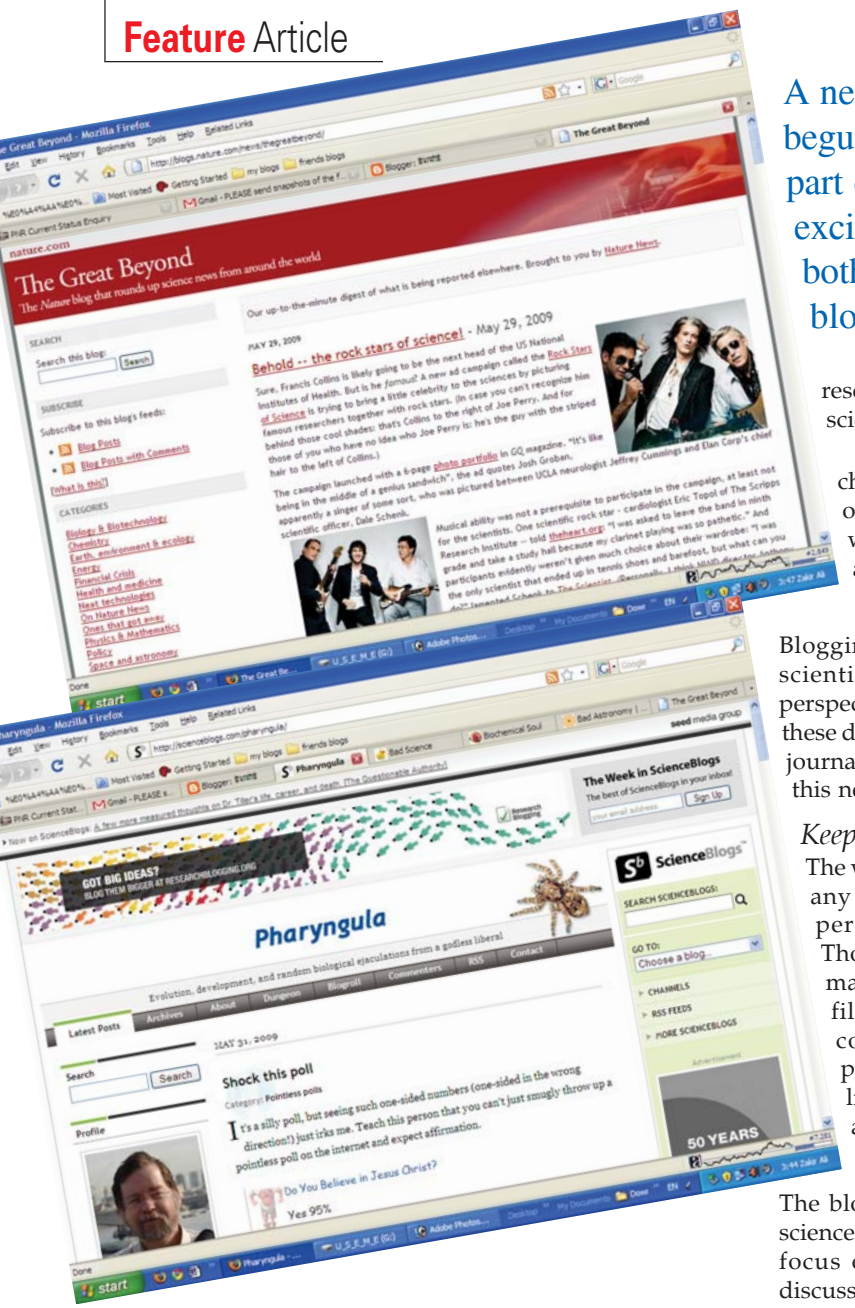
Communicating Science Through Science Blogs

A new era in science communication has begun through the creation of science blogs. Hop on to the bandwagon, before you get left out, and make a mark for yourself.

THE Internet has dramatically changed the very nature of dissemination of scientific knowledge to the common public over the past few years. Online journals like PubMed Central (http://www.pubmedcentral.nih.gov/) and PLoSBiology (http://www.plosbiology.org/home.action) have now become as respected as any print journal in the concerned fields. Moreover, now researchers do not send requests for paper reprints any more, as they can easily log on to their online libraries and download the required material.

Many search engines now bring to one's fingertips almost everything published in science practically as soon as it is published online. Google search engine is increasingly and appreciably allowing people not affiliated with big universities to find literature online. There is a growing trend of more and more journals coming up with their online editions. In this backdrop of a very varied and



A new era of science blogging has just begun. Many of you might like to be a part of this revolution. So welcome to the exciting new world of science blogging, both as an audience and as a science blogger!

vast scenario of scientific activities on the Internet, the advent of science blogs heralds a new era in science communication.

What is a Science Blog?

There are as many definitions as there are science blogs. But in general, science blogs could be defined in two ways: by topic matter and by authority of the author. A science blog is one that always, often, or at least sometimes covers science as a topic or one that is written by a person with some expertise in science like a practicing scientist, a science student, or a science journalist.

A blog is a personal web diary but science blogs specifically contain a high percentage of posts on scientific topics. In other words, science blogging is writing mostly about science. Some are written with the lay public in mind, while others for only peer group scientists, detailing even minute details of a particular subject or experiment or research. Therefore, any person with some expertise in science can write a science blog.

The essence of science blogging is to provide a chance for scientists to communicate the functioning of their part of science directly to the public. But whether every scientist should blog is a debatable point and a matter of choice as well.

Why Science Blogging?

Blogging science to the general audience does help the scientist to present his research work from a broader perspective. Science blogging is rapidly gaining momentum these days even on the risk of supplanting traditional science journalism. The reasons for the overwhelming success of this new venture are many:

Keeps Abreast with Scientific Research

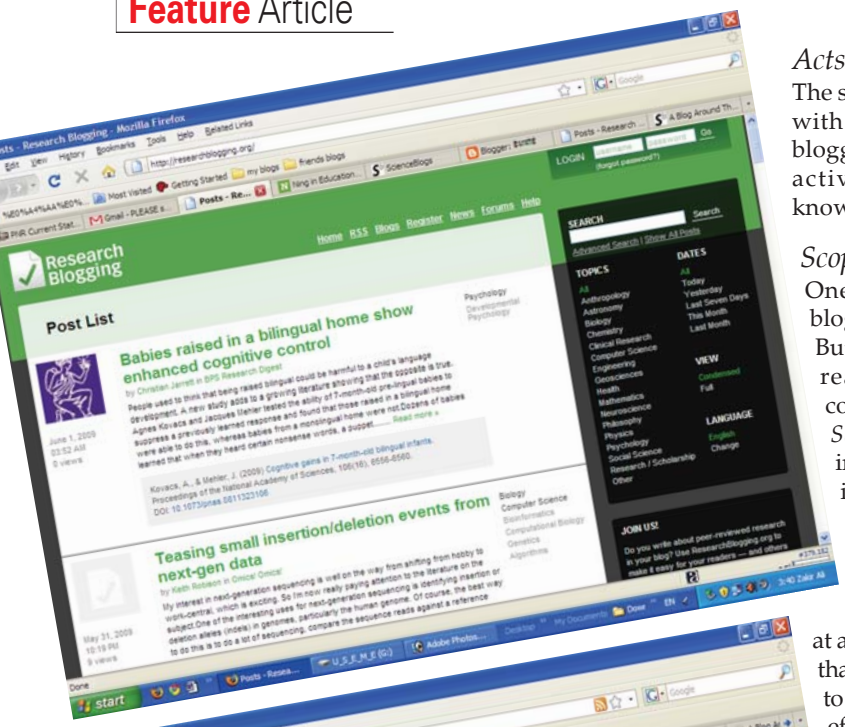
The world of science is changing at a fast pace. How could any one afford not to remain up-to-date on the most pertinent or meaningful developments in science? Though the mainstream media gives a lot of headline-making stories, much still gets left out. Science blogs fill up the gap. For example, ResearchBlogging.org collates those blog posts that deal directly with primary literature. Obviously, reading primary literature of any discipline is of prime importance for any beginner.

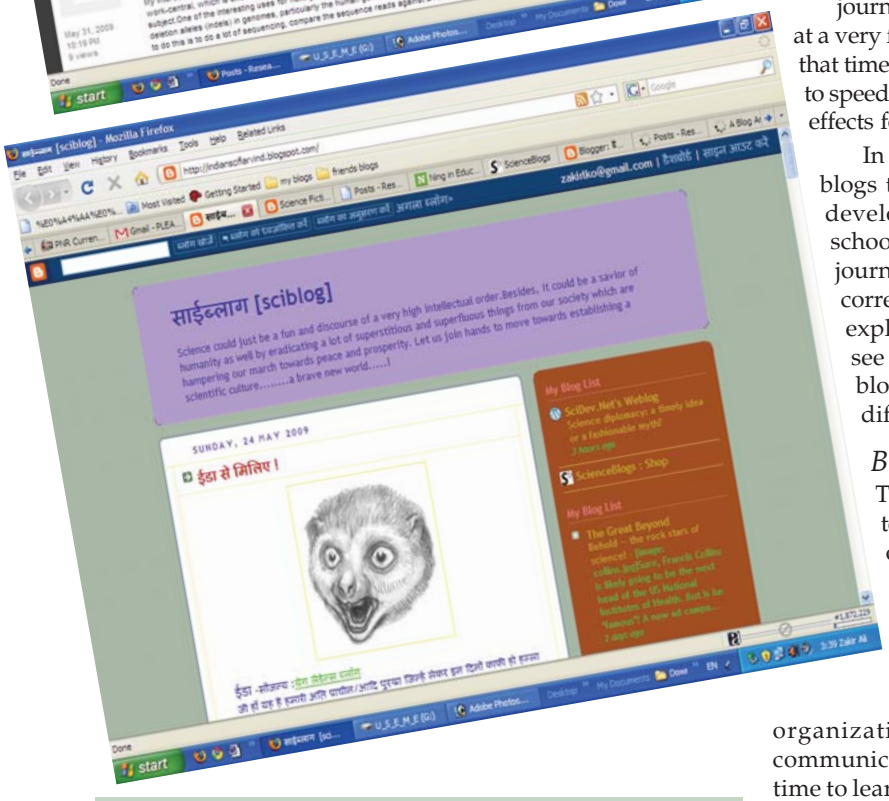
Acts as Powerful Communication Media

The blog is an interactive medium. The advantage of the science blog as a medium of information dissemination is its focus on the interaction with the reader and ensuing discussion. This is usually resorted through the "comments" section of a blog post. The conversations often evolve into multiple posts across the blogosphere that encompasses all cross-referencing and interacting with each other, generating multiple discussions in due course of time. Instead of being a passive receiver of scientific knowledge, the audience takes active part in the ongoing discussions and debates on the implications and relevance of the issues in question.

Maintains Presence Within Science Community

As science blogs are the personal expressions and opinions of the blogger, one can often read posts dealing with current issues and hardships that exist in the academic world. Science blogosphere is a true community. In many respects, being a part of this community has become one of the most rewarding experiences for anyone interested in science communication. Blogs are an excellent way of continuously maintaining a presence within the science community and contributing to the enrichment of the scientific thought.





Blog Terminology

- WeB + Log = Blog
- Blogger – person who blogs and maintains his/her blog
- Blogging – the act of creating a blog
- Blogrolling – moving from blog to blog
- Blogrolodex – a listing of other blogs
- Blogorrhea –Reading/writing hundreds of posts per day about anything
- RSS – method of sharing updates online
- Aggregators- Tool to check sites at pre-determined times

Acts as Pro-science Activism

The scientific community is usually in a never-ending battle with many prevailing superstitious beliefs. The science blogging community, in fact, plays the role of pro-science activism. Science bloggers share their passion and knowledge with the rest of the world.

Scope Not Limited to Virtual World

One might get the impression that the online science blogging community is restricted to the virtual space only. But it is not true. In reality, most science bloggers have readership connections not only within the virtual community but with the real world as well. An event like *ScienceOnline09* (http://www.scienceonline09.com/index.php/wiki) conference held in North Carolina, USA is a pointer to this fact. The entire conference was dedicated to science blogging, writing, journalism, and education through online media.

There are studies which indicate that science journalism is in decline and science blogging is growing at a very fast pace. But can one replace the other is a question that time will only answer. It is expected that blogs are going to speed up the internationalization of science, with positive effects for both scientists and public worldwide.

In future more and more people would access science blogs to make themselves aware of the latest scientific developments. Science teachers in middle and high schools will have information at their fingertips. Even journalists will increasingly access science blogs to find correct information about a topic that requires scientific explanations. Random blog surfers will pop in and see some really cool science-stuff. The best science bloggers will be able to also write well, translating difficult science into ordinary language.

Blogs Act as Teaching Tools

There is a growing trend among some of the best teachers to use blogs and similar social media-like online sites like *Nings in Education* (http://education.ning.com/) as tools to supplement classroom teaching. Many teachers are now willing to give advice to fellow teachers on using these new pedagogical tools to add to science teaching.

There is now a growing trend in various organizations to get more involved in online science communication. The new generation devotes most of its time to learning, chatting, and meeting online. Children and kids practically run their lives through the Internet. Science blogs are, therefore, an excellent way to keep the new generation informed of the latest scientific research. Science blogs can reach out directly to the public, without the role of unreliable media intermediaries any more.

Act as Future of Science Communication

Science bloggers can often do a very good job of science news reporting. Whenever there is a great news story in prestigious science journals like *Science* or *Nature*, a science blogger could present the subject in a non-technical manner. Here, bloggers may even excel and outperform the traditional science communicators. Science bloggers can even do investigative journalism.

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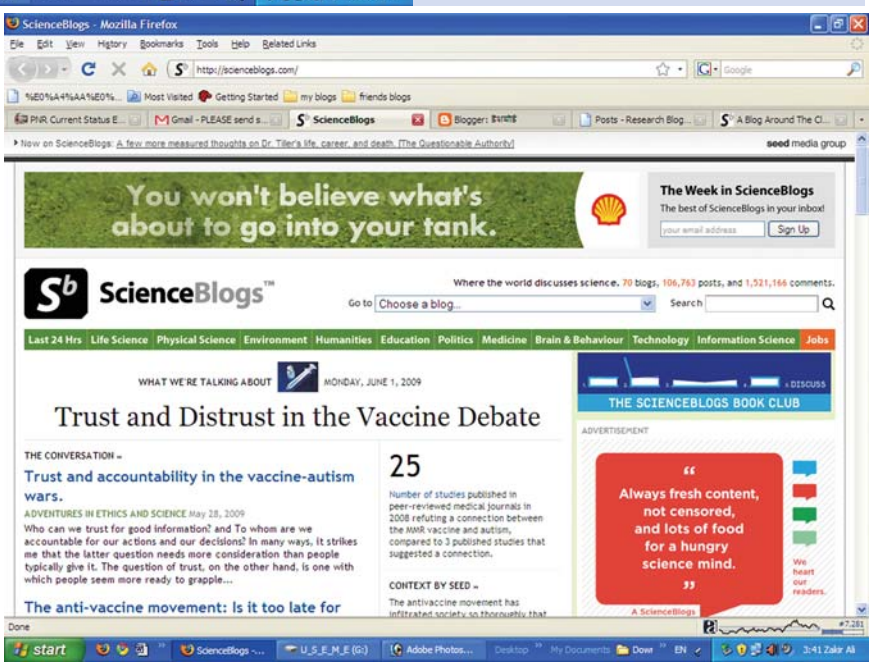
There is a strong possibility that science journalism may be largely replaced by science blogs in the near future. Science bloggers are much harsher critics of research details than journalists who generally do not understand the intricacies with sufficient detail to present a good critique. Science journalists (at least as we have traditionally known them) are being made obsolete by science bloggers in advanced countries. That is not to say that blogging can or should replace journalism, but good science journalism needs to evolve as it becomes complemented by the growing community of science blogs.

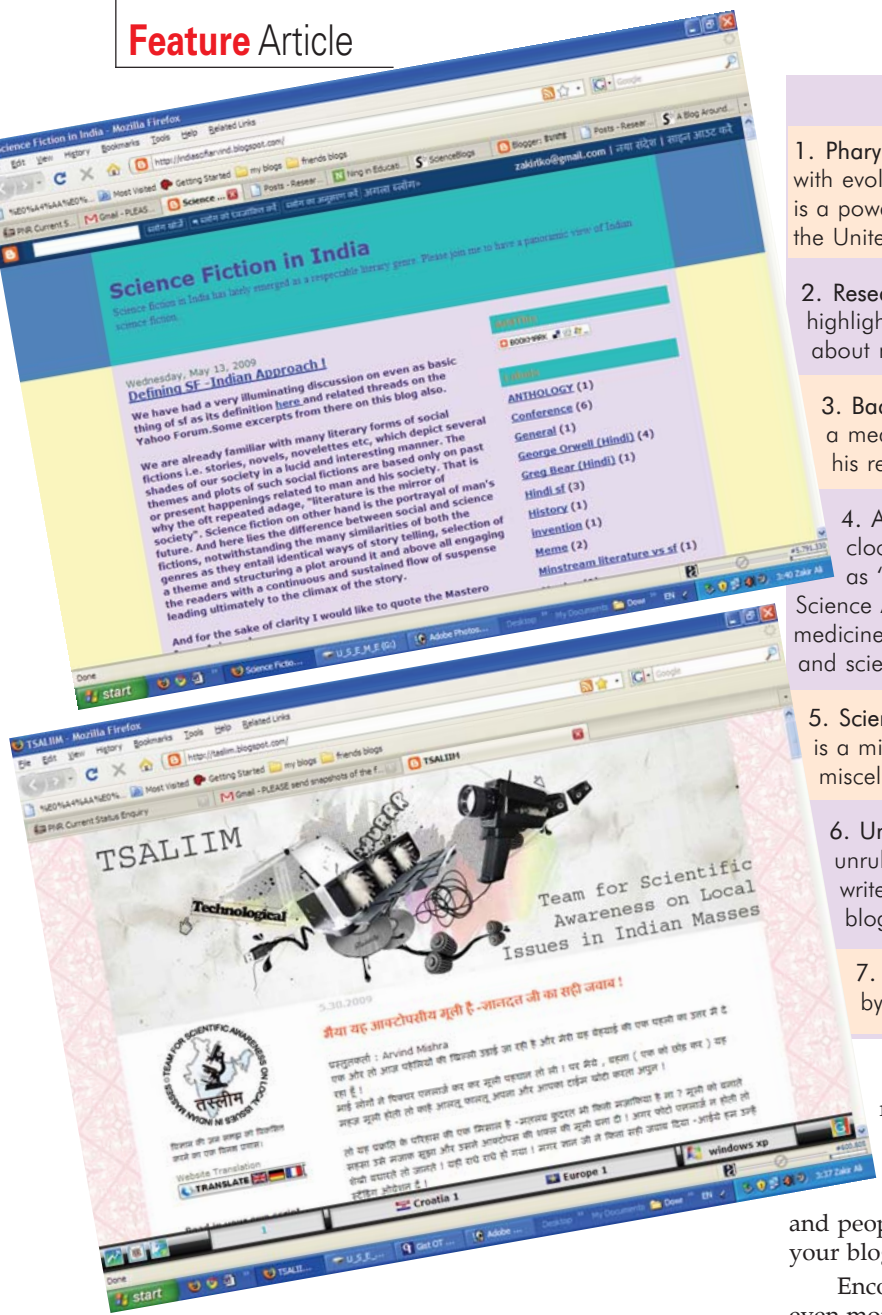


Facets of Science Blogging

If you are a scientist and want to blog about your own science or issues facing scientists you could resort to science blogging. Likewise if you are a science journalist and intend to report on science in a way that is different from conventional publications you could blog. You could also go for science blogging if you are a political commentator, monitoring science policy and its potential impacts. All these disciplines come under the umbrella of science blogging. However, you need to first choose a subject for which you are both passionate and knowledgeable about.

Another question of relevance here may be how regularly should you blog? The answer is *every day* as the audience wants to feel the blog alive, and frequent posts exhibit this. Minimum posts may be twice a week. A group or community blog can also be set up. But this may be a tricky deal, unless the group shares a clear sense of purpose and similar attitude. One successful example of this approach in our country is the Science Blogger Association of India (http://sciblogindia.blogspot.com/).

Each post does not have to be a thousand words of carefully argued and finely crafted prose. In fact, quite the reverse is true as the posts are like having a conversation with the readers. Videos, pictures and graphics can be even more interesting. Some bloggers even add their own photographs or videos. A successful community science blog is Tsaliim-Team for scientific awareness on local issues among the Indian masses (http://tasliim.blogspot.com/), which is managed by an autonomous organization, popular for its penchant for science puzzles and riddles.



Some Indian science blogs, managed by the author of this article, are Sciblog (http://indianscifiarvind.blogspot.com/) and Science Fiction in India (http://indiascifiarvind.blogspot.com/). Content wise both are solely oriented to the common public and present the panoramic view of science in general and the world of science fiction in particular. A science blog aggregator of much importance is ScienceBlogs (http://scienceblogs.com**),** which highlights the important science blogs on a daily basis.

Blogging Away

The Internet offers a wide variety of blog software with user-friendly guides like Blogger (https://www.blogger.com/start), Wordpress (http://wordpress.org/) and Typepad (http://www.typepad.com/). Though limited bandwidth and Internet access in some areas of the developing world like India may be a limiting factor for blogging, once you have your blog ready and running, you will need to get the audience.

Bonanza for Beginners

1. Pharyngula (http://scienceblogs.com/pharyngula/) deals with evolution, development, and other biological issues and is a powerful pro-science voice in the creationism debate in the United States.

2. Research Blogging (http://researchblogging.org/) highlights the posts of its registered users when they write about new journal papers.

3. Bad Science (http://www.badscience.net/) is written by a medical doctor, Ben Goldacre. His conversations with his readers often generate ideas for future posts.

4. A Blog Around the Clock (http://scienceblogs.com/clock/) is written by Bora Zivkovic, better known online as 'Coturnix', and is a fusion of his three old blogs: Science And Politics, Circadiana (chronobiology and medicine of sleep), and The Magic School Bus (academia and science education).

5. Science and Politics (http://sciencepolitics.blogspot.com/) is a mix of science, politics, blogging-about-blogging and miscellaneous stuff.

6. Unruled Note Pad (http://unrulednotebook.wordpress.com/) is by Arunn who also writes in Tamil at Ommachi and Ariviyal, both science blogs in Tamil.

7. Biochemical Soul (http://biochemicalsoul.com/) is by Daniel D. Brown on science, nature, and evolution.

This can be difficult to begin with. There are a number of things you can do, and the key is 'linking' as you need to include many links in all that you post. This helps with 'search engine optimization', as it helps search engines understand your blog, and people searching for your topic are more likely to find your blog.

Encouraging links from other sites to your blog may be even more important. You can do this by leaving comments on other blogs of your interest and sites you like, which include links back to relevant posts on your blog. You can also show a list of other blogs you like, which is called a blog roll. You may also send details of your blog to Technorati (http://technorati.com/), which acts as a search engine specifically for blogs. If you wish to blog about peer-reviewed research articles, you could register with Research Blogging (http://researchblogging.org/), a website that highlights the posts of its registered users when they write about new journal papers.

In a nutshell, a new era of science blogging has just begun. Many of you might like to be a part of this revolution. So welcome to the exciting new world of science blogging, both as an audience and as a science blogger!

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