

Science Plays: Creating a Legacy at AIR Kolkata

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Abstract

The present paper traces the history, development and idiomatic techniques for the Science Plays which have been written and produced over the years at All India Radio, Kolkata Station. It is a combination of historical and aesthetic research.

Keywords: AIR, Science Plays

Introduction

Practitioners of science, imbued with true scientific spirit, has long been lamenting that scientific culture has not been able to secure a foothold in this country. Professor Shyamal Sengupta, speaking at the Indian Institute of Science Education and Research (IISER) in 1999, narrated some essential features of this culture. Prof Sengupta holds that *'The emergence of ... an objective mind is an important contribution of science to human culture. To such a mind facts are sacred and statements based on facts are the only ones worthy of examination.'* India's scientific community and the so called lay people have rarely shown an interest to be the owner of such objective minds. Narrating an anecdote from yesteryears he cites the case of Nobel laureate Subramhanyam Chandrasekhar who was requested to become chairman of the Atomic Energy Commission after the death of Homi Jehangir Bhaba. After visiting several scientific establishments in the country Chandrasekhar declined to accept the offer saying that lack of funds is not the problem but the atmosphere is thoroughly discouraging. This lack of encouragement

springs not only from the narrow vision of the administrators of science in the country but also the general disinterest to appreciate the spirit of science. Trying to sound positive in his concluding remarks Prof Sengupta commented, ‘*Some day in the distant future, we hope all cultures of the world would free themselves of elements of faith which contradict the objective knowledge of science. ...*’ But his hope actually lays bare the unscientific attitude of our society.¹

Long before this speech was delivered at IISER Kolkata, the first Prime Minister of the country, Jawaharlal Nehru coined the term *scientific temper* in his phenomenal book *The Discovery of India* in 1946. It was not a coinage by chance. That Nehru strongly believed in the need for building up scientific temper in the society was reflected in his actions. He volunteered to become the first President of the Association of Scientific Workers of India (ASWI). This was registered as a trade union and though it lasted only a few years till the early 1950s, it left an indelible mark in the history of rational thinking in India. The association strived to foster scientific temper in the society. It had a good number of leading scientists of the country among its members who remained flag bearers of scientific temper throughout their life.² One of them was Pushpa Mitra Bhargava, the founder director of Centre for Cellular and Molecular Biology. Writing in *The Hindu* under the title *Scientists without a scientific temper* in January 2015 Professor Bhargava wrote, ‘... *India has not produced any Nobel Prize winner in science in the last 85 years – largely because of the lack of a scientific environment in the country, of which scientific temper would be an important component.*’ So even if the lamentation regarding the lack of scientific temperament seems philosophical and unnecessary to some, the

material loss of prestige and prize in the world can hardly be ignored by those.³

It is only logical to expect that the unscientific attitude existing within the walls of the scientific institutions will have its impact on popular culture as well. Thus we find very few or sometimes no element of science in our conventional culture. Science is shunned and avoided keeping the space free for bigotry and religious excesses. Popular media also regards science as unnecessary for their daily presentations. The allotment of space for science coverage in newspapers has never been into two digits in terms of percentage. Again, science is mostly presented as a utility and is often scrapped to accommodate more appealing utilities like finance and films.

AIR and Science Communication

In such a desert of non-science there exist a few oases where citizens enjoy the liberty of knowing the spirit and products of science. All India Radio (AIR) established way back in 1927 and reorganized as per national development goals after 1947, remains one such oasis. Since its initial days AIR has been presenting science in a popular form that is informative and enjoyable at the same time. However the time allotted for science broadcast on AIR was really negligible till the mid seventies. The real thrust for increasing broadcast time and for reorganization came in 1977 when exclusive Science Cells were set up in seven cities of the country. Kolkata (then Calcutta) was one of those cities.⁴ The recruitment for such cells were made from the best of science post-graduates who knew the art of science and would soon master the craft of radio presentation.

One more shot in the arm was received after the central government decided to set up the National Council of Science and Technology Communication (NCSTC) in 1982. This was of course in keeping with the country's sixth Five year Plan goals. NCSTC conceptualized and funded the first countrywide science series broadcast in 1988. It was called *Methods of Science* in English and *Vijnan Vidhi* in Hindi. Regional stations had their own versions. The production in Bengali was titled *Bijnaner Niyam Kanoon*. It was a serial lasting thirteen episodes only but it gave the listeners a new experience of learning science through radio. The same organisation also initiated the first major science series on radio on human evolution in 1992. It concluded in early 1994. Interested people got used to listening to the episodes of this series on every Sunday morning. In Bangla the series was titled *Bibartaner Pathe Manush*. A good number of these episodes contained dramatization with an aim to present documents and facts in a more appealing manner. Such formats often go by the name of docu-drama. AIR Kolkata outsourced the production to a particular agency but remained in control of the process.

In the meanwhile Vigyan Prasar has been established under the Department of Science and Technology as an autonomous body on the lines of NCSTC but with a different mandate. After the radio series on human evolution there was no collaboration between AIR and DST, Government of India for a long time. Vigyan Prasar snapped this continuity and a fresh phase of collaboration started from 2008.⁵

Series of Radio Plays on Science Fiction

A civilization that values its scientific achievements will naturally indulge in all sorts of media presentations on science. Thus radio stations in UK, USA and several European countries love to enthrall their listeners with radio plays based on science fiction. A classic case is the airing of the play titled War of the Worlds based on a 19th century fiction by H G Wells. On October 30, in the year 1938, Orson Welles and his Mercury Theater company created a panic among the listeners of New Jersey when their production went on air through the apparatus of the Columbia Broadcasting System (CBS). Some of the listeners called the local police station to verify whether Martians had actually attacked and devastated New York already. The radio play was fashioned in a realistic manner and had seemingly live reports from the sites of devastation. Those who missed the opening announcement explaining that it was no more than a radio play based on a fiction, panicked even more.⁶ This particular fiction created panic in other parts of the world as well. Reports say that in February 1949, Leonardo Paez and Eduardo Alcaraz produced a Spanish-language version of Welles's 1938 script for Radio Quito in Ecuador. The broadcast set off panic. Quito police and fire brigades rushed out of town to fight the supposed alien invasion force.⁷

Radio plays on science fiction continue to be an essential part of broadcasting in several parts of the world. The BBC probably leads the others in this endeavour. Be it The Time Machine penned by H G Wells, Frankenstein by Mary Shelley or R.U.R by Caryl Chesson – BBC has brought it all to the listeners in radio play format.⁸ AIR can hardly boast of such glorious tradition at least in science fiction based radio plays. Producers at AIR did try their hand at producing such plays but that only occasionally.

In 2008 the Science Cell of AIR Kolkata was approached by Vigyan Prasar for producing a series of non-connected radio plays. It was decided that a package of thirteen radio plays will be broadcast. The present author was given the responsibility of the producer.

The stories that were chosen were as follows: *Poka* (An Insect) by Premendra Mitra, *Bankubabur Galpo* (The Story of Bankubabu) by Bimalendu Mitra, *Rona* by Adrish Bardhan, *Baatik* (Obsessive Disorder) by Amit Chakraborty, *Captain* by Nirendranath Chakraborty, *Phaand* (Trap) by Samarjit Kar, *Silicon Dwiper Poka* (The Creatures of Silicon Island) by Sankar Ghatak, *Buddhi Jodi Briddhi Paay* (If Intelligence Shoots up) by Aneesh Deb, *Jhinjo* (Jhinjo, a robot) by Dilip Kumar Bandopadhyay, *Himsisu* (Frozen offspring) by Enakshi Chattopadhyay, *Bayas Jekhane Baare Na* by Hiren Chattopadhyay, *Caraccus* by Swapnamoy Chakraborty and *Titingi Paharer Debota* (The God of the Titingi Mountain) by Khitindra Narayan Bhattacharya. These stories were required to be adapted for radio play and the Science Cell got into the task of booking the services of renowned adaptors like Hiren Chattopadhyay, Basanta Bhattacharya and Soumyadeb Basu. It was for the first time that such a series was being produced at AIR Kolkata and the excitement was clearly written on the faces of the members of the production team. There was departure in other related aspects as well. While radio plays produced by the Drama section had always been between 30 minutes to an hour in duration ours was shorter. Each play was of twenty minutes duration and it was sometimes very difficult for both the adaptor and the producer to fit all the required dialogues and sequences into that time frame. Booking artistes for enactment was not too difficult as AIR stations always maintain a roster of auditioned

voices. But collection and proper mixing of sound effects and music posed a challenge. By that time the production process at AIR Kolkata has shifted from analogue to digital and computers made it easy for us to edit in very short time. The series lasted from January to March 2008. The plays were broadcast every Sunday at 8am and we received a lot of letters congratulating us for this initiative. A competition was also organized. A question was given at the end of each play based on the content and listeners were asked to send answers. Correct answers were many and we had to go for a lottery to select winners. A function was organized after the conclusion of the series to award prizes to the winners. The listeners present at the function interacted with the officials of Vigyan Prasar, members of the production team, the adaptors and some of the artistes. It was a rewarding experience for all of us. Never before had such a cycle been completed at AIR Kolkata with such alacrity.

The Marathon Begins

We at the Science Cell had no idea that the radio play series was only the tip of the iceberg and Vigyan Prasar (VP) had a lot more in store to keep us working hard for the next decade. In fact a Memorandum of Understanding (MOU) had already been signed between AIR and VP by the time we were conceptualizing the science play series. The MOU meant that VP will plan a science series of 52 episodes on the UNESCO theme of the year ‘Year of the Planet Earth’. It will develop scripts in English and Hindi and distribute those for onward translations in regional languages for production and broadcast. The production part was to be managed by AIR at its selected

stations with funding from VP. Speaking of funding, it was just public money going from one government department to the other.

AIR with its depleted staff was going to undertake a project of huge proportion after a gap of almost fifteen years. It was by no means easy. Whereas the series on human evolution had around four members of the staff of AIR Kolkata along with an outside agency attending to the day-to-day requirements, the new series had only this author assisted by a casual hand. It was a challenge from the beginning. The scenario was not very different in other stations of AIR where productions were undertaken. The first question that arose was regarding the format. VP did not have any expertise in this and logically looked up to AIR producers for advice. After a long series of discussions it was decided that the format will be docu-drama. There will be a family of four consisting of father, mother, son and daughter. In each episode they will enter into a lively discussion concerning the environment and the health of the planet. They will receive guests who will preferably be scientists and they will add new dimensions to the discussions. They will also travel to far off places and talk about conserving the environment during the whole time. They will also attend functions at their daughter's school or their son's college where again something related to this topic will come for presentation. There was no proper conclusion as can be expected from a classical viewpoint. Each episode had a pack of information to be delivered and the play ended when the pack was concluded. To provide relief to the listener a few sequences where the family enjoys food at home or outside were included. There were also sequences where the son teased her sister or the opposite happened. This also helped to break the continuum of information sharing.

In general, such a format for 52 episodes is most likely to be drab and boring. But listeners were actually in for a change from the regular dose of melodrama that radio play offers. In effect, the radio series came to break the boredom. Feedbacks received from the listeners through letters and sometimes over phone reinforced this conviction of ours. Lay folks who had a marginal interest in knowing the facts related to the destruction of the environment found our radio series attractive and their routines on Sundays underwent a change. The average listener chose to listen to our programme at 8am before going out to the market for fetching the daily requirement of his family. But it was not very smooth at our end. Actors and actresses used to express human emotions through their allotted dialogues found it quite difficult to move ahead with loads of scientific facts. Some of them could not pronounce terms that they were seeing for the first time in their life. Generally such artistes come from humanities background and their brush with science had ended at the matriculation level. Initially it was a harrowing exercise of trying to convince such artistes that this could really be shaped into a radio drama. Editing also consumed a lot of time and I had to bring home the rush recording and continue editing late into the night on my personal computer. There was no incentive for such overwork and it was sheer passion for science communication that propelled me through this labour intensive process. The series started in January 2008 and continued for the whole of the year.

Choosing a suitable title in Bangla also posed a challenge. For the first series that was focussed on the Year of the Planet Earth, I chose the title *Amader Ei Basundhara* conveying the same meaning as the title in English. Over the

years I had to keep this innovation running as it was often very difficult to choose a suitable title that will appeal to the critical mind of the Bengali listener. The title had to convey the central idea of the series and at the same time was required to carry some literary flavor. We probably succeeded to deliver a suitable title to every series. Scripts also created problems as this time VP had created a new mechanism. Societies associated with science activity were chosen for producing scripts in regional languages. It was an ill conceived step but we had to abide by the decision. Writing scripts for radio is an exclusive art that needs to be learnt and practised and societies engaged in producing models for science exhibition or pamphlets for government sponsored social schemes are thoroughly inadequate for this purpose. I had to spend hours to edit and bring up the scripts to the desired level. Sometimes I found script writers composing passages that would remind the listeners of their classroom sessions. Equations of chemistry and physics were lifted straight from the textbook. Dialogues were shallow and did not reflect the mood. Often local dialects crept in and made the scripts confusing. The wrong decision on the part of VP continues to create trouble in different centres of the country and AIR Kolkata is no different in this regard.

Success brings More Work

The successful conclusion of the first series encouraged VP to go for more serials. The next series was oriented with the UNESCO titled International Year of Astronomy. Again the same format was used and again the length of the series was of 52 episodes. The family retained its existence throughout the series. A few episodes were dedicated to discussion with invited scientists and listeners chosen on the basis of their letters. After the

conclusion of this series we had a meeting with VP officials at Guwahati and everyone agreed on shorter series that would last for 13 or 26 episodes. Accordingly VP launched series on Grassroots Innovation (*Dhulomuthi Sonamuthi*), Science in Independent India (*Sonali Samayer Katha*), Women in Science (*Naari o Bigyan*), Colors of Chemistry (*Rasayaner Rangbahar*), From Atom to Stars (*Paramanur Jagat*), Magic of Numbers (*Anker Akash*), Understanding and Managing Disasters (*Aasuk Durjog Prastut Amra*) etc. But VP has again decided to go back to 52 episodes structure in the present series on Sustainable Development (*Rupoli Rekhar Lakhye*).

After the first two series we decided to do away with the family and produce each episode as complete in itself. In the new concept the episodes had characters that are historically supported along with a few imaginary ones. In Magic of Numbers we chose to portray the lives of mathematicians against associated historical backdrop. It became so popular that we still receive requests for repeat broadcast of the series. We could understand the chemistry behind our success. People love to listen to stories replete with war, love, treachery, trust, success of innovation and the *eureka* feeling of groundbreaking discoveries. Magic of Numbers had it all and there was every reason for the listeners to like it. We consider this series to be our best production. In the series on Grassroots Innovation we did our own research using the database provided by the National Innovation Foundation (NIF) established by Prof Anil Gupta of the Indian Institute of Management, Ahmedabad. We came to know a lot about our craftsmen working at the grassroots level and constantly contributing to our comfortable living. Some of these unsung heroes have received national recognition through the efforts of the Honeybee Network of Prof Gupta and of course the NIF. We

had unparalleled joy in making these characters lively in our radio plays. We strived to put through the message that technological innovation does not always require elaborate and expensive infrastructure.

VP sponsored science series has been broadcast for more than ten years now and the necessary productions are being undertaken by several centres. But a couple of stations have stood apart because of their dedication to the cause, the appreciation of the ethos of the different series and knowledge of the craft. AIR Kolkata and AIR Bengaluru have attracted the attention of not only their respective listeners but also the officials of VP. Thus time and again VP officials consult the producers of these stations for correcting faults in the planning process. The present author has also been asked by VP for writing scripts in English for successive serials. A meeting is convened after the conclusion of each series and such occasions allow the scope of brainstorming and experience sharing.

This type of series is likely to continue for some years in the future. One of the major reasons for this is that VP has found an effective path of channeling their funds. AIR still enjoys a lot of trust in the society and VP has learnt through experience that listeners will lend an inquisitive ear to science on AIR. In the process a new type of radio play has become a legacy at AIR Kolkata. Listeners keep asking for the next series when a particular series concludes. They mention the names of different characters in the plays and comment critically on the performance of the actors. This is definitely rewarding and is probably the only incentive for the production team.

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