

85TH ANNIVERSARY OF THE INDIAN SCIENCE NEWS ASSOCIATION

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The scientific and political elites of Kolkata like P.C. Ray, M.N. Saha, P.C. Mahalanobis, S.K. Mitra, D.M. Bose, P.C. Mitter, U.N. Brahmachari, Netaji Subash Chandra Bose and Shayma Prasad Mookerjee, were behind the formation of The Indian Science News Association. In July this year Indian Science News Association (ISNA) stepped into its 85th birth anniversary. This article is our attempt to pen down a brief history of ISNA which began its journey in July 1935. With the help of Minutes of the Council of ISNA, Annual Reports and other reports, we describe a short history of its formation, activities and its struggle and challenges to survive.

Introduction

In the past few years, institutional history has become a part of the history of science. On the occasion of the 75th anniversary of the Indian Science News Association a brochure was prepared by S.C. Roy *et. al.*¹ In 2018, S.C. Roy in a short article wrote about the 83 year's journey of the journal *Science and Culture* and ISNA.² To the best of our knowledge, a detailed history of the activities of ISNA has not been written. The present article intends to fill this gap. However, to keep the article short, we have restricted our discussion till about 1960, the time period we call as "Meghnad Saha era" (Saha died on February 16, 1956). A detailed history of ISNA will be explored elsewhere.

The main objective of the Association, according to the Memorandum of Association:

"is to popularise and disseminate the knowledge and progress of natural and cultural sciences through

publishing journals and books, and by organising lectures in English and vernacular. To secure and administer funds, grants, endowments for the furtherance of the objects of the Association."³

The journal *Science and Culture* was created to fulfil this objective. M.N. Saha was so eager to vent his idea of propagating scientific knowledge and scientific ideas for national development that the first issue of *Science and Culture* was published in June 1935 before the formation of ISNA. Publication of *Science and Culture* was at the centre stage of the activities of ISNA right from its inception and continues to be so till recent times. A brief history of *Science and Culture* has been published in the last issue of the journal,⁴ and hence we will limit ourselves mainly to the other activities of ISNA.

We intend to discuss the following in this article primarily based on original Annual Reports, Minutes of the Council Meetings of ISNA and Minutes of the Annual General Meeting (AGM).

- The foundation of ISNA
- Political links and activities of ISNA
- Promotion of science by creating Funds and Award by the Association

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- Financial aspects
- Historical and cultural contribution of ISNA

Indian Science News Association – A Dynamic Institution

The inaugural meeting of the ISNA was held on July 9, 1935 in the Hall of Calcutta Mathematical Society, University College of Science. The meeting was attended by 250 participants, and presided over by Acharya Prafulla Chandra Ray. The politician Shayma Prasad Mookerjee (also written as Mukherjee), Vice Chancellor, University of Calcutta, was to welcome the guests. As he was unable to attend the meeting, his speech was read by S.C. Ghosh, Secretary of the Post-graduate Council in Art and Science. The aims and objectives of the ISNA were given in the editorial of the first issue of *Science and Culture*, the mouthpiece of the Association, which was distributed in the meeting. In his speech S.P. Mookerjee talked about the industrial revolution. In his opinion, “revolution” would be interpreted in modern sense - to change the face of the nation with science and technology, as was done in Europe and not in the narrow sense of popular uprising characterized by violence. He said:

“The Indian Science News Association has been founded not only with the object of placing within easy reach of the public a knowledge of modern science, but also for expressing intelligent and unbiased opinions on such industrial measures which are likely to affect our everyday life.”³

S.P. Mookerjee justified Calcutta (now Kolkata), the Second City of the British Empire as its head quarter because it had important scientific institutions like the Asiatic Society of Bengal, University of Calcutta, and newly founded National Institute of Sciences of India (today known as Indian National Science Academy).

It is well-known that M.K. Gandhi and S.P. Mookerjee were not on the same line so far as their political views

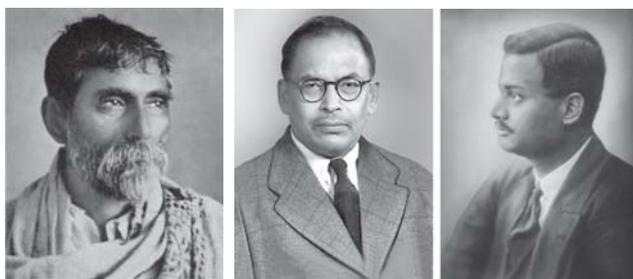


Figure 1: (From left to right) Founder President Acharya P.C. Ray, Founder Secretaries M.N. Saha and B.B. Ray.

were concerned. He opposed Gandhian (without mentioning Gandhi’s name) philosophy of sticking to village industries, instead he emphasised the need of using modern science and technology for the prosperity of the country.³

S.P. Mookerjee in his speech revealed that the ISNA was started with the help of Sir Upendra Nath Brahmachari who donated 1000 Rupees. He hoped that similar support will be received from him in future. Professor P.C. Ray promised to donate Rs. 2000. Another gentleman, who wanted to remain anonymous, gave 6000 rupees. Hari Keshava Ghosh and his brothers, the owner of “The Indian Press Ltd.” promised to print *Science and Culture* for two years, free of cost, if needed.

M.N. Saha on behalf of organisers told about the efforts of Sir Asutosh Mookerjee in establishing various science chairs at the University of Calcutta. However, his (A.M.) dream to teach the masses was not yet fulfilled. Saha envisaged *Science and Culture* as an organ to do so.

P.C. Ray in his presidential lecture stated that India had scientific tradition for more than 10000 years, but darkness fell on it in the past. The veil of darkness was being lifted by the recent work of scientists like J.C. Bose, and other Indian scientists, both male and female. He said – India could regain its old glory through the study of science, and spreading this knowledge. He gave the example of Japan, which worked miracles with modern science in all aspects of life. According to P.C. Ray, in order to achieve its objective, the ISNA required a sum of one lakh rupees. He hoped that “a large number of public spirited men with a love of science at heart will come forward to help this Association, and the sum of one lakh will be raised in no time.”³

The first provisional Council was formed with the following members: President: P.C. Ray. Vice Presidents: S.P. Mookerjee, U.N. Brahmachari, and Satya Churn Law. Secretaries: M.N. Saha and B.B. Ray. Treasurer: N.R. Sen.³

Details of the “Constitution”, “Election of life-members”, “The council and its officers” etc. were presented in separate sections in the published Memorandum.³

In a meeting of the Council held on March 25, 1960, the amendments of the constitution proposed by a committee consisting of J.C. Sen Gupta, P.K. Bose and S.N. Sen was discussed. On July 8, 1960, the Minutes of the Council were confirmed and the amendments were accepted in the Annual General Meeting (abbr. AGM). Further amendments of the constitution were discussed in

several meetings of the Council in later years but no major changes have been made.

Election of Life Members

Membership of ISNA was a very prestigious possession to anyone. One had to go through a tough scrutiny by the members of the Council to become a Member of ISNA (be it Life Member or Ordinary Member). Scientific achievements were thoroughly scrutinized before accepting him/her as a member. Under Section C of the Memorandum of the Association:

“candidates for Life-Membership shall be proposed by one and seconded by another Member of the Council of the Association. The names of the candidate, his proposer and seconder shall be laid before a meeting of the Council, and if approved, the candidate shall be recommended for election by ballot at the next meeting of the council, and published in the next issue of *Science and Culture* for information of the members of the Association, and if there is a requisition by at least five members of the Association for postponement of the election given in writing to one of the secretaries at least one week before the next meeting, the recommendation shall be referred back to the Council for reconsideration. If the Council reaffirms its previous decision the approved candidate shall be balloted for at the next meeting of the Council.”

From the above, one can understand how elaborate and transparent were the election of a Life Member of ISNA. Currently acceptance of Life Membership is less elaborate and ends with the approval of the Council.

The strength and prestige of an institute depend on the number of its members as well as how distinguished are the members in their respective fields. The Annual Reports show that until 1940 the Association had only Life-Membership. In 1940 the concept of Ordinary Members was introduced.⁵ The data given in Table 1 is taken from the Annual General Meetings of the ISNA.

The table shows that within five years the Life-Membership reached about 100, and remained almost constant, with the exception of the year 1944-45. This sudden fall was due to famine and war conditions. On the other hand, in the same year the number of Ordinary Members increased enormously. Unlike Life-Members, the number of Ordinary Members remained variable. After India’s independence, it continuously went down.

Table 1: Development of Life- and Ordinary- Members of the ISNA with time.

Year	Life-Member	Ordinary Member
1938-39	83	
1939-40	88	
1940-41	90	3
1941-42	97	18
1942-43	103	32
1943-44	110	40
1944-45	91	52
1945-46	112	45
1946-47	111	45
1947-48	112	40
1948-49	114	40
1949-50	112	36
1950-51	112	33
1951-52	111	34
1952-53	103	37
1953-54	102	33
1954-55	102	30
1955-56	102	28
1956-57	100	23

To have an idea about the recent scenario we report from the 80th Annual Report of ISNA for the year 1st April 2014 to 31st March 2015, as a typical example, that the number of Life Members and Ordinary Members was 694 and 9 respectively.

In Table 2 we see the Presidents of the ISNA. The remarks given in the last column leave no doubt that they were men of international and national repute.⁶

Financial Position

We have seen above that ISNA started operating from the donations received from U.N. Brahmachari, P.C. Ray and another well-wisher. Financial position of ISNA had never been satisfactory even during Meghnad Saha’s time. When we analyse the Council Meetings of ISNA we find that Meghnad Saha lamented for the funds almost in every meeting. In spite of receiving grants from the government, donations, advertisements, subscriptions, membership fees etc. it was hard enough to make ends meet. ISNA was forced gradually to shed off paid employees which was more than 10 during Saha’s time from the present size of only 3.

Table 2: Presidents of the ISNA.

Year	President	Remarks
1935-36	P.C. Ray	Chemistry Nobel Prize nominator
1936-37	S.P. Mookerjee	Minister for Industry and Supply
1937-1943	Satya Churn Law	Vice-President, Calcutta Zoological Gardens, and founder of <i>Prakriti</i> journal for popularisation of Science
1943-1946	U.N. Brahmachari ⁷	Medicine Nobel Prize Nominee
1946-1947	D.N. Wadia FRS	Geological Survey of India
1947-1949	M.M. Sur	Associated with Indian Ceramic Society
1949-1953	M.N. Saha FRS	Physics Nobel Prize nominator and nominee
1953-1955	D.M. Bose ⁸	Physics Nobel Prize nominator
1955-1958	S.K. Mitra FRS	Physics Noble Prize nominator

University of Calcutta	..	..	Rs. 500
Bengal Chemical & Pharmaceutical Works, Ltd.	..	..	.. 500
Indian Association for the Cultivation of Science	..	..	.. 100
Mr. Alamohan Dass	..	..	.. 250

Figure 2: Donating institutions for the year 1938-1939.

Figure 2 shows the main donors of the ISNA for the year 1938-1939. It was stated that due to war the financial condition was precarious. The annual expenditures were 8500 Rupees, whereas the income was Rupees 7000 only. The deficit had to be compensated with donations.⁹

M.N. Saha informed the members that our President S.C. Law, his brother B.C. Law and Vice-President U.N. Brahmachari have donated 1500, 1000 and 500 rupees respectively (Figure 3). With that our deficit narrowed to Rs. 1500 this year. To encourage his fellows he gave the example of the journal *Nature* which was founded in 1872 by Alexander Macmillan. The astronomer Joseph Norman Lockyer was its first editor. It took thirty years till the journal became self-supporting. Before that, the founder himself endured all additional expenses.⁹

University of Calcutta	...	...	Rs. 500/-
Bengal Chemical & Pharmaceutical Works, Ltd.	...	...	Rs. 500/-
Indian Association for the Cultivation of Science	...	...	Rs. 100/-
Dr. S. C. Law	...	...	Rs. 1,500/-
Sir Upendranath Brahmachari	...	...	Rs. 500/-
Dr. Bimala Churn Law	...	...	Rs. 1,000/-
Mr. Prahlad Chandra Roy	...	...	Rs. 200/-

Figure 3: Financial supporters for the year 1939-1940.

In 1943, Saha told that the financial difficulties in the past were solved only narrowly in recent years. Then he

referred to the recent grants of Rs. 2000 and Rs. 1000 from P.C. Ray and Messrs. Sur Enamel & Co. respectively. The first was utilised for the compilation and publications of an authorised biography of the donor P.C. Ray¹⁰. Saha appealed to industrialists and businessmen to lend financial patronage, so that activities directed in various important directions so far remain untouched could be started.¹⁰

To make both ends meet, the firm Continental Publicity Sale and Service was appointed at one stage to secure advertisement on a commission basis of 30% for *Science and Culture*. The subscription rate was subsequently increased.¹¹

Shortly after India's independence, in 1948-1949, it was reported that the Association was struggling against precarious financial position. This was caused by unprecedented crisis like the WWII, famine and communal upheaval followed by partition of India. To meet the increasing cost of publications, in the last five years the price of the journal was increased twice. Consequently, it led to fall of subscriptions and loss of income from that source.¹²

In 1950, Government of West Bengal, NISI (Government of India), Burmah Oil Company Ltd., University of Calcutta, and Bengal Chemicals and Pharmaceutical Works granted 2000, 1000, 1000, 500 and 500 rupees, respectively. Rupees 900 were donated by Calcutta Chemical Co. Ltd.¹³

Change in financial year from July-June to April-March was approved and given effect from April 1, 1955. For *Science and Culture* the year was kept as before.¹⁴

S.K. Mitra, one of the Secretaries, while presenting the annual report for the year 1951-52, said that due to lack of space and financial limitations it was not possible to accommodate the increasing number of articles, letters, etc. received for publication.¹⁵

Figure 4 shows that in 1954 the Government of India increased the grant by a considerable amount. Indian Council of Agriculture Research gave a subsidy of Rs. 1859, which was credited to the funds of the Association.¹⁶

Grant from the Government of India considerably reduced financial worries. It was hoped that the Government grant would be received on a permanent basis. This would enable the Association to extend the activities according to the aims and objectives of the Association.¹⁶

Government of India	9,000/-
Government of West Bengal	1,000/-
National Institute of Sciences of India	1,000/-
Burmah Oil Co. Ltd.	1,000/-
Indian Association for the Cultivation of Science	1,000/-
Calcutta Chemical Co. Ltd.	800/-
University of Calcutta	500/-
Bengal Chemical and Pharmaceutical Works Ltd.	500/-

Figure 4: Grants for the year 1954-1955.

Even in 1960, A.C. Ukil, the President of the Association, in his address stated:

“Although there has not been any phenomenal increase in membership, yet it is encouraging to note that support from other sources is gradually increasing. This is, however, not stable. A glance at the audited Statement of Accounts for 1960-61 will show that the income from invested funds is still low for effecting much-needed expansion of functions in many directions.”¹⁷

The grants and donations are the lifeline of ISNA's existence from its inception till now. Grants received from several academic institutes and organizations (government or otherwise), donations received in recent years made the financial position of ISNA more stable than before. A typical example of grants received during the year 2014-2015 as reported in the 80th Annual Report of ISNA is presented in Figure 5. Only problem till now is that the grants received are not stable and hence it is difficult to plan any long term activities of ISNA.

One time grant of Rupees Ten lakhs each as a corpus fund to be used for publication of *Science and Culture* was received from the Government of India on the behest of Prof. A.P. Mitra and from the Govt. of West Bengal on the behest of Mr. Gopal Gandhi when he was the Governor of West Bengal. An unprecedented donation of Rupees Twenty-five lakhs (so far the largest donation received by ISNA) was received on the behest of Prof. S. C. Ray from Ms. Maya Natarajan, mother of Prof. Vasant Natarajan of Indian Institute of Science, Bangalore and one of the Council members of ISNA for the publication of *Science and Culture*.

Saha Institute of Nuclear Physics (for Publication 2013-14):	Rs. 50,000.00
Department of Science and Technology (for Trg. Prog):	Rs. 1,30,000.00
Saha Institute of Nuclear Physics (for Publication 2013-14):	Rs. 52,600.00
CSIR, New Delhi (For Publication 2013-14):	Rs. 3,00,000.00
University of Calcutta:	Rs. 50,000.00
S.N. Bose, National Centre for Basic Sciences, Salt Lake: (for Publication 2014-2015)	Rs. 10,000.00
Department of Science and Technology Govt. of India (for Publication 2014-2015):	Rs. 1,50,000.00
Bose Institute, Kolkata:	Rs. 20,000.00
Indian National Science Academy, Kolkata:	Rs. 20,000.00
Indian Statistical Institute:	Rs. 24,999.00
Total:	Rs.8,07,599.00

Figure 5: Grants received in the year 2014-2015 as reported in 80th Annual Meeting.

Publications of sponsored special issues introduced in 2005 by Prof. S.C. Roy, the Editor-in-Chief had added money to the ISNA coffer. According to the Bank Statement, about Rupees twenty-two lakhs (Rs.21,87,000/-) has been collected as a sponsorship fee for the special issues in the last nine years (2011-2019).

Building of its own

The ISNA did not have its own building. It houses in the premises of Rajabazr Science College of Calcutta University. The need for its own space was realized long back and A.C. Ukil suggested in 1962 to create a “Building Fund” for this purpose. He donated a taken sum of Rs. 100/- “as a catalysing agent for the Fund.”¹⁷ No tangible result was found. The Association is crammed into a space of about thousand square feet. The acute shortage of space was again discussed in the Council Meeting held on 11th March 1964 where it has been resolved that the Indian Science Congress Association will be approached to provide some space for ISNA. More recently (2010), a proposal offered by Prof. Samir Brahmachari, when he was the Director General of CSIR, to get some space in the site of Indian Institute of Chemical Biology (IICB) at Jadavpur on mutual agreement when IICB will move into its new building at Salt Lake did not materialize.

Research Activities and Prizes of the ISNA

The ISNA did not keep its activities limited only to publication and other activities as described, but introduced

proper research activities by generating funds for research and prize for popularisation of science articles.

Foundation of Adair Dutt Research Fund

A laboratory instrument making Adair Dutt Company located in U.K., had a corporate office in Kolkata, to represent European Laboratory equipment manufacturers in India. "In 1949 the Indian arm became a freehold company under the name of Adair Dutt & Company (India) Pvt. Ltd."¹⁸

In the history of the ISNA, for the first time Adair Dutt Research Fund was established with the help of Adair Dutt & Co. Ltd. The firm donated 4000 Rupees. The aim was "to encourage scientific work by research students in different institutions in Calcutta." For the management of the Fund, a Committee was vested to the following members: M.N. Saha, S.K. Mitra, J.C. Ghosh, B.C. Guha, A.C. Ukil and G. Bhattacharyya - General Manager of India of Adair, Dutt & Co., Ltd.¹⁹ Three scholarships tenable for two years were awarded for the research on²⁰:

- (a) Artificial culture of natural foods for fresh water fishes of Bengal.
- (b) Study of long chain dienoic acid with conjugated double bonds, and
- (c) Ionosphere and upper atmosphere problems.

The projects were guided by H.K. Mookerjee, P.C. Mitter and S.K. Mitra respectively.

The firm further donated Rupees 2500 for two more scholarships. One of them was awarded to a female scientist to carry on research on Biology, Domestic science, Nutrition or Dietetics' and another for 'Industrial Research'.²⁰

In 1944 four scholarships were awarded and two were renewed (Table 3).²¹

In 1944, the firm donated 3000 rupees more to carry on research in other fields, which were to be decided by the Committee.²¹ In 1947-48, P. Nandi had a project in London on microbiology, and Pranbandhu Dutt, in India, in the field of chemistry.²² After 1948, the firm stopped these activities. However, in the middle of 1950s the members of ISNA came up with a new idea, namely, to award prizes for the best written articles. The idea was to

Table 3: Research projects for the year 1944. The last two were renewed for the second year. The first project was at the University of Dacca, while others were at the University of Calcutta.²¹

Research Scholar	Topic (Subject)	Guide
Gobinda Ram Debnath	Androgenie Hormones/Chem.	J.N. Chowdhury
Arobinda Nath Bose	Processing of food stuffs on vitamin values (Higher Technology).	B.C. Guha
Mrs. Amina Rahman	Methods of estimation of Vitamin of the "B" Group and their assay in Indian foodstuffs (Nutrition)	B.C. Guha
Amal Chand Ghosh	Cyclotron (Higher Technology)	M.N. Saha
Satyendra Nath Ghosh	Measures of the intensity of the night sky (Physics)	S.K. Mitra
Sailendra Nath Ghosh	Feeding in carps (Zoology)	H.K. Mookerjee

motivate young scholars to write on contemporary science topics at a popular level.

Prizes for Young Scholars

The Council of the Association, with a view to encouraging popular science writing, decided to offer ten prizes each of Rs. 100/- for the best selected article written on ten topics chosen by the Council. It was hoped that by offering similar prizes year after year, the younger generation of scientists might be encouraged to acquire the "knack of popular science writing."²³

In the Annual Meeting, ISNA decided to offer ten prizes (each of value Rs. 100/-). Topics given by the Association were²⁴:

1. Calculating Machines
2. Basic Chemical Industries – their present position and prospects in India
3. Utilisation of Solar Energy – its possibilities and limitations
4. Photosynthesis – its economics possibilities
5. Radio Astronomy
6. Radioactive Carbon Dating
7. Problems of Cosmology
8. Possibilities of Nuclear Power in India
9. Breeding of Diseases Resistant Strains in Economic Plants
10. Genes and Enzymes.

In the next meeting the winners from the first eight subjects were declared as Bimalendu Ghos – Calcutta, K.K. Majumdar – Dhanbad, Mohindra Kumar Ghosh – Dhanbad, K.R. Srinivasan – New Delhi, Jagadish Narain Tandon – Delhi, Ajoy K. Bose – Kharagpur, Bailon de Sa – Calcutta, and K.V. Jagannadha Rao – Vizianagram. For the last two topics no prize was awarded, because the received articles were not upto the expected standard.²⁴

In the first annual report after Saha’s death ISNA prizes was renamed as “Meghnad Saha Popular Science Prizes”. It was decided to award five prizes, each of worth Rs. 250.²⁴ The topics announced were shown in Table 4.²⁵

Table 4: Topics and number of articles received for M.N. Saha popularisation of science prize.

Group	Topic	No. of articles received
A	Nature of Viruses	6
B	Light Alloys in Engineering	3
C	Radio Isotopes in Biology	Nil
D	Photography and Science	1
E	Future of Science Teaching in India – the Language Problem	3

During the year 1955-56 three prizes of the value Rs. 250/- were awarded to: (a) Kamalesh Ray - Future of Science Teaching in India – the Language Problem. (b) Ajoy K. Bose - Nature of Viruses. (c) N. Harinarayana – Light alloys in Engineering. Articles on “Photography and Science” and “Radio Isotopes in Biology” were not found suitable for the prize.²⁶ For the next competition the Association proposed the following topics²⁶:

1. The Food and Population Problem in India
2. Radiation Hazard associated with Utilisation of Nuclear Energy for War-like and Peaceful Purposes
3. Science Teaching in Schools
4. Reform of the Examination System in Schools
5. Sunshine and Life.

Kamalesh Ray (Delhi), N. Harinarayan (Madras), and Kamakhya R. Sen (Kolkata) were awarded prizes for “The Food and Population Problem in India”, “Radiation Hazard associated with Utilisation of Nuclear Energy for War-like and Peaceful Purposes” and “Sunshine and Life” respectively.²⁷ Meghnad Saha Popular Science Prizes is non-functional now. The only prize for students of Class

X-XII is operational under the name “Mrinal Kanti Dewanjee Students Award for Basic Science Research” which has been recently introduced from the generous donation received from Dr. Mrinal Kaniti Dewanjee, an American scientist working at the National Institute of Health, USA. Two awards have been given- one for the physical science and the other for the biological sciences.²⁸

The ISNA tried, not only to increase the standard of articles in *Science and Culture*, but also made structural changes (detail below).

Council Meetings and Annual General Meetings

During Meghnad Saha’s time and till 1964 the usual practice was to hold only one Council meeting in a year. The Council meeting was held in the month of September/October every year to approve the annual report, the statement of accounts, the budget, election of office bearers and members of the Council. The meeting of the Council and the Annual General Meeting (AGM) was held on the same day: the Council meeting in the afternoon and the AGM in the late afternoon. It was only in the meeting of the Council held on 11th March 1964 the Council “expressed the desirability of having at least two meetings annually”.

The Annual Report contained the detailed activities of ISNA as well as the strength and weakness of the Association. It contained number of Life Members and Ordinary members, number of subscribers of *Science and Culture*, number of copies dispatched, number of journals received in exchange, statement of accounts, budget estimate etc. In addition, the discussion was initiated by the Chairman by deliberation on what the country needs for its overall growth and development and how it can be accomplished by the scientists. The priorities change with time such as before and after independence. Meghnad Saha in the 14th AGM of ISNA held in September 1949 emphasised of the need of a Planning Commission for “proper organization of natural resources of the country”. He asked the scientists to take part in solving the current problems in the country in addition to their work at laboratories otherwise “the country would be thrown into a great disaster”. In the meeting next year he said “what is most needed today is the building up of character. For, in societies, as in individuals, character can not set, till reason has blossomed.” In the 15th AGM Meghnad Saha stressed on the need of recasting the education system of the country. He opined that the education system which

was meant for a dependent country was utterly unsuited for development of the country and genius of the people. Meghnad Saha continued to be the President of the Association from 1949 till 1953 when the mantle was handed over to D.M. Bose as MNS was elected as a Member of Parliament of the Govt. of India in the general election held in 1952.

The practice was to invite some eminent distinguished persons from the field of science, politics, arts, literature and culture as the Chief Guest in each of the Annual General Meetings. A list of persons invited as Chief Guest up to 1960 is presented below in Table 5.

The tradition of inviting of distinguished persons from different walks of life continues till this time. In one of the recent AGMs (84th) held on September 28, 2018, Prof. Jogen Chowdhuri, Member of Parliament of Govt. of India and Former Dean, Faculty of Fine Arts, Visva Bharati was the Chief Guest who delivered a talk on “Science, Culture and their relationship”.

ISNA and Politics

In the second annual meeting of the ISNA held on Aug. 29, 1937, in the Applied Chemistry Department, University College of Science Bains Prasad, the first Indian Director of the Zoological Survey of India, presided in place of S.P. Mookerjee as he was absent due to illness.²⁹ S.K. Mitra³⁰ – who later became known as an expert in the ionospheric science and discovered the D-layer, and one of the Secretaries of the Association, stated that *Science and Culture* was rendering services to the nation through its editorials and other articles on national problems. He referred to the introduction of “Science and Industry” as a regular topic in each issue of the journal published in the past.²⁹ The other Secretary - MNS in his talk stated that *Science and Culture* was established not only to popularise science, but also to advocate applications of science to solve problems of national reconstruction. To the criticism that the solutions proposed in this journal were too ambitious and expensive, Saha replied by giving the example of Russia, which had similar situation before the revolution. He stated that no problem could be solved without conflict with capitalist system. Soviet Russia realised the importance of co-operation with scientists to solve problems. Our politicians should learn from Russia. If national scheme proposed in this journals are followed all problems of poverty, famine and flood would disappear forever.²⁹

Table 5: Annual General Meeting and Chief Guest.

AGM	Chief Guest
1 st	S.P. Mukherjee
2 nd	S.P. Mukherjee was ill. Bains Prasad presided over.
3 rd	Subhash Chandra Bose, President Indian Science Congress.
4 th	Saha presented report. SC Law presidential address.
5 th	S.S. Bhatnagar
6 th	N.R. Sircar
7 th	Dr. John B. Grant, Director All India Institute of Hygiene and Public Health, Calcutta
8 th	Sir Cyril S. Fox, Former Director of Geological Survey of India
9 th	P.N. Ghosh delivered welcome lecture. Other distinguished speakers were D.M. Bose, M.N. Saha, and others
10 th	G.L. Mehta
11 th	Unfortunately, report is not available.
12 th	Annada Prasad Chowdhury, Finance Minister, Government of West Bengal
13 th	P.C. Ghosh, Former Chief Minister, West Bengal
14 th	M.S. Krishnan, Officiating Director of the Geological Survey of India.
15 th	Rai Harendranath Chaudhuri, Minister of Education, Government of West Bengal.
16 th	S.P. Mookerjee. Mookerjee was Minister of Commerce and Industry of India.
17 th	Prof. P.C. Mahalanobis F.R.S.
18 th	Prof. N.W. Pirie FRS Rothamsted Experimental Station.
19 th	M.S. Thacker, Director, Scientific and Industrial Research.
20 th	J.B.S. Haldane FRS, Statistical Institute Calcutta.
21 st	Bhupati Majumder, Minister of Commerce and Industry, W.B.
22 nd	Prof. Humayun Kabir, Minister of Scientific Research and Culture.
23 rd	N.K. Siddhanta, VC, Calcutta University.
24 th	N.K. Sidhanta, VC, Calcutta University.
25 th	Rev. Father H. Santapau, Chief Botanist of the Botanical Survey of India.

From the very beginning the founders of the ISNA realised the importance of political connections. M.N. Saha personally followed the Russian communist ideology. However, he had contacts with S.C. Bose – Indian Congress Party, Shayma Prasad Mookerjee – a right wing politician, J.L. Nehru – who was pro-Gandhian, but believed in the socialist system. This does not mean that the

Members of the ISNA were opportunists. They maintained contact with those who were ready to support science and technology for the bright future of India. In this context we give some examples (detail below).

Netaji S.C. Bose : It is speculated that S.C. Bose's contact with B.B. Ray eventually led to his meeting with Adolf Hitler, via the renowned physicist Werner Heisenberg. These details are explored elsewhere.³¹ The fact is, M.N. Saha after establishing *Science and Culture* wrote a general letter to many scientists and politicians. It is very probable that S.C. Bose got this letter, and responded.

A few months later, *Science and Culture* published a lecture from S.C. Bose on "Some problems of nation-building." He welcomed the publication of *Science and Culture*, which was brought out "not only by those who are interested in abstract science, but also by those who are concerned with nation-building in practice." He was in favour of nation-building by scientific spirit. He confessed that for the politicians it is not possible to acquire scientific knowledge due to various reasons. Thus, scientists and investigators had to come for their rescue. Bose's main focus was on the sociological issues such as: "Is Indian civilization at the evening of its life, or is it on the threshold of a new dawn? Under which condition the revivification of a stagnated civilization, like ours, can begin?" He wanted to get, not sentimental, but scientific answers. Other issues he touched upon were Nazi's race theory, birth-control and a common language in India.³²

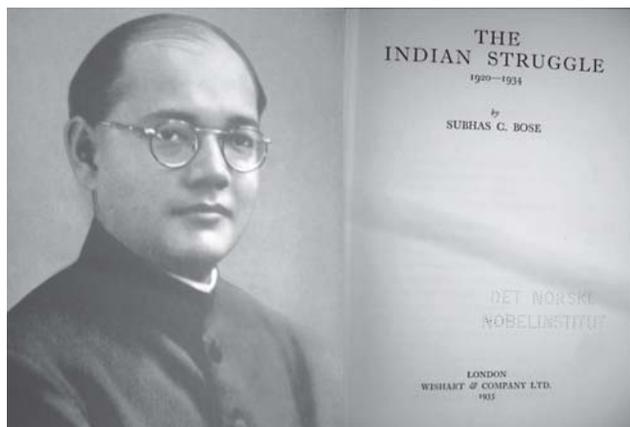


Figure 6: S.C. Bose and the title cover of his book. Credit: Archive of Peace Nobel Prize, Oslo.

On the occasion of the third Annual Meeting of the ISNA on Aug. 21, 1938, at the University College of Sciences, on the proposal of Shankar Purushottam Agharkar (better known as S.P. Agharkar), Subash Chandra Bose, President of the Indian National Congress was voted

to chair. M.N. Saha asked many questions to Subhas Bose during the meeting.

For instance:

"May I inquire whether the India of future is going to revive the philosophy of village life, of bullock cart, thereby perpetuating servitude, or is she going to be a modern industrialized nation which having developed all her natural resources will solve the problem of poverty, ignorance and defence and will take an honoured place in the comity of nations and begin a new cycle of civilization?"³³

And further:

"If the Congress High Command decides on a policy of industrialization are they going to set up a rationalized scheme of industrialization and establish a National Research Council and mobilize the scientific intelligentsia of the country? I put the question as Congress has come into power in several provinces and because there is a great confusion of ideas regarding the future industrialization of India."³³

Evidently, Saha wanted to know, whether Congress will run on Gandhi's lines which opposed industrialization.

In response, S.C. Bose first, appreciated *Science and Culture* as well as thanked the members of the ISNA for the invitation. He told that he was greatly interested in the application of science to the problems of national reconstruction. However, this could not be done without the help of scientists. Then he placed his ideas before the members of the ISNA about national reconstruction, which included the support for "Large scale industrialization" and "The need of a national planning commission." About Saha's question regarding the attitude of Congress towards industrialization Bose told that all Congressmen were not of the same opinion but the new generation was in favour of industrialization due to the following reasons: (i) It was needed to solve the problem of unemployment. (ii) New generation thinks in terms of socialism as the basis of national reconstruction. (iii) Industrialisation is necessary to compete with foreign industries, and (iv) Industrialisation was needed to raise the standard of living.³⁴ Bose was in favour of the co-operation between science and politics. However, he was of the opinion that:

"So far as technical research is concerned, we shall all agree that it should be freed from governmental control of every kind. It is only in this unfortunate country that government servants are entrusted with scientific research on receipt of princely salaries and

we know very well what results have been obtained therefrom.”³⁴

In the end, Bose wished *Science and Culture* “a long useful and prosperous career in the service of the nation and humanity ...”

In the same meeting, S.K. Mitra in his speech stated that *Science and Culture* was founded only three years ago to create interest amongst the public in the application of science to solve problems. A number of articles were published under “Science and Industry”. It is regrettable that Indian industrialists ignore them, because they have “all-absorbing concern for the economics issues.”³⁵ MNS in his lecture mentioned of S.C. Bose’s speech at Karlsbad³², in which Bose had posed the question, whether Indian civilisation is in the evening of its life or was it on the threshold of a new dawn? He wanted to know, whether the new awakening was from within, or just a response to the impact of West as in the case of a muscle under stimulus. Secondly, what should be done to revivify stagnating Indian conditions? Thirdly, for increasing the vitality of Indian nation, whether inter-caste marriage or exogamic marriages should be promoted. Saha said that in a recently written article by S.C. Bose, he has advocated the removal of artificial restrictions on marriage. If exogamic theories of Nazi are scientifically wrong, they must be resisted. Bose has also raised the question of same clothing and same food for all.³⁵ Saha said - the above issues were raised by S.C. Bose in 1935. They were never replied. In his speech, Saha discussed them one by one.

It is a matter of speculation – what would have had been the future of ISNA and *Science and Culture*, if S.C. Bose would have lived longer in India, like his contemporary S.P. Mookerjee, who was following entirely different political lines.

S.P. Mookerjee : As we have seen before, S.P. Mookerjee was the Founder Member of the ISNA and Chief Guest at the time of inauguration. The sixteenth annual general meeting of the Indian Science News Association was held on Sept. 20, 1951, in the Institute of Nuclear Physics, Calcutta. MNS presided and S.P. Mookerjee was the Chief Guest. Mookerjee was the Minister of Commerce and Industry of India in Nehru’s Government, until April 6, 1950. He left, and in 1951 founded the Bharatiya Jana Sangh.

He was its Founder–President (1951-52). He was the Chief Guest in the Annual General Meeting. He said:

“A realistic approach to reconstruction problems and the use of natural resources could only be initiated with the help of scientists. Scientists could point out the defects, if any, in the Government’s development projects, and they alone could spread the knowledge of science among the people, so that the latter could find the ‘way of salvation discovered through research.’”³⁶

He was pleased to observe that the National Government and many industrialists recognised the value of scientific research. He recalled – how 16 years ago the Association was started. He was happy to note the progress made during the past years. Justice Sambhu Nath Banerjee - Vice-Chancellor, Calcutta University, in his address expected that the Association would gradually progress under the able guidance and co-operation of S.P. Mookerjee.³⁶

S.P. Mookerjee died on June 23, 1953. In MNS’s own words: “The Indian Science News Association, ... was established by Dr. S.P. Mookerjee, when he was the Vice-Chancellor of the Calcutta University 18 years ago.”³⁷

J.L. Nehru : From his Allahabad times, M.N. Saha had contact with the politician J.L. Nehru.

In 1942, J.L. Nehru sent a long message to *Science and Culture*. In part it reads:

“I send my greetings to ‘*Science and Culture*’ on the eighth anniversary of its birth. The very name of this periodical signifies the two things which, more than anything else in India, like all progressive and civilized nations, must possess. For science and culture in their widest meaning comprise almost everything. Science is the very basis and texture of life today and without it we perish, or , what is even

So science and culture are of the essence of life today, in war and in peace, and any periodical which serves the cause of science and culture performs a service to India and humanity. I wish that “SCIENCE AND CULTURE” will continue its useful career and will widen its sphere of influence, so that its message may reach even the laymen in India and might not be confined to the experts and the scientists. It is comforting to know that in spite of the war and the difficulties that inevitably result from the war, this journal has continued to come out. Indeed it is in these times of war and crisis that the rational message of science is all the more necessary. So more power to “SCIENCE AND CULTURE”.

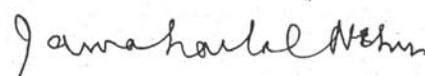


Figure 7: A part of the message of Jawaharlal Nehru published in *Science and Culture* Vol. 8 (1942).

worse, slide back to barbarism. ... It is comforting to know that in spite of the war and the difficulties that inevitably result from the war, this journal has continued to come out. Indeed it is in these times of war and crisis that the rational message of science is all the more necessary. So more power to '*SCIENCE AND CULTURE*'." A part of the message is reproduced in Figure 7.

It is well known fact that Saha was disappointed when his policy on nuclear programme was slighted by Nehru and he came closer to S.S. Bhatnagar and H.J. Bhabha. In order to enforce his ideas and give voice to them, Saha decided to involve himself in politics. His opposition to Nehru's policies is explored in "Meghnad Saha in Parliament".³⁸ However, the differences of opinion between the two were not that big as it seems to be. Nehru implemented the Damodar Valley project on the basis of Saha's idea. Nehru was in favour of calendar reform proposed by M.N. Saha, and he made a Committee with Saha as the Chairman. Nehru was so much convinced that he sent Saha to U.N.O. to present his ideas so that the Indian proposal gets international recognition. Unfortunately, due to protest from a few Jews it did not work, though Saha sought support from Albert Einstein.⁶¹ The calendar reform went to oblivion after Saha's death.

ISNA members and direct involvement in politics and more : Without any doubt, journalists and writers influence the politics of a country. ISNA and its organ *Science and Culture* were established to press the ideas of scientists and progressive political leaders on the Government. In 1941 the Association proudly wrote:

"Several of the members of the Editorial Board and of the Editorial collaborators are serving on the newly formed Board of Scientific and Industrial Research of the Government of India and of its various committees. We are glad to note that this collaboration is being maintained and our members are being invited from time to time to serve on the different committees of the Board."⁴⁰

And further, "If so the Indian Science News Association may have reasons to congratulate itself for his what it had been pleading for all these years."⁴⁰

In 1943-44, in order to involve Indian scientists in war efforts A.V. Hill – Secretary of the Royal Society London visited India. It was reported that A.V. Hill supported the stand taken by ISNA.⁴¹ In the proceedings a part of Hill's speech was quoted in length.

After years of political struggle – on Aug. 15, 1947, India was declared as an independent country. ISNA had played its own role in the process. On the occasion of the 12th Annual General Meeting, on Oct. 6, 1947, in the absence of D.N. Wadia - President of the Association, S.K. Mitra - Vice-President was in the Chair. It was stated that while politicians fought for India's freedom from foreign domination, ISNA had not remained aloof as a silent witness.

"One of the achievements of *Science and Culture* has been to clarify the future objectives of the country – planning development of the resources in men and material so that our people may live at par with the civilized people in other progressive countries."⁴²

The ISNA through its official mouthpiece *Science and Culture* had advocated nationalisation of natural resources, and industrialisation of country. In one of the meetings, Chief Guest, Annada Prasad Chowdhury - Finance Minister to the Government of West Bengal, in his address suggested eminent scientists and the Association to propagate scientific knowledge in Bengali, and bring out Bengali edition of *Science and Culture*.⁴² In response, M.N. Saha,

"offered the unreserved service of the Association in serving the national cause of reconstruction in liquidating poverty and famine and propagation of scientific knowledge in Bengali, provided necessary funds and encouragement were available from the Government."⁴²

Partition of India was a bitter lesson. Millions of people were killed and immigrated. Riots were worst in Bengal and Punjab. ISNA's stand was expressed in the following words:

"We were also not unmindful of the cultural aspect of our organ; for, many of the ills and evils, both physical and physiological, from which the humanity suffers today as the result of a disastrous and devastating war, cannot be eliminated unless the human mind is liberated from the maddening bondages of passions, pride and prejudices which reveal themselves in fanatical and idolatrous worship of set dogmas, favourite ideologies, circumscribed doctrines, and even of sentimental nationalism and material progress. There is no wonder, therefore, that the society today had become a battle field for rival groups, communities and nations blinded by lust for power and greed."⁴³

Chief Guest P.C. Ghosh, Ex-Chief Minister, Government of West Bengal, in his address stressed on the role of scientists in the solution of the food problem. He wanted that in free India, Government and scientists should cooperate to solve problems of people. Scientists must do something good for the society; otherwise, they could not claim Government support.⁴³ P.C. Ghosh repeated that M.K. Gandhi was not against large-scale industrialization. "On the contrary, he supported such industry if it was utilized for the welfare of the masses and not for the exploitation of labour."⁴³ M.N. Saha, who proposed a vote of thanks to the Chief Guest, said:

"The scientists in India were quite alive to the problems of the country and were ready to co-operate with the Government of the day in finding out solutions for them. Scientists could formulate certain proposals for the solution of the problems but the carrying out of them vested on the Government."⁴³

In another meeting M.N. Saha in a speech asked scientists to work on the burning problems of public. According to his view – independent India requires new education system. In the past, though the number of universities was increased, the standard of education and research had gone down. He expressed his disappointment with the Government policies as follows:

"The most important recommendation which they had made with regard to planning on scientific lines had not been accepted by the Government, nor had they set up the national planning commission. Government, he said, instead of proceeding on right lines are muddling in almost all the undertakings which they have taken up."⁴⁴

On another occasion Rai Harendranath Chaudhuri, Minister of Education, Government of West Bengal was Chief Guest. In his address he criticised the present education system and proposed different scientific bodies to come together to spread scientific knowledge among the masses.⁴⁵

On the occasion of the 17th Annual meeting, on Sept. 17, 1952, it was proudly announced that "*Our Members elected and nominated to the House of People and West Bengal Assembly*" (underlined in original). It was reported that our President Prof. M.N. Saha was elected to the House of the People. Prof. S.N. Bose, Life Member of the ISNA, was nominated to the Council of State. Prof. K.P. Chattopadhyay (Editorial Collaborator), and J.R. Dhar – Life Member, were elected to the Legislative Assembly,

West Bengal.⁴⁶ On this occasion, P.C. Mahalanobis F.R.S., was the Chief Guest. In his speech he told that he was twice in Moscow and in other parts of the world. He has realised how important is the use of applied science.⁴⁶ He said:

"In Soviet Russia as also in other countries in the world today, the question of planning was being studied from physical or practical point of view. The present system of financial planning, as in India, was abstract. On the question of study of physical planning closest collaboration between scientist and the administrator or economist was essential. From this point of view, great attention was now being paid in U.S.A. today to input-output inter-industry research study."⁴⁶

The Eighteenth Annual General meeting of the ISNA was held at the Institute of Nuclear Physics, Calcutta, on Oct. 10, 1953. Like previous year, MNS was President. The Chief Guest was Member of Parliament – Mr. Arun Chandra Guha, Deputy Minister (Finance), Government of India.⁴⁷ MNS in his speech persisted that in order to find untapped resources, the Government of India must set up a Central Geophysical Institute. He was annoyed that American firms were searching for petroleum in the delta-region of Bengal.⁴⁷ The Chief Guest A.C. Guha in his speech hoped that the ISNA which was like a pioneering institution in this line, would co-ordinate its activities with the Planning Commission. "He appealed to the younger generation of scientists to apply science to practical life and thus try to bring benefits of science to the common man."⁴⁷

The other issue, which is under-estimated by historians of science is the role of ISNA and *Science and Culture* in maintaining the heredity of scientists, in particular, Bengali scientists. In this context, the example of B.B. Ray suits well. He was one of the Founder Members of the NISI (today known as INSA). After his death, INSA forgot him entirely and did not even publish his obituary, while ISNA did more than this. In the following only a few well-known cases are given to emphasize our discussion (detail below).

Creating History and Maintaining Heredity

On the occasion of the 6th Annual Meeting on Aug. 12, 1941, before the business of the meeting begun the participants stood for a short time in silence as a mark of respect to the departed soul Nobel Laureate and poet Rabindra Nath Tagore, who expired on Aug. 7, 1941.⁴⁸ Apart from that S.K. Mitra, one of the secretaries reported

the loss of Sir Shah Muhammed Sulaiman (who has written a number of critical articles on Einstein's theory of relativity), and Guru Saday Dutta – Life-Member of ISNA. M.N. Saha, who had close contact with Sulaiman wrote his obituary in *Science and Culture*.⁴⁹

P.C. Ray and B.B. Ray : In the 9th Annual Meeting, in the absence of President S.C. Law, P.N. Ghosh was in the Chair. Before the usual business began the members stood in silence for a while as a mark of respect for B.B. Ray and Acharyadeb (P.C. Ray) who had passed away recently.⁵⁰ On behalf of Secretaries S.K. Mitra presented the Annual Report. Under "Obituary" it was stated that P.C. Ray's death was a great loss. He supported not only intellectually but also financially, whenever we were in difficulties.⁵⁰

P.C. Ray, the discoverer of mercurous nitrite, was nominated for the Fellowship of the Royal Society London for his scientific discoveries, and established a School of Chemistry, which produced famous chemists. He is also famous for his landmark book *The history of Hindu Chemistry*.⁵¹ P.C. Mitter and P.C. Ray were the first Indian chemists to be asked for nominating scientists for the Chemistry Nobel Prize.⁵²

The credit goes to ISNA for keeping the legacy of less known men like B.B. Ray. In this context, one of us (RS) would like to tell an episode (see Box).

About two decades ago, I was searching for information on B.B. Ray in order to explore his contacts with Niels Bohr, under whom Ray studied in the 1920s. I asked INSA about Ray. I was given the address of Prof. Santimay Chatterjee, who as I later came to know, was associated with ISNA and *Science and Culture*. S. Chatterjee sent me some information. A few years later, I decided to write B.B. Ray's biography. Again, Editor-in-Chief of *Science and Culture* and member of the ISNA, Prof. S.C. Roy sent me the obituary and photograph of B.B. Ray.

Now we come back to the history of ISNA and B.B. Ray. According to the Proceedings of the 9th Annual Meeting:⁵⁰

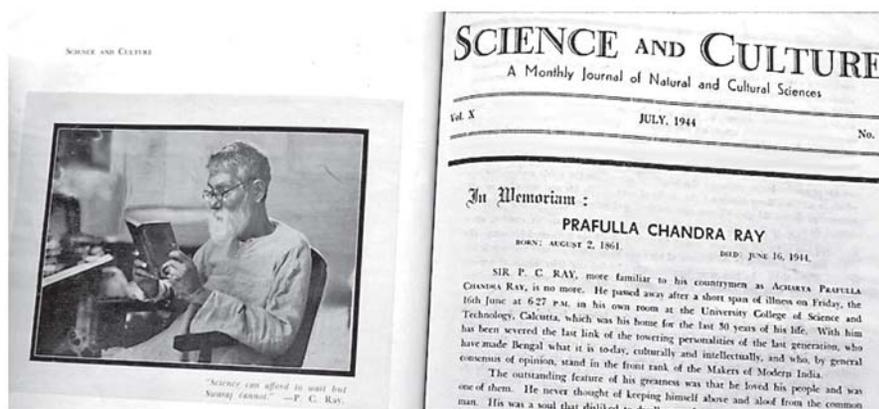


Figure 8: A part of article published by *Science and Culture*.

"The Association when started in 1935 had no room of its own, and Prof. Ray allowed his sitting room to be converted into office of *Science and Culture*. He gave his time and energy freely to the service of the magazine which needed fostering care in its early days. Professor Ray's memory will remain fresh in the minds of his colleagues and co-workers, and the Association mournfully records the help and services it received from him."⁵⁰

According to *Science and Culture*, shortly after BBR's death a meeting of condolence was held at the University College of Science and Technology. A committee was constituted to collect money for a Memorial Fund.⁵³ In the March 1946 issue of *Science and Culture* we find that B.B. Ray's portrait costed Rs. 250, whereas the cost of unveiling ceremony Rs. 50. The remainder of the fund was handed over to the Calcutta University for the creation of an endowment on specific conditions, such as (i) Establishing "Professor Bidhubhushan Ray Memorial Lectureship" on Experimental and Mathematical Physics and allied subjects. (ii) Lecture be delivered once in every three years at the University College of Science and Technology by a distinguished scholar.

In the same issue of the journal it was reported that 8332 rupees were collected. The unveiling ceremony of the portrait of Prof. B.B. Ray was performed on January 28, 1946 before a distinguished gathering of colleagues, research workers, friends and admirers of Professor Ray. Dr. B.C. Roy, President, Council of Post-Graduate Teaching in Science unveiled the portrait.

Evidently, without ISNA's efforts there might not have been B.B. Ray's portrait at the University of Calcutta, nor any obituary available for the next generation.

M.N. Saha : Figure 9 shows that on Feb. 22, 1956, an invitation was sent by the Honorary Secretaries for a

Some Significant Activities of ISNA after Saha

ISNA was established in 1935 and continues to exist with its head high. This has been possible only by dint of dedicated, selfless service provided by its members. The photograph of current president and the two secretaries is presented in Fig. 12.



Figure 12. (from left) Dr. K. Muraleedharan, present President of ISNA, Prof. Sudhendu Mandal and Prof. Manas Chakrabarty, present Secretaries of ISNA.

We intend to publish another article on the activities of ISNA in the post-Saha period. However, in this section we present some of the significant events that occurred after Saha's death. The presentations given below are neither exhausting nor arranged in terms of priority. Moreover, during the period of writing this article, the ISNA office is closed due to covid pandemic lockdown and the authors did not get any chance to access necessary documents to verify. So any omission of events, or mistakes is unintentional.

a) Saha's Dream Fulfilled: Science Communication Course : To fulfil Meghnad Saha's dream of popularizing science among the masses, ISNA started conducting a certificate course on "Science Communication and Media Practice" from 1963. The attempt is not only to train students but also to produce books, videos, CDs etc. that will continue to serve as effective study material for the trainees. The course includes lectures, workshops, site visits, hands-on-experience and orients the students in such a fashion that the learner gets a good exposure to the unfolding secrets of science and technology as well as gains the ability to communicate the same to masses through print and audio visual media. Participation of *Vigyan Prasar* as co-organiser made this course more effective and inspiring.⁵⁷

b) Old Institution, Modern Outlook: Digitization of all Issues of Science and Culture : In view of the deteriorating condition of old issues of *Science and Culture*, it was felt that digitization of all past issues was an imminent need. The financial situation of ISNA could

not afford this huge expenditure. Prof. S.C. Roy, Editor-in-Chief and Shri Samarjit Kar, Editorial Advisor, *Science and Culture* approached the Council of Scientific and Industrial Research (CSIR) for financial help. CSIR was very generous to provide the requisite funds to undertake this task. All the issues of *Science and Culture* since 1935 were digitized at a time (about a decade ago) when very few organizations ventured to take this step.

c) Memorial Lectures : Conducting lectures and seminars was one of the objectives of ISNA from its very inception. But during Meghnad Saha's time there was no structured regular seminar. Lectures were arranged by him when some eminent foreign or Indian scientists were available. According to the website of ISNA, about seven Memorial Lectures were launched after Saha's death which are being organized regularly.⁵⁸

d) Students' Award for Basic Sciences : With the generous donations received from Dr. Mrinal K Dewanjee, an Indian-American scientist working at National Institute of Health in the USA, ISNA instituted two awards in 2017, one in physical sciences and the other in life sciences for students of XI and XII standards. Each award comes with a cash award of Rs. 10,000/- and a certificate. For more details readers may refer to July-August 2017 issue of *Science and Culture*.

e) An Ancient Guru Reborn: A Documentary on Acharya Prafulla Chandra Ray : A documentary film titled, "Acharya Prafulla Chandra Ray – an Ancient Guru Reborn" produced by ISNA was released on the occasion of the 150th birth anniversary of Acharya Prafulla Chandra Ray by the then Hon'ble Governor of West Bengal Shri Keshari Nath Tripathi on 2nd February, 2015 at Nandan Hall II, Kolkata. The film was scripted by Dr. Manas Pratim Das, Convener of the Organizing Committee and was directed by Mr. Mujibar Rahman, a well-known director of documentary films with support received from Professor S.K. Talapatra, Chairman of the Organizing Committee and Professor Biswapati Mukherjee. The film was funded by the Council of Scientific and Industrial Research (CSIR).

f) Platinum Jubilee Celebration : ISNA completed its 75 years of existence in 2010. The platinum jubilee of ISNA and *Science and Culture* was observed throughout the year. A colourful booklet describing a brief history of *Science and Culture* and ISNA was published on this occasion¹. A book entitled "Emerging Science and Culture: Connecting People" edited by S.C. Roy, Editor-in-Chief of *Science and Culture* was published by ISNA from the

INDIAN SCIENCE NEWS ASSOCIATION
PLATINUM JUBILEE CELEBRATION
 Release of Platinum Jubilee Commemorative Volume
 “Emerging Science and Culture : Connecting People”



Figure 13: Professor Yash Pal, Former Chairman, UGC addressing the audience. Sitting from left to right are Professor Sudhendu Mandal, Secretary, ISNA; Professor Manoj Kumar Pal, Former Director, Saha Institute of Nuclear Physics, Kolkata; Professor B.B. Biswas, President, ISNA and Professor S.C. Roy, Editor-in-Chief, *Science and Culture*.

generous grant received from Ministry of Culture, Govt. of India. The book contains articles written by experts on emerging issues on four different areas : Energy, Communication, Science and Technology and History and Culture. The book was released during the valedictory session of the Platinum Jubilee held on August 6, 2010 by Professor Yash Pal, Former Chairman, University Grants Commission and Chancellor of Jawaharlal Nehru University (Figure 13).

Conclusion

The ISNA founded in 1935 continues to survive. Obviously, it is an example of a success story, which began in colonial India, and continued in post independent India. Its history shows:

- From the time of its inception, it adopted the policy of maintaining right contacts in order to achieve its goals like the use of science and technology for the development of India. However, it did not rely only on contacts. Many of its members participating in science making policies were instrumental in imposing the policies of the ISNA.
- From financial point of view, ISNA almost always had financial stringency. Thanks to Bengalis’ nationalism, it survived. This successful story tells us that the survival of an institution is not always a matter of money, but often national spirit and dedication play an important role.
- The founders of ISNA and *Science and Culture*

dreamt of bringing the journal to the level of the British journal *Nature*. In contrast the journal moved from being monthly to bi-monthly. Why so? If we compare *Nature* with *Science and Culture*, we see that in the case of the former, a single person took the financial responsibility. He was a businessman, who was ready to bear losses in the beginning. In contrast *Science and Culture* was a part of an institution, and its policies were determined not by a single person.

● After India’s independence most of the institutions started getting help from the State and Central Governments. With time, persons like P.C. Ray, U.N. Brahmachari disappeared from the stage. In the post independent India even institutions like Adair Dutt & Company (India) Pvt. Limited withdrew their support. This suggests that the nationalistic feelings were no more as strong as before 1947. The existence of ISNA is due to Bengali nationalism as well as to keep the legacy of scientists like M.N. Saha and P.C. Ray.

·The positive part of the story is that ISNA remained loyal to its objectives. By keeping the records of scientists like B.B. Ray or other lesser known scientists, by writing on scientific societies, and in particular detailed reports on the Indian Science Congress Association in *Science and Culture*, ISNA has done a great job. Definitely there is no financial benefit but from intellectual point of view, national heredity and cultural aspects, it offers invaluable service to the society. □

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