

C H A P T E R 8

OPINIONS OF SOME SCIENTISTS ABOUT
INDIAN JOURNALS

After studying the starting, growth and usage of the Indian journals (specially those pertaining to the fields of Physics and Astronomy) through different periods in this century and getting a picture of the present status of the journals in the country, it was necessary to find out what the users (the scientists) of these journals felt about them. It was also important to find out from those involved in bringing out these journals (specially the editors) the problems faced by them in bringing out the journals and their assessment of the journals.

We present in this chapter the opinions expressed by a cross section of scientists in the country about Indian scientific journals. This presentation consists of three sections. Several physicists and astronomers from abroad (three of them Indians settled abroad) and a few science administrators in the country were interviewed to find out their opinions about the journals in India. The first section gives a summary of the views expressed during the interviews; the second covers the

views expressed in publications by practicing scientists and others; and the third gives the opinions expressed by scientists and editors at conferences and seminars.

8.1 Opinions expressed in interviews

Opinions were got by interviewing a cross section of scientists, editors of the five journals studied by the author and a few administrators. A small sample of physicists and astronomers belonging to twelve leading research institutions in the country, six universities and one University Centre for Astronomy were interviewed and their opinions sought. The physicists/ astronomers were from the Bhabha Atomic Research Centre, Bombay, Indian Association for the Cultivation of Science, Calcutta, Bose Science Centre, Calcutta, Bose Research Institute, Calcutta, Indian Institute of Astrophysics, Bangalore, Indian Institute of Science, Bangalore, Indian Institute of Technology, Madras, Institute of Mathematical Sciences, Madras, National Physical Laboratory, New Delhi, Raman Research Institute, Bangalore, Saha Institute of Nuclear Physics, Calcutta and the Tata Institute of Fundamental Research, Bombay. Among the universities at which scientists were interviewed were Bangalore University, Bombay University,

Calcutta University, Delhi University and Jawaharlal Nehru University, New Delhi, Karnataka University, Dharwad and the Inter University Centre for Astronomy, Pune. The interviews were limited to a small number since the sampling of opinions held by the scientific community is only a minor part of the present study. About 65 physicists (45 from Research institutions and 20 from universities) and 16 astronomers (12 from Research institutions and 4 from universities) were interviewed.

Some of the important aspects of journals on which their opinion was sought were :

1. Their perception of the important journals in their field
2. Whether journals were the main channel of information?
3. Whether they published in Indian journals and if so in which journals ?
4. If they didn't publish in Indian journals reasons for not doing so.
5. Their impression about the refereeing system in Indian journals.

6. Their assessment specifically of the following journals - IJP, IJRSP, Pramana, IJPAP, JAA, Current Science, Proceedings of the National Academy of Sciences, Proceedings of the Indian National Science Academy, and the Bulletin of the Astronomical Society of India.
7. Whether India should have national journals ?
8. Whether scientists should be compelled to publish in Indian journals ?
9. Whether the **quality** of science done in the country has gone up and whether the scientific journals in the country reflect the science done in the country?
10. What they felt could be done for the improvement of Indian journals.

We summarize below the opinions expressed on each of the above points. Whenever **required**, opinions of astronomers and physicists are given separately.

1. Important journals:

The majority of the physicists and astronomers categorically stated that the journals published from abroad were of importance to them. Over 90% selected Physical Review Letters, Physics Letters, Physical Review, Journal of Physics, Reviews of Modern Physics, Astrophysical Journal, Astronomy and Astrophysics,

Monthly Notices of the Royal Astronomical Society as being the leading journals. Only two Indian journals namely Pramana and Journal of Astrophysics and Astronomy were mentioned as of interest, that too marginally. Concerning IJP, IJRSP and IJPAP, these three journals were mentioned as important only by a few working at the universities. Those working in research institutions had very little to say about them. A list of journals mentioned as important by the scientists has been given in Appendix 1.

2. Main channel for information:

Scientists working in certain areas like Particle Physics, Condensed Matter Physics, Astronomy, observed that they depended more on informal channels like pre-prints, discussion with fellow scientists and attending conferences. They depended on journals only about 20% of the time. But this was not the practice among physicists in some of the universities. They did not receive any pre-prints and depended more on journals. In other fields, however, it appears that journals still remain a major channel for information.

3. Publications in Indian journals:

More than 80% of the scientists working in research institutions preferred to publish the majority of their papers in foreign journals. Some of them hardly ever published in Indian journals. This agrees with our data presented in the chapter 6 on Journals utilization. By contrast, those working in universities had no hesitation in publishing in Indian journals.

4. Reasons for not publishing in Indian journals and for publishing in foreign journals:

Ninety percent of those not publishing in Indian journals gave the following reasons for preferring foreign journals:

- a) The poor "*visibility*" of Indian journals in the international scientific community
- b) Articles published in Indian journals not getting due credit nor cited (perhaps, because of its poor visibility)
- c) Not getting a good or a critical feedback from the referees of Indian journals.
- d) uneven standard of refereeing, even in journals like Pramana
- e) Good articles getting buried among mediocre (or even worse !) articles

- f) Indian journals often being too general and diffuse and non-specialist or non thematic in character.
- g) Earlier papers and related papers being published in foreign journals.
- h) Active groups working in a certain area publish in certain journals. So, others also publish in them to get noticed.
- i) Articles published in foreign journals tend not to be ignored easily.
- j) There 'are "theme" journals among the foreign journals, and **it** would be useful to publish in these.

Approximately fifty percent of the scientists interviewed belonged to the age group 25 - 35 years, and they expressed a few additional strong reasons for not publishing in Indian journals. These were :

- a) A higher weightage was given to articles published in foreign journals while assessing a candidate for a position. This was the case not only at the international level, but more so at the national level.
- b) Most of the " senior" scientists had published and continue to publish most of their output in foreign journals and therefore, to expect the young scientists to publish in Indian journals was considered "*unfair.*"
- c) To a large extent, foreign journals not having the deficiencies mentioned earlier that were found among Indian journals.

5. Refereeing:

Seventy five per cent of the physicists felt that refereeing in Indian journals was fair. About 20% of physicists working in research institutions felt that Pramana, whose record was much better than that of any other Indian journal, had uneven refereeing and that papers sometimes did not go to proper referees. It was also felt that there were not many physicists in the country in certain newly emerging sub-fields of Particle Physics and that unless Pramana has an international refereeing policy, it would not be helpful either to the scientists or even to the journal. About 50% of the scientists interviewed were refereeing papers. The majority of those scientists who were refereeing, observed that they adopted the same standards while refereeing a paper received from Pramana as they would for a paper received from Physical Review or Physics Letters. About twenty five percent adopted a slightly different standard for Indian journals, specially IJP or IJPAP. If they felt that the paper did not have any serious scientific errors, then they accepted it even if the work was of a routine nature. They took the view that one had to consider the environment/facilities, background of the author before totally rejecting the papers. At least 50% of the physicists interviewed felt

that there was certainly an unseen bias in refereeing. The byline of the article played an important role with the referees. The place from where the article was submitted appeared to carry some weightage. This was more so in the case of periodicals published from abroad. One scientist remarked that when something new or controversial is reported, the paper gets into problems with referees.

6. **Assessment** of Indian journals:

The physicists working in the universities felt that both IJRSP and IJPAP were "average" journals, IJP was "good" and Pramana our "best journal". Nearly 90% of the physicists in the research institutes felt that IJRSP and IJPAP were definitely not in the same class as either IJP or Pramana. A physicist who referees papers for IJPAP felt that this journal received only very low quality papers. Another physicist who was a member of the editorial board of IJPAP mentioned that the senior members of the editorial board do not take the board meetings seriously. Notwithstanding the twenty five percent of the physicists who felt that Pramana was too general and refereeing in it uneven, other physicists working in research institutes felt that Pramana was our

best journal, but that **it** could still improve. A referee of Pramana felt that the articles received by **it** does not give **it** enough scope to become a viable journal of international standard. A few physicists (~5%) felt that Pramana had not kept up the early promise **it** showed.

The astronomers (both working at the research institutions and universities) felt that JAA was a very good journal but had poor visibility outside the country and because of that they did not wish to **publish** their work in **it**. **It** was also felt by many (about 50%) that its level is slowly coming down over the years. A leading Radio Astronomer observed that very important papers from his group published earlier in JAA were totally ignored by outsiders and did not get the due acknowledgement. Hence, they were forced to publish in foreign journals. Contrary to the opinion of the associate editor, ~ about 75% of the astronomers considered the Bulletin of the Astronomical Society of India as just an official organ of the Society and did not give **it** the status of a research journal. They equated **it**, at best, with Mercury the official organ of the Astronomical Society of the Pacific.

About 40% of the physicists and astronomers in the research institutes considered Current Science as a journal covering predominantly Biological Science and of little interest to physicists or astronomers. 10% felt that though it claimed to be a refereed journal, the refereeing was very poor and in fact highly questionable.

The other 50% felt that of late (1990 onwards) this journal had been improving dramatically and coming up with interesting numbers covering important themes and issues relating to science and technology in the country, along with research articles in physics and astronomy. The efforts of the editor in his present attempt to change the status of the journal were commended by most of the scientists.

Eighty percent of the physicists said that they did not look at the Proceedings of Indian National Science Academy or National Academy of Sciences and considered them to be of no consequence.

7. Whether there should be National Journals in India:

About 90% of both physicists and astronomers expressed the need for national journals. But it was felt

by them that there were too many journals in the country and we should consolidate our efforts and bring out only a few good journals. The other 10% felt that our national journals served no purpose and we may as well scrap them.

8. Whether Indian scientists should be compelled to publish in Indian journals :

A question frequently debated is whether Indian journals could ever improve unless there is official pressure and compulsion on Indian scientists working in India to publish their results in Indian journals. Over 80% felt that there should not be such compulsion and compulsions will not bring in the required results. On the other hand, if Indian journals were improved and brought to near about international standards, then the scientists will automatically start publishing in them of their own accord.

However, 20% strongly expressed the view that there must be such legislation and since the Government was funding almost the entire scientific research in the country, there was nothing wrong in its compelling the

scientists to publish in national journals which were again funded by the same Government. Examples were quoted of the articles from CERN (Geneva) being published in European journals, work from the European Southern Observatory (ESO) published in the journal *Astronomy and Astrophysics* and the majority of Russian and Japanese work being published in their national journals (though the scene is changing in Russia). A few (5%) among this lot felt that the restriction could be for a period of five years during which time all out efforts should be made to improve the other aspects of the journal like refereeing, editorial boards and distribution of the journal for a wider audience.

9. Quality of science done in the country and whether **it** is reflected in Indian Science journals:

Nearly 80% of the physicists and astronomers felt that the standard of Indian scientific work has certainly gone up in the last few decades, but that this applied to only the top research institutions in the country. There were many small pockets of excellence but **if** one took the **national average** of the country as a whole, **it** indicated a low quality of work, though the number of articles published were large. Fifteen percent of the scientists felt that the science done in

the country though of good quality, could not be classified as original scientific work and that it was only a poor imitation of western science with hardly any new result contributed to the existing knowledge. The remaining 5% felt that there was hardly any change in the scientific work done in the country over the last five decades excepting for the large number of below average articles published and the absence of the scientists of the calibre of Raman, Saha, Bose, Krishnan and Bhabha.

Majority of the scientists (85%) expressed the view that *one does not get a true picture of the science done in India by looking at the Indian journals (in Physics and Astronomy). The Indian journals they opined, publish by and large, the low quality of work that they receive for publication as most of the good work done in the country, especially at the leading research institutions, is reported in foreign journals. Unlike in the journals of Britain, USA, USSR and Japan where one does get a picture of the science done in those countries, Indian journals do not reflect the scientific work of the country in the true sense.*

Opinions of Editors

Editors/Associate Editors of the four Physics journals and the Astronomy journal studied were interviewed to find out the opinions about their own journals and the problems faced by them as editors.

The problems seem to be common to all the journals, all the editors complained about the difficulty of *getting sufficient number of good papers from the leading institutions*. The editors felt that contribution both in terms of articles for publication and suggestions for improving the journal) from the editorial board members was minimal, specially that of IJRSP and IJPAP where, they were just ornamental. IJPAP editors drew attention to the difficulty experienced by their not having independent typing facility or artists facility and that they had to depend on a common pool. They (IJPAP editors) also felt handicapped by the inadequacy of telecommunication facilities. This was the case with the editors of IJRSP also. Editorial offices of IJP, **Pramana** and JAA had these facilities. Editors of IJP mentioned that they take extra trouble to encourage papers from new centres. Editors of **Pramana** mentioned the efforts they were making to review their referees list. Though they had a large panel of referees, only

200 were active. **I**t was also mentioned that in most fields good and conscientious referees were few. Editors are all the time campaigning to get good articles from leading centres of physics research in the country and are also constantly trying to reduce the delay in publication. The editors of Pramana mentioned that they were requesting referees to give more objective reports and were not accepting one-line referee reports.

It was mentioned by the Associate Editor of JAA that the number of papers they received was rather small and that not many send their best papers to this journal. **I**t was also felt by him that *generally articles from universities were not good* and were lacking in professionalism.

The Editor of publications of the Indian Academy observed that **i**t had been resolved by the Council of the Academy, not to publish commemoration issues of journals to honour scientists on a routine basis. He also mentioned about the efforts being made by the Academy to revamp the editorial boards and panel of referees with active scientists.

The general impression given by almost all the

editors is that the *Indian scientific community does not contribute its best papers to Indian journals generally, and that there is a lack of commitment from everyone concerned.* However, the editors seem to be making efforts to improve the situation.

10. Miscellaneous Comments:

Various other general opinions were expressed about Indian journals and these have been summarized below. These opinions have not been quantified, only the significant ones, having some direct relation to the topic of study, are being mentioned.

- a) **It** was felt that a mixture of publications of Indian articles in Indian and foreign journals would be good for disseminating Indian Science and that **total weightage should not be given for Indian publications in foreign journals.**
- b) The articles going to foreign journals were not really harming Indian Science. However, they should give references to publications in Indian journals.
- c) Most Indian scientists (majority of them) who publish their research work send their best work to foreign journals and poor work to Indian journals. One should not publish in any journal as a charity.
- d) Circulation of reprints/pre-prints will not make up for the poor visibility of the journal. **It** is not just the attention of the scientists known to authors that one would like to receive but also that of scientist not known to the author.

- e) Indian journals serve more to help the scientist to increase the number of publications (most of the time, poor quality papers) to meet the necessary stipulations laid down by the employers to get promotions etc.
 - f) Elder scientists in the country have set a trend of publishing in foreign journals.
 - g) As of today, Indian Science is a removable appendix of Western Science and hence we don't need science journals in the country.
 - h) Journals published by CSIR are not of any use to mainstream science done either in India or outside.
 - i) If a journal is not able to get good papers, it should be closed down.
 - j) Majority of the editors of Indian journals are not serious about the standards of the journal and the integrity (of referees and editors) is low in Indian journals. Most Indian journals are associated in the public eye with particular groups which is not congenial for the journal.
 - k) A lot of effort is required from those running the journal to make a journal successful.
 - l) A number of younger physicists in the leading research institutions mentioned that they (their group) were planning to publish hereafter regularly at least a few articles in Pramana .
11. Some Suggestions for improving Indian journals:

The representative sample of the Indian scientists interviewed made a number of suggestions for improving the Physics and Astronomy journals published

from India. Significant among them are:

- a) It would help to reduce the number of journals as there are too many at present.
- b) Channelize articles of certain type to a particular journal, for example, publish all review articles in IJP, articles on Applied Research in IJPAP and the rest in Pramana. This way, there would be consolidation of these three journals, each of them getting good articles of a particular variety.
- c) Indian scientists should publish the longer version of the work in Indian journals with a short account going to the foreign journals. There should be cross referencing to these articles.
- d) Editors of the journals should be chosen carefully and they should campaign for good articles from their colleagues.
- e) Journals should try to gain the confidence of the scientific community, especially the quality-conscious segment, by adopting rigorous refereeing standards and not compromising on the quality of the articles published.
- f) Leaders should come forward and publish their good work in Indian journals.
- g) Authors in rapidly developing and newly emerging areas must be consulted to obtain a panel of names for referees. The number of international referees should be increased and it should not be a closed circle.
- h) Good review articles should be published.
- i) There should be a campaign directed at those in charge of recruitment, not to underrate the arti-

cles published in Indian journals.

- k) Special efforts must be mounted to improve sales and subscription for Indian journals.

8.3 "Opinions of Science Administrators":

Five scientists who had turned part administrators (like Directors of research institutions) but who were still involved in research and a scientist who is a full time administrator in one of the important wings of the Government, were interviewed to get their reactions about the Indian journals. The general opinion of this group was that we should certainly have good journals in the country and that Pramana was fairly good. They were of the opinion that it was not totally true that no weightage was given to publications in Indian journals while assessing a scientist. Whatever the situation might have been in earlier days, of late the people who were recruiting did give the deserved weightage for every journal, be it Indian or foreign. No journal was discriminated against just because it was Indian. It was also expressed that it would be unfair to expect the same weightage to be given to all the Indian journals specially knowing the standard of many of the Indian journals presently. It was also felt that the scientists could not be expected to publish all their work in

Indian journals. They were not for any sort of legislation. But one of them expressed the view **that** project leaders of specific projects funded by the Government could be requested to publish the results of that project in an Indian journal. However, all of them emphasized the need for improving the standard of our journals **first** by following rigorous refereeing standards, publications coming out on time and adopting generally accepted international norms in publication of journals. **When** a suggestion was made by this author to the administrator from the funding agency to support the practice of circulating sufficient number of reprints of articles published in Indian journals (among scientists whose opinion mattered and who were **mostly** working abroad), the suggestion was readily accepted. However, **it** was mentioned that such a thing could be done only for a few selected journals, to start with. One important factor that emerged out of talking to this group was that the science administrators knew very well the importance of having good journals in the country and they were prepared to support this activity fully. (This is not surprising as all of them were themselves researchers and had published some time or the other).

Opinion of some foreign scientists:

About ten physicists and astronomers from abroad were interviewed to get their opinions about Indian journals. These scientists were from Australia, Britain, United States and the USSR. Three of them were Indians settled abroad.

Most of the astronomers (seven of them) and the physicists felt that there was a need for national journals in every country and that India should certainly have its national journals. However, **it** was emphasized by **all** of them that the scientists of the country should feel the need for a journal and they should be prepared to publish their work in **it**. A few of the astronomers felt that in case **it** was not possible to get sufficient good papers, one could think of a regional journal for a geographic area (like European astronomy journals coming together to start the journal **Astronomy and Astrophysics**).

One of the astronomers felt that **it** was not a question of National Journal one should be thinking about. He felt that **if** a journal had to be made good, then one should try to make **it** of the highest standard with papers from all over the world. **If it** caters only

to a national group, naturally its usage and circulation will be limited. To achieve acceptance in the international community, one has to build up a good reputation and be backed up by individuals/institutions well known for their work. And it takes time for such a thing to happen. Another astronomer felt that one should not publish all their articles in their own national journal but should publish a certain percentage outside also. At the same time, national journals should attract and publish good articles from outside the country.

The physicists were aware of **Pramana** and felt that there was scope for making it to international level with a little more effort. One of them expressed the view that good papers do not come to journals just like that. It depended on the reputation of the journal, the editor's powers of persuasion for good articles, relations with active scientists and his group of associate editors reaching out for papers from different active centres.

Another physicist felt that there must be Indian journals for various reasons. But all the articles of Indian scientists need not be published in them and that Indian journals should try to get some good articles

from abroad from time to time in newly emerging fields.

One of the leading astrophysicists in the world expressed that Journal of Astrophysics and Astronomy was as good as any other leading astronomy journal in the world. He felt that the Radio Astronomy work done in India and especially at the Tata Institute of Fundamental Research was quite good and that **it** would certainly be read even **if** published in JAA. He mentioned that **it** would be good to have full time editors with subject background but was aware of the difficulties of getting committed scientists to edit journals. He was also of the opinion that a journal could be made good by keeping a high standard and gaining the confidence of the people for integrity. Even though the other astronomers had known JAA, none of them read this journal as their reading of journals was limited to just a few journals. They read **pre-prints/reprints** received from known quarters much more than the journals. In fact, their channel of communication was personal communication (pre-prints/discussions/ electronic mail messages) and information gathered during conferences (most of the time outside the conference rooms in informal discussions). One of the astronomers had refereed papers for JAA and felt that the standard of papers he had received was good.

To summarize, though the physicists and astronomers (from abroad) interviewed were aware of **Pramana** and JAA, these journals were not used by them. They were not aware of any other physics journal from India.

Opinions from others:

A number of opinions have been expressed in publications by scientists, editors and publishers about Indian journals. We mention below a few of them which are relevant for this study.

Rajagopal (1988), the then Editor of **Pramana** wrote an article in **Physics News** in which he raised doubts whether **Pramana** should be continued to be published. He drew attention in this article to the prevailing practices of the leading Indian scientists underrating Indian journals and publishing their best works in journals published outside the country. He also came forward with a few suggestions to improve the situation but expressed his doubts as to whether the community would accept them.

Arunachalam (1979) reviewing the scientific journals in India wrote :

" from the point of view of impact factor, immediacy index and interconnections with the overall scientific literature of the world, most articles published in Indian journals have very little cognitive connection with international science".

In an article on the Journal of Astrophysics and Astronomy, Arunachalam (1985) concluded that JAA was truly international and that it stood a good chance of becoming a core journal in the field. Reviewing this journal in Nature, John Barrow (1982) wrote that the success of this journal would depend on it receiving articles from foreigners and expatriate Indians.

Mathai Joseph (1979) felt that Indian journals could only reflect Indian science at best and even in that 'it could not succeed as very little of quality material was submitted to it.

Ramaseshan, a leading Physicist of the country who edited the journals of the Indian Academy of Sciences and was the first editor of Pramana, discussed the problems of journals in India in the key note address to a seminar on Primary Communication of Science and Tech-

nology(Ramaseshan,1978). To quote him, on a few points, he says :

" While it is true that the quality of our science is by no means of the highest order, our journals are much worse than the science we produce".

Referring to the early Indian journals, he says :

" The quality of the work and the references made in foreign journals to Indian ones gave to the latter a standing and reputation so good that most scientific laboratories in the world subscribed to journals like the Indian Journal of Physics, Proceedings of the Indian Academy of Sciences, Current Science and Sankhya". (Ramaseshan - 1978).

Touching on the aspect of improving the journals, he says :

"The only method of improving the quality of scientific papers in a journal is by insisting on the highest standards of refereeing. In fact, a good journal disciplines a scientific community by demanding an impartial assessment system based only on quality - not dependent on any hierarchal system". - (Ramaseshan - 1978).

In another talk, Ramaseshan explained why **Pramana** was started. He says that it was an attempt for starting a cohesive community in the country that could take care of peer group assessment without any reservations. He emphasized that the attempts to strengthen the jour-

nals should be seen as a part of building "an endogenous and indigenous scientific community" (Ramaseshan - 1989).

Venkataraman (1989) lamented in a note to the same conference (perhaps pessimistically) about our journals. He felt that the neglect of our journals was only a manifestation of general neglect and indifference prevailing in the country.

Rao, the then Editor of the publications of the Indian Academy of Sciences was forced by the prevailing situation to appeal to the Fellows of the Academy to send at least one or two of their good papers every year to the journals of the Academy. He wrote to the Fellows:

The publication record of our Fellows in our Academy journals is miserably poor. A sample survey shows only about 50 papers (which is a little less than 10% of the total publications) are published by the Fellows in our journals. Furthermore, only a few Fellows publish these papers." (Rao, 1988).

Recently the issue of Indian science journals has been taken up by a number of scientists in Current Science. Padmanabhan (1990) discussed the issue of journals compromising on their standards on the grounds of helping or showing some concession to those scien-

tists working under difficult conditions with very little facilities. He argued that journals should not have such an attitude and that "the pride of a scientist cannot be compromised with attempts to publish poor quality papers based on mistaken justifications." Bala Ravi (1990) dealt with the aspect of professionalism in producing the journals in the country. He observed that it is only through peer review and sound editorial policy that one could enforce quality in publishing science journals. Kochhar (1990) analyzing the problems of Indian journals felt that peer pressure was essential as the strength of the journal was in it and that its set of authors should be identical with the set of referees. He was of the opinion that any honour to scientists from within the country should be made conditional to his services to Indian science and if a scientist felt that the Indian learned societies were good enough to be members of, then they should accept that the journals of those bodies also to be good enough to publish their research papers in.

Opinions expressed in conferences:

There have been a few conferences in the country devoted to Indian scientific journals. There was a

seminar on Primary Communication in India in 1978 at Bangalore. At this seminar, editors of journals and librarians and teachers in Library and Information profession in the country discussed the various aspects of Indian journals. A number of papers on bibliometric studies were presented. The papers presented indicated that the level of 'Indian journals (excepting a handful) was very low. There was no in depth discussion as to why it was so.

In 1989, there was an interesting meeting at Madras where perhaps for the first time scientists, editors of journals, representatives of funding agencies and librarians met in what was termed a "Brain Storming Session on Indian Science & Technology Journals". Each of the groups expressed their opinions about the state of Indian journals and the reasons for why they are so. Most of the points that emerged were similar to what has already been mentioned in connection with the opinions expressed by scientists in interviews. An attempt was made to get a collective pledge from the scientists that they would publish most of their good papers in Indian journals. But the scientists were not prepared to take such a pledge and one scientist went to the extent of saying that he would rather leave the country than be forced to accept such a regulation (self-imposed or

otherwise).

A Summary of the opinions:

To summarize the opinions expressed in different forums, the scientists are not happy about most of the Indian publications and have their own reservations about publishing their work in Indian journals. Editors feel that they cannot do much unless they receive good articles. However, efforts are going on from both sides to improve the situation and hopefully things would improve in course of time.

The author's comments on the remarks summarized here are deferred to the next chapter.

R E F E R E N C E S

1. Arunachalam S. (1979) : "Scientific Journals in India : Their relevance to international science." *Science Today* **13**, p.68, March 1979.
2. Arunachalam S. (1985) : "Has Journal of Astrophysics & Astronomy a future?" *Scientometrics* **8**, 3 (1985).
3. Bala Ravi (1990) : *Current Science*, **59**, 295 (1990).
4. Barrow J. (1982) : *Nature*, **299**, 510 (1982).
5. Joseph M. (1979) : "Do our journals have symbolic value only?" *Science Today* **13**, p.50 (1979).
6. Kochhar R.K. (1990) : "Poor Science, Poor Journals", *Current Science* **59**, 773, 1990.
7. Padmanabhan G. (1990) : "The Quality of Research" in *Current Science*, **59**, 5 (1990).
8. Rajagopal E.S.R. (1988) : "Should Pramana - Journal of Physics continue to be published". *Physics News* p.61 June 1988.
9. Ramaseshan S. (1978) : "Some thoughts on scientific journals in India" in Proceedings of a Seminar on Primary Communication in Science & Technology. Edited by R.N.Sharma and S.Seetharama. New Delhi, Publications and Information Directorate.(~1980)
10. Ramaseshan S. (1989) : Inaugural address to the "Brain Storming Session on Indian Science & Technology Journals " Madras 1989.
11. Rao C.N.R. (1989) : In a letter to the Fellows of the Indian Academy of Sciences. Reproduced in Studies on Indian Science & Technology Journals - A preliminary compilation brought out on the occasion of the "Brain Storming Session on Indian Science & Technology Journals", Madras, 1989. PPST Foundation, Madras.
12. Venkataraman G. (1989) : "On publishing in Indian Journals - Some Random Thoughts". Note to the "Brain Storming Session on Indian Science & Technology Journals", Madras, 1989.