
29 TOWARDS THE DEVELOPMENT OF SCIENCE COMMUNICATION IN THE CARIBBEAN

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For the past week we have been occupied with the study of the means and tools of communication, and the techniques and relative advantages of the use of each individual medium, with the how and what of arranging conferences, seminars, meetings, exhibitions and tours for efficient communication.

It is somewhat unfortunate however, that we have such limited time in which to survey such important issues as the extent to which these media have been used in the Caribbean specifically for the dissemination of scientific information; the political, economic and attitudinal constraints which tend to reduce efficiency of communication; the attitudes of scientists themselves of decision makers and the varied motivations for scientific and technological research within the region. The constraints as typified will not be treated under separate headings, but should be sufficiently appreciated by implication.

While absorbing the atmosphere of the workshop and engaging in conversation here and there, I was struck by one particular statement: "In order to have science communication we must have scientists." This can be taken in different senses, each pertinent to the development of our thoughts on Science Communication in the Caribbean.

It might have been evoked by the conspicuous shortage of Scientists at the Workshop. This could be either through a flaw in the organisation or the negative attitude of our local scientists towards Science Communication.

It may mean that we have so few scientists in the region that we have little to communicate. This led me to fear that perhaps we were addressing our minds to the communication only of science emanating in the region, which would have been a tragedy. Nevertheless, it may be useful to state here that a large number of trained Caribbean Scientists are working in Metropolitan countries on projects of slight or no relevance to our immediate needs. This could explain the limited number of scientists in the region.

The statement may also serve to emphasise that perhaps not only the communication of scientific information, but also of information about scientific activity in the region has not been as efficient as it should be.

The historical paper by Benjamin and Cox summarised by

Joel Benjamin, substantiates my own conclusion that the region has not been sterile in scientific productivity.

A very cursory research reveals that there are fifty (50) or more institutions in the Caribbean concerned with scientific research in one field or another. Nearly eighty (80) different journals and bulletins have appeared during the present century, a large number directed to the farmer as end user.

Work has been done by individual scientists - indigenous and foreign; by scientific officers working for Governments and industrial concerns, e.g. the Sugar, Bauxite and Marine Engineering industries in Guyana; by research teams on private expeditions, financed by Metropolitan Universities, mainly in the environmental and ecological fields and for the benefit of their doctoral students or to expand their museums; and recently by the Universities of the West Indies and Guyana, the Caribbean Research Institute (CARIRI), the Caribbean Food and Nutrition Institute (CFNI), the Caribbean Conservation Association (CCA), the College of the Virgin Islands and the Island Resources Foundation of the US Virgin Islands, the Marine Research Institute in Curacao of the Dutch Netherlands Antilles (CARAMI), and many others on the surrounding mainland and the islands of Puerto Rico and Cuba.

Hundreds of scientific papers have been published in the region based on the work of these institutions and individuals, but alas for one reason or another a large quantity of these are unknown to local scientists. The doctoral theses and findings of Tropical Research Stations are in Universities and museums abroad.

At the moment scientists in the region keep in touch by letters, and phone calls, and by more frequent trips from place to place for confabs, than would be necessary if they were provided with proper documentation and abstracting services. The question here is: In a region which is not unified politically, in which publications are coming out in English, French, Spanish and Dutch - who will undertake the setting up of a suitable Caribbean Centre? What can the scientists do about it?

The only reaction to this situation at the moment is unilateral procedure at high level on the plan of (CARIRI), the Caribbean Research Institute established by the Government of Trinidad and Tobago, with the help of UNDP and with UNIDO as the Executive Agency. Here I stress with the help of UNDP in order to emphasise the economic constraints. This institution staffed mainly by indigenous scientists has an arm which provides Technical Information Services to Industry, from which I am sure that the whole region could benefit -

1. It collects and holds available a core of important and useful technical information;

2. It presents such information in a form acceptable and useful to industrial personnel;
3. It offers necessary advice;
4. It maintains liaison with international agencies, equipment manufacturing firms, the University of the West Indies and the Trinidad and Tobago Development Corporation Libraries;
5. It advises on the organisation of Library/documentation services for small industrial concerns;
6. It undertakes translation of technical papers from foreign languages into English; and
7. An information retrieval service provides information required for the compilation of bibliographies and the preparation of literature surveys.

The Technical Information arm is staffed by one Information Scientist, one Information Specialist, one Assistant Documentalist, and a Clerical Assistant. Some of the publications which I have seen are :

1. A select list of documents on Science Policy held by certain institutions in Trinidad and Tobago - A similar document would help the NSRC in enunciating our Science Policy;
2. A number of technical news sheets; and
3. A series of Food Processing data.

Except for the Caribbean Conservation Association which has a holistic concept of the region and which is building up regional documentation on environmental matters, I am unable to mention any other established institutions parallel to CARIRI, dealing with other scientific disciplines in any of the English, French, Dutch or Spanish speaking territories, but the time available to me was too short for indepth research on this topic.

In Guyana however, we can lay the foundation for such an institution by the combined efforts of NSRC, GAPE, UG Library, National Library, and the Guyana Ecological Society, not only in the preparation of local bibliographies, but also in the acquisition of bibliographies and other material from the region.

As far as I know we have a Bibliography on Soil Science Research in Guyana; a local Bibliography on Forestry is now with the printers; a Bibliography on Ecological work done in Guyana is in preparation; and the documentation of agricultural publications is also in progress. The importance of

bibliographies should be appreciated as a first step to be followed by acquisition of the publications before abstracting can be done.

In addition to the farmer, the industrialist and the research worker as end users of scientific information, one has to keep in mind the social purpose of science, (which however is not really to be found in science itself) and it should be the duty of someone to effect the integration of science into general culture.

Is this someone to be the scientist himself/herself? - Perhaps by the means of learned societies? The problem here is the prestige system of scientific disciplines. "This is the fundamental social phenomenon which currently inhibits all well-meaning attempts to infuse general culture with Science", an undertaking which if successful, would increase general understanding of science, increase the number of future scientists, and certainly clear the vision of decision makers.

The professional scientists sees his/her activity as earning "international visibility", recognition as an expert puzzle-solver within his/her own discipline and promotion within a faculty or department, which latter often halts productivity in research.

If we recognise that the economic health of a nation or region depends on science and technology, on adequate science education and a wide scientific literacy, "there seems to be a strong case for fabricating a prestige system which recognises achievement in the popularisation of science to the same extent as brilliance of scientific discovery".

The Scientist then, who is not of real research class, and who often realises it, may be diverted from chasing shadows and induced to turn his attention to communication of science either by good teaching or effective writing.

I will close by posing a few questions for which I do not have the answers:

1. Which newspaper in the Caribbean has a Science Correspondent?
2. Which radio station in the Caribbean, government or commercial, has a regular science feature as a public service involving a scientists on its staff working in collaboration with the communication experts?
3. How many science graduates in the Caribbean have taken up professional librarianship?
4. When and in what way will our Universities approach the exposure to science of its non-science under-graduates, many of whom are destined to become administrators and decision-makers on important issues involving an appreciation of scientific principles?

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