

**CODATA XIX INTERNATIONAL CONFERENCE**

The Information Society :  
New Horizons for Science

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**OPEN ACCESS FOR ALL :  
A REQUIRED STEP TOWARDS A SOCIETY  
OF SHARED KNOWLEDGE**

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**Berlin November 10, 2004**

**Mr Chairperson,  
Ladies and Gentlemen,**

I would like first to thank Dr. Krishan Lal, the Co-Chairs John Rumble and Andreas Oberweis, as well as the organizers of this important event, in particular Mrs Kathleen Cass, for inviting me in Berlin, at this 19th CODATA Conference, in order to put forward the problems of knowledge sharing and development strategies. Dr. Krishan Lal kindly asked me to come here, among you, following our discussion at the Conference: "Steps Toward Implementation of the Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities" which was held in Geneva in May 2004 at CERN.

This meeting, to which I was invited by Prof Jurgen Renn, of the Max Planck Institute, and member of the Civil Society Working Group on Scientific Information, within the framework of the World Summit on the Information Society (WSIS), and during which the CERN signed the Berlin Declaration, was for me a live illustration of the implementation of the WSIS recommendations. Following that conference, I decided to consider Open Access as a question of high importance, because it is a way which belongs to the perspective towards knowledge sharing which is so dear to me. It is for this reason, that I selected to discuss this issue with you, today after having studied it somewhat further, during exchanges and discussions which have enlightened the non-specialist that I am.

The hope that I nourish and which is shared by all women and men of knowledge of the "South", is that this momentum of human solidarity should get stronger, and that the present meeting, here in Berlin, a high-place of the European philosophical culture, would be the opportunity of one more step in the good direction, that is, towards a shared Knowledge society, an inclusive society where human solidarity shall constitute one of the bases of sustainable economic development, the only chance of long-term survival for all the people on our planet. The stakes are therefore important.

The first phase of the World Summit on the Information Society constituted a major advance. Not only was the central role of Science clearly identified, but also for the first time in the history of United Nations Summits, the importance of Open Access to scientific information was recognized, thanks, and this should be underlined, to the persevering actions of the Civil Society working group. The Recommendation 28 of the Declaration of Principle is particularly significant:

***28. We strive to promote universal access with equal opportunities for all to scientific knowledge and the creation and dissemination of scientific and technical information, including open access initiatives for scientific publishing.***

The Recommendations of the Action Plan are significant as well : for example in the paragraph *C3. Access to information and knowledge* : subparagraph ***10. i) Encourage initiatives to facilitate access, including free and affordable access to open access journals and books, and open archives for scientific information.***

Scientific Information includes not only the scientific literature but also the raw or fundamental data.

The issue of access to raw or fundamental scientific data must be distinguished from the one of access to Scientific Literature. This distinction seems quite appropriate within the framework of this conference organized by the Committee on Data for Science and Technology (CODATA), whom I acknowledge the daily remarkable work of the members, as well as its contribution to the WSIS process.

Today is an opportunity to clearly define our position in regards to the open access to the data concerning the human genome as well as those related to water, this common wealth of humanity. In other words, would it not be natural and logic that the articles which explain or comment on those data shall be freely accessible to all ? Therefore, would logic not require too that scientific articles shall disclose in a more explicit way the scientific data on which they are based ?

Our position on this matter is unambiguous: the fact of making digital data accessible would allow a better peer review while offering to other scientists, who are not able to duplicate the same experiments or same calculations, the possibility of taking part in an inclusive way to the world research dynamical movement, while, of course, fully acknowledging former works.

It means that Open Access to scientific articles as well to raw data, shall be guaranteed to all, whenever the data and scientific information being disclosed in articles, as is very often the case, are the result of research works supported by public or philanthropic funds.

An average citizen could wonder why. To say the truth, access to the scientific and technical knowledge is in a paradoxical situation. By “scientific”, one should also understand social sciences and humanities. My speech concerns also the whole set of works produced by Academics or Researchers in any discipline, within the framework of their professional or volunteer activity.

More and more daily newspapers, which must pay their journalists to produce content, have now an online Open Access edition. This may appear as a normal and unavoidable evolution of media. However, it is ignored, by the general public as well as many political decision makers, that in order to access online to the vast majority of scientific journals, it is necessary to pay subscriptions that only rich institutions in wealthy countries can afford, while at the same time a great number of scientific authors are making donations of their articles to the journals.

This situation is all the more surprising that the HTML standard was developed at CERN, initially for communication purposes between scientists, and that the genesis of the Internet has been managed by the scientific community.

To better grasp this situation, let us detail a little bit the scientific publication process that everybody here knows quite well. A researcher submits the report of his/her research work to the journal editorial committee, which sends the manuscript to be reviewed by other scientific. Then if the review is favourable, the Journal team formats the article and then publishes it. The reviewers are carrying out their tasks for free, for their vast majority, editors are little or not remunerated. The online publication cost is very low, and printings costs have kept decreasing. Paradoxically, the very prices of subscriptions to scientific journals, have kept increasing as librarians are denouncing. It is thus not astonishing that the large scientific publishing organizations are reporting considerable profits.

Who thus pay the bills? All the society ! Not only the scientific community which must repurchase freely donated material, but also all the private and association sector which should be entitled to freely benefit from this aid from public authorities and philanthropic institutions.

Why should this situation be allowed to continue to exist ? Would historical inertia not be held responsible ?

Fortunately, a movement exists, a movement in the true direction of History, the Open Access movement which is represented during the WSIS by the Working Group on Scientific Information, and which proposes various solutions to get out of this current situation as fast as possible. This very active movement currently gathers more and more supporters within the scientific community as well as within funding institutions.

Would a first solution not consist in promoting journals where authors contribute to the publication costs and whose content is freely available for all on the Net ? One may also consider Open Access journals located in emergent countries where publication costs will be low. One may also recommend Open Access journals, without publication charges, and which would be subsidized or implemented by national and international organizations. Another solution, non-exclusive of the others, would be, as some are preaching it, to access, in Open Archives, to the preprints or reprints of articles published in subscription journals ? This strategy depends on the authorisation and conditions of the journals and authors.

It is clear that financially handicapped scientists, fighting for their intellectual survival, cannot and shall not accept to be considered as second class researchers, and to have free access only to six months old archives. More inclusive and innovating policies should and could be implemented.

Governments have just started to become aware of the problem and initiated various inquiries, for example in the United Kingdom and in the European Union. I call on all the learned societies whose philanthropic goals could not be fully reached if they do not make available to all the very contents which are given to them for free. They should make their best efforts in order to find financial resources other than from the sale of journals, and which are less detrimental for the whole society.

**Mr Chairperson,  
Ladies and Gentlemen,**

Let us now deal with the economic aspect, with a global view.

Open Access is an essential condition of an evolution towards a society of shared knowledge, and this is not a concern only of intellectual or philosophical nature, because the consequences of the current system are quite simply dramatic, even tragic.

The current system goes against the efforts of all governments, whoever they are and wherever they are, to reinforce their economies, which, everywhere, are struggling at the beginning of the third millennium.

In spite of large financial efforts provided by many governments to fund research, in the hope to stimulate economic growth and to create jobs, results still remain insignificant.

Research produces Information, and despite the fact that this information is funded for the world public good, it is not available to all the economic stakeholders: large and small companies, innovating entrepreneurs and associations, potential inventors...

In economical terms, the Keynesian multiplier effect is seriously dampened, and public expenditures are playing a much less effective role than has been forecast.

The current system, if it were to persist, would be some sort of a forced rent or toll on scientific information, and would constitute also in this way a forced contribution from all innovating entrepreneurs whose researchers are also freely donating the contents of their publications as members of the scientific community.

In countries in the "South", the damage is even larger, because the access cost to this costly information becomes an annihilating factor, and then we find before us a digital divide at the content level which adds up to the digital divide at the level of access means.

In our developing countries and in Africa in particular, the Open Access phenomenon is already raising issues in terms of hardware and software. Because for the majority of populations in Africa, not only information technologies are not included yet as means of fast development, but in addition, they do not constitute a priority: awareness remains to be raised.

Moreover, beyond equipment problems which can always be solved, how can one reconcile the concept of Open Access to information with the cultural concepts of measure and willful retention of information classified as significant and strategic? This approach which consists in providing data in a parsimonious way and only to a certain category of initiated people still forms a part of the persisting cultural values.

A traditional Manding wisdom saying tells us, more or less, this: "If I know everything, if I tell everything, I damage everything".

If science is universal, it is not universally distributed. How can one inform without measure while wanting to inform with measure ?

In Africa, the phenomenon of Open Access is raising, more than everywhere else, a problem of values, of morality and of ethics, that all of us have also the need to integrate in this new society in construction.

My statement does not mean that in Africa one cannot speak about Open Access. My intent is to draw attention, so that knowledge transmission mechanisms should be re-examined and adapted to the current world without affecting the true values of the milieu. It is precisely one of the reasons for which it is important that the modernization of transmission media should be emphasized i.e. the languages of concerned stakeholders, vehicles of cultures and matrices of science and endogenous knowledge. There is matter, here, to promote and develop a South-South-North cooperation which would be very beneficial to the whole humanity.

**Mr Chairperson,  
Ladies and Gentlemen,**

We are not dealing with a divide, but with an abyss that circumstantial measures cannot fill. Structural reforms are imperatively required.

This economic aspect leads ineluctably to a human tragedy, when it is considered that the scientific and intellectual elite of many developing countries must expatriate, with great reluctance, not allured by higher wages, but simply to stay in a place where information, the vital blood of their research, is available. Without Open Access, it will not be possible to slow down this disastrous emigration that is the brain drain.

Devastations are occurring not only at the economical level, because neither our children who are studying nor their teachers can access to such an indispensable knowledge. It is an education question.

A bridge must therefore be constructed, as fast as possible, above the digital divide, at the very level of true access to scientific and technical contents as well as at the level of network infrastructures.

**Mr Chairperson,  
Ladies and Gentlemen,**

To conclude, I would like to launch, here, in Berlin, in this historical city, cradle of the October 2003 Declaration in favour of Open Access, taking advantage of this XIX CODATA Conference whose topic is a very revealing symbol, a call to all scientists and all scientific organizations to unambiguously support Open Access so that, at the WSIS session in Tunis, in November 2005, significant advances towards a knowledge society based on shared knowledge, can be reported and accepted by all the peoples in the world. Then we will truly open new horizons for science, contributing to the consolidation of peace all over the world.

Open Access for All, constitutes at the same time, an intellectual requirement, an economical necessity and a duty of human solidarity!

So help us God in this great and noble enterprise !

**I thank you for your kind attention.**