LANGUAGE DIVERSITY
IN THE INFORMATION SOCIETY

FINAL REPORT

INTERNATIONAL SYMPOSIUM

organized by
the French commission for the UNESCO

in cooperation with the UNESCO and the Agence intergouvernementale de la Francophonie

and with the support of the Ministry for Foreign Affairs and the Ministry for Culture and Communication

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PRESENTATION OF THE SYMPOSIUM

Electronic communication tools now hold a key role in the circulation of information and access to knowledge. They are also instrumental in establishing a dialogue between people from different backgrounds. As is the case with the Internet, they provide access to an ever larger knowledge base in an almost limitless number of fields. The development of multiple interconnections, however, pose a number of problems; language barriers but also the risk that one single language might become the standard in all forms of communications are some of the major challenges to the development of electronic networks.

Being aware that making the new means of communication available to developing countries is a key factor in the evolution of the information society, UNESCO has already taken a number of initiatives. The most substantial of these is probably the ‘Babel Initiative’ which aims in particular to promote multilingualism on the Internet. It will provide support to actions designed to make the largest possible amount of cultural information available in cyberspace while avoiding language segregation and protecting minority languages.

In this context, the French Commission for UNESCO is preparing a colloquium on ‘Language diversity in the information society’. The objective of this meeting is to arrive at a number of recommendations with regard to fostering language diversity on the Internet.

First, the future of multilingualism in electronic networks will be conditioned by such technical imperatives governing the possibility to translate and interoperate between different languages. Obviously, any discussion of this topic must rely on a detailed assessment of the translation tools that are currently available and their foreseeable evolution.

Yet it is also necessary to look beyond technical factors.

Thus, unless Internet users are able to use a greater number of languages, any call for the development of language diversity on electronic networks is bound to remain unheeded. This involves educational policies and in-service training in the teaching of languages. What is at stake here is not merely a questio of computer hardware and software: language diversity on the Internet will only become a reality if users are able easily to switch from one language to another. Finally, language diversity is the key to cultural diversity, but it can only exist through international cooperation. Here again, this is a multidimensional issue, ranging from the dissemination of software produced in developing countries, the distribution of which still remains extremely limited, to genuine economic cooperation based on fair terms of exchange in electronic commerce.

Besides providing an opportunity to discuss these issues and topics mentioned above, it is hoped that the colloquium will lead to concrete conclusions and practical recommendations. Several avenues have already been identified for further exploration:

- as regards technical means, it is necessary to define which mechanisms for language interoperability should be implemented; this is a broad issue that involves multilingual access to information resources as well as the development of multilingual directories;
- as concerns education, there is a need to reflect on the language-teaching strategies which ought to be developed by each country within its curricula;

- with regard to international cooperation, legal standards will have to be agreed upon, in particular concerning interconnections. Such standards will have to be integrated within international agreements.

These are the main topics which will be discussed during the proposed two-day meeting, as a contribution to UNESCO’s role in these matters.
SYNTHESIS

Is the Internet becoming multilingual?

The speeches delivered during this colloquium have brought a new vision about the issue of language diversity on the electronic networks: actually, the language diversity on the Internet appeared to be a fact noticed by all the speakers and by the results of various statistical surveys (Global Reach, Funredes, etc...). The number of languages has increased, and the fear of monolingualism on the Net has been prevented through its extension to a great number of linguistic communities, even if we are still far from a fair representation of the different languages on the Internet.

The appraisal made during this seminar indicates that, at this moment in time, there is an obvious disequilibrium between the demographic size of the various linguistic communities (if considering the number of speakers) and the representation of these languages on the electronic networks. It is already obvious that the rate of electronic equipement and the disparities in the access to the Internet are mainly responsible of this disequilibrium. An effort must be made in terms of infrastructures and of transfer of technology and Know-How (North-South and South-South) in order to make up for this disequilibrium with the creation of contents in a great number of languages. The reflection about the uses must focus on the users. Actually, the users must be helped in producing contents in their own, badly represented language. Forming users, we will form contents producers in different languages.

I/ The technical means for interoperability.

One of the main issues is the one of interoperability. The main problem is to know how to make languages communicate, to avoid the creation of numerous and closed universes of knowledges and contents. A distinction has been proposed, during this colloquium, between multilingualism (the presence of a great number of languages on the networks, made possible by the evolution of the technics and standards) and plurilingualism (the possibility to exchange contents from a language to another, to create links between the languages to insure intercommunication and to foster language and cultural diversity). This distinction seems to be relevant and one of the tasks for the coming years will be to avoid the appearance of linguistic and cultural ghettos. Regarding this issue, the commitment of some institutions seems essential: the UNESCO, the historical actors of the Internet regulation - IETF, W3C, ICANN- and the States.

Standardization has been regarded as essential by many speakers, and this is not surprising, as the Internet is overall a question of standards and norms. The indian example has shown how the question of the systems of characters and writings could be decisive - even before estimating the translation tools efficiency. The description of the harmonization efforts made by Japan and the other asiatic countries has also shown it.

The networks expansion in the developing countries has to face a double difficulty: the number of access points to the Web is limited and there is a great number of vernacular languages only known by the local inhabitants. Should these languages be suited to the internet? This question has to be dealt with.
Internet will become a tool only if a precise work is made about these languages and for these languages.

First of all, it is absolutely necessary to make a classification of these languages, to determine which transnational languages are liable to become common languages, usable on the Net by a great number of users.

A modernization work will probably be necessary to adapt these languages to the new electronic tools: the spelling systems codification and the standardization of the writings are very important tasks.

It will also be necessary to increase these languages terminology, to give these ancient cultures an immediate access to the new technologies.

But, what is at stake is not only to give these languages a size suited to the new technologies of information. What is absolutely crucial is the creation of electronic tools dedicated to the languages different from the ones already existing that are softwares created in the developed countries for these countries’languages.

The most recent, and the most welcoming standards to the linguistic diversity (Unicode, ISO 10 646) won’t be the only answer to all the communication problems: the obstacles seem to drift over other levels of the technological system, for instance the keyboards.

The presentation of these technical problems has permitted to formulate some propositions:
- the multilingual search engines, such as the automatic translation engines are a key to language diversity: this point has clearly been demonstrated in the Indian example -huge linguistic and cultural diversity- and through the analysis of the relationship between widespread languages and more confidential ones.
- A strategy to guarantee the survival of the confidentially spoken languages would be the production of links between widespread languages and more confidential ones. To reach this goal, the number of bilingual dictionaries must increase.
- On-line data bases, free translation portals could offer a solution suited to the network system based on the sharing out of the electronic resources.

Different approaches have also been listed about the technical issues:

- Automatic translation systems based upon mainspring languages (for instance the UNL project).
- Libraries dedicated to a very precise corpus, easy to develop in different languages (The C-Star consortium).
- Common models of description and representation of languages: grammar, lexicon, in order to simplify the development of electronic tools.
- The spreading of fair use practices (by means of the French-speaking agencies and networks, and Unesco recommendations).
II/ The educational stake

The role of the human subject has been underlined during this colloquium:
- **The translator is the ultimate expert in meaning** and his intervention is required to make the translation tools work or to increase their efficiency, actually, he is the only one able to avoid ambiguities in the message.
- Furthermore, the cultural issue, when regarding the globalization phenomenon, cannot be underestimated. What is at stake is first the adaptation (or its difficulty) of the individuals and the peoples to technology performances. Second, what is also at stake is the encounter between different cultures through information technologies. This encounter can become an invasion (as a colonization of minds by a dominant standard) or a clash because of a lack of preparation or a misunderstanding.

We can find here a certain number of lessons regarding the training to information technologies that the speakers have underlined:
- First, **the young students must be taught the use of the new technologies and medias**, in order to make these technologies become tools for training and learning.
- Regarding this problem, the Information and communication technologies can encourage the students to learn and to make use of languages. The early **integration of the languages in learning** is a way to reinforce the use of several languages.
- More generally, the problem to solve is to succeed in **reconciling the fast evolution of technology and the long time learning needs**. This may be one of the reasons of the scholar system crisis.

These questions must be asked now that learning is becoming a business, created and ruled by some great universities (mainly private ones) and private firms. Actually, there is a risk of weakening of the public scholar system.

To conclude, the development of the language diversity on the networks has to face various economic constraints. They cannot be all enumerated, but the digital divide is overall a pre-existing economic and social divide: the problem of the internet growth in the developing countries cannot be separated from the global development of theses countries.

III/ The need for a political will and action

All these problems, but also the evocation of the possible solutions, speak for a **large-scale public action**. Regarding this, if the State action, at a national level, is absolutely necessary, we must underline the need for international negotiations and for the promulgation of international rules at a world-wide scale. The role of the UNESCO as an international debate forum is absolutely obvious.

So, what is the State’s duty? First of all, **to create a fair digital public domain**. Actually, there is a belief in the internet growth as a synonym of opening and freedom. On the contrary, we can fear that this development bring a **risk of confinement for the citizens**. The great commercial distributors of softwares giving access to the internet and of all the other systems of portals have interest to promote the non-interoperability between the different systems, to try to capture exclusively the consumers. This will is opposite to any attempt to promote the linguistic and cultural diversity on the internet. The State’s duty is, in this case, **to promote opening technical and legal norms**.
Different solutions can be considered. First, **a wide spreading of the open source-code softwares is absolutely necessary**. The way the Internet works is a network and cooperation logic, favouring the periphery rather than the center, as any computer can become a server which files can be viewed by any cybernaut. Here, the question at stake is not to try to know whether the softwares must be free or not but to reaffirm that it is absolutely necessary to the largest possible number of users to have access to their source-code.

The pursuit of these goals faces **numerous economic and political obstacles**. The way the Internet works has really created **a linguistic technologies market**. Actually, the language use on the Internet is not an immediate one, it depends on the use of softwares. Now, their number is increasing, and their improvement and their specialization to very restricted fields (business, education), too. **The vocal technologies appearance** will probably reinforce this tendency. A quick observation makes it obvious that some firms hold these technologies and have the power to make the users pay for the use of their own language in the digital domain. The opportunity for this firms, due to their monopoly situation, **to promote or not these new electronic tools** and the need, for the users, to replace periodically their electronic equipment make these economic datas become a real power and decision stake.

Another very important question is the contents one. So, the communication and the exchanges between individuals seem to take a more important part than the only written text. According to this, **the renewal of the reflexion about the notion and the function of the royalties due to an author** is absolutely necessary. Last, it may be necessary to change the software standards to favour the use of **little modulars softwares** adaptable to different linguistic specificities.

The importance of **the existence and the respect of legal rules in the cyberspace** is obvious. First, because of the need for **public cultural servers** that business firms wouldn’t rule and that would maintain a minimum linguistic and cultural diversity. So, the **state has to remain constantly vigilant considering the technical changes and the difficulties it brings**. **The royalties problem** certainly needs an answer suited to each country. As the free use is a possibility for countries where the internet access is widely spread, it may be a real problem in countries where the softwares and electronic tools market is recent. The financial viability of the firms may be endangered.

If this task is obviously the State’s concern, it musn’t be limited to a national level. It must also be one of the main issues of the international concerted efforts, overall regarding the fair development of the Internet. A volunteer action will certainly be necessary to **avoid the spoliation of the developing countries’ digital resources** when they will produce softwares dedicated to the Internet use. Regarding this concern, some multilateral agreements are necessary. It is already possible to view a certain number of measures: to favour the development of **research programmes in the public institutions** and to make sure that several **specialists coming from the developing countries are involved in**. But, some other ways can also be explored.
Conclusion: the State’s necessary vigilance

To finish, we must underline a certain number of paradoxes and contradictions in the use of the new technologies of information. As the electronic tools are a newcoming technology, it is rather difficult to identify clearly their positive effects and their negative ones, the ones that increase the desequilibriums and the ones that bring remedies. The colloquium’s speeches and debates have also underlined this contradictions:

- For instance, it has been picked out that the said “democratic access” to the information technologies has overall increased the power of the people that already had access to them.
- Some non-democratic States try to find the way to control and restrain the access to the internet. Here is another danger we musn’t forget.
- Last, if the internet can be regarded as an engine able to destroy some cultures, it is overall a media which content has no real structure, and that is particularly adapted to the individual communication. Actually, its way to work is more like the phone’s one than like the television’s one. It permits to put at disposal and to share a large number of contents (images, sounds, mail) at a very low cost. According to this, it is very efficient and profitable for the creation of narrow diffusion contents dedicated to minority groups. Another example is the one of languages gathering scattered communities on the internet.

To conclude, the essential role of the state must be underlined. As the electronic tools are still evolving and as their future is very difficult to predict, the State must promote some progressive rules that may be periodically adjusted. Its control on the changing universe of the electronic networks is the only way to make it become a fair and really global intellectual forum.
ANNEX : AGENDA OF THE MEETING

FRIDAY 9 MARCH

08h30  Reception and inscription of the participants

09h00  OPENING SESSION

Mr Koichiro MATSUURA, Director general of the UNESCO.

Mrs Vigdis FINNBOGADOTTIR, former President of the Republic of Iceland, Goodwill ambassador of the UNESCO for languages.

Mr Roger DEHAYBE, general Administrator of the Agence intergouvernementale de la francophonie.

Mr Jean FAVIER, Member of the Institut, President of the French commission for the UNESCO.

10h00  THE STAKE OF THE MULTILINGUAL USE OF THE ELECTRONIC COMMUNICATION TOOLS

President : Mr André LARQUIÉ, former President of Radio France Internationale, President of the Communication committee of the French commission for the UNESCO

A- The translation stakes.

-Theme 1: what are the conditions of the creation of the efficient translation tools?

Mr Narayana MURTHY, Reader at the Department of Computer and Information Sciences, University of Hyderabad (India).

Mr Philippe RENAULT, Responsible for the HARMONIC project (multilingual questioning tool) of the Association Française pour le Nommage d’Internet en Coopération (France).

-Theme 2: capacities and perspectives of the multilingual questioning.

Mrs Maria Teresa CABRE, Director of the Institut de Linguistica Aplicada of the University Pompeu Fabra of Barcelona (Spain).

Mr Nabil ALI, Director of the Language Engineering Company, Cairo (Egypt).
B- Towards multilingual networks.

- Theme 1: the multilingual compatibility.

Mrs Maria Ines BASTOS, Coordination Unit, Programme for the Information society of the Ministry for Science and Technology (Brazil).

Mrs Svetlana TER-MINASOVA, Professor at the State University of Moscow (Russia).

- Theme 2: situation and future prospects of the multilingual access to information sources.

Mr Taik Sup AUH, Professor at the Mass Communication Department of the University of Korea (Korea).

Mr Denis CUNNINGHAM, President of the Fédération Internationale des Professeurs des Langues Vivantes (Australia).

THE EDUCATIONAL AND CULTURAL STAKES

President: Mr Marcel DIKI-KIDIRI, Institut de Linguistica Aplicada of the University Pompeu Fabra of Barcelona (Spain).


- Theme 1: the child education and the primary school learning.

Mr Omkar N. KOUL, Professor at the Central Institute of Indian Languages of Mysore (India).

Mr Raymond RENARD, Director of the Centre international de Phonétique appliquée de Mons (Belgium).

- Theme 2: learning during the lifetime.

Mr José SILVIO, Coordinator of the Programme IESALC/ UNESCO in Caracas (Venezuela).

Mr Paul DELANY, Professor at the English Department of the Simon Fraser University of Burnaby (Canada).

B- The cultural diversification in the electronic networks.

- Theme 1: the strategic use of the multilingual cultural collections.

Mr Kiyoshi HARA, Professor at the Joshibi University of Asamizodai (Japan).

Mr Daniel PIMIENTA, Director of the Fundacion Redes y Desarrollo (Dominican Republic).
-Theme 2: promoting the cultural diversity.

Mr André DANZIN, former Director of the Institut national de recherche en informatique et en automatique, President of the Forum international des sciences humaines (France).

Mr Sveinn EINARSSON, General secretary of the Icelandic commission for the UNESCO (Iceland).

SATURDAY 10 MARCH

9h00 THE LEGAL AND GEOPOLITICAL STAKES

President : Mr Omkar N. KOUL, Professor at the Central Institute of Indian Languages of Mysore (India).

A- The international cooperation at stake.

-Theme 1: the developing countries’ situation.

Mr Marcel DIKI-KIDIRI, Institut Universitaire de Linguistica Aplicada of the Pompeu Fabra University of Barcelona (Spain).

Mr Jean-Claude GUEDON, Professor at the Department of compared litterature of the University of Montréal (Canada).

-Theme 2: the problems of technical compatibility and economic cooperation.

Mr Tatsuo KOBAYASHI, Member of the Unicode Technical Committee, Chief of the Japanese delegation of the Working group for Han Characters (Japan).

Mr José Antonio MILLAN, Creator of the Virtual Center Cervantes, journalist in the multimedia section of El Pais (Spain).

B- Is the definition of legal rules possible?

-Theme 1: public regulation and the definition of multilateral fair rules.

Mr Rainer KUHLEN, Professor at the Institute for Library Science of the Humboldt University of Berlin (Germany).

Mr Pierre OUDART, Technical advisor for multimedia and the new services of communication for the Minister of Culture and Communication (France).
-Theme 2: the question of the legal tools and the problem of copyright.

**Mrs Anita SOBOLEVA**, Director of the Law Program of the Open Society Institute of Moscow (Russia).

**Mr András SZINGER**, Legal Department of the Hungarian Bureau for the protection of authors’ rights of Budapest (Hungary).

12h00 **CLOSING SESSION**

**General report**

**Mr Daniel MALBERT**, Technical advisor for the information society at the Délégation générale à la langue française (French ministry for Culture and Communication).

**Mr Jean-Gabriel MASTRANGELO**, Technical advisor for the communication issues, French commission for the UNESCO.

**Conclusion**

**Mr Philippe QUÉAU**, Director of the Information and Informatics Division of the UNESCO.

**Mr Jean-Pierre BOYER**, General secretary of the French commission for the UNESCO.