Presentation of Information and its Educational Role in Response to Complexity

It is obvious that with the increase in complexity of society and its problems, there is a much greater dependence on information. The point was recently made by Helma Anna, President of the International Federation of Documentation: « Qui qu'on dans cette situation se hasarde à faire des pronostics sur l'avenir de l'humanité, on peut pas ignorer l'anthropologie, ou que nous confie la technique (y compte celui de nous décrire nous-mêmes), et la faiblesse de notre volonté, la médiocrité des moyens intellectuels dont nous disposons pour son application intelligente... Aujourd'hui, nous l'avons vu, l'information n'est plus en premier lieu l'« hôtel » intellectuel du progrès. C'est le seul moyen moyen de garder suffisamment le contrôle de l'évolution pour que l'humanité, forte de ses connaissances et de ses expériences, transe hâtivement partout de toutes les données de l'information, conserve toujours une avance sur la menace qui peut mener à la catastrophe ». A distinction must, however, be made between (a) the increasing quantities of information required, (b) the increasing quality and accuracy demanded, and (c) the improved structuring of the information necessary to facilitate its use.

In a social environment in which the problems may be considered relatively isolated and easy to place within the mental framework of a single organization or discipline, the methods of retrieving information can be simple (e.g. alphabetic order, hierarchically structured classification, etc.). Unfortunately, the social environment is now highly turbulent and information can no longer be adequately handled by such means; as the following quotations make clear:

"...whither in magnitude the fine compre- hensive and trusted bodies or systems of knowledge that have been presupposed in the economy of man... Where, for example, does the novice urban mayor turn to comprehend the dynamic interrelationships between transportation, employment, technological, political and educational forces and can no longer be solved by fractional approaches from individual disciplines... Complexity and the large scale of problems are forcing decisions to be made at levels where individual participation of those affected is increasingly remote, producing a crisis in political and social development which threatens our whole future ». (OECD. Bellagio Declaration on Planning 1968).

"...the probable assumption is that every single one of the old demarcations, disciplines, and faculties is going to become obsolete and a barrier to learning as well as to understanding. The fact that we are shifting from a Cartesian view of the universe, in which the accent has been on parts and elements, to a configuration view, with the emphasis on wholes and patterns, challenges every single dividing line between areas of study and knowledge..." (P.F. Drucker. The Age of Discontinuity; guidelines to our changing society, 1969).

In such a complex context a key issue is therefore how to select, structure and represent information in order to facilitate, rather than hinder, social innovation. And in a very real sense the ability to engender appropriate social innovation is directly dependent upon the innovative character of information delivery to the user. If the user is obliged to devote a considerable proportion of his available time, energy and resources to compensating for inadequacies in the nature of the information delivered, it is much less likely that the available information will provide a constant stimulus to innovation. It will also be much easier for some to adopt a strategy which denies the possibilities of innovation. The above problems of information delivery and the possibilities for their solution, can be usefully discussed in the following interrelated areas:

Kinds of information

Information is mainly collected about a. « subjects » as distinguished in a variety of document classification schemes. A « subject » is a very general concept covering a hedgehog-like tangle of topics ranging from fields of knowledge and skill, through areas of experience and belief, to concern with a particular region, plane or person. The schemes have not attempted to distinguish and integrate the different kinds of « subject » important to social innovation. Documents on subjects are often only classified by author, b. « subjects » as identified in a population census, registers of companies, employment categories, economic sectors, etc. Because of its nature, such information tends to be mainly quantitative and of necessity mainly processed in an aggregated form in which the individual subjects cannot be either distinguished, intertwined amongst themselves or with subjects of a different kind. Consider the following kinds of subject which are not generally distinguished as such and yet which would each appear to be important and distinct components of any information facility in support of social innovation.

- problems for which innovative solutions are required
- organizational units acting in some way in response to these problems
- intellectual disciplines relevant as a body of conceptual tools to the innovative resolution of a problem
- information sources on problems or their solution
- legal instruments relating to particular problems

124 ASSOCIATIONS TRANSNATIONALES, 4-1977
The challenge is to design multi-purpose information systems. Information relevant to social innovation is used in different ways by bodies having very different priorities and mandates. Generally these very differences are considered adequate justification for the establishment of distinct and unrelated information systems for purposes such as:

- research on programme/programme relationship
- education about programme
- policy-making to determine programme
- programme management
- public information on programme
- public participation and programme

The separation of these systems leads necessarily to lack of correspondence between bodies about the same problem area and consequences which aggravates dangerously the discontinuities and delays in social change processes and their comprehensibility. As Sir Robert Jackson notes in the Context of Development Systems, for example:

> « The need for development cooperation action has been greater in the past few years than in any other period in history. However, the diversity of forms according to the present situation of social and economic development and to the kinds of social innovation we need to implement as René Dubois has pointed out ».

The concepts of man are however themselves developed by the innovations which are implemented as René Dubois has pointed out. The environment men create through their activities becomes a mirror that reflects their civilization; more important it also constitutes a book in which is written the formula of life that they communicate to others and transmit to succeeding generations. More succinctly Winston Churchill’s point about buildings, that « We shape our buildings and they shape our lives » could as well be applied to the information systems we choose to create.

The question is what effect does the selection of a particular information strategy have on our changing image of ourselves and how does this relate to the kinds of social innovation that consequently prefer? Conversely, what resistance to social innovation stems from our reluctance to adapt to an alternative image of man? AJ