

# Socialization of information: A new research agenda

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## *Abstract*

*Summing up the two sides of the event information, information as a process and information as a product, Socialization of Information has emerged as a methodological perspective to bring about fresh insights on information themes. Focusing on human and social aspects of information transfer, Socialization of Information seeks to provide successful alternatives, which might improve and foster the process within which information translates itself into knowledge, and knowledge into action. This paper presents some key theoretical issues related to Socialization of Information in the light of new challenges posed to Information Science. The preliminary findings of the first research project on Socialization of Information is summarized, and it is presented another ongoing project in Brazil.*

## INTRODUCTION

From its childhood, Information Science has been provided a fertile soil to analyse formal, epistemological and cognitive aspects that are involved in the different steps of the process that goes from generation to diffusion of information. Amongst other items, models of information transfer have been proposed and discussed both within and between different subject areas and countries, classification schemas have been improved, new indexing languages have been developed, information retrieval techniques have gained new breath with the introduction of Information Technologies, and the design of Information Retrieval Systems (IRS) has become more and more sophisticated. We have learned how quantitative approaches to information artefacts (as documents) can help us to understand science

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development, but we have also learned how outstanding qualitative aspects are when compared with the former. We have been concerned with information overflow and how to manage huge stocks of information.

However, despite the astonishing body of knowledge we have accumulated on information themes throughout the decades, Information Science development has been grounded mainly on documents, systems and institutions (Wersig,1992). From the Socialization of Information point of view, there has been a perspective missing: the process that translates information into knowledge, and knowledge into action. This means we should look at human beings, their context of action and the whole social process they are involved in when generating, using and transferring information.

Clearly, information scientists have also thought over and over again about users needs and demands for information, although they have done it especially in terms of academic communities. The information transfer taking place at the boundaries of science and society has not been in the main stream of the discipline, maybe due to the fact that society in general has been considered basically as laymen who despite supporting science do not properly understand its languages and achievements. In that sense, society should not try to evaluate and influence science. On the other hand, researches pertaining to different fields have taken that perspective on board and have begun to analyse knowledge transfer and its impact on society as a whole. Parallel to this, they have also pointed out that with the increasing fragmentation and specialisation of knowledge, the scientific enterprise has become inhabited by numerous languages and codes, which in turn frustrates our main goal of integrating all kinds of knowledge in order to understand the world and our own life's project.

In order to help in this monumental task of knowledge integration and recombination, translating it into action, Socialization of Information perspective proposes an analytical and methodological approach on information themes, which stresses the significance of the human communication process. Beginning with the delimitation of a */oca/* problem

of information, Socialization of Information seeks to identify actors, their interests, their context of action and their needs and demands for information to perform a specific task. Taking senders and recipients at the same level of prominence, Socialization of Information claims that partnership and co-operation between them are the only safe way which can lead to the development of suitable languages, codes, instruments and channels for information transfer. By means of *inter-action* and participation, actors will be gradually conferring to the communication process a characteristic of learning process, where not only information is transferred, but also new information is created. In this outlook, information as a product and as a process become interwoven events, social ones by excellence.

The present paper introduces initially the main theoretical perspectives from Information Science as well as other research traditions, which are amalgamated into the heart of Socialization of Information. Next, some initial research findings are presented, and some future perspectives are discussed.

## THEORETICAL PERSPECTIVES ON SOCIALIZATION OF INFORMATION

Socialization of Information is a puzzling concept. Perhaps the first step to capture its meaning is to say what it is not. Although it is concerned with socially distributed knowledge throughout society, Socialization of Information brings the challenge of going further than globalization of information and democratization of information *métaréçites*. These later concepts are grounded in an ideology, which invites us to take in a homogenous way human beings socio-cognitive process. So, the information transfer processes have not been questioned since, even occurring in different contexts, the information generation process and the artefacts associated to it are taken as granted. In addition, they have been analysed under quite apart research approaches, with no perspective of integration.

Socialization of Information, on the other hand, claims that historical, socio-cultural, political and economic factors play a commanding role in the context of information and knowledge production, defining at the same time the informational artefacts produced and their social diffusion process. Taking process and product as not dissociated information events, Socialization of Information perspective searches for methodologies, mechanisms, tools (and so ever) which might provide that, when being transferred, information can be recreated, translating itself into *knowledge in action*.

Knowledge in action means knowledge as *capacity for action*, an imperative of the new context of knowledge production (Gibbons *et al.*, 1994). In recognising the real world and the human condition complexities, knowledge is no more the provider of certainties and truth, but a capacity for dealing with uncertainty in a visionary way. A kind of knowledge that, in stimulating the capacity of questioning, feeds the dynamic of the social innovation process, promoting the Subject existence in his/her plenitude. Being heterogeneous, transdisciplinary, reflexive and coloured by social responsibility issues, this knowledge brings the necessity of being socially distributed throughout a broaden spectrum of use and application *loci*. To the increasing specialisation of knowledge production within science sub-fields and the consequent vertical paths of communication, it has demanded to build up horizontal ones as well, which means increasing of communication density amongst different kinds of knowledge, and between them and society.

In this connection, the main goal of Socialization of Information is not merely *translate information* for different users, but it is concerned with construction, treatment and diffusion of information resulting from different kinds of partnerships between producers and users, who have agreed upon their needs and interests. It is also concerned with which would be the paths (or methodologies) more appropriated to accomplish this (Braga and Christovão, 1994, 1996). In this perspective, Socialization of Information is in fine tune with Saracevic's claim (1992, p.6) that although " (...) *Information Science has vacillated between the two worlds - human and*

*technological” within information ecology, “ Information Science had and has a strong social role to play; it has a strong social and human dimension above and beyond technology.”*

In the Graduate Programme in Information Science (Research Department, Brazilian Institute for Information in Science and Technology – DEP/IBICT, Brazil) the Socialization of Information perspective came up at the confluence of two Information Science specialities, Scientific Communication (SC) and Information Retrieval Systems (IRS) through the work developed by two researchers, Dr. Heloisa Tardin Christovão and Dr. Gilda Maria Braga. What unifies both specialities is, obviously, the process of information transfer. From the IRS perspective, the key point is an emphasis on information as a human event by excellence. If IRS seeks for maximising the information use, it is vital to bring into system’s design the users. One first stage to accomplish this huge task is taking in consideration the informal communication system in which producers and users of information are involved in, trying to formalise into a system those information flows that are really important for them. In doing so, Scientific Communication approach provides the theoretical settle for think of new ways of designing IRS.

Although Socialization of Information perspective that has been developed in Brazil can be presented and discussed from both IRS and SC viewpoints, in this paper SC is going to be the starting point. This is so because of some peculiarities of the SC field development in Brazil, considered a peripheral country in the international scientific endeavour.

Early in the eighties Christovão (1983), analysing the differences between scientific communication systems pertaining to central and peripheral countries, pointed out some features which distinguish the later ones. Contrary to the Garvey & Griffith ‘s modelling of this system, Christovão gave clear evidences that the formal flow can be explained from the informal one, so questioning the universality of the process of scientific production. This finding was a decisive step to establish some bridges between Information Science and the so emerging field of Sociology of

Knowledge (Bloor, 1991)<sup>2</sup>. When stressing that there is no “*two cultures*” at all (Snow, 1960) Sociology of Knowledge highlights the process of knowledge production, and as process, all regimes of knowledge production (i.e., scientific knowledge, technological knowledge, common sense) are equivalent in status and suitable for sociological analysis.

Two main consequences emerged from this closeness between Scientific Communication and Sociology of Knowledge. First, that we should think of cultures in terms of a shared body of knowledge and information. So, within the scientific enterprise each field, sub-field or speciality, once embracing their particular practices, concerns, methods and vocabularies, have their own culture<sup>3</sup>. Like sociologists of knowledge, information scientists might turn to microanalysis, at */oca/* level, if they seek to properly delineate the process of information production and the artefacts associated to it.

The second main consequence has been an increasing interest of Scientific Communication on the process of diffusion of information. By diffusion we mean the process of information transfer that encompasses both dissemination of information (amongst peers) and popularization of knowledge (between science and society). Once we are concerned with microanalysis and */oca/* information problems, by society we mean very particular localised social contexts and social interests. Therefore, diffusion of information encircles both the processes of information transfer that takes place within science and amongst science and its diverse public (or users).

However, Socialization of Information claims for a redefinition of the transfer of information concept, trying to make it convey a less mechanical process, that is, priority should be given to its social aspects. In these terms, diffusion of information should be thought as similar to the diffusion process that is discussed in the context of *Innovation Studies* field. In that perspective, diffusion is a process of slow accumulation of knowledge along

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<sup>2</sup> For a discussion of this subject, see Guimarães (1998a).

<sup>3</sup> This evokes Polanyi's works, *Personal Knowledge* (1958) and *The tacit dimension* (1966), and in special his emphasis on tacit knowledge as a shaping force in scientific cultures development.

the way technology is spread throughout users (Rosenberg, 1986). Taking technology as knowledge, diffusion process is, by excellence, an activity of evaluation and integration of knowledge<sup>4</sup> analogous to that which takes place within the scientific community (Layton, 1974). Researches on *Innovation Studies* and *Economics of Technical Change* (see, for instance, Dosi, 1988 and Metcalfe, 1995) have highlighted some interesting features about diffusion process which are quite significant to Information Science.

The first one is the understanding that "*The impact of new and improved technology is not just a matter of improved technical performance. It is, rather, a matter of translating such information into its potential economic and social significance*" (Rosenberg, 1986, p.26). The driven forces of this translation (or knowledge diffusion process) are, at least, twofold. One is a result of endogenous change within the context of knowledge production itself; the other comes from changes or demands in the context of knowledge use and application<sup>5</sup>. Researchers have acknowledged that there is no sharp distinction between them, since producers and users' perception can change by a suitable definition of an information set.

Here, the main point for Socialization of Information is the ratification of the key role played by users in the information diffusion process, re-constructing the knowledge that was previously developed in order to promote its use and application in a new context of action. Therefore, diffusion process is not about the transfer of closed bits of information but a process wherein information is transformed and recreated.

The second and most interesting feature that researches have highlighted is the big mistake made by the orthodox view of diffusion process when taking as granted full information and classical rationality on the behalf of users. From Herbert Simon (1961) came the concepts of bounded rationality and imperfect information. By imperfect information is meant the fact that

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<sup>4</sup> This paper is not going to discuss the differences between information and knowledge (if they exist). Enough is to keep in mind the common sense distinction between knowledge as holding information, knowledge as understanding information, and knowledge as skill or knowing how to do something with it.

<sup>5</sup> This discussion send us back to the models of relationship between science and technology, which were in vogue in the 70's. See, for instance, Coombs *et al* (1987).

information is not equally available for all agents, knowledge is colonised and controlled by specific expertises. Bounded rationality means that the human beings capacity to process information is limited not only by cognitive and physiological nature of the mind, but also by social, psychological and organisational factors. Human beings select a set of information from the whole by exclusion, through a filtering process that is not a passive one.

If the perception of the value of information is an *active process*, its diffusion process (in terms of human communication process) is also an active process. To be effective and successful, a communication process must be *inter-active* and must entail some kind of mutuality between producers and users of information. Mutuality influences individual human being's perception of his/her own interest, opening the possibility for changing orientation, for action.

For Socialization of Information, the experience of difference is the condition of possibility for acquiring and processing information, which implies some degree of interaction between actors. Both from Durkheim (1976) and interactionist theory (Goffman, 1961) follows that social conduct displays itself as contingent upon others. Interactivity between producers and users of information led us to think of the communication process as *exchanges of meanings*. Exchange means the formation, reinforcement or modification of the message content during interaction. If for interactionists shared knowledge is the explanation for co-ordination in social action, for Socialization of Information the question is how to help in this accomplishment by providing particular strategies for information diffusion. These strategies do not deal with structuring of information flows only, but also, and mainly, with structuring relationships.

This approach implies active Subjects, *actors* involved in a communication process, which means that both the sender and the recipient are prominent. When coming to an inter-action neither the sender nor the recipient are authoritative actors *a priori*. An actor is seen as a locus of decision and action is in part a consequence of actor's decision. In interaction, actors try



to reconcile contraries in order to establish chains of interest: "*The work of generating interest consists in constructing these long chains of reasons that are irresistible even though their logical form may be debatable. The implication is not logically correct, but is socio-logically accurate.*"(Latour, 1996,p.33). The first step for sharing knowledge is sharing interests and "(...) *the interest should not be imputed to actors as background causes of actions, but rather that they should be an attempt to define and enforce contingent forms of social order on the part of the actors themselves*" (Callon and Law, 1982, p.615).

In this perspective, the metaphor of networks is introduced to translate the flexible co-operation around common interests (Callon, 1994) and expresses the key issues related to *reciprocity* and *interdependency* amongst actors. To build up a network of relationships is to have people interested, to recruit them, bring them on board, have them tied up with a subject (Latour, 1996). To be in a network is to participate. Nonetheless, the Socialization of Information main goal is more ambitious: theoretically, communication is a necessary condition for participation, collaboration and co-operation amongst actors, but is not a sufficient one for action and changing orientation. Only by practising, by doing, can actors effectively learn and transform their daily reality.

Here is where Socialization of Information meets the theory of knowledge developed by the internationally known Brazilian educator Paulo Freire. His main contribution was related to adult education, but Paulo Freire's legacy goes much more further than this<sup>6</sup>. For him, communication has three main related facets: the anthropological , the epistemological and the political one (Lima, 1996).

The anthropological one comes from the assertion that a Subject can only be a Subject when in relationship with another and this link is provided by communication. Communication is not an accessory, but a constitutive part of human nature. In the epistemological level, Freire claims that the

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<sup>6</sup> For a summary, see Gadotti, M. (1996) *Paulo Freire. A Biobibliography*. [Original in Portuguese] São Paulo: Cortez, Instituto Paulo Freire; Brasília: Unesco.

communication is the condition of possibility for the construction of new knowledge. Knowledge is taken as a result from a social relationship of two actors that is mediated by the subject they seek to know. Here communication means the relationship that comes into being by the effective actor's co-participation in the act of knowing. From this follows the political facet of the communication: to generate knowledge the communication must be in an egalitarian social relationship. In doing this, the actors are taking part of a social practice that effectively changes their realities.

Synthesising the issues discussed above, and translating them into the Information Science context, it can be said that Socialization of Information holds three main compromises:

- To search for approaches that can foster both the process of information diffusion and information use and application in different contexts of action;
- To search for mechanisms and alternatives that can provide the establishment of partnerships and co-operation between producers and users of information in relation to specific subjects (an information theme or an information problem);
- To search for specific methodologies, tools and instruments (artefacts and/or processes) that may assure an effective inter-active communication amongst actors.

The main point to keep in mind is that Socialization of Information has no previous recipe on how to do this. As an emerging speciality, Socialization of Information brings into itself the accumulated knowledge and practice of the Information Science field, which has coalesced with other different research fields. Perhaps what makes Socialization of Information unique is that more than theorising about the issues related to information transfer, it is looking for *social practices* that can help in this endeavour. In addition, as a way of doing, "*We make the road by walking*"<sup>7</sup>.

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<sup>7</sup> Horton and Freire's book title, *We make the road by walking: Conversations on Education and Social Change*. Philadelphia: Temple University Press, 1990.

The next section summarises some preliminary findings of the first research project developed under the Socialization of Information perspective in Brazil, followed by the presentation of an ongoing project at Oswaldo Cruz Foundation - FIOCRUZ, a Brazilian health research centre.

## SOCIALIZATION OF INFORMATION AND THE INTERFACE BETWEEN INFORMATION AND HEALTH SECTORS

Before presenting the Socialization of Information research project in course at FIOCRUZ, it is necessary to summarise some features of the first research project on Socialization of Information, developed within the Graduate Programme in Information Science (DEP/IBICT). The reason for that is because this first project was more than a laboratory, it was a precious learning experience with the Socialization of Information practice.

Entitled "*Socialization of Information: Searching for methodologies for its implementation. Case studies on the interface of Information Science and Health Science*" this project was launched in 1994 introducing the concept and proposing the use of the Socialization of Information perspective for analysing information themes (Braga and Christovão, 1994). This research project had a duration of four years, and the general objectives were twofold:

- to delineate specific roles that Information Science may play in socializing information for non-academic and institutional collectives;
- to practice, together with the Graduate Programme students, the exercise of translating theory into solidarity actions according the collectives necessities.

In that research project our intention was to situate Information Science between Biomedical Sciences and Public Healthy sector, trying to build up bridges across the fields of specialised knowledge construction and knowledge use and application for health. Information *for* health was the main goal to be pursued in terms of Socialization of Information. It is meaningless to stress how important this approach is to us in Brazil, a

country inhabited by contrast: we have been at the research front in some biomedical specialities, nonetheless Brazilian people have yet died due to endemic diseases which, we believe, would have been avoided if people had a more clear understanding of the diseases mechanisms and cure. We do not believe that information is the remedy for all diseases, but we do believe that the population is not a passive actor in the fight for public health.

For the development of that research project, we selected a specific disease, *Hansen disease* or leprosy<sup>8</sup>. Brazil is a second ranked country in the world statistics on this disease incidence, although biomedical knowledge has already provided suitable medication for the patients' treatment and cure. In addition, Brazilian biomedical researchers have already pointed out that the disease's elimination has a close relationship with the patient's perception and understanding of it, "(...) *specifically with the way the information and the resources used to transfer it are perceived by patients, how this information is accessed, interpreted and incorporated to their representation system and beliefs*" (Claro, 1995,p.79). For our research project, the main specific objective to be achieved was a search for mechanisms and methodologies that could overcome this gap between the official public health institutions and the population (patients and risk population/non-patients).

The first step in the research development was a search for a clearer picture about the disease in the Brazilian context. The project was restricted to the city of Rio de Janeiro, especially due to a partnership developed with the Municipal Health Office (Secretaria Municipal de Saúde do Rio de Janeiro). The team project was divided in five sub-groups, working with different but complementary sets of data related to leprosy, academic and non-academic ones:

- Memory sub-group, that collected historic information (text and/or pictures) about leprosy in Rio de Janeiro;

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<sup>8</sup> Brazilian legislation forbids the official use of the word leprosy, in a fight ( maybe an unfaithful one) against stigma.

- Legislation sub-group, that analysed federal legislation on leprosy trying to understand how the State apprehends the disease;
- Health Assistance Unit sub-group, that through a field research, tried to map qualitatively the information flows between patients, health professionals and managers in their daily activities;
- Database sub-group, in charge for the development of a bibliographic database on leprosy;
- Citation sub-group, that developed a prototype of the citation index of the Brazilian periodical literature on leprosy.

The analysis of the data collected by the sub-groups and the partnership developed with the Rio de Janeiro Municipal Healthy Office provided us a realistic picture of the informational context in which leprosy is inserted in. This understanding was essential for guiding a proposal for an information retrieval system modelling, that we call Integrative Information Retrieval System (IIRS)<sup>9</sup>, that should be developed and implemented by the Municipal Healthy Office to support the actions demanded by the Socialization of Information approach on leprosy.

We believe that as important as the informational artefacts we were able to produce in the last four years are the learning we have been involved in. By interacting within the project team, we learnt about the disease and our own drawbacks in dealing with it. By interacting with Health professionals, we learnt about their practices and the relationship with patients. We have reinforced our viewpoint that is not enough to structure information flows, we have to try, at least, to structure relationships.

This first Socialization of Information project was only a first and small step in a long way that, we are sure, there exists ahead in providing an effective design for information diffusion process on leprosy for different actors. For different reasons, after the project's conclusion the team was dissolved,

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<sup>9</sup> The IIRS proposal development will not be discussed in this paper. Enough is to say that it is theoretically grounded on some visions coming from Autopoiesis (Maturana & Varela), Chaos, Complexity and Estranezas (Maluf, 1998) theories. The main principle of its development is, by using a "smart software" and a particular set of data previously defined, to bring into the system modeling the users needs. For more information, see Braga and Christovão (1999).

but the ideal of Socialization of Information has remained in some people minds as a powerful research approach to explore hidden perspectives on information problems.

It was for its methodological success that Socialization of Information approach has been applied within a new and challenging context: in an institutional one, more specifically at the Oswaldo Cruz Foundation – FIOCRUZ, one of the biggest health research institutions in Latin-America (Guimarães, 1998b). Founded in 1900 by Oswaldo Cruz, reckoned as the first Brazilian sanitarian, FIOCRUZ's life confounds itself with the fight against epidemic diseases of the beginning of the century, and had (and still has) a close relationship with public health issues.

During its one hundred years life, FIOCRUZ has got bigger in size and complexity in terms of research interests and competencies. Today it is a conglomerate of sixteen units concerned with teaching, research and development (R&D) activities, and vaccines and pharmaceuticals production. Besides, some of its departments are Brazilian and Latin American excellence reference centre in specific diseases. Scientific journals edited by FIOCRUZ have been amongst the few Brazilian ones that have been indexed by Institute for Scientific Information (ISI). The FIOCRUZ's researcher productivity is one of the highest amongst Brazilian research institutions. These and other features have made us be honoured by FIOCRUZ achievements. Nonetheless, searching for effective actions to translate this knowledge in both information on and information for Health have not necessarily followed the continuous search for excellence in scientific performance.

Recent changes in the Brazilian political scenario have opened a more democratic room for discussing the future paths for the country development, where Health and Education have been the “keywords”. Organised social groups (non-governmental agencies included) have been stepping forward social movements and actions, which have been increasing people's consciousness about the role played by some institutions in the public health sector. FIOCRUZ has been tuned with these

changes and have taken information diffusion process as the cornerstone of the link between Health and Education.

The ongoing Socialization of Information research project at FIOCRUZ, which was launched in August 1998, has an institutional character in the sense that the methodological approach would be available to be applied in at least three different contexts of the information diffusion process. Internally, amongst the various FIOCRUZ's own units, and at the interface public/private, between FIOCRUZ and society, and between FIOCRUZ and other institutions related both to the health and science and technology sectors. These three contexts are not necessarily independent from each other and, although the information flows between FIOCRUZ and society have been taken as the most important context of analysis, the two others should show up as contingent ones upon it.

From the numerous possible information themes (or information problems) that could arise from this picture, two investigative lines have been in course:

- The first one has been analysing the vaccines production sector . It is an exploratory study that seeks, firstly, to map the information flows that have been linking FIOCRUZ both internally (its main units and departments that have been devoted to any facet within the whole process of the vaccines production) and between FIOCRUZ and some key external actors that have played important roles in this endeavour. Through the collection and analysis of the relevant documentation on the subject ( i.e., Brazilian vaccines policies and research orientations, knowledge production both in terms of papers and patents, development and production activities, epidemiological data, vaccines campaigns) followed by interviews with key actors in the sector, we hope to identify specific “bottlenecks” in the information diffusion process. After delineating this network of relationships, specific methodologies and mechanisms for foster information diffusion process can be suggested;
- The second line of investigation has been one directed to explore the relationships between Internet and information diffusion in the light of Socialization of Information approach. More specifically, if and how

FIOCRUZ can make use of the Internet resources as a potential instrument that can stimulate specific users' understanding and application of knowledge. Also, if and how FIOCRUZ can learn from users in this kind of interaction. This issue is far away of being trivial, and it has been deeply discussed at some FIOCRUZ's units. At the time being, the prevalent proposal has been directed to the development of a prototype of an interactive site, focusing on particular users and an information theme.

The "Socialization of Information at FIOCRUZ" research project has yet fifteen months ahead for its development, and our expectation has been that we might be, at least, spreading seeds for a new way of looking at information diffusion process.

In the last section, some points for thinking of a future for Socialization of Information are presented.

## **SOCIALIZATION OF INFORMATION: A POSSIBLE FUTURE**

Socialization of Information has shown, in a first approach, its main interest on the linkages between science and society. However, the search for more inter-active exchanges of information flows between different contexts of knowledge production and use has made its approach useful to be applied to numerous other interfaces. Socialization of Information has broken up the traditional information thematic divisions (i.e., scientific information, technological information, and managerial information) and presents itself as an inter-thematic approach, in the sense that any information problem encompasses, by its own nature, various heterogeneous elements.

Along this paper discussion, Socialization of Information has emerged as devoted mainly to the human aspects of the informational processes that have been analysed within Information Science. Of course, we do not dismiss how important have been Information Technologies (ITs) on information diffusion. However, it is by Socialization of Information focus on human communication processes that we believe it can be useful to



numerous other research fields. For instance, it has already pointed out how the analysis of knowledge flows and the Socialization of Information perspective can be applied to the constructive approach on Technology Assessment (TA) (Guimarães, 1997). By the same way, Socialization of Information can be helpful on the technology implementation processes, where power and resistance are the common issues.

In the strategic management field, with the growing interest on strategic alliances, virtual corporations, buyer-suppliers relations and technology collaborations between organisations, where the knowledge creation process is a key point, we believe that Socialization of Information has also a role to play.

Obviously, there could have been pointed out numerous other contexts as much relevant as that to Socialization of Information perspective implementation<sup>10</sup>. As previously highlighted the Socialization of Information power resides in its methodological flexibility – each information theme is unique, and demands particular strategies in the search for diffusion process improvements. Maybe this flexibility can be taken by some as fragility. However, we have not been concerned with the establishment of theoretical constructions *per se*. At the present stage of the Socialization of Information development, the practice and the learning by doing have been our main goals. There exists a long way ahead, and we believe that a door was opened. If so, we proudly invite you to come in.

## REFERENCES

- Bloor, D. (1991) *Knowledge and social imagery*. 2 ed., Chicago: University of Chicago Press.
- Braga, G. M. and Christovão, H. T. (1994) *Socialization of Information: methodology development for its implementation. Case studies on Information Science and Health Sciences*. Research Proposal, 19p. (Supp. by CNPq, 523272/94-4)
- (1996). Activity Report, 29p. (Supp. by CNPq 522943/96-9)

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<sup>10</sup> Nineteen Master thesis and Doctoral dissertations are being developed/were conducted at the Grad. Prog. In Information Science, CNPq/UFRJ, exploring Socialization of Information and/or its applications to different fields.

- \_\_\_\_\_. (1999). Final Report, 65p.
- Callon, M. (1994) Techno-economic networks and science and technology policy. *STI Review*, OECD, n.14, p.59-117.
- Callon, M. and Law, J. (1982) On the interests and their transformation. *Social Studies of Science*, v.12, p.615-25.
- Christovão, H. T. (1983) *The aging of the literature of Biomedical Sciences in developed and underdeveloped countries*. PhD dissertation, Drexel University, Philadelphia, USA. Adv.: B. C. Griffith and M. C. Drott.
- Claro, L. B. L. (1995) *Hanseníase: representações sobre a doença*. Rio de Janeiro: Editora Fiocruz.
- Coombs, R. *et al.* (1987) *Economics and technological change*. London: Macmillan Education.
- Dosi, G. (1988), The nature of the innovative process. In: Dosi, G. *et al.* *Technical Change and Economic Theory*. London: Pinter.
- Durkheim, E. (1976 [ 1915]) *The elementary forms of religious life*. London: Unwin.
- Gadotti, M. (1996) *Paulo Freire: uma biobibliografia*. São Paulo: Cortez, Instituto Paulo Freire; Brasília: Unesco.
- Gibbons, M. *et al.* (1994) *The new production of knowledge*. London: SAGE Publications.
- Goffman, E. (1961) *Encounters; two essays on the sociology of interaction*. Indianapolis: Bobs-Merrill.
- Guimarães, M. C. S. (1997) Management of technology and knowledge flows. Paper presented in the workshop on *Zero Emission and Technological Assessment in a Global World*, International Association for Technology Assessment and Forecasting Institution – IATA, Rio de Janeiro, October 27-30.
- \_\_\_\_\_. (1998a) *Tecnologia como conhecimento: o público e o privado; o social e o econômico*. Doctoral dissertation, CNPq/UFRJ, Brazil.
- \_\_\_\_\_. (1998b) *Socialization of Information at FIOCRUZ*. Research Proposal, 10p. (Supp. by CNPq, 300649/98-3)
- Latour, B. (1996) *Aramis or the love of technology*. London: Harvard University Press.
- Layton, E. (1974) Technology as knowledge. *Technology and Culture*, n.15, p.31-41.
- Lima, V. A. (1996) Conceito de comunicação em Paulo Freire. In: Gadotti, M. *Paulo Freire. uma biobibliografia*. São Paulo: Cortez, Instituto Paulo Freire; Brasília: Unesco.

- Maluf, U. (1998) *Cultura e mosaico. Uma introdução à teoria das estranhezas*. Niterói: Sol Nascente.
- Metcalf, J. S. (1995) Technology systems and technology policy in an evolutionary framework. *Cambridge Journal of Economics* v.19, p.25–46.
- Polanyi, K. (1958) *Personal Knowledge*. Chicago: The University of Chicago Press.
- \_\_\_\_\_. ( 1966) *The tacit dimension*. London: Routledge & Kegan Paul.
- Rosenberg, N. (1986) An overview of innovation. In: Landau, R. and Rosenberg, N. (Eds.) *The positive sum strategy*. Washington: National Academy Press.
- Saracevic, T. (1992) Information Science: Origin, evolution and relations. In: Vakkari, P. and B. Cronin (Eds) *Conceptions of Library and Information Science*. London: Taylor Graham.
- Simon, H. A (1957) *Administrative behaviour*. 2ed. New York: Macmillan.
- Snow, C. P. (1993 [1959]) *The two cultures*. Cambridge: Cambridge University Press.
- Wersig, G. (1992) Information Science and theory. In: Vakkari, P. and B. Cronin (Eds) *Conceptions of Library and Information Science*. London: Taylor Graham.