Shifra Baruchson-Arbib

"Social Information Science" – as a concept for assimilating Smart Internet Usage in a Multi-Cultural Society : The Case of Israel

Abstract:

The present paper discusses Social Information Science, an innovative field of study, which can enhance assimilation of smart internet usage in multi-cultural countries such as Israel. Social Information Science (S.I.) deals with the development ,theory and applications relating to the retrieval and processing of social and medical information, training "social information scientists," as well as the development of SI mediation services such as SI banks, SI sections in schools ,public libraries, hospitals, community centers, and private services. Together, these concerted efforts aim to establish a modern information-oriented climate in which stressful social and medical issues are handled through the retrieval and use of reliable information as the basis for knowledgeable decision making. Mediation services demonstrate the potential and risks involved in internet usage, as well as the importance of information-based decisions. Social Information Science will help train people to conduct their daily life decisions on the basis of information selection and self-responsibility- which is a step forward in the evolvement and empowerment the individual.

Agenda

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Author:

Prof. Dr. Shifra Baruchson-Arbib:

- Associate Proffesor. Department of Information Science, Bar-Ilan University, Ramat Gan, 52900 Israel, Department website: www.is.biu.ac.il email: infosci@mail.biu.ac.il
- ☎ 972-3-7301495 , ✉ baruchs1@mail.biu.ac.il, 🖥 www.biu.ac.il/faculty/baruchs
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Introduction

The present paper discusses an innovative assimilation service concept developed and implemented by the author at the "Department of Information Science," Bar Ilan University, in Israel. Israel is a multi-cultural state comprised of local religious and secular groups, Jews and Arabs, immigrants from western and eastern countries and foreign laborers. The present study is grounded in the premise that the assimilation of information technology in multi-cultural societies must be supported by a creative, multi-systemic perspective. One method to cultivate an information-oriented society is the establishment of social information banks and desks managed by academically-trained "social information scientists," possessing an understanding of "information behavior" language and mentality issues. In these times of a digital divide, there still is a need for a mediator who use face-to-face encounters to gradually expose individuals to information in areas relevant to their daily lives. An understanding of the potential of information and the internet is expected to empower individuals, train them to manage their lives based on knowledge-based decisions, enhance independence and responsibility and reduce the digital divide.

The Internet and the Evolution of Individual: Options, Choices and Responsibilities

The internet emerged as a new communications tool with unique and distinct features in the last decade of the 20th century. For the first time, at our disposal is an interactive, global tool of knowledge, comprised of words, color and sound. This dynamic instrument, which is a repository of enormous amounts of information increasing from day to day, poses many challenges to humanity. The internet triggers changes in culture and leisure, modes of learning, commerce and social communications, and also raises the issue of nationalism in a global environment (Castells, 1996; Castells, 2004; Curran 2002 Howward and Jones, 2004 Winston, 1998). In order to understand the potential of the internet and assimilate its use in everyday life, three essential skills are needed, without which use of the internet is impossible: usage techniques, information skills and search techniques. However, the major challenge for humankind is how to bring the power and significance of information to the public's

awareness, and to develop its appreciation of the need for "smart internet usage." Relevant information potentially enhances individual quality of life by suggesting numerous options for life management. Smart usage involves information assessment techniques, awareness of the information overload problem and an appreciation of ethical issues such as intellectual property, privacy and the digital divide- all of which are important for being an equal citizen in the information society.

Any new communication tool introduced into human society poses new opportunities and challenges, as well as new risks. Underlying the present paper is the assumption that access to information representing new options and new alternatives constitutes a foundation for individual development and growth. Therefore, the internet has the unique potential to increase self-awareness, individual responsibility and individual independence. Exposure to the unprecedented abundance of information on the internet allows individuals to select the most appropriate information for his or her needs. This selection process is a conscious and responsible process that integrates elements of personal maturity with expressions of individuality and creativity.

In the absence of widespread appreciation of the power and uses of information, a very narrow stratum of the population may emerge as an "information elite." This elite may exploit information for its own benefits, while the majority of the population continues to play computer games, send emails and participate in on-line chats, with no real understanding of the "treasure" called information. This large group will not only fail to realize any benefits from the positive potential embodied in the internet, but may gradually become an information-impoverished social group, detached from one of the greatest challenges offered by the internet: the opportunity to lead a productive life grounded in informed decision making. If this forecast is realized, we will no longer speak of a digital divide, but of a mental divide.

Traditionally, information was controlled by elite groups: rulers, religious leaders, physicians, lawyers and experts in various fields. Individual decision-making was typically restricted to information which had been filtered, classified and released by monopoly owners. Now, for the first time in history, individuals have the opportunity to independently select information and knowledge, and consequently gain control over major portions of their lives. The internet, however, has created the challenging

situation, akin to that of a prisoner released after many years of incarceration, or a villager who encounters the big city for the first time. In this context, the words of Burckhardt (1958) remain relevant: "Man was conscious of himself only as a member of a race, people, party, family or corporation - only through some general category...." (p.143). The internet now allows man to perceive himself also as a member of a global entity, with the freedom and responsibility to make his or her own choices based on vast amounts of information.

To ensure that the opportunity for individual growth is realized, we must establish an "information climate" in daily life, through by education, public debates and special assimilation projects. For this task, regular methods of computer training and basic information skills acquisition are insufficient because assimilation training must emphasize broader issues, including the power of information, the liberty and responsibility which create lives based on informed decision making, ethical issues applicable to the internet, and exposure to the "information environment" comprised of books, journals, television, experts, acquaintances and family members.

Assimilating information technology such as the internet is especially difficult in a multi-cultural society, because social groups generally maintain distinct information channels, unique modes of appreciation of the significance of information usage, and unique views on individualism and personal responsibility. To ensure the success of the technology assimilation process, and provide a genuine opportunity for progress to the population at large, assimilation should be based, first and foremost, on an understanding of the mentality of each social group. Such understanding must be grounded in scientific research, and implemented by developing creative, modular assimilation programs suited to the unique language needs and awareness levels of each group. Such an assimilation process does not imply any modification of cultural mentality and beliefs, but only support for increasing access to the benefits of the new technology and the opportunity to join the information society equipped with all necessary knowledge.

Past media revolutions offer lessons on the importance of the assimilation process of new information technologies. One major communications revolution was prompted by the printing press, invented by Johann Gutenberg in the mid-15th century. Gutenberg printed the "42-line Bible" (Mainz 1454-1455), in a large format (41.3 x 30 cm, 2 volumes, 987 pages), leaving margins for hand-made illustrations, yet was oblivious to the potential of his innovation and failed to foresee the development of pocket books, bureaucratic paperwork, newspapers or scientific journals. In fact, first to understand the possibilities of the printing press were religious authorities. The Catholic Church in Rome printed indulgences which generated revenues used to finance magnificent buildings, while the Church's opponents, the Reformators and supporters of Martin Luther, printed pamphlets and books in their campaign against the Church, ultimately causing the separation of the Protestant from the Catholic Church. Yet, at the same time, the invention had little impact on the literacy of the public at large: Four hundred years later, in 1840, one half of Europe's inhabitants remained illiterate (Baruchson, 1993; Cipolla, 1969; Eisenstein, 1979; Febvre and Martin, 1976).

Can we allow ourselves a similarly slow process of technological assimilation, which the French call "laissez faire laissez passer "? Over one hundred years of social science studies in the universities illuminate the disaster inherent in a slow assimilation process, in terms of equality and status among individuals. Since Gutenberg, the "play," "the actors" and the "stage" have changed and will never be the same. The "play" is no longer a printed book with fixed contents, the "actors" are no longer authors, printers and librarians, and the "stage" is no longer stable. Now, the leading "actors" are technology firms and hi-tech experts, the "play" is virtual and interactive and the "stage" is continuously moving in cybernetic space. In fact," slow time" has ceased to exist and has been replaced by uncontrollable rapid, dynamic changes. In this new state of affairs, we are called to concentrate our efforts and creative energy to the development of a framework for assimilating new technology, a framework which is innovative, effective and efficient, operating simultaneously on multiple channels. Our realistic aim, then, is not to resolve all the problems of digital divide, but to alleviate them.

"Smart Internet Usage" in a Multi-Cultural Society: The Case of Israel

Assimilation of internet usage skills touches upon several foundational questions, including the designation of the parties initiating and

implementing the assimilation process, as well as the manner of assimilation. In the context of a multi-cultural society, assimilation of internet usage becomes entwined with many additional factors including literacy, awareness of the power of information, technological knowledge, economic resources, openness to unfamiliar technological channels as substitutes for traditional information sources such as community leaders, parents and friends, and finally, openness to knowledgeable-based decision making, which is one of the most important opportunities offered by the internet. In a study on the information behavior of minorities, Chatman (1999) noted, "The role that a small world plays in formulating first-level information is quite simple. Primary conditions are trust and believability. For information to take on legitimacy it must be compatible with what members of the social world perceive to be plausible" (p. 215). In her theory of "life in the round", Chatman explains: "When people seek information only from others much like themselves....their world has limited range of possibilities" (ibid, p. 215).

Two main methods are used to assimilate new technologies. The first entails the gradual and random exposure of the population to the new technology, for example, through the dissemination and sales of computers and short training programs focusing on uses of the new technology. This is obviously a limited method when applied to groups whose economic situation and/or cultural worldview prevents them from using the new technology. As this method is dependent on general competencies, it also entails the risk of promoting the formation of a new elite comprised of the owners and experts of these technologies.

The second method employs initiatives of educational systems. Despite its advantage, assimilation through this method is limited to individuals attending such institutions due to its nature as a structured and controlled curriculum. Furthermore, some planned educational efforts fail to take into account the specific needs of different social and cultural population groups, ethical issues or attention to the significance of the informed decision-making. Although some international programs for technology assimilation, such as the ECDL (European Computer Driving Licenses), have been developed in recent years, these programs generally target an already aware and interested group, and are also limited to the technical aspects of the assimilation process (Munnelly & Holdan, 2000).

The State of Israel illustrates the problematics involved in assimilating information technology in a multi-cultural society. Israel is comprised of diverse cultures of Jews, Moslems, Christians, and more recently, foreign workers especially from the Philippines, Romania and China. Even the country's Jewish population is varied, comprised of Israeli-born and immigrants from Eastern Europe and North Africa, with a minority from central Europe and the English-speaking countries. In the last thirty years, large waves of immigrants from Ethiopia, Russia and other Former Soviet Union states have arrived. The Jewish population is also segmented by religion: The majority of the population is secular, although many respect, honor and wish to preserve ancient Jewish traditions. Religious Jews are further divided into several sects: Orthodox, Modern Orthodox, Conservative and Reform Jews, while Orthodox Jews themselves are divided into several streams. The languages spoken in Israel are Hebrew, Arabic, Russian, Yiddish, Amharic and English. Although the information behavior of the various population groups has not been studied to date, different mentalities and perspectives are clearly involved. This is especially prominent in Orthodox and other conservative groups, where most decisions follow the religious leader opinion, and access to other information channels such as the television or the internet is frequently forbidden. Internet usage rates in Israel are relatively high. According to January 2004 data, of 6,700,800 inhabitants, 29.8% (2 million) individuals use the internet (Internet Worldstats, 2004), most of them are concentrated in high socio-economic status cities in central Israel (Eitan,2001).

The Concept of "Social Information Science"

Even if a considerable share of the population uses the internet, the question is whether the majority of this diverse population understands or is ready to understand the options embodied in access to information and information sharing. In this complex reality, the cultivation of an awareness of information-based decisions requires special-personalized- information services and special qualified professionals. To this end, the author developed a new scientific discipline for MA and PhD students in the field of information science, designated "Social Information Science." Service delivery is planned to be conducted through social information banks or desks, and characterized by its one-on-one format relating to the individual's unique circumstances. Social information services are based

on the belief that information provided by a mediator in an area which is highly important to the client, indirectly exposes clients to information sources and the need for informed decision-making based on a rational selection process. The present paper focuses on the underlying rational of this new field rather than the contents of its curriculum, which are discussed elsewhere (Baruchson-Arbib, 2000a) and are updated on an annual basis to incorporate changes in the field of social information in Israel (Department of Information Science, 2004).

The field of Social Information (SI) addresses several areas: theory development and the application of all aspects of retrieval and processing of social and medical information, including primary information (names and addresses of organizations, websites, relevant articles, etc.) and supportive knowledge (belle letters, stories, movies, etc.). The field also addresses information needs, ethical and legal issues, information seeking behavior in multi-cultural societies, and the development of special institutions and services, such as SI banks, SI sections in school and public libraries, SI desks in hospitals, SI sections in community centers, and private SI services (Baruchson-Arbib, 1996b).

The goal of this new field is not to establish additional information services, but rather to create an atmosphere in which individuals become accustomed to solicit the assistance of an independent consultant to obtain information concerning social and medical problems. The consultant-mediator helps the client chart his or her information needs and identify solutions to actual problems or dilemmas. This method offers the following benefits: Individuals are exposed to the practical significance of information, new information sources and technologies, as well as the need for knowledge-based decision making. A substantial effect is anticipated as a result of the exposure to information and to the potential of technology, due to the very personal and vital topics involved and the highly motivated state of the individual seeking information.

In many societies, individual routinely consult mediators in many dimensions of life. We recognize our need to locate information and consult mediators such as investment counselors, travel agents, real-estate brokers or school counselors. However, faced with a social or medical problem, especially an unfamiliar or ambiguous condition, no familiar routine exists. The path of locating appropriate information is paved with anxiety, to say nothing of expenses. A person who retires from his

job, for example, can benefit from information on his social rights, options for work or volunteering, information on leisure activities, support groups, senior citizen homes, self-help organizations and social clubs, to say the least. If the individual has a medical condition, he will also need information on his illness, including treatments options, technical devices, and support. In the absence of a possible cure, he will need to know how to maintain his optimal state of health. He might also be interested in the latest science news relating to his condition, on a continuous basis. He would probably appreciate a book or film about a person his age coping with a similar condition, and enjoy similar sources of support or insight. The inclusion of supportive knowledge in the new service was based on an appreciation of the major role on individual's mental state and coping, in the context of social and medical problems. To efficiently and effectively find, access and utilize all this information, individuals require basic preliminary competencies in information technology applications, knowledge of information sources, data retrieval skills and strategies, and assessment rules for selecting credible information. In addition, individuals should be capable of planning search strategies by outlining aims and research sources. Individuals would also be advised to familiarize themselves with the appropriate literature as a source of insight. In addition, individuals must be fluent in the language of the sources and familiar with related ethical issues, such as the problem of junk mail or free information that could lead him to misguided decision making.

As internet technology assimilation proceeds in the current transition period, mediation services rendered by academically-trained professionals are required to enable the aforementioned retiree, or any other individual who lacks adequate information skills, to function productively and enjoy the benefits of access to information. Such professionals should be well-trained in conducting "helping interviews," and familiar with information sources, ethical problems and issues of diversity pertaining to information transmission and sharing. By simultaneously establishing socially-oriented information services in multiple community institutions such as libraries, schools, community centers and hospitals, we can create a climate in which the majority of the public comes to recognize the significant role of information.

The rational of Social Information Science goes beyond the traditional perspective of librarianship that aims to disseminate information and help

people obtain relevant data. More than a program for supplying information, Social Information Science is an educationally-oriented concept that uses information delivery as a mean to gradually expose all population segments to the process of information selection and informed decision making, and gain an appreciation of how direct information and supportive knowledge can enhance the quality of life.

The implementation of this concept requires the integration of the following five elements:

1. The Mediator or the Social Information Scientist- a professional holding a BA degree in the social sciences and a MA degree in social information science. On the basis of his or her knowledge and understanding of information sources and information behavior, the Social Information Scientist delivers information from a neutral, unbiased perspective. Even internet-oriented individuals can benefit from information mediators: When a social or medical crisis strikes, individuals' anxiety and apprehensive state of mind undermine their ability to plan a search rational strategy or calmly evaluate large amounts of information. Secondly, as many reliable internet-based information sources have shifted to a fee-based business model, reliance on an expert information mediator may become the most cost-effective method of obtaining reliable information.

2. Diversity of Location - The simultaneous establishment of SI banks, desks and sectors in a wide range of community institutions and private sector resource centers, will expose the majority of the population, members of diverse age and status groups, to the significance of information and transform knowledge-based information search needs into an integral part of everyday life in the 21rst century.

3. Service Delivery – SI services are grounded in an empathetic, compassionate approach, based on in-depth interviews, to offer options, alternatives and assistance to individuals in planning a logical step-by-step process and ultimately, conduct evidence-based decision making. From this perspective, SI services constitute an informal learning process, which some users will hopefully adopt and independently apply in the future. Assimilating the terminology of information society would be considered significant progress and a first step in attaining equal status in the emergent virtual world.

4. Information sources – In-depth knowledge and familiarity with available printed and electronic information sources in relevant languages and appropriate levels of literacy for each population group, in addition to familiarity with both primary information and supportive knowledge sources. This concept is based on the rationales of psychoneuroimmunology and bibliotherapy, which claim that support and understanding reduce stress and allow individuals to make decisions in a rational and calm, rather than stressful and anxious, state of mind. This in itself is a not insignificant achievement in our stressful, anxiety-ridden society Baruchson-Arbib, 1996b; Hynes McCarty and Hynes Berry, 1986; Vollhardt, 1991). In addition, use of literary sources as illustrated through bibliotherapy, for example, ensures that modern society remains linked to the sources of human culture in literature, poetry and cinematography. This would be a significant contribution to the sought-after balance between technology and humanity.

5. Marketing and Image - Our aim is to establish a – prestigious- yet accessible service for all population groups, by creating a unique 21st century climate in which obtaining information through mediation is a common procedure. This fee-based service is expected to generate respect for informed mediators, for the power of information and, especially, for the users. Although gradated fees should be offered to accommodate economic need, the service provided should be uniform in quality for all users who enjoy equal access to information.

The integration of these five components will help cultivate a mature, rational audience of information users and responsible decision-makers who have a deep understanding of the significance of information. By promoting awareness-based engagement in information in the context of personal issues, we will be able to prevent digital and mental divide. The social information approach is an additional layer added to previous attempts at formal and informal assimilation projects. As these efforts, activities and discussions proliferate, we will make progress in building a more aware, responsible and equal information society.

Social Information Science in Israel - Reality and Zeitgeist

Our students are encouraged to apply their social information skills in their workplaces: school and public libraries, community centers and hospitals. Many of these institutions already have the infrastructure for SI services, and the development of a full-service SI desk requires no more than minor

investments. Our students are also trained in the preparation of the infrastructure for such services, including building websites for a variety of social and medical needs, and conducting information interviews, taking into account differences in language, beliefs, attitudes and customs.

In the past 8 years, our department has also been extensively engaged in theoretical and experimetal studies conducted by members of our academic staff and graduate and post-graduate students. Most studies aimed to examine whether the State of Israel has a genuine need for individual mediation-based services to promote information technology assimilation. Studies initiated by our department have found that very few community based information centers exist and public libraries generally fail to realize their potential in this field. A study conducted in Hertzliya confirmed the public's thirst for human contact in the context of information. The study conducted in this city, characterized by a relatively high socio-economic profile, found that when solving problems, most of the population refers to newspapers (36%), the internet (24%) and personal contacts (18%). However, when asked how they prefer to receive information, most participants noted the telephone and one-on-one conversations. (Shemesh, 2002; Shemesh, Baruchson-Arbib & Shoham, 2003). Additional studies found that the Israeli public is eager for self-help literature. There is a steady increase in this literature every year, especially in psychology-related topics, confirming a high level of self-awareness and desire for independent problem-solving tools (Baruchson-Arbib & Kivity, in press). Other studies found that health-related web-sites in Israel fail to meet multi-cultural needs, as most are in Hebrew rather than other spoken languages (Baruchson-Arbib & Megidov, in press). A similar situation was found in hospital websites which service the majority of the public in Israel (Booch, 2003). Hassin (2002) found that most of the employees in five Israeli Health Information Centers for patients had no training in information science or librarianship. These information services also lack the financial resources to support adequate advertising.

Another study (Baruchson-Arbib, 1998; Baruchson-Arbib, 2002b) focused on the establishment of a "self-help section" in a special corner of a school library, located in a low socio-economic community. The "self-help section" was a great success and attracted students who had never previously shown any interest in reading books or accessed internet sites about social problems (relationships, drugs, and other problems of adolescence). Although average readership rose by 32%, the most impressive increase was noted among young boys who never previously visited the library (123%). With its innovative, original design, the "self-help section" maintains maximum privacy and has evolved into an extremely popular place for the youngsters. Completion of this study, which has been extended to several schools, is anticipated this year. If similar results are obtained, it will be clear that libraries can be effectively used as a means of educating adolescents - our society's future - in the significance of information. Findings of other studies (Baruchson-Arbib, 1998; Baruchson-Arbib, 2000b) indicated that "aid organizations" are highly interested in developing information services with the assistance of a professional social information scientist, yet lack the resources to do so.

Another study, focusing on the introduction of computers into religious communities, found that the modern orthodox population has even introduced computers into yeshivas (schools concentrating in religious studies) (Hiller Daum, 1996), reflecting their adaptation to modern times. Some religious communities also adapted the internet to their needs by creating various filters to restrict access to "immodest" or "immoral" websites. Several websites as" Kipa" and "Moreshet" are administered by members of the religious population, and include a "Responsa" section (Q &A) directed to Rabbis. Although the process is virtual, the rabbis are well-known figures in the modern Orthodox community (Zarfati, and Bleis, 2002). Notably, Bar Ilan University, a religious institution, initiated the Responsa Project, based on its understanding of the significance of a digital repository of knowledge. The Responsa CD is a digital database of the entire foundational literature of the Jewish people, including the Old Testament, Talmud, legal literature, customs and Responsa literature.

These studies confirm the desire of the Israeli public to adopt information technology, on one hand, and the need for a mediator to provide individual service and customize information sources to the spoken languages in Israel. It is equally clear that Israeli society is prepared for this new scientific and practical discipline of "social information science".

New ideas become established when society is ready for them. Although social information banks do not yet exist, the "Zeitgeist" is clear. Israeli society is gradually attaining an appreciation of the need to establish personal information dissemination

services alongside the internet. In recent years, we have witnessed activities outside the academia, which reflect theories of social information science. One national initiative to bridge the digital divide is "Lehava", a project financed by the Israeli Ministry of Finance. "Lehava," which operates a large number of free internet training centers, was conceived with the aim of delivering social information, especially on citizens rights, and the intention of having the young pupils bring their family members to the center (Lehava, 2004). The J.D.C. (The America Jewish Joint Distribution Committee) for example, supports the need for a "welfare information scientist" and intends to train handicapped persons as social information scientists for other handicapped individuals (Ben Natan, 2002). The recently established "Shamir Project" is a national center for medical information, designed to offer services by representatives who speak several languages, with the appropriate background and familiarity with the health-care system. The initiators of the project noted "Although information is available on the internet, the abundance of data makes it very difficult; Furthermore, most people prefer to obtain information from a skilled individual with access to authorized information" (Levkoviz, 2004).

The current "zeitgeist" is directed to the need for life management on the basis of knowledgeable decisions grounded in relevant information. In the USA and Europe, this has been evident for several years, and is reflected in the development of fields such as "preventive medicine", and "patient education," as well as the extensive efforts of the European Union to establish outstanding social websites (Europa 2004). As Gann (1992) noted: "People are no longer content to be told what is good for them: They want to access to information which will enable them to weight up risks and benefits and to make informed choices between options in health care"(pp. 545-555).

We have come a long way from Gutenberg's printing press to the world wide web. In the past, literacy was the key to reduce social divides. The internet, however, highlights the potential to raise awareness beyond literacy, or the use of computers. The huge amounts of information now available to modern man may point to a new phase in human evolution: the evolution of individuals who manage their lives on the basis of knowledge, information, moral and ethical values and personal responsibility. To provide an equal starting point for the majority of individuals in our information society, it is not sufficient to provide technical training. Our aspiration should be

to bridge not only the digital divide, but to prevent potential mental divides, through smart usage of the internet and the development of personal information services as suggested in this paper.

In assimilation projects, no uniformity is either intended or desirable: The aim is to create a situation in which individuals have a similar starting point in life, which enables them to operate in a knowledge-based world. "Social information science" is one of several concepts which can expand opportunities for individuals to join the information society with equal skills and prospects.

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