The Ideology of the Information Wave (IW)

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ABSTRACT

The paper is a general review of Information Wave's (IW) ideologies. IW is an ongoing process of political (ideological), economic, social, and technical configurations and relations. Conflicted IW ideologies must be reconciled. The interests of info-economic utility and social justice need to be balanced. Social awareness of IW must be promoted. A healthy and peaceful living can be achieved by simultaneous promotion of localized economies and identities and globalized consciousness. International institutions, led by the United Nations, must take on new roles and adopt new strategies to build up a dynamic and creative relationship between the need for a global market and the needs of the small entities. Further knowledge that gives permanence and stability to the moral standards, which afford reasonable scope for genuine adjustments, adaptations and innovations, must be advanced. It makes morality reign supreme for ICT developers, operators, users and policy makers; and ensures that the affairs of life, instead of dominated by self-centered desires and interests, are regulated by norms of morality.

INTRODUCTION

In an information economy, labor related to information (e.g., creation, processing, dissemination) exceeds labor related to the other three economic sectors (e.g., agriculture, industry, service). Porat (1977) notes that 1967 marked the beginning of the information economy. Schement (1990), however, argues the common myth that the rise of information economy is somehow congruent with the rise of computers and sophisticated telecommunications equipment. Although computers began to play a facilitating role after 1950, it is the need for the workers and their work that had the most direct bearing on the initial emergence of the information economy early in the 1990s. The number of workers in information-related jobs increased by nearly 500% between 1900 and 1930 but increased only by 220% between 1930 and 1960 (Schement, 1990).

The central issues about an information economy to the larger society have less to do with tools or means than about the higher ends (Pemberton, 1995). The information economy produced the information wave (IW) (or the information society), in which societal focus is on information. This IW is an ongoing articulation of political, economic, and ideological arrangements and relations. Slack (1987) notes, descriptions of IW are ideological, and ideology permeates what the IW is, how it is lived, how it is experienced, and what it will become.

Ideologies are maps within which we understand the changes as well as live and experience them. Consequently, ideologies are implicated in and part of the very reality that they map (Slack, 1987). One of the central tenets of the dominant ideology of the IW is that information replaces industrial goods as the principal commodity and economic engine (Slack, 1987). However, some (e.g., Marvin, 1987; Ekecranz, 1987) argue that, contrary to the dominant ideology, the new information society is in no way a new society. All societies have had information exchange as central element in their social make-up. What has changed is the forms of energy in which information is captured and exchanged.

Proponents of the IW, which is info-communication technologies (ICT) driven or facilitated, have promised a number of mostly conflicting changes. Toffler (1980) for instance, claims that IT will lead to a new society or a "Third Wave" society, marked by local control and broadened democracy. Young (1987), however,

expects that IT will lead to a more repressive future. Qvortrup (1987) argues, it is the social power that determines how IT will be developed and used. Jacobson (1987) adds, only through politicization of ICT can the IW be shaped according to socially defined needs and goals, rather than those of corporate interests.

ICT can, and ought to, be used to shape the IW in a positive direction (Valdez, 1987). The purpose of this paper is to elaborate on the ideology of the IW and the role of CIT developers, operators and users in shaping such an ideology in a positive way. The paper is organized accordingly. The social engineering of IW is presented first, the early ideologies of IW are discussed second, the ideology of the ICT-driven future is introduced third, the international perspectives of IW are covered fourth, and the paper ends with a conclusion.

SOCIAL ENGINEERING OF IW

IW is an ongoing process of political (ideological), economic, social, and technical configurations and relations. The definitions and descriptions of the IW are ideological because ideology inspires what the IW is and how it is understood, practiced, and designed. It is the concept of the ideological position of a practitioner and designer of the IW that conceptualizes a civilization's aims, structures, relationships, and their characteristics.

Ideologies are people's maps for reality (Slack 1987). In the 1980s and 1990s, the ideology of the information age (as it was called in those decades) became dominant over the ideology of the industrial civilization. This dominance was expressed through the power of media, education, informated business, and institutions.

The IW ideologists can describe their preferences as a choice within the following areas (Mowshowitz, 1981):
- *Information tools* — can be selected from a palette of languages, databases, knowledge bases, model management software, system software, utility software, and dialogue management techniques, designed with CASE and without, and so forth to design an information system as a filter or as a source of solutions.
- *Stimulation* of the IW developers and operators as well as users can be defined in regulated directions and protections as information policies with regard to IW-related issues including:

- Information privacy
- Information censorship
- Information properties
- National and international interest
- Information trade
- Information crime
- *Positions* taken by systems designers and operators that will influence the IW ideology can be as follows:
  - *Technicism* — using the computer as an instrument of progress, where success or failure depends on the system design and implementation; social and political consequences are ignored.
  - *Progressive individualism* — humanizing the system with computers to achieve desirable change.
  - *Elitism* — informing and rescuing the society as the mission of the computer specialist; social engineering is the most sophisticated method of steering social change in the growing complexity of social issues.
  - *Pluralism* — representing interest groups affected by computer use with "fair information practices" together with a combination of legal, regulatory, and security measures to protect consumers and users.
  - *Radical criticism* — protesting the philosophy that computers should be allowed to have their own logic of independence and those mega-computer systems should be developed to operate automatically without human control.
  - *Devolutionism* — gaining power of design but losing control over use.
  - *Computer surveillance* — producing technocratic benefits.

A combination of these choices (tools, stimulation, and positions) made by the IW developers and operators as well as users will generate social awareness of implemented solutions. This awareness can be analyzed in terms of (Mowshowitz 1981):

- *Biases* that will be usually influenced by the choice of information tools. For instance, a technical bias advocates the belief that "technology can solve a problem", while a non-technical bias supports the view that a "problem can be solved through managerial action such as leadership or improved market strategy".

Figure 1 Social Engineering Cycle

- *Beliefs* are usually affected by the choice of stimulation. For example, computers can be seen as a strength to the planning of a business or as a threat to an individual's privacy and autonomy.
- *Expectations* are the result of a position taken by the IW developers and operators as well as users and are determined by: information culture (a way of using information) in the scope of values (human and civil rights vs. totalitarian information slavery; creativity and electronic friendships vs. alienation); symbols (credit cards equate to a cashless society, computer screens equate to a paperless society); competence standards (a lack of computer skills equates to illiteracy); knowledge centers (data, knowledge, wisdom bases); know-how (individual computer skills, social skills that control the information transformations), and futurology ("Star Wars").

The relationships among the IW, choices of developers, operators, and users, and social awareness are shown in Figure 1, the Social Engineering Cycle.

The early ideologists-theorists of the information age, such as Daniel Bell (1973), Edwin Parker (1976), and Marc Porat (1977) claimed that information replaces industrial goods as the principal commodity and becomes an economic engine of the information age. It is an assumption taken from the technicism position. They observed the trend of a declining percentage of jobs in manufacturing and a rising percentage of jobs in the service-information sector. This does not mean that society has slowed down the consumption of goods and has begun to consume information instead. In reality, society consumes an even bigger variety of goods in the IW. A society that becomes more productive in all areas of activities due to the application of information tools is not an "information society" (in the definition of the early theoreticians). Rather, it becomes an informative society since it uses information tools to electronically manage solutions anytime and anywhere in the synchronism of events.

Marvin (1987) traced the history of information and found that all societies have had information exchange as a central element in their social make-up. He argues, what have changed are the forms of energy in which information is captured and exchanged. The application of mediated-digital information instead of analog information is the main shift in the way industrial society is transformed into the informative society.

The situation in information management reminds us of one in economics. Contrary to popular belief, free-market forces alone will not generate growth. Strong political and legal institutions, including courts and patent laws, are needed as well. Pricher (1987) proves the same hypothesis that the evolution of systems of statistics (information) circulation within the European societies interacted with political and economic needs and has remained central in the information age (civilization).

Futurologists usually provide images of the future. One of them is sociologist Daniel Bell (1973), who, from the computer surveillance position, views the information economy and society as a combination of computer tools and employment categories, which, sooner or later, will transform all workers into computer programmers and users. As Slack (1987) indicates, Bell's vision is limited to the economic goal of American consumerism that will be frozen in the here-and-now.

Also, from the computer surveillance position, Alfred Toffler (1980) optimistically predicts that the new information technology will lead to a new society, a "Third Wave" society which will be characterized by local control and broader democracy. Young (1987) argues that Toffler's prediction is naive since the new information technology was created by a given power system, which
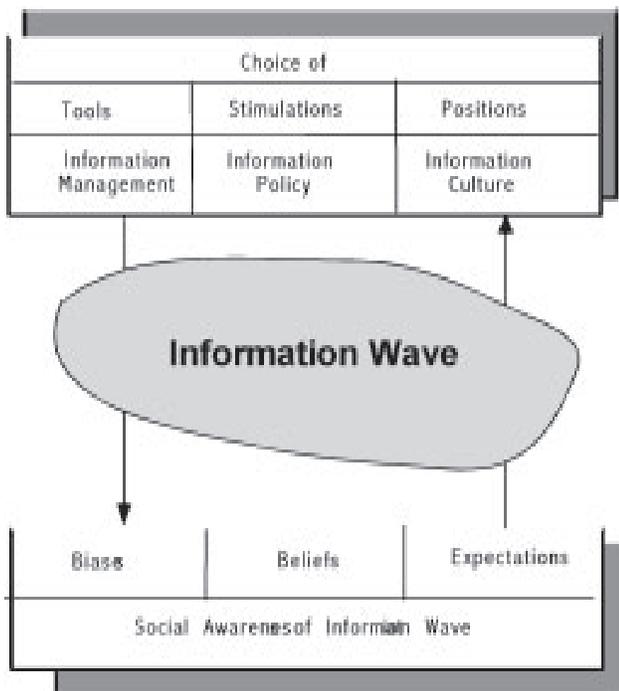
will be reproduced again by its own tools. On the other hand, information tools (which were new to Soviet society) facilitated the collapse of the Soviet Union in 1991 — *glasnost*.

THE IDEOLOGY OF THE FUTURE-DRIVEN BY ICT

Info-communication technology (ICT) influences the mechanism of any power. Electronic mail with special information can reach almost everyone everywhere, whether it is the President of the United States, the CEO of the Apple Corporation, or a student at Western Michigan University. The progress of social computing from the level of an individual to upper levels of the societal strata indicates that these new information tools can change the mechanism of power from within. It is a widely recognized fact that mass media has become the fourth power of modern societies.

Is Young (1987) right when he expects that the new information technology will lead to a more repressive future? All the facts of the 1990s, when both sides of a military conflict watched war scenes through CNN (e.g., the Persian Gulf conflict in 1991, the Somali conflict in 1993, and the Haiti conflict in 1993) indicate that Young (1987) was wrong in his analysis.

A wider and more common access to the same source of information flattens the structure of management and increases social awareness of events that are getting more and more out of control. For instance, in Somalia, in 1993, the U.S. changed its policy, becoming a peacekeeper, rather than a war-maker. This change was caused by televised images of war, when a warlord who could not be caught by America, the number one world power, imprisoned an American pilot. Apparently, in this case, information tools changed the power mechanism; and Young's (1987) thesis that the more information that is received, the more repressive control can be exercised was contradicted.

A future driven by information tools is perceived in popular literature to be one with increased democracy, social enlightenment, and individual freedom. From this position of elitism, Qvortrup (1987) warns that these consequences will not occur. He claims that because IT is dominated by private capital, the trend is already leaning toward the continued erosion of the public sphere in the creation of hierarchical social relations. In effect, the future will lead us toward social passivity, manipulated leisure time, and a decrease in individual autonomy.

Nevertheless, it is up to the individual to decide whether to exercise these possibilities in an intellectual or a manual way. The new ICT empowers the individual, allowing him to choose between more options anytime and anywhere in the synchronism of events. In fact, the majority of our population prefers to stick to manual activities since they are more visible and understandable for them. Perhaps we need another 200 years to learn the way the IW acts. This is the way we dealt with the industrial age and the 6,000 years we spent living in the material civilization.

THE INTERNATIONAL PERSPECTIVE OF THE IW'S IDEOLOGY

Barber (1992) stresses the international perspective of the IW using the "Jihad versus McWorld" metaphor. Barber's ideas, however, rely more on instinct than analysis and more anecdote than explicit synthesis. Even his central concepts of McWorld and Jihad are given meaning by clouds of examples and metaphors rather than precise definitions (Noonan, 1996).

To Barber (1992), there are two possible political futures (or forces) — tribalism and globalism. The first is a retribalization of large swaths of mankind by war and bloodshed. A threatened Lebanonization of national states in which culture is pitted against culture, people against people, tribe against tribe — a Jihad in the name of a hundred narrowly conceived faiths against every kind of interdependence, artificial social cooperation, and civic mutuality. The second is borne by the onrush of economic and ecological forces that demand integration and uniformity. MTV, Macintosh, and McDonald's – will press nations into one commercially homogenous global network, one McWorld tied together by technology, ecology, communications, and commerce, mesmerized through fast music, fast computers, and fast food.

The planet is falling precipitately apart and coming reluctantly together at the very same moment. The forces of Jihad and McWorld operate with equal strength in opposite directions, one driven by parochial hatreds, the other by a global market. McWorld views Jihad as the most fearsome foe. Yet, Jihad uses the very instruments of the global information revolution (e.g., the Internet, radio, television, etc.) to transmit local culture. There is no winner in this struggle.

Five doctrines promote the globalization of social progress: market, resource, ICT, ecological, and political:

1. *The market doctrine* erodes national sovereignty and gives birth to stateless consortia, international banks, transnational lobbies (e.g., OPEC, Greenpeace), and world news services (e.g., CNN, BBC). The global market argues for global peace, a common language (e.g., English), common currency, common standards, and common cosmopolitan behavior (Barber 1992). It is the New Economy Environment, which is open, competitive, and dynamic, based on the New Enterprise, which is open, networked, information-based organization, flexible and virtual.
2. *The resource doctrine* enforces a commercial reach for other states' resources because some nations like Japan, Switzerland, or Korea have almost nothing they need. It promotes the interdependence of nations or the globalization of economy.
3. *The ICT doctrine* postulates the integration and sharing of information at 186,000 miles per second. The application of digital language and satellites leads to a borderless world. Global culture is promoted through ICT conduits; Lotus 1-2-3 in English is more popular in Poland than software in the country's native language. The New Technology Paradigm is the management of a solution and perception anytime and anywhere in the synchronism of events.
4. *The ecological doctrine* promotes global collaboration to keep the planet in balance and prevent ecological catastrophe. The climate, water, soil, our diversity of planet and animal life, and our living space are threatened. Mitigating the crisis will require a planetary perspective (Gore 1993).
5. *The political doctrine* promotes the New Geopolitical Order, based on an open, volatile, multi-polar world, which has been developing since the end of the Cold War in 1991.

On the other hand, Post-Cold War tribalism (nationalism, fundamentalism, and racism) generated about thirty wars in 1991. Some small nations (like Tamils, Catalonians, Quebecois, Kurds, Serbs, Zulus, Basques, Chorvats, Bassarabians, Ossetians, Abkashians) would like to seal their own borders and protect themselves from modernity. The Jihad strategy of "struggle" is a very popular one in the revolt against the status quo and Western civilization. Among these tribes, there are about 4.5 billion people without a "password" to a computer and its networks.

McWorld, according to Barber (1992), promotes "free trade," "free press," and "free love." McWorld does not look attractive for the Jihad part of the world, which however, promotes solidarity among tribe members. Jihad is also attractive for many people alienated in the McWorld.

There is an educational and historical gap between these two ideologies. It takes time to build democracy and it can be done from the bottom-up as well as from the top-down (as is the case of the former Soviet Union). Neither ideology provides a self-sustained democratic environment. At first glance, McWorld looks better than Jihad; however, it does require a careful check and balance mechanism. Telematic (computers + telecommunications + television) networks may lead to small regional entities, self-managed from the bottom-up, with an access to the global market and some sort of government run by a small state or group of states. This solution should satisfy the Greenpeace slogan — "think globally, act locally," as well as the statements "work apart and together" and "small is beautiful." The promotion of managed efficiency can be pursued, but it should be aimed at the policy of keeping the Earth in balance, rather than allowing it to promote corporate, stateless short-term profit and thus support the apparent collapse of the planet's healthy life.

From the progressive individualist position, it can be assumed that the educated world will not follow the Jihad strategy; rather, it is McWorld, with a humane strategy that will prevail. In the process of building the McWorld, we will probably follow the history of the industrial revolution, which has prevailed through the last 200 years despite protests by the spasmatic Mexican and Bolshevik revolutions. In effect, both revolutions ended up in the industrial world, driven by profit rather than by "social justice." At this time, profit rather than central planning should be "managed." Perhaps the better-educated citizens of the McWorld, the members of its Global Family who are aware of the planet's possible collapse, may find some feasible solutions. At the very least we should strive to find it.

CONCLUSION

1. IW is ICT-enabled. IW is an ongoing process of political (ideological), economic, social, and technical configurations and relations. The definitions and descriptions of the IW are ideological because ideology inspires what the IW is and how it is understood, practiced, and designed. It is the concept of the ideological position of a practitioner and designer of the IW that conceptualizes a civilization's aims, structures, relationships, and their characteristics. IW proponents, however, have adopted conflicting ideologies.
2. Conflicted IW ideologies must be reconciled. The interests of info-economic utility and social justice need to be balanced. A healthy and peaceful living can be achieved by simultaneous promotion of localized economies and identities and globalized consciousness.
3. International institutions, led by the United Nations, must take on new roles and adopt new strategies to build up a dynamic and creative relationship between the need for a global market (McWorld) and the needs of small entities (Jihad).
4. Shaping an IW ideology in a positive direction requires a patient and determined cultivation of democratic civil society where people talk, reflect and act not just as consumers or believers but as citizens striving for the common good.
5. The Social Engineering Cycle presented in the paper may be useful in developing such an understanding and in promoting a social awareness of ICT-enabled IW.
6. The high-tech revolution must be accompanied by morality of developers, operators, users and policy makers; and ensures that the affairs of life, instead of dominated by self-centered desires and interests, are regulated by norms of morality.

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