

Politics, Democracy in the Light of Information and Communication Technology

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ABSTRACT

The purpose of the paper is to discuss the effects of information and communication technologies on democracy. These effects are important to study because they play a major role in shaping society. It examines the relationship of theories in communication and democracy. It studies major driving forces and issues behind tele-democracy and speculates the future of democracy and issues related to it in 2009.

Keywords: Politics, Democracy in the light of Information and communication technology

INTRODUCTION

Government plays an important role in the development of democracy and spends billion of dollars every year in information and communication technology (ICT). The Federal government alone spends over \$25 billion annually on IT systems and services to decrease the gap between government and citizens [1]. In 1993, the White House formed the Information Infrastructure Task Force (IITF) to articulate and implement the Administration's vision for the National Information Infrastructure (NII) [2].

The benefits of the NII claimed by the Center for Civic Networking are to create a smarter country that provides less costly, efficient government; have well-informed citizens that result in eliminating poverty; and promoting life-long learning [3]. According to the estimation of Computer System Policy project, NII will create as much as \$300 billion annually in new sales across a broad range of industries [3]. Besides, all these claims and promises, the effects of ICT on politics and democracy are still a question to many experts where the conflict of interest occurs between the two.

This paper analyzes the effect of ICT on politics and democracy and predicts the future of democracy in 2009 as by then the ICT will be used and experienced in various areas of government bodies and the citizens and the governers bodies will be more aware of the ICT usages. The discussion also includes the concept of Teledemocracy and driving forces behind it and anchors examples of the usage of ICT in the public interest and points out the social implications in the present and in the future.

Definition of Tele-democracy

Experts describe a democracy facilitated by the ICT as "Tele-democracy". Tele-democracy originates a system that takes an initiate to educate citizens by providing an access to databases (Grosswiler 1998, Schwartz 1992); promotes discussion and electronic community meetings between advocates or politicians and citizens (Magid et al 1999, Becker 1993, Betts 1992, Schwartz 1992). It facilitates electronic voting systems (Betts 1992, Schwartz 1992), and directs electronic discussion between citizens and thus, promotes better understanding of issues and differences among different cultures (Magid et al 1999, Croce 1993).

Perspectives in Tele-Democracy

In Politics, two perspectives are discussed at length on Tele-democracy, the Athenian and the Orwellian perspective. The Athenian perspective advocates that technologies will eliminate the representations from the hierarchy of democracy and direct democracy will predominate in the future. In contrast to, the Orwellian perspective portrays a negative role of technology. It argues that government will control and dominate citizens permanently. They predict that due to the easy and direct access to citizens, the interference of government will increase and democracy will be replaced by an "electronic cloak of darkness that gives the illusion of closeness" (Grosswiler 1998).

To understand the concept of Tele-democracy and its evolution, it is worthwhile to discuss the human theories of communication and theories of democracy. According to human communication theory, humans interact when they communicate (Hacker 1996). In the technology age, humans communicate using computer networks. Computer networks are considered to be a two-way interactive communication system because of its' ability to send and receive data. In politics most of the communication is considered mass communication, which provides a one-way channel of political information dissemination, from leaders to a mass. Discussion on networks and democracy rely on the same concept, that is, a linear model of human communication. Critics also argue that a two-way network communication system is not necessarily an interactive system. In an interactive system citizens are encouraged to share their opinion and talk, thus, creates equilibrium of communication between leaders and citizens (Hacker 1996). If the interaction is not present between the networks, it is, then, just another source of sending information from one sender to many receivers and justly is not an effective way of generating knowledge to understand the depth of issues to produce positive results.

In democracy theories, four theories of democracies are closer to the views about tele-democracy (Hacker 1996). (1) The classical democratic theory is fundamental in ancient Greek talks about direct participation in speech and debate. (2) The classical pluralism theory assumes that a spokesperson represents everyone in a democratic society. (3) The elite pluralism assumes that people in the lower class do not have enough knowledge or concern to participate in political issues and policies. (4) Critical pluralism theory assumes that in capitalist states technologies favor to those who have capital more than to those who do not.

The above mentioned theories incorporate a need for a system which supports the citizens needs and provides them an opportunity as an active participant in the process of democracy. Presently, politics in America tend to represent the ideas of the classical theory. In some critics' view, Tele-democracy presently, is closer to critical pluralism theory.

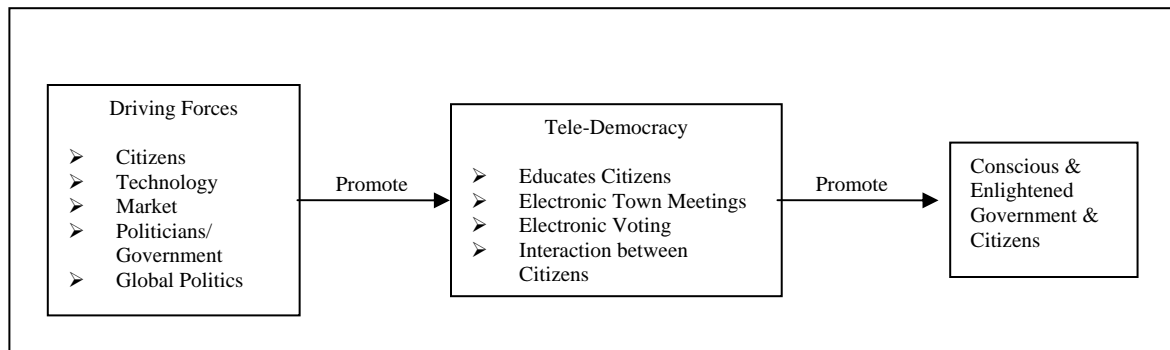


Figure 1: Democracy Model.

The model in figure 1 shows a framework for Tele-democracy. This framework introduces the environment of Tele-democracy and covers the essential stipulations effecting the process. This model can also be used to study each condition separately.

Driving Forces

The driving forces of Tele-democracy have been arguably the government, politicians, more enlightened citizens, technology, communities, and global political pressures. In some experts' viewpoints, the major driving force behind democracy is technology. But, we cannot ignore the importance of awareness of information power between today's citizens. The roles of driving forces is discussed below:

Citizens: The usage of computers, computer competency and information literacy is dramatically increasing in citizens. New ICT is able to attract the involvement of citizens in the political process who felt neglected, frustrated and betrayed in the past. Exposure to technology at a young age in Schools is creating a new generation of computer and information literate (Magid et al 1999). According to a 1999 Dataquest survey of 16,500 U.S. households, 55% of voting-age American have Internet access either from home, work, school or libraries. This figure was expected to increase by 63% by year 2000. In a population of 196 million voters, 48 % are male and 52 % are female. The past statistics shows that from the population of 13.2 million voters who visit political candidates' Web sites, 71%

are males and 29% are females. The increasing trend in the figures predicts that by 2009 our voters population will be doubled and we will see an increase in women participation.

Figure 2 and Figure 3 show the 1999 statistics of voters who visited Political Web sites. The majority is between the ages of 18 and 34 in both sexes. The statistics clearly show the trend of using ICT for election purposes and citizens

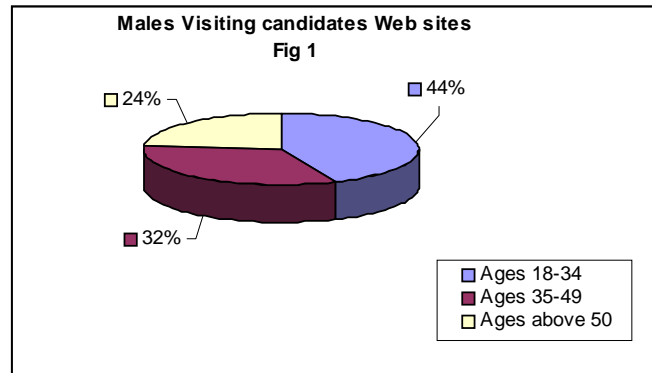


Figure 2: Males Visiting Candidates Web Sites.

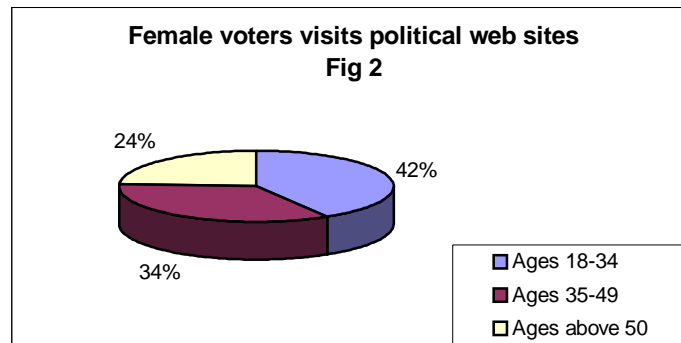


Figure 3: Females Visiting Political Web Sites.

involvement in the process of selecting the best candidate to represent their issues effectively. Table 1 shows the breakdown of voters by states that have an access to Internet and the voters who visit the political sites in each state on regular bases.

Early Caucus States	Primary/ States	# of voters in State (Millions)	# of online voters (percentages)	# of online voters who visit political sites
Iowa		1.9	50	14
New Hampshire		1.0	60	4
Delaware		0.8	64	5
South Carolina		2.6	45	19
North Dakota		0.6	37	10
California		21.9	63	15
Connecticut		2.8	63	7
D.C.		0.4	62	25
Florida		10.7	55	19
Georgia		4.9	58	12
Maine		0.9	43	10
Maryland		5.0	61	14
Massachusetts		4.4	55	11
Missouri		3.7	55	11

New Jersey	6.0	59	7
New York	6.6	41	7
Rhode Island	0.6	41	12
Vermont	0.4	65	15
All States	196	55	12

Source: Dataquest Survey 1998

Table: 1 Online Voters in U.S.A.

The findings depicted that presently, from 55% voters who were web users, 12% visit political web sites and this figure is expected to go up as the Election Day will come closer. The November 7, 2000, an Election Day, 70% of voting-age adults were expected to have Internet access. Since 1999, citizens have used electronic voting machine system to cast their vote.

Technology: Information communications and technology now are seen as essential parts of the social and political framework of society. Global and local usage of the Internet has confirmed that to enhance an effective democratic process lower cost, ease of access and open architecture plays a major role (Calhoun 1998, Berman et al 1997). It enables users to access distributed databases, value-added networks, and supports novelty of ideas, information and diverse opinion with complete anonymity (Iwas 1997).

The increase in capacity of storage and high broadband makes possible video conferencing between the politicians and citizens to exchange opinions, ideas and discussion (Weintraub 1993). Thus, ICT improves citizens' participation by providing each individual an access to their leaders. Unlike, radio and television (Simon 1991), ICT does not have restrictions of time space and channels. On the Internet, the addition of a new web page does not require an elimination of another web page (Berman et al 1997). In short, since the creation of a task force the development in bringing the government message through the virtual interaction is noticeable and worth the time and money spent by the previous and present government. The ease of usage and accessibility to the information is an integration of software and hardware that is a combined effort of government and private companies.

Communities: The extensive demand of technologies has made the cost of ICT hardware and software affordable. In the process of the creation of virtual communities, technology's infrastructure is becoming a part of other wiring system in a new housing and commercial development (hotels, resorts, and airport). This trend is guiding a living style where computers will be seen as an essential part of our life, like other utilities. The usage of ICT is giving rise to virtual-learner-communities who are learning through new technologies like "distance learning". Today's new communities are providing distance-learning facilities to teach programs such as parenting and mentoring to residents through their community centers that is convenient and cost effective for both parties. The media of interaction is a high-speed Internet (combination of high speed networks and large capacity databases), which provide multimedia interaction to educate themselves in the programs that can be a source of income in the future.

Politicians/ Government: Government and politicians are also realizing a power of ICT and are participating actively to make a direct contact to the citizens. They are eager to use the technologies as a rational mean to find and satisfy the needs of citizens (Nordin 1991). Unengaged and uninformed voters have created a government that neither knows nor implements the public's will. This situation has created a frustration at both ends. Government is eager to access approximately 250 million citizens and is spending billions of dollars annually to ensure more educated and knowledgeable citizens at less expense in the future. Some politicians such as Steve Forbes and Al Gore initiated in providing their own websites and are communicating directly with voters and later followed by other politicians and government institutions to create the similar interface with the public. Their websites provide their bio, speeches, policy issues they support and other releases.

Global Politics: Global politics with the help of ICT is creating a global democracy where citizens of global communities are working together regardless of any physical boundaries. Governments and politicians worldwide are concerned about the impact of technologies and information flow to their power and control of countries. Previous experiences in the world have shown that the effect of technologies is not only on a national level but it is also spreading across other boundaries (Naisbitt 1994). Technologies were the most effective weapon ever used in global issues. The Internet has been and is being used to call international attention to the struggle on issues like Iraq, Afghanistan, Bosnia and Yugoslavia, and plays a major role in linking governments on every continent. Governments and politicians are starting to realize the implications of collapsed global boundaries and are working together to establish a more effective and calm virtual environment. Besides, putting together the infrastructure for

the global telecommunication system, the policies and regulation are also coming to place for tackling the problem of communication gap between international communities. In 1995, an independent body of the G7 governments (Canada, France, Germany, Great Britain, Italy, Japan, and the United States) established the Global Information Infrastructure Commission (GIIC) for a period of 3 years, to fill the gap in international communications policy and regulation (Ferguson 1998). Russia joined the GIIC in 1997 and is now called G8. The government of 20 other countries has also joined the organization to provide information to citizens and businesses [3]. The G8 motivates and invites other countries and individuals from all over the world to join them in their efforts of global democracies.

Recent Practices

Government is making every effort to keep a free flow of information between themselves and the citizens. The task force of National Information Infrastructure (NII) is working on improving the equitably delivery of government information to the taxpayers who paid for its collection at a fair price. Besides, the NII task team efforts are to decrease a gap between Americans who have information and who do not have information. Following are the three examples.

Government Information dissemination: The Emergency Planning and Community Right-to-Know Act of 1986 established a Toxic Release Inventory (TRI) database, which required industries to report their estimated total releases of toxic chemicals to the environment. The Environmental Protection Agency has used a variety of means for making the data available to the public, including a collaborative effort involving the agency, the nonprofit community, and philanthropy. This effort involved making the TRI available through an online service called RTK NET (the Right-to-Know Computer Network), operated by OMB Watch and Unison Institute. As a result of the TRI program, EPA and industry developed the "33/50" program, in which CEOs set a goal of reducing their pollution by 33 percent by 1992 and 50 percent by 1995. Because of RTK NET's success, the EPA is seeking to expand the information available on the service.

Universal accesses and Distance learning: In the city of Harlem, where 40 percent of the residents live below the poverty line, NII deployed fiber optic cable. New York City was exploring the use of interactive video conferencing between community rooms in housing projects and government offices, schools, and New York corporations. These facilities could be used to teach parenting to teenage mothers, and promote mentoring programs between inner city youth and employees of New York corporations.

Electronic Town meeting: President Bill Clinton used teleconferencing to take his ideas on health care to citizens in St. Paul, Minnesota.

Communication Task	Systems Employed	Applications	Examples
Broadcasting	Touch screen, multimedia PC	Multi-lingual kiosks	24-hour City Hall, Hawaii Access, LA project
Transaction	Automated teller machines	Welfare and Medicaid transaction	Proposals at the state and federal level
Access to Public Records	Dial-up electronic bulletin boards	Public, government, community information	Santa Monica's PEN, PARIS/PALS Pasadena
Interpersonal communication	Electronic mail	Citizens complaints, inquiries, requests	Santa Monica's PEN
	Computer conferencing & bulletin boards	Electronic forums on public issues	Santa Monica's PEN, NYCENET

Surveying & Monitoring	Computer assisted dialing & interviewing	Opinion polling	Political campaigns
	Audience response systems	Voting & polling from the home	QUBE system in Columbus, Ohio

Table 2: Other examples of Projects on Tele-Democracy (Dutton 1992).

Table 2 illustrates various other projects government has implemented to increase the participation of citizens.

Issues in Tele-democracy

Social Issues: Among United States total population of approximately 250 million, 90 million adults do not have literacy skills. Nation wide 25% of students no longer complete high school and this percentage increases to 57% in large cities [3]. To enjoy a true and robust democracy, Americans must be educated and trained. Though technology alone can not eliminate a issue of uneducated and untrained population, studies have shown that computer-based instruction is cost-effective, enables 30 percent more learning in 40% less time at 30% less cost [3]. In year 2002 high school graduates increase to 84.1 percent as compare to in 1990 where 75.2 percent graduated [4]. Though the literacy ratio is increasing but the increment over the period of time is still disappointing. The registered voting population in 2000 was approximately 200 thousands and the actual voting percentage for Presidential election year was 63.9 and for Congressional election year 54.7 [4]. This raises an issue of the true democracy as all citizens are not aware of their rights and available incentives to live a decent life and be an active member of the society.

Some experts fear that the consequences of a privatized information infrastructure will increase inequality between information haves and have-nots, or information rich and poor. To ensure that benefits of access to information will be distributed equitably and democratically, NII is being used to bring Americans together. Government exploited the educational applications of computers and networks. They are implementing NII to promote collaborating learning between students, teachers, and experts; take virtual field trips and access on-line digital libraries. Despite all the claims, critics are still skeptical about the future participation of uneducated proportion of population. The experts fear that a gap between educated and uneducated, rich and poor will increase.

Privacy and Security Issues: Tele-communication will open new ways of communication and thus, will increase the issues of privacy and security. Privacy is always a great issue but now due to government involvement in new ways of reaching citizens, their surveillance is the major threat (Friedland 1996). Furthermore, ICT also encourages adequate recognition of the structures of power that lie behind the machines and the web, which in return provide an attractive challenge to the computer hackers to destroy those structures. The security of information is still a huge issue in the information economy. The recent security problem in electronic voting systems through touch-screen voting machine (like ATM) has raised the critics, States' and other law makers' concern about the legal implications and the future usage of the voting machines in certain States is prohibited. Moreover, the State is also mandating a print copy of each vote caste for the records as a backup. In California the Riverside County Supervisors voted against these restrictions and voted to take legal action against the Secretary of State [5].

ICT produces data on citizens' private and public lives, but does not provide any promising security measures. The data provides a potential surveillance from the government and also from the hackers. The structure behind the Internet though claimed to be decentralized is amazingly centralized and consequently gives more power of control to government or parties involved behind the scene.

Future of Democracy

Democracy in 2008: In a country like United States, the next five years are crucial in shaping the future of electronic democracy. The driving forces of democracy demand effective information and technology infrastructure. The awareness and participation of citizens in 2008 will increase. The complicated government and high cost of information in the past will be replaced by more Internet access interfaces. Ease of usage and lower cost of information will encourage citizens to access information more frequently.

The Internet will be the major source of support of democratic activities. Electronic town meetings on local, state, and national level, will increase as more communities' value-networks and high-speed telecommunication media

integration will transpire. Public information sources will be more common and intelligent agents will be more popular to answer the citizens' questions. Participation of voters will increase, as there will be more powerful software available. Telecommuting will increase citizens' participation in elections. The percentage of Democratic Party Member voters will grow in numbers. For election registration purposes, the usage of digital signature and electronic fingerprints will be a common practice in certain States.

The immensity of government will decrease due to more dissemination of information regarding its vital services. The bureaucracy in government will decrease due to flatter organizational structure. New public policies regarding publicly finance elections will be under enormous pressure. The tens of millions of dollars spend on television advertisement on presidential candidates would be given directly to citizens to spend on presidential candidates' information. The movement to protect the consumer rights will be stronger because the role of the media will be vital in the political process. The citizens will have the right to know more about the media as they do about the government and politicians. The competition between politicians will increase considering less financial burden.

Globalization is the accretion of economic, social and political relations across periphery. To enhance an effective global order, the collective governance between certain countries will increase due to international communication policies and more distributed political power. The worldwide national communications policies will be led by GIIC on a large scale, which will transfer more power to G8. United States, European and Asian countries will be the major players, and the struggle of control and power over the standardization of telecommunication infrastructure will increase.

Due to an increase in the privatization of public broadcasting and state-run Telecommunications Corporations and more strategic alliances with private enterprise on global level, there will be more competition between companies in providing better services at lower costs.

Issues in 2009

The issues in 2009 will not be so different than today's issues or issues of five years ago. Due to an increase in the usage of technologies, privacy and security issues will be the major concerns. Instead of the control of computers by humans computers will control the live of citizens. Decisions will be based upon the compatibility of technologies than the citizens. The initial prediction was done in 1999 for the year 2005, and at that time the issues of privacy and security violence was a great concern and is still a problem in 2004 and thus, resulting in legal actions against government entity by informed citizens. Regardless of government's efforts, the large amount of dollar amount will be spent on settling these issues like physical records, legal fees, expertise and introduction of new hard and software technologies. Shortages of lawyers who have understanding of both politics and technology will affect the number of pending cases.

Increase in government databases, which store the citizens' private and public information, will increase the interference from politicians, government and other sources (hackers). The government and politicians will have a direct access to the citizens' and they will have more and better ways of manipulating the citizens and the system and vice versa. Despite of G8 present role, global political boundaries will shrink, and global interference of powerful countries towards powerless countries will grow.

The isolation of democracy will increase and will become an electronic threat with the introduction of wireless and microwave technologies. Presently, a new era of electronic terrorism is opening a challenging front for our governess bodies to fight war against these unknown electronic forces where no one needs batches and physical security clearances and each have power to fight very efficiently and effectively to achieve their hidden and declared agendas. The harm is not only monetary but also life threatening and a life and death are only a wave of thought away from the sender and have no geographical boundaries.

CONCLUSION

Tele-democracy is bringing a new way of thinking, which is perceptible, bright, curious, deliberate and dangerous. Society is and will be enthusiastic and surprisingly different as a result. The changes have already started to happen. We are seeing the world with the interactive eye of ICT and are informed through small icons just by a click of a mouse. The images are descriptive and provide visual education of an ideology. Direct democracy will happen in direct participation in the political process not by direct governess of the state or country.

Our society is still centuries away from the sort of country where citizens replace the representatives. Our political, social and economic issues are too complex for a common person to understand and solve. Moreover, isolated citizens cannot run a complex government, they have to come together under a common umbrella and interact to build the perfect country. Therefore, technologies will permit alliances to gather successively and advertently, around issues that are important to publics and not to the lobbyists or political thinkers.

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