CHAPTER ONE

Information and International Politics

An Overview

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> About the NATO thing, you know I feel they should come here and protect us. I wish somebody could. I don't even know how many people get killed anymore. You just see them in the memoriam pages of newspapers. I really don't want to end up raped, with no parts of body like the massacred ones.
>
> —E-mail from Adona, age 16[1]

> Today we have sunny and warm weather in Belgrade. . . . Last night's raid was civilized and decent—it all ended at midnight, so we could go to sleep in our beds, not in shelters. . . . But this very moment the sirens are going off.
>
> —E-mail from a man in Belgrade[2]

At the time of this writing, the civil war in Yugoslavia is already being touted as the first "cyberwar" (Pollock and Peterson 1999), or more accurately, *netwar*—the term Arquilla and Ronfeldt (1996) use to designate conflicts short of war that may involve civilians as well as military personnel. In this case, the civilian response to NATO bombing has included a Serbian electronic counterattack in the form of spam messages[3] to Western journalists, decision-makers, and economic leaders among others, particularly in the United States, in addition to the thousands of E-mail messages, most of them from grateful Kosovars, detailing life at ground zero.

The centrality of E-mail to the conduct of Yugoslavia's civil war only extends the growing role of the Internet—essentially a computer communications network with no hub, no switching station, and no governing authority—in international affairs, from a source of mostly officially sanctioned

information, to a venue for the creation of knowledge steeped as much in political diatribe and innuendo as fact (MacFarquhar 1999). That is, the Internet not only provides erstwhile surfers with up-to-the-minute stories, including sound, pictures, and opportunities to interact with one another and with experts on a developing international crisis at conventional news sites, but also enables anyone with access to a computer, a modem, and a telephone line to influence international affairs directly.[4]

The Internet and related information technologies (ITs) have thus increased the capacity of individuals to generate and manipulate knowledge, and to communicate ideas and values quickly, irrespective of geographic distance. With 2.2 billion E-mail messages, compared to just 293 million pieces of first-class mail, each day, the United States has already, according to some observers, become an E-mail nation (Skarloff 1999). Arguably, this astounding increase in electronic communications has not only improved interpersonal relationships and deepened family values (Harrow 2000), but also empowered the general public to intrude upon national policy-making processes (Neuman 1996).

What does this mean for the future of international politics? The contributors to *Technology, Development, and Democracy. International Conflict and Cooperation in the Information Age* respond by providing a select range of theoretical perspectives and empirical analyses for understanding the impact of the communications revolution on international security, the world political economy, human rights, and gender relations. Despite differences in their approaches, each contributor addresses two key debates: (1) contemporary innovations in ITs as sources of change or continuity in international politics; and (2) the consequent incidence of conflict versus cooperation among nations. The resulting discussion suggests that ITs may hold no greater prospects for economic and political development than previous technological advances (Stover 1984). Yet the Internet and related ITs, arguably, *do* portend significant advances for democracy, the democratization process, and international peace.[5]

The remainder of this chapter is intended as an overview of the theoretical literature linking IT to both economic and political development and international peace, and as an orientation to the chapters contained in the volume. This overview is divided into two parts. The first part consists of a discussion of IT and change, which highlights the volume's theoretical contributions, particularly authors' comments on issues of the economic, social, political development of nations in the Third World. The second part of the chapter focuses on the theoretical relationship between ITs, interpersonal and international communications, and peace. Given this theoretical backdrop, the section develops contributors' empirical assessment of these arguments as a basis for claiming that, in general, there are clear reasons to expect

that IT will foster significant, positive changes in international politics, including peace.

Information Technology and Change in International Politics

Technological advancement is commonly associated with economic growth and political development. This general relationship is particularly prevalent among development economists and regime theorists, the latter being International Relations scholars whose work suggests that technological change, in combination with the increasing economic interdependence that characterizes contemporary international politics, will both increase domestic demands for better standards of living, and overwhelm established patterns of international interaction. As a consequence of these simultaneous pressures on the domestic-international system, new international norms, organizations, and regimes will emerge. This "simple economic process model" would suggest that the impact of ITs would likely be the gradual adaptation of nations to new volumes and new forms of transnational economic activity (Keohane and Nye 2001, 35).

The Neutral Response

This logic is representative of *neutral* responses to the question: Will innovation in ITs, such as the Internet, serve as forces for change or continuity in international politics? The neutral approach is best represented in this volume by Steele and Stein, who concur with economists and others that the current communications revolution exists within political and economic structures that channel the flow of information (Keohane and Nye 2001; see also De Long 1998). Steele and Stein's review of the history of internationally significant technological changes, including steamships, railroads and automobiles, telegraphy, and radio and telephones is sufficient to demonstrate that ITs do not necessarily portend a new international politics in which high-tech communications "make of the entire globe, and of the human family, a single consciousness" (McLuhan 1964, 67). Steele and Stein argue, more specifically, that innovations in the tools we use to communicate, from telegraph (point-to-point communication) to broadcasting (one-to-many communication) and, finally, to the Internet (mixed point-to-point and one-to-many communications), have reflected and magnified, rather than driven, international politics, and will continue to do so.

This balanced view of international politics in the information age is often checked by those who discount earlier telegraph and broadcast technologies—including radio, television, and satellite—relative to the Internet, as the harbingers of revolutions in interpersonal and international communications.

Today's IT, which exits as a "combination of computers, satellites, telephones, radio, television, and other electronics information technology" arguably "provides more effective and efficient interaction" now than any single technological advance did previously (Stover 1984, 2). As the emblem of this IT, the Internet facilitates the inexpensive and rapid processing and transmitting of information. As a result, the significance of nation-states, multinational corporations, and other large, bureaucratic organizations is waning relative to that of individuals and the nongovernmental and "network" organizations so effective at penetrating national borders and mobilizing domestic constituencies (Keohane and Nye 2001, 218). It is by so vastly increasing the opportunities for communication among people and cultures that IT is changing international politics (Frederick 1993; Keohane and Nye 2001). According to Davis (1999);

> the ubiquity of computers and computer networks will produce a 100 millionfold increase in the information available world-wide compared with the precomputer era. That's a far greater information leap than the one that followed the invention of the printing press, and [ought] to have similarly revolutionary consequences. (R14)

The Positive Response

Arguably, the quantity, and often also quality, of information readily available on-line both enables national and international leaders to make more informed decisions, and empowers individuals and, by extension, groups within society to influence national governments and international organizations and institutions more effectively. IT thereby engenders more representative governance. Thus it would seem obvious that the ongoing communications revolution must be a basis for unprecedented *positive* change in the processes and outcomes of international politics. And indeed, a rich and diverse body of literature on the sources of international cooperation suggests that IT is likely to facilitate more pacific international relations by (1) increasing the amount of contact among individuals and nations (Stein 1993); (2) improving the quality of interpersonal and diplomatic communication (see, e.g., Holsti 1977); (3) extending economic interdependence (see most recently Gowa 1999); and (4) deepening the democratic processes that permit the pacific inclinations of individual citizens to influence their nations' strategic decisions (see Weart 1998 for a recent review of this literature).

Steele and Stein (in this volume) provide a general discussion of the arguments just summarized, while other contributors provide more specific, theoretical arguments in favor of IT as a positive force in international relations. Foremost among these is Rosenau and Johnson's postinternational analysis of

the impact of IT on international politics. Rosenau and Johnson emphasize the role of the Internet and related technologies in the widespread mobilization of subnational groups demanding recognition, status, and some degree of independence from the nation-states to which they were once loyal (Rosenau 1990). Perhaps the most important consequence of this transformation in international politics is the breakdown of the nation-state—in some issue areas, such as environmental protection and human rights—accompanied by more interactions and much higher levels of communication among individuals and groups. Rosenau and Johnson thus argue that the greatest change associated with the communications revolution is occurring in the development of individuals' technological skills and imaginations. It follows that IT may be associated with wide-scale improvements in international politics insofar as individuals and groups use the information and technologies available to them to integrate and organize themselves to demand more just social, political, and economic governing institutions.

Rosenau and Johnson's perspective is representative of more generally pluralist arguments that IT is reshaping international politics in fundamentally positive ways. Pluralist examinations of the impact of IT on international organizing recognize that the myriad foreign policy decisions that constitute international politics are increasingly made under the auspices of international institutions, or under the influence of intergovernmental and nongovernmental organizations (IGOs and NGOs) and multinational corporations (MNCs). Such nonstate entities exist, in part, to bring greater awareness and consideration of specific issues—for instance, human rights (see Richards, in this volume) or the natural environment (see O'Gorman 2000 and Schubert 2000)—to the practices of international institutions, IGOs, and MNCs. It follows that the Internet and other technological means of increasing communication, by enhancing democratic decision making, facilitates organizing among activists at the international and the national, levels.[6] Notably unlike Rosenau and Johnson's approach in this volume, straightforwardly pluralist scholarship does not usually suggest that the resulting democratization of international politics (see Dougherty and Pfaltzgraff 2001) will naturally contribute to the erosion of the nation-state (Evans 1997).

In addition to the postinternational and pluralist approaches already discussed, liberal responses to the impact of IT on international politics—represented by Kedzie, Baum, and Richards, in this volume—are also overwhelmingly positive. In keeping with classical liberalism, Kedzie, Baum, and Richards do regard the individual as theoretically foundational; however, their specific arguments reflect more contemporary liberal emphases on (1) democratic, as opposed to authoritarian, forms of government; (2) international peace rather than conflict; and (3) economic interdependence, cooperation, and free trade over protection. This orientation is reflected most

directly in Kedzie's argument that IT is a significant determinant of democratization, while Baum and Richards each address particular instances of how exactly IT impacts the democratic processes of nation-states. More specifically, Baum explains how IT increases public attentiveness to foreign crises and thereby constrains presidential crisis decision making. Richards presents his argument that although IT does not directly improve nations' human rights records, it might nonetheless have such an effect as a basis for democratization.[7]

The Critical Response

In a 1999 essay entitled "Putting People First in the Information Age," then U.S. vice president Albert Gore suggested that "We should not view . . . IT as an end itself, but as a tool that we can use to create economic opportunity, improve our quality of life, and advance our most basic values" (9). This statement reiterates the importance that positive views on the relationship between IT and international politics place on individuals—both alone and collectively. At the same time, it begs the question posed by many *critics* of the information age: What is the capacity of the innovations of IT to empower the least advantaged people within national societies, and the most poorly endowed members of the international community? In other words, the Internet and other advanced technologies may be conceptualized simply as tokens of this latest stage in a long history of progress in the creation and dissemination of knowledge. As such, IT may be unlikely to impact (domestic and/or) international politics without ensuring broader access to it (Luke 1989).

In much of the industrialized West, of course, where telephone lines are standard and children learn to use computers in school, access to the Internet and other ITs is a matter of the ability to purchase a computer. Currently, the falling price of low-end, Internet-ready computers ensures the near ubiquity of the computer in American homes.[8] Moreover, even though computer prices are higher in Europe and elsewhere in the world, the number of Internet users worldwide has increased phenomenally in recent years—to an estimated 147 million. Not surprisingly, half of these users are American (Horwitt 1999, Paquet 1999). Not all of the remainder are Western, though, and it is these people, many of whom live in the nations comprising the Third World that arguably should concern us. Citizens of, and others living in, these developing and often impoverished nations must overcome not only poverty, but also relatively few years of education, low levels of telephone and computer penetration, a primitive network infrastructure—for example, network access lines, Web software and Internet services—and, increasingly, heavy government censorship.[9]

Such concerns regarding the limited access of the class of less-skilled individuals internationally to burgeoning information technologies relative to that of the highly skilled, who reside primarily in the industrialized, and more importantly, capitalist, West, underlies Webster's Marxist critique of the role of IT in international politics (in this volume).[10] According to his class analysis, the Internet and the phenomenon of globalization, more generally, do represent significant changes in the sheer of volume of information available and the speed with which it may be disseminated. Yet precisely because the "Internet, cable television services, portable PCs . . . [so] facilitate and affect how we analyze situations and stay in touch with one other" (80), it is difficult to judge the impact of this change. If the skills required to take advantage of the Internet's promise accrue only to some subset of people, and this is the same group that has always exploited technological innovations, then we should expect, by extension, little change in international political processes and outcomes. Thus, Webster argues that significant change at the level of international politics will require modification of nations' educational systems and other means for preparing young people for high-skilled employment, which will alter the composition and characteristics of the labor force, and so also national politics and foreign policy.

Mazrui and Ostergard's chapter (in this volume) likewise recognizes Marxist concerns that whoever controls the international economic system, which is dominated by the United States and by other Western industrialized nations with a comparative advantage in IT, also controls the world's political systems (Poster 1999). It also more directly complements Webster's chapter by emphasizing the important role education plays in teaching individual members of a society to use computers, the Internet, and other technological keys to capitalizing on the communications revolution. Mazrui and Ostergard, however, are overall more optimistic with respect to education's capacity to restructure labor relations and other aspects of African societies, in particular, in the interest of modernizing in a manner that is culturally independent of the West.[11] They even go so far as to suggest that if managed well, the ongoing diffusion of the information technologies could catalyze a redistribution of international power, perhaps enabling African nations to avoid imitating the West in their collective bid to "catch up." Not that this transformation will be easy. Despite the environmental and other social movements that often herald national reorientations to the international community, most Africans have limited access to radio and television, not to mention the Internet, as the reigning technologies of mass organization. As a result, African governments have been able to integrate the computer and Internet use, but far less successful in finally closing the gap between North and South (Bellman, Tindimubona; and Arias 1993; Cambridge et al. 1996, 48).

In addition to these Marxist analyses, this volume includes a straightforwardly critical analysis of the relationship between IT and international relations. According to Stienstra (in this volume, 190) critical international relations theory examines the inequalities that exist in international politics in an effort to understand why specific institutions and practices are developed, and for whose benefit they continue to exist. She uses this point of view to argue, in particular, that the Internet embodies not only domestic, but also international, power relations. That is, the institutions and practices of international relations that define and regulate the Internet have developed in response to underlying power relations, which have yet to change (see also Ebo 1998). Consequently, we cannot expect the Internet to provide a venue for equal participation.

International Conflict and Cooperation

Evaluating the impact that IT has had, and is having, on international conflict and cooperation represents what is perhaps *the* way we understand how the communications revolution might transform international politics.[12] The review of approaches to understanding the relationship between IT and international politics provided in the first part of this chapter suggests that the Internet and related ITs are most likely to modify the potential for conflict, or cooperation, rather than to cause either of these phenomena to occur. Indeed, Steele and Stein's review of the international political history of communications (in this volume) suggests convincingly that IT is most likely to "parallel and amplify trends in international relations." They continue to point out, though, that because the current communications revolution is occurring during a period,

> free of major conflict between the great powers . . . a revolution in the nature of relationships among [them] may very well be occurring. But it is not being driven by changes in communications technology. Other recent changes in the international system have increased the incentives for states to choose more pacific strategies. (43)

It is, therefore, important to consider the establishment of the national information infrastructures and corresponding international institutions that manage and coordinate the transnational flow of messages and diplomatic communiqués that undergird instances of both international cooperation and international conflict.

Of course, the role of ITs in matters of war and peace far exceeds the prospect of E-mail from the front lines directly to the folks back home (Arquilla

and Rondfelt 1996; Drogin 1999). It also includes, at least (1) the education of populations and leaders that enables nations to make better, even more peaceful, decisions; (2) the transmission of often classified information among national leaders and on the battlefield; and (3) advanced espionage (Drogin 1999; Steele and Stein, in this volume). In addition, it is reasonable to suggest that some—perhaps, less-developed—nations might use the international community's desire to secure electronic communications as leverage to gain access to information and ITs as the price for their cooperation.[13]

International cooperation in this information and technology penetrated era might then be fairly related to increasingly high levels of interdependence and more strident popular demands for greater quality of life. In the West, such demands have included increasing pressure for government deregulation of telephone, commercial television, cable, satellite and Internet services. They have yielded local, national, and international societies that are becoming more and more heavily networked. In other words, the citizens of civil societies—consisting of myriad associations, such as churches and synagogues, schools, labor unions, business and other professional organizations, and volunteers and interest groups—are increasingly able "to reduce their isolation, build far-flung networks within and across national boundaries, and connect and coordinate for collective action" (Arquilla and Ronfeldt 1996, 23).

The nature of, and potential for, conflict under these conditions are the bases for studies of netwar. The expectation is that netwars will be relatively easy to initiate and wage. Participants will be able to build and maintain complex networks at some distance from the front, to move openly and covertly across practically inconsequential territorial borders, and to play on shifting identities and loyalties. Yet it is also possible that citizen-based networks could yield a major new "global peace and disarmament movement" (Arquilla and Ronfeldt 1996, 46, 76; see also Keohane and Nye 1998 and Steele and Stein, in this volume).

Information Technologies and the "Democratic Peace"

Recognizing that international conflict may thus be attributed just as easily as international cooperation to innovations in IT, a select number of scholars have shifted their attention to how nations manage information to achieve specific domestic and international goals. Of course, there are a multiplicity of possible relationships between nations' political and socioeconomic systems on the one hand, and their use of raw information and the regulation of information flows on the other. The most pronounced among these is the general expectation that the compromise-based patterns of conflict resolution

key to effective democratic government is a potent basis for arguing that information technologies are indeed likely to foster not only international cooperation, but also peace (Allison and Oclassen 1996; Keohane and Nye 1998; Splichal and Wasko 1993). Kedzie (in this volume) suggests outright that increased international communication, manifest primarily in the Internet, is a boon to democratization and, by extension, peace.

Kedzie's argument builds on a growing body of evidence in support of the "democratic peace," in reference to the observed absence of war between democracies. This empirical finding arguably buttresses Immanuel Kant's prescription for perpetual peace (Reiss 1970). According to contemporary interpretations of Kant's treatise, it is representative government, together with the legal equality of all citizens and a private property, market-oriented economy, which supports individuals' rational opposition to the costs of war as a domestic constraint on the use of force (most recently, Bueno de Mesquita and Lalman 1992; Chan 1993; Dixon 1994; Gowa 1999; Maoz and Russett 1993; Morgan 1993; Ray 1993; and Russett 1993). A derivative democratic institutions argument suggests that "open" domestic institutions make it difficult for the leaders of democracies to gain the widespread support necessary for war (Gowa 1999; Russett 1993). The alternative democratic culture argument suggests instead that leaders of democracies share democratic norms that facilitate mutual accommodation in the avoidance of all but the most restrained conflict (Gowa 1999; Russett 1993; Weart 1998). The establishment of a community of nation-states that share an interest in honoring the ultimate right of its members to protect their citizens' individual liberties, and ensuring conditions of "universal hospitality" among them, creates an additional, international impediment to war (see Gowa 1999 and Reiss 1970).

Kedzie's theoretical contribution to this now predominantly empirical discussion lies in his recognition of the inherent relationship between IT and the practically axiomatic absence of war between democracies. As a result of the ongoing communications revolution, governments have generally become increasingly unable to maintain exclusive power over politics. Likewise, individual citizens have become increasingly free to exchange ideas as well as goods internationally and domestically, thereby facilitating the widespread diffusion of the technologies, ideologies, and behavioral norms considered necessary for a democratic peace.[14] Briefly, the reigning argument is that the importance of communication to democratic political culture and institutions supports the expectation that democracies will strive to develop and sustain similar, intensely communicative international relationships. To the extent that the leaders and citizens of democratic nations achieve communicative successes internally, especially with respect to those methods necessary for policy-making effectiveness and electoral success, they will seek open and reliable means of communication internationally as well (see Pye

1963 and Weart 1998). It follows that, because such communication enables international commerce and collective security (Deutsch et al., 1957; Stopford and Strange 1991), we should expect peace, rather than war, among the world's democracies.

Democracy in the Information Age

> Can democracy, a form of government born in the ancient world and designed to bring small numbers of individuals with consensual interests together into a self-governing community where they might govern themselves directly, survive the conditions of modern mass society?
>
> —Benjamin Barber; "Three Scenarios for the
> Future of Technology and Strong Democracy"

The foregoing discussion of the theoretical and practical relationship between the increased communication associated with the Internet and, more generally, the diffusion of ITs begs the question of whether or not IT actually improves communications and so also democracy. Or, alternatively, does IT foster public participation in the political process, particularly popular involvement in the deliberative processes that are needed for true democracy? As is typical of the most accurate response to complex questions, there is no entirely right answer:

> [the] scientist wisdom suggests that science and technology, by opening up society and creating a market of ideas, foster more open politics. . . . Yet technology coexisted with tyrannical government in Nazi Germany, and was made to expedite the liquidation of the Jews in a fashion that suggests its utility in rendering dictatorship more efficient. (Barber 1998, 1)

According to Barber, however, there are three "prospects" for the future of democracy and technology. What Barber refers to as the "Pangloss" possibility would be the outcome of a complacent projection of current attitudes and trends. That is;

> for all of its technological potential for diversification, the domination of these new technologies by the market . . . assures that to a growing degree, the profit-making entertainment industry in the Anglo-American world will control what is seen, felt, and thought about around the globe. (Barber 1998, 4; see also Resnick 1997)

The "Pandora" alternative would instead be tempered by caution in light of the worst case scenario—that of a dangerous technological determinism of

"supercorporations" and "government monopolies" (Barber 1998, 5). Finally, Barber's "Jeffersonian" prospect is a hopeful one, which would discover and implement affirmative uses of IT in the interest of fostering democracy. Yet it is one requiring that

> citizen groups and governments take action in adapting the new technology to their needs . . . [information] technologies can challenge passivity, they can enhance information equality, they can overcome sectarianism and prejudice, and they can facilitate participation in deliberative political processes. (Barber 1998, 6; see also Roper 1997)

Barber argues that actions of this kind would enable contemporary democratic governments to overcome the tyranny of opinion in the greater interest of "rational discourse and citizen education" (1998, 7). Baum (in this volume) effectively argues, in a manner consistent with this position, that the impact of IT on international war will ultimately occur in the area of foreign policy making. More specifically, the results of his examination of competing arguments regarding exactly how the public constrains democratically elected leaders suggests that the sheer amount of information now easily available to Americans has increased their attentiveness to foreign policy, and prompted the kind of popular oversight that could limit the president's use of force. Thus, according to Baum (in this volume, 132), was President Bush constrained to conduct a quick and bloodless war in the Persian Gulf (see also Gottschalk 1988)?

Empirical studies such as Baum's clearly do support the potentially positive role of IT—refering, in this case, to the mass media—in the foreign policy making of democratic nations. Yet it is still possible to argue that when IT is understood to mean the Internet, it is inherently antithetical to the kind of popular discourse that is typically associated with established democratic processes. Democratic forms of government are, for instance, expected to engage "most" of the adult population (see Weart 1998), but the Internet can involve exchanges among only a relatively small number of people in a given nation. Moreover, democratic communication is supposed to be reflective (Flammang 1997; Young 1996), while discussions on-line are characteristically rapid and urgent. Finally, democracy should foster meaningful interaction, something the cacophony associated with the Internet might easily inhibit (Garson 1995). Such concerns prompt investigations—including, in this volume, chapters by Stienstra and Richards—into how the Internet is used, and to what effect.

Stienstra, for instance, anticipates significantly more discord as women take their inherently counter hegemonic movement on-line. That is, women

may be able to disguise their gender on-line, but this potential is not rightly regarded as a basis for expecting fewer disparities in gender relationships off-line (Poster 1999; see also Sampaio and Aragon 1997). This observation problematizes the question of how the Internet fosters women's organizing, shifting attention from how women represent themselves on-line to how they organize off-line, particularly in the Third World. In other words, "information technology issues are enmeshed in an ecology of interest group trade-offs, conflict, competition, and compromise" (Garson 1995, 39).

Richards, alternatively, begins a discussion that speaks directly to the relationship among IT, democracy, and violence by pointing out that those who are mostly in need of the Internet and other ITs as a democratic aid, typically have the least access to it, and are therefore practically unable to influence either national governments or international institutions. Richards's specific point of reference here is human rights. In this case, he sadly reports his finding that although the world may seem smaller as a result of IT, and its inhabitants consequently more familiar with one another, the violation of individual citizens' human rights by national governments continues, except in democratic nations. Therein lies reason for optimism.

IT and Choosing Peace

Richards's analysis portends optimism with respect to the relationship between IT and international cooperation because it suggests that enhanced communication under conditions of political openness yields reductions in violence at a very primitive level: the individual citizen and those who govern him or her. Considering any lasting international peace will, ultimately, require the abolition of all forms of violence—that is, not only that which occurs between nation-states, but also that which is inflicted upon individual citizens at the hands of their governments (Forcey 1991; Rock 1989)—this conclusion is particularly heartening. Moreover, it provides a conceptual focal point for the contributions to this volume as a whole. Whether or the not the communications revolution yields international cooperation and peace amounts to choice. Average citizens as well as national leaders must *choose* to use IT to coordinate and voice coherent and unceasing demands for both more extensive political participation, and more equitable enjoyment of physical and emotional health, economic well-being, and full self-expression.

A Culture of Peace

Peace understood as a "special and more stable condition [of peace] in which the threat itself of conflict is effectively lacking" (Rock 1989, 2) is

said to evolve (Modelski 1990; see also Boyd and Richerson 1985 and Jantz 1980). Theories of cultural evolution, in particular, suggest that individuals possess the capacity to respond to the international community as well as to their more immediate national and/or local communities, and thereby affect changes in them (Boyd and Richerson 1985; Habermas 1972). Human evolution depends, more specifically, on the inheritance of cultural as well as genetic information. People grow and develop in social situations that enable them to learn, or to inherit, nongenetic information, such as dietary preferences and social mores, that they then can pass onto other members of a given society (Boyd and Richerson 1985). In a more technical sense, humans' metabolic processes enable them to create their world, and to communicate it via demonstration, emulation, and other forms of social learning, rather than genetically (Jantz 1980, 174–177; see also Chopra 1992).

Culture is thus the collective outcome of individuals' reactions to the world around them, and their attempts to envision and then develop alternative social orders. Whether or not a culture of peace eventually characterizes the international community must then be a function of what the individual citizens of still disparate and statutory sovereign nations know, and how they come to know what they know. Thus the significance of the current communications revolution for international politics, according to the contributors to this volume, is obvious: within given limits to access and institutionalized barriers to use, IT will spur political participation, deepen democracy, and foster international peace.[15]

Notes

1. CNN In-Depth Reports (1999) contains reports and ongoing E-mail conversations between Finnegan Hamill, a Berkeley high school student and Adona, one of Kosovo's ethnic Albanians.

2. CNN Interactive (1999).

3. "Spam" refers to E-mail messages sent nearly indiscriminately by list to hundreds or thousands of addresses at once.

4. In contrast to the immediate and heavy use of E-mail in the Yugoslavian case, millions of people hit news Websites within minutes of the 5:00 P.M. announcement on December 16, 1998 that the United States and Britain had begun to bomb Iraq; 500 reportedly streamed into chat rooms at CNN's site, where traffic ultimately peaked at 475,000 hits per minute (Kornblum 1998). See also Hu (1999).

5. The general argument is summarized in Allison and Oclassen (1996) and developed more fully in this volume by Kedzie, Richards, and Baum.

6. "Democratic" refers to political decision making that is open to significant levels of public participation and deliberation. That said, and despite

a common tendency to conflate traditional "participatory" democracy with the more recently explicated "deliberative" democracy, note that the former advocates active participation in the democratic political process, while the latter instead emphasizes the design of political institutions and decision-making practices intended to encourage discussion in which all "reasonable" viewpoints are heard (I thank Brooke Ackerley for this clarification).

7. Note that because the contributions by all three of these authors bear on this larger relationship among IT, democracy, and international conflict and cooperation, they are treated more thoroughly in the second part of this chapter.

8. Computer production currently serves two markets: a high end catering to professionals and enthusiasts, and a low end including "everyone else" (Crothers 1999). Low end personal computers may now be purchased for as little as $299, which includes free Internet service for a year as well as system and word-processing software (Kanellos 1999).

9. Horwitt (1999). Consider also Keohane and Nye's argument that the theoretical and practical centrality of the territorial nation-state will survive the revolution in personal communications, in part because "three quarters of the world's population does not own a telephone, much less a modem and computer (Keohane and Nye 1998, 82).

10. See Dougherty and Pfaltzgraff for a concise, up-to-date distinction between classical Marxism—as "an admixture of metaphysics (dialectical materialism), theory of history (economic determinism), economic and social science, political ideology, theory and strategy of revolution, social ethics, and an eschatological moral theology that looks toward secular salvation: the advent of a classless social order of perfect justice, in which conflict ceases and the psychology of a new human being is generated" (Dougherty and Pfaltzgraff 2001, 428)—and contemporary Marxist thought on the legacy of colonialism with respect to the economic, social, and political development of the Third World.

11. Mazrui and Ostergard in this volume define "development" as "modernization minus dependency," and furthermore associate that process with efforts to become more secular, more technologically sophisticated, and more oriented toward the future.

12. This lead-in reflects the centrality of the conflict-cooperation continuum to the academic study of international relations.

13. See, for instance, Mofson (1997), which provides evidence of just this sort of generally strategic behavior on the part of Zimbabwe as a party to the Convention on Trade in Endangered Species (CITES).

14. Huntley (1997). In contrast to those who naively examine the exchange of information and ITs in "the market," De Long argues that "information goods," including specific ITs, have the potential to "defy the

very principle of scarcity and control over commodities that has convinced economists that the market is the single, best system for directing the production and distribution of goods and services" (De Long 1998, 14).

15. This qualified liberal conclusion is intended to capture the concern that in a given nation at a given time in history, the politico-social context in which individuals' technologically assisted interactions occur may well limit the diversity and equality actually experienced via on-line communication (Streck 1997; see Hassner [1997] for a related argument).

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