

## Computer Networks and the Emergence of Global Civil Society

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WHEN IN THE COURSE OF HUMAN EVENTS it becomes possible to dissolve the communication frontiers that have divided peoples one from another and to assume among the Powers of the Earth the interdependent and balanced communication relations to which the Development of Technology has entitled them.

WE HOLD THESE TRUTHS TO BE SELF-EVIDENT, that all human communicators are created equally, endowed with certain Unalienable Rights, among them the right to hold opinions without interference and to seek, receive, and impart information and ideas through any media and regardless of frontiers. This Right to Communicate Includes the right to be informed as well as to inform, the right to reply as well as to listen, the right to listen or to ignore, the right to be addressed as well as to speak, and the right to use communication resources to satisfy human social, economic, and cultural needs.

THAT TO SECURE THESE RIGHTS, a global computer communications network has now arisen benefitting the Common Good of Humankind by loosening the bonds of the marketplace and the strictures of government on the media of communications and allowing that part of human endeavor known as global civil society to communicate outside the barriers imposed by commercial or governmental interests.

These are possible opening lines of what might be called a *Charter of Communication Interdependence* of the global nongovernmental movements for peace, human rights, and environmental preservation. The growth of such global interdependent communication relations has been greatly accelerated by the advent of decentralizing communica-

tion technologies such as computer networking. Global civil society as represented by the "NGO movement" (nongovernmental organizations) now represents a force in international relations, one that circumvents hegemony of markets and of governments. This chapter outlines the concepts of global civil society and the NGO movement, describes the obstacles that they face from governments and transnational corporations, and sketches the emergence of the Association for Progressive Communications network as an illustration of this worldwide phenomenon.

"Community" used to be limited to face-to-face dialogue among people in the same physical space, a dialogue that reflected mutual concerns and a common culture. For thousands of years, people had little need for long-distance communication because they lived very close to one another. The medieval peasant's entire life was spent within a radius of no more than twenty-five miles from the place of birth. Even at the beginning of our century, the average person still lived in the countryside and knew of the world only through travelers' tales.

Today, of course, communications technologies have woven parts of the world together into an electronic web. No longer is community or dialogue restricted to a geographical place. With the advent of the fax machine, telephones, international publications, and computers, personal and professional relationships can be maintained irrespective of time and place. Communication relationships are no longer restricted to place, but are distributed through space. Today we are all members of many global "nonplace" communities (see Harasim's discussion of Networks in chap. 2 and Rheingold's portrayal of virtual communities in chap. 4).

In the last decade there has emerged a new kind of global community, one that has increasingly become a force in international relations. We speak of the emergence of *global civil society*, that part of our collective lives that is neither market nor government but is so often inundated by them. Still somewhat inarticulate and flexing its muscles, global civil society is best seen in the worldwide NGO movement, nongovernmental organizations, and citizens advocacy groups uniting to fight planetary problems whose scale confound local or even national solutions. Previously isolated from one another, NGOs are flex-

ing their muscles at the United Nations and other world forums as their power and capacity to communicate increase.

The concept of *civil society* arose with John Locke, the English philosopher and political theorist. It implied a defense of human society at the national level against the power of the state and the inequality of the marketplace. For Locke, civil society was that part of civilization—from the family and the church to cultural life and education—that was outside of the control of government or market but was increasingly marginalized by them. Locke saw the importance of social movements to protect the public sphere from these commercial and governmental interests.

From the industrial age to the present, mercantilist and power-political interests have pushed civil society to the edge. In most countries civil society even lacked its own channels of communication. It was speechless and powerless, isolated behind the artifice of national boundaries, rarely able to reach out and gain strength in contact with counterparts around the world. What we now call the NGO movement began in the middle of the last century with a trickle of organizations and has now become a flood of activity. NGOs today encompass private citizens and national interest groups from all spheres of human endeavor. Their huge increase in number and power is due in no small measure to the development of globe-girdling communication technologies.

Dutch social theorist Cees J. Hamelink (1991a, 5–8; 1991b) sees a new phenomenon emerging on the scene—*global civil society*, best articulated by the NGO movement. New communications technologies now facilitate communication among and between national civil societies especially within the fields of human rights, consumer protection, peace, gender equality, racial justice, and environmental protection. From Earth Summit to GATT, from the United Nations General Assembly to the Commission on Human Rights, NGOs have become the most important embodiment of this new force in international relations.

The development of communications technologies has vastly transformed the capacity of global civil society to build coalitions and networks. In times past, communication transaction clusters formed among nation-states, colonial empires, regional economies and all ancient (or example medieval Europe, the Arab world, China and Japan), West African kingdoms, the Caribbean slave and sugar economies:

Today, new and equally powerful forces have emerged on the world stage—the rain forest protection movement, the human rights movement, the campaign against the arms trade, alternative news agencies, and planetary computer networks.

These decentralizing and democratizing qualities of new computer technologies are also benefiting a growing global movement for the common good. The promise of democracy is fulfilled when citizens can rise above personal, even national, self-interest and aspire to common good solutions to problems that plague the entire planet. The global commons is not just those parts of the planet outside national jurisdictions, such as the air, oceans, outer space, and Antarctica (International Journalism Institute, 1987, 18). It is also a common striving to reach certain transcendent goals. In times past, those goals included abolition of slavery, laws against child labor, and universal suffrage. Today's planetary challenge is environmentally, socially and economically sustainable development. People must reduce sharply the burden they impose on the carrying capacity of the Earth's ecosystems.

The continued growth and influence of this global civil society faces two fundamental problems: increasing monopolization of global information and communication by transnational corporations and the increasing disparities between the world's info-rich and info-poor populations. Global computer networking makes an electronic end run around the first problem and provides an appropriate technological solution to overcome the second.

Hamelink observed that the very powers that obstructed civil society at the national level—markets and governments—also controlled most of the communication flows at the global level. Government monopolies still control a huge share of the world's air waves and telecommunications flows. Even worse, a handful of immense corporations now dominate the world's mass media. If present trends continue, Bagdikian predicts that by the turn of the century "five to ten corporate giants will control most of the world's important newspapers, magazines, books, broadcast stations, movies, recordings and videocassettes" (1989, 805). Telecommunications infrastructures and data networks must also be included in this gloomy account.

Why is this happening? The most fundamental reason is fully international corporate control of media production and distribution

reaps vast profits and creates huge corporate empires. Already more than two-thirds of the U.S. work force is now engaged in information-related jobs (U.S. Department of State, 1988, 1.). Almost half the gross national product of the fourteen most industrialized countries, and one-quarter of all international trade, comes from services (Jussawalla, 1985, 11). Telecommunications services grew by 800 percent worldwide in the 1980s. According to UNESCO, the total world information and communication economy in 1986 was \$1,185 billion, about 8 to 9 percent of total world output, of which \$515 billion was in the United States (UNESCO, 1990, 83). Growth in this sector is accelerating, and it is no surprise that a few large corporations now predominate in the world's information flow. While there are more than one hundred news agencies around the world, only five—Associated Press, United Press International, Reuters, Agence France Presse, and TASS—control about 96 percent of the world's news flows (Mowlana, 1986, 28).<sup>1</sup> Corporations such as Sears, IBM, H&R Block, and Lockheed control the bulk of the videotex information markets in the United States.

In addition to transnational control of information, global civil society and the NGO movements confront the increasing gap between the world's info-rich and info-poor populations. In virtually every medium, the disparities are dramatic.

- An estimated 95 percent of all computers are in the developed countries.
- While developing countries have three-quarters of the world's population, they can manage only 30 percent of the world's newspaper output.
- About 65 percent of the world's population experiences an acute book shortage.
- Readers of the *New York Times* consume more newsprint each Sunday than the average African does in one year.
- The only third world country to meet UNESCO's basic media standards for per capita numbers of newspapers, radio, and cinema is Cuba.
- Only seventeen countries in the world had a gross national product larger than total U. S. advertising expenditures.
- The United States and the Commonwealth of Independent States, with only .5 percent of the world's population, use more than 50

percent of the geostationary orbit. The third world uses less than 10 percent.

- Ten developed countries, with 20 percent of the world's population, accounted for almost three-quarters of all telephone lines. The United States had as many telephone lines as all of Asia; the Netherlands, as many as all of Africa; Italy, as many as all of Latin America; Tokyo as many as all of Africa (Frederick, 1993, 75).

Even within the United States we have the info-rich and the info-poor. From the streets of Manhattan to the barrios of Los Angeles, from the homeless to the immigrant populations, from Appalachia to the inner cities, there are millions upon millions of our fellow Americans who cannot read or type, do not consume newsprint, cannot afford a book. For example, white children are 2.5 times as likely to have home computers as African-American and Hispanic children (Information Rich vs. Poor, 4).

To counter these twin trends that threaten to engulf civil society with commercialization and control, there has arisen a worldwide metanetwork of highly decentralized technologies—computers, fax machines, amateur radio, packet data satellites, VCRs, video cameras, and the like. They are decentralized in the sense that they democratize information flow, break down hierarchies of power, and make communication from top and bottom just as easy as from horizon to horizon. For the first time in history, the forces of peace and environmental preservation have acquired the communication tools and intelligence-gathering technologies previously the province of the military, government, and transnational corporations. Many people, organizations, and technologies are responsible for this development, but one organization has distinguished itself by specializing in the communication needs of the global NGO movement.

The history of the Association for Progressive Communications (APC) dates back to 1984, when Ark Communications Institute, the Center for Innovative Diplomacy, Community Data Processing, and the Foundation for the Arts of Peace—all located in the San Francisco Bay Area near Silicon Valley, California—joined forces to create what was then called PeaceNet, the world's first computer network devoted exclusively to serving the needs of the movements for peace, human rights, and social

justice. In 1987, PeaceNet became a division of the San Francisco-based Tides Foundation, and the Institute for Global Communications (IGC) was formed to direct and support its activities.

Parallel to this, with seed money from Apple Computer and the San Francisco Foundation, in 1984 the Farallones Institute created EcoNet to advance the cause of planetary environmental protection and sustainability. Farallones transferred EcoNet to the newly formed Institute for Global Communications in 1987. ConflictNet, dedicated to serving nonviolent conflict resolution, dispute mediation, and arbitration, joined IGC in 1990. Together, these three networks—PeaceNet, EcoNet, and ConflictNet—make up what we now refer to as the IGC networks, the largest computer system in the world dedicated to peace, human rights, and environmental preservation.

Inspired by the technological success of establishing these networks in the United States, the Institute for Global Communications began collaborating with a similar network in England, GreenNet. To raise funds, rock stars Little Steven and Peter Gabriel performed two "Hurricane Irene" concerts in Tokyo in December 1986. Thus it can be said that the idea of a global network for peace, human rights, and the environment was born in Peter Gabriel's New York hotel room in 1987 when the money was distributed and the original charter was drafted on a laptop computer.

With this impetus, in 1987 GreenNet and the IGC Networks joined together seamlessly, demonstrating that transnational electronic communications could serve these communities. This transatlantic link was so successful that, with the support of the MacArthur, Ford, and General Service foundations and the United Nations Development Program, IGC helped to establish five more networks in Sweden, Canada, Brazil, Nicaragua, and Australia. This led in 1990 to the founding of the Association for Progressive Communications (APC) to coordinate this global operation. Today, more than 15,000 subscribers in ninety countries are fully interconnected through low-cost personal computers. These groups constitute a veritable honor roll of nongovernmental organizations working in these fields.

APC members are fond of saying that they "dial locally and act globally." Today there are APC networkers in the United States, Nicaragua, Brazil, Russia, Australia, the United Kingdom, Canada, Sweden,

and Germany and affiliated systems in Uruguay, Costa Rica, Czechoslovakia, Bolivia, Kenya, and many other countries (see figure 17.1 APC Network Topology). The APC even has an affiliated network in Cuba and can boast of providing the first free flow of information between the United States and Cuba in thirty years. Dozens of FidoNet systems connect with the APC through gateways located at the main nodes. APC's largest computer, known as "cdp" or Community Data Processing, is located in Silicon Valley, California.

The APC networks can now set up complete electronic mail and conferencing systems on small, inexpensive microcomputers for between \$5,000 and \$15,000 with software developed since 1984 and available to partner systems at no charge. Individual users typically make a local phone call to connect to their host machine, which stores up mail and conference postings until contacted by a partner computer in the network, typically about every two hours. Aside from its low cost, this technological configuration is appropriate for countries whose telecommunications infrastructure is still poor. The file transfer protocols used between the computers have a high level of resiliency to line noise and satellite delays, and, if an interruption does occur, they are able to resume a transfer right at the point it was interrupted. This is particularly important for transporting large binary files, when the chances of losing the connection over poor quality telephone lines is significant.

Within the APC, main nodes at London (GreenNet), Stockholm (NordNet), Toronto (Web), and San Francisco (IGC networks) bring the communication flow in from regional nodes. Messages are then exchanged and distributed around the world so that a message from Australia can end up on a screen in Estonia in two to four hours. Messages can be sent through these machines to outbound fax and telex machines, to commercial hosts such as Dialcom and GeoNet, and to academic networks such as Janet, BITNET, EARN, and USENET/UUCP. The entire APC system is funneled on to the Internet through the IGC networks, which are a full Internet host (igc.org). The price is low by any standard; in the United States hourly connect charges range as low as \$3 per hour.

Simply put, electronic mail (or email) connects two correspondents through a computer and a modem to a host computer. One user, let's say a peace researcher in Finland, uses her computer to dial into a local data network (analog) to the telephone network but for data traffic

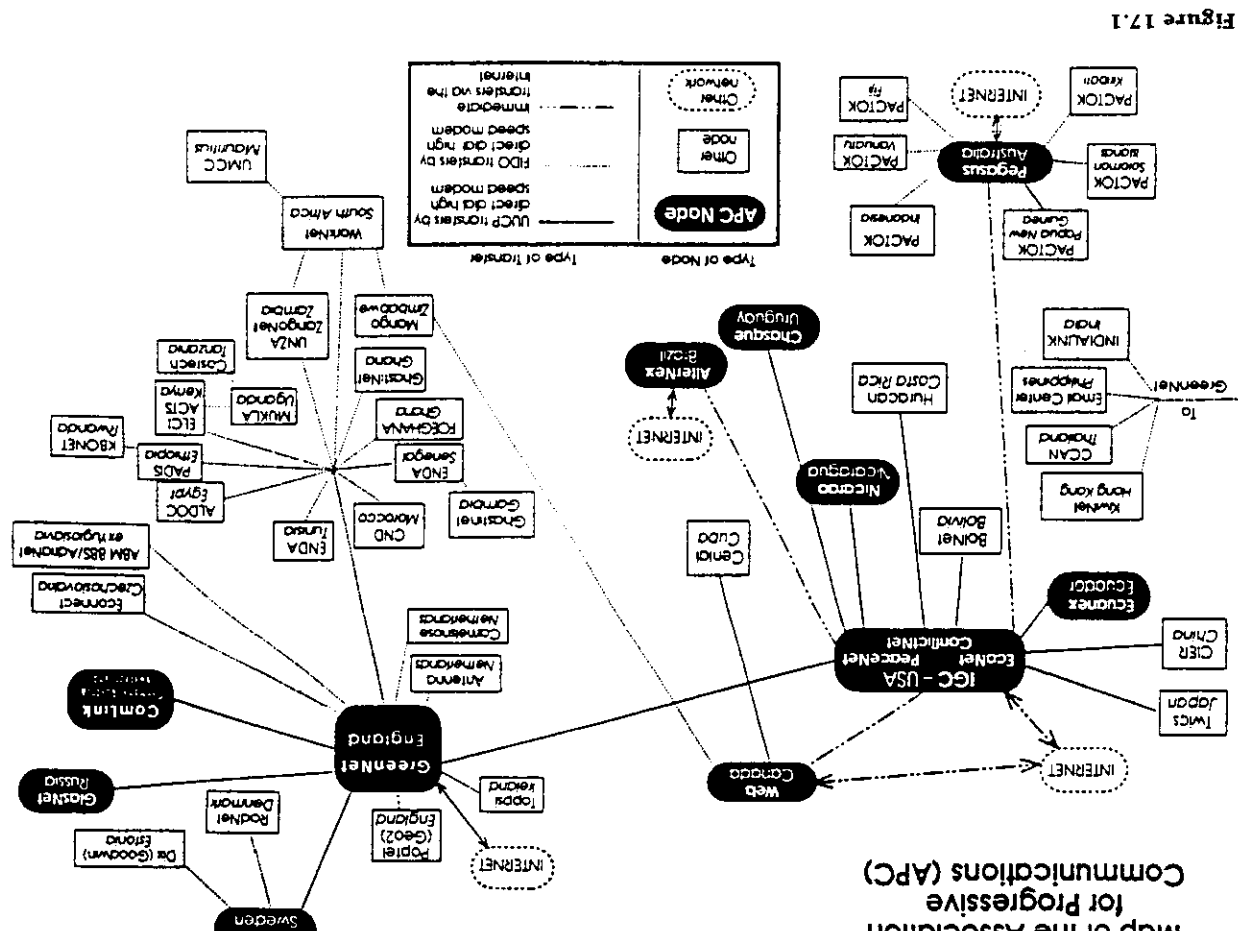


Figure 17.1

instead of voice). She either types in a message or uploads a prepared text into her host computer—In this case, NordNet in Stockholm. Within a short time that message is transferred via high-speed modems through the telephone lines to the host system of her correspondent, a university peace studies professor in Hawaii. His host system is the PeaceNet computer in California. At his convenience, he connects to his host and downloads the message. This miraculous feat, near instantaneous communication across half the globe, costs each user only the price of a local phone call plus a small transmission charge.

Unlike systems used by the large commercial services, the APC networks are highly decentralized and preserve local autonomy. One microcomputer serves a geographical region and is in turn connected with other nodes. The local node collects the international mail, bundles and compresses it, then sends it to the appropriate partner system for distribution using a special high-speed connection.

In addition to email, the APC networks also oversee about nine hundred electronic conferences—basically a collective mailbox open to all users—on subjects from AIDS to Zimbabwe. It is here that people can publicize events, prepare joint proposals, disseminate vital information, and find the latest data. APC conferences carry a number of important alternative news sources, including Inter Press Service (the third world's largest news agency); Environmental News Service (Vancouver), the United Nations Information Centre news service; Agencia Latinoamericana de Información (Ecuador, in Spanish); Alternet (Washington, D. C.); New Liberation News Service (Cambridge, Massachusetts); Pacific News Service (San Francisco, California); and World Perspectives Shortwave Monitoring Service (Madison, Wisconsin).

The first large-scale impact of these decentralizing technologies on international politics occurred in 1989. When the Chinese government massacred its citizens near Tiananmen Square, Chinese students transmitted detailed, vivid reports instantly by fax, telephone, and computer networks to activists throughout the world. They organized protest meetings, fundraising, speaking tours, and political appeals. Their impact was so immense and immediate that the Chinese government tried to cut telephone links to the exterior and started to monitor the USENET computer conferences where much of this work was taking place (Quarterman, 1990, xxiii–xxiv).

During the attempted coup in the Soviet Union in August 1990, the APC partners used telephone circuits to circumvent official control. While the usual link with Moscow is over international phone lines, APC technicians also rigged a link over a more tortuous route. Soviet news dispatches gathered in Moscow and Leningrad were sent by local phone calls to the Baltic states, then to NordNet Sweden, and then to the London-based GreenNet, which maintains an open link with the rest of the APC.

Another example is the 1991 Gulf War, when computer networks such as PeaceNet and its partner networks in the APC exploded with activity. While mainstream channels of communication were blocked by Pentagon censorship, the APC networks were carrying accurate reports of the effects of the Gulf War on the third world, Israel, and the Arab countries, and news of the worldwide antiwar movement. For a movement caught off guard, amazingly smooth coordination took place rapidly across the country and the world. Competing groups agreed on common platforms, set synchronized action dates, and planned large-scale events across vast distances. Computer users seized the technology and made it work.

In 1992, the Association for Progressive Communications, through its Brazilian partner network Alternet, played a major role in providing communications services for environmentalists, nongovernmental organizations, and citizen activists before, during, and after the 1992 United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro. The largest United Nations conference in history, UNCED was the first global gathering on the environment since 1972. It was also the first global summit to take place fully within the age of the NGO and computer technologies. APC maintained over thirty electronic conferences on UNCED documents, agendas, reports, discussion and debate, and even distributed *da zi bao*, or "electronic wall newspapers," from the conference. APC's information sharing allowed the United Nations process to be accessible to citizens around the world, thus providing broader citizen participation in a heads-of-state summit than was ever possible before.

Around the globe, other APC networks are working on issues of peace, social justice, and environmental protection. In Australia, the member of the Pegasus network are working to hook up the affluent 18 percent of the electorate that votes Green. In the United States,

EcoNet is helping high school students monitor water quality in local rivers. One such experiment involved fifty students along the Rouge River in Michigan. When in 1991 neo-Nazi skinheads ransacked a Dresden neighborhood populated by foreigners, users of the German partner network ComLink posted news of the event. Soon Dresden newspapers were flooded with faxes from APC users around the world deploring the action. All in all, tens of thousands of messages a day pass back and forth within the "APC village," and the number grows every day.

The partner networks of the Association for Progressive Communications have built a truly global network dedicated to the free and balanced flow of information. The APC charter mandates its partners to serve people working toward "peace, the prevention of warfare, elimination of militarism, protection of the environment, furtherance of human rights and the rights of peoples, achievement of social and economic justice, elimination of poverty, promotion of sustainable and equitable development, advancement of participatory democracy, and nonviolent conflict resolution."

The APC networks are trying to circumvent the information monopolies to construct a truly alternative information infrastructure for the challenges that lie ahead. By providing a low-cost, appropriate solution for nongovernmental organizations and poor countries, they are attempting to civilize and democratize cyberspace. They also provide an appropriate way to bridge the gap between the info-rich and the info-poor.

The world is truly moving into a "new order." The age of democracy may have had its beginnings in the French and the American revolutions, but only today is it finally reaching the hearts and minds of sympathetic populations around the world. This "preferred" world order of democratic change depends heavily on the efficiency of communication systems.

Perhaps the most durable impact of the APC networks is their promotion of that illusive phenomenon known as "world public opinion." One way that we can confirm the ascendance of global civil society is to examine the accumulating evidence for world public opinion, a cosmopolitan convergence of interactively communicated national civil societies. The 1980 MacBride Report observed that world public

opinion was "still in the process of formation, and thus fragile, heterogeneous, easily abused" (International Commission for the Study of Communication Problems, 1980, 198). As we approach the third millennium, communications technologies such as the APC networks are transforming international relations. They have greatly accelerated the rise of global civil society and the NGO movement. Not only do they report violations and victories of human rights but they are also demonstrating that *communication and information are central to human rights* and to the emergence of democratic, decentralized, planet-loving movements.