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The NII and the Coming Era of Participatory

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Excerpt From CSC Vanguard Technology Forum, "Redefining
Collaboration through Groupware," Atlanta GA, September 22-23, 1994.

For Internal Distribution Only, Office of Media Affairs, The White House

The NII and the Coming Era of Participatory Communications

Jonathan Gill

"This isn't your father's government; this government is technology friendly,"
began Jonathan Gill, director of special projects, Office of Media Affairs, The White House.

By technology friendly, Gill was referring to current government efforts to create the National Information Infrastructure (NII), and to create on-line access to The White House, the Cabinet and many of the most important federal agencies.

If current statistics are any indication, the effort is ahead of its time. "Most Americans haven't heard of the NII — two-thirds, in fact — but when it's described to them they think it sounds like a good idea," said Gill. Likewise, most Americans have little to do with computers in their daily lives, he believes, because only 12% of the U.S. population has modems.

Gill believes efforts to increase computer literacy among Americans will have a dramatic impact upon political science. "Political science is about power and its use," he said. How that power is used is reflected by the technology available for communication. "Political science in oral culture was much different than when clay tablets came along,

and it changed again when books came along. Interactive, participatory, computer-based communications will dramatically change the political science of the book world.

We're currently going through this latter transition, Gill believes. Today, "CNN carries the essential, fundamental information of the culture. It is no longer text based."

This is just a step on the way to a truly interactive era, Gill believes, when the passivity of TV will be supplanted by technologies that allow us to utilize our writing, painting and musical abilities and integrate more of our intellectual capacity into our communications. Yet it is unclear what role politics will play in this new era. "New technologies have always been adapted into the political process," he said. "The political community in the agrarian and industrial ages was well defined. But political community in the information age is still undefined."

Power and Knowledge

Power will play a key role in defining this new political community, Gill believes. "Power is an emergent property of knowledge," he said. "Ignorance does not yield power. So where does knowledge come from? It emerges from a process of dialog within a community." Today, our community is defined more by television than by the town meeting hall. Given this shift, Gill asked, "What will community mean when computer-based participatory communications become part of the mainstream and we all become economic nomads and our cities become carved up by highways? And how will that affect power and politics?"

As communities become more diffuse and impersonal, Gill believes power is shifting too. There is a need for a new set of what he called "power paradigms" for the 21st century that maximize knowledge production and enable a sense of community among people. The traditional sense of government for "the common good" becomes unclear in this era, when community is poorly defined and understood. Which power

paradigm best supports the common good? A traditional, top-down, hierarchical model, one that is based on power from the bottom up, or one that incorporates some of both?

These power paradigms also have implications for the future of groupware, Gill believes. "If my paradigm is one of scarcity — that the only way for me to increase my power is to take it from you, then groupware doesn't have a bright future," said Gill. "But if I view that I have an abundance of power and that it is related to the success of the group, then I have a power paradigm that is supportive of groupware."

These two basic views of power will determine not only the future of cooperative, networked computing, but of mass media as well, according to Gill. The ironic consequence of the rise of mass media, Gill believes, has been a rigid centralization of knowledge and its dissemination. "CNN and network news is one-way, top down," said Gill. "Normal people can't get on it or determine what it covers. The barrier to entry in standard media — books, radio, TV — is enormous." The result has been an American voting public that is increasingly passive, withdrawn and cynical. It has also promoted a sense of powerlessness among many segments of the population, as well as ever decreasing voter turnouts on election day. According to Gill, people who make \$8000 a year (the current minimum wage) vote less than 40% of the time, while those who make \$50,000 vote in over 70% of local and national elections.

Breaking Down Barriers to Entry

Yet there is a chance that this trend could be reversed through new participative forms of computer communications. If these systems are successful, argues Gill, Americans could be drawn back into the process of government. "What we're seeing with participatory computer networks," said Gill, "is that everyone is a player. What's the barrier today to becoming a multimedia computer sender and receiver? \$5000. For that, I can broadcast my news and my point of view. I become an active contributor rather than a passive consumer of news."

Gill believes that the rate of increase in knowledge production is related to the increase in cultural complexity and the decrease in knowledge centralization. "In the Dark Ages, for example, there was tremendous knowledge centralization — mostly in monasteries — and not very much cultural complexity. During the Renaissance, when knowledge became much more decentralized, you saw more knowledge production and more cultural complexity."

Participatory computer networks enable decentralization of knowledge production on a great scale, and they allow for a non-linear integration of local knowledge with global knowledge. Computer users talking with others around the world on topics of common interest will create an interwoven collaborative understanding that is unprecedented.

Yet the government faces a difficult task in trying to coordinate and build a suitable infrastructure for transporting all this information. Compounding the problem is the expense and current lack of practical applications for many new technologies. When Gill talked about the possibility of two-way video links to "attend" a far-off grandson's birthday party, Gill was asked by a member of the audience: "Two-way video is extremely expensive. What other use is there for this enormously expensive technology besides birthday parties? What can this do that other types of information can't do?"

Gill replied that the true benefits of the information superhighway will probably not be felt for some time. "If you'd asked this same question about the automobile in 1910, people wouldn't have been able to tell you what it could do and how it would transform society."

Developing the Common Good

Gill likened the information superhighway dilemma to that of building the interstate highway system in the 1950s — no one was quite sure what the long-term benefits would be, yet there was a sense that it should be done. Advisory board member

Alan Kay noted also that the Cold War gave Americans a built-in incentive to support projects that would have a long-term benefit.

"There's no longer an external organizing principal scaring us into acting on this," said Gill. "There's an economic threat, but there's not the fear of annihilation that we had during the Cold War. There's no doubt that the interstate system was good for the country. Yet suppose it had never been built and I went to Congress today and said I need \$100 billion for an interstate highway system. Do you think I'd get it?"

"Too often we let greed and short-term gain take precedence," he added. "What are the requirements for cooperation? There must be a sense that the accumulated benefit in 20 or 30 years is far greater than any current incremental cost to cooperation. You need to look at cooperation around groupware in terms of that broad horizon, too."

To achieve this long-term cooperation, community diversity is also an issue. "If the community is completely homogeneous, it's crystalline and there will be no tolerance for change or ability to adapt to change. If the group is completely diverse, there's nothing to bind it together at all. But if you have a good mix, you have a chance to gain that needed cooperation."

If groupware is successful, said Gill, traditional marketing of products will change radically. The mass media approach to "brands" will gradually be replaced by a concept of brand as a one-on-one relationship between consumers and companies. "Brand is a product of top-down, one-way communication," said Gill. "I spend millions of dollars on TV ads to build brand awareness so that people will become loyal consumers of my products. In the future, companies that reliably deliver quality products to the consumer will build an individual relationship with the customer, and that will become the brand. The mass market will become a market of one to one."

Indeed, in the future, consumers will have a choice as to whether they receive advertising or not. This means that the emphasis of advertising will shift from blanket messages directed at a general audience to providing truly useful, specific buying

information. "If I'm in the market for a stereo, I can elect to have stereo ads sent to my house and receive them until I feel I have enough information to make a purchase," said Gill. "Then I'll stop getting the ads."

The End of Traditional Political Brands

Just as brand names for products are threatened, so too are traditional political "brands." "These days there are people who are fiercely moralist, others who are fiercely libertarian, others who are fiercely business oriented, and others who are fiercely environmentally oriented," said Gill. "There are also a few diehards who call themselves Republicans or Democrats because that's what they've always called themselves. But the branded section of the political spectrum is evaporating."

"Part of the reason we're seeing so much turmoil on the political scene," added Gill, "is because we're having to reinvent the ways we look at politics." The traditional reliance upon stasis and certainty in societies is going away forever, Gill believes, and the current upheaval is reflective of the shift that is occurring to a view of the world that accepts ambiguity and contradiction. "We have had 100 years of the most remarkable scientific discoveries," said Gill. "But it's like the snake that swallowed the rat. This vast chunk of scientific information is stuck in our culture's throat and it hasn't been smoothed out throughout the entire body of the culture yet."

Assuming that there is enough cooperation to build a truly efficient information superhighway capable of capitalizing on many of the more recent technological advances, Gill believes that the political implications of such a system should be thought out carefully — and early. "The technology will be incorporated into the political process whether we like it or not," he said. "What we don't want is a system dominated by the instant plebiscite. That's a tool of dictators. How do you prevent the slickest snake oil salesman from gaining instant popular support?"

"The New England town meeting wasn't perfect because it tended to favor landowners, but it was clear that the process worked well. They would meet in small groups to discuss a preliminary agenda and then meet as a large group to act on it. So if 'process over time' seems to be what's required for our form of government, how do we avoid the instant plebiscite?"

Meanwhile, Gill believes there must be a way to provide all segments of the population with access to computers, which is now restricted mostly to those who can afford to buy them, or schools that can afford to buy enough to stock a computer lab. "Free use of computers is like a free press," he said. "I think we need T-1 lines into every school in the country so we can get a knowledgeable, informed electorate.

"Why did we mandate public education in the first place? Because we couldn't run an industrial economy with illiterate people. How can we run an information economy with information illiterates?"

Fortunately, said Gill, computer literacy is growing, especially among children. "Kids today take graphical browsers for granted. By the time they hit the political scene the use of computers in the electoral process will be second nature to them."

Vanguard advisory board member Alan Kay argued that America is already wired. "Wiring everyone up looks like a solution, but it's not unless Americans can begin to deal with complex discourse," he said. "We're already wired up in a sense, and it's in the form of our national library system. People already have access to all the information they need. But if they aren't willing or able to deal with it, it doesn't have much impact."

The White House on the Internet

Whether the information superhighway will have the kind of political and social impact that its backers predict remains to be seen, but the process of connecting up with the electorate has already begun. Citizens now have Internet access to The White House and top government officials. When users call the system through Mosaic, they see an

introductory color slide with the Presidential seal and President Clinton. A recorded message from the President is heard, and the user has a box to send an e-mail message directly to the President's office.

As the system develops, users will be able to access each major administrative branch of the government, where there will be an introductory slide showing the Cabinet head (Lloyd Bentsen for the Treasury Department, for example) and pictures of the staff. Clicking on their pictures brings up biographies of the staffers and descriptions of their responsibilities. When the system is fully operational in the next few years, users will be able to search through the hierarchy of each department to find the person they want to speak to and leave an e-mail message for them. Right now, the system receives about 5000 e-mail messages per week, but that number will grow as the system evolves, Gill believes.

The long-term goal of the project, concluded Gill, is to create what he called a "citizens' handbook," an interactive system that enables computer users to access daily bulletins from the White House and send specific messages to their representatives. Gill is also hoping that an on-line system can be created that will enable the delivery of information concerning jobs and benefits into the living room, easing the bureaucratic burden on government employees and citizens who are frustrated in their ability to access — and deliver — services.