Discord or Harmony:

Culture and Technology

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ACCESS *by Design*

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Introducing any new tool into an organization or community can change the way people do things, but the transformative effect that computers and digital technologies are having on our society has few parallels in human history. Some groups find that the new technologies support their culture's traditions, values, and ways of interacting, while others worry that they will threaten established patterns and beliefs.

People we talked to[1] seemed to find it helpful to examine how the introduction of technologies, whether digital or mechanical, might be consonant with or conflict with the values of their culture, community, and organization. For some, being invited to talk about these issues enabled people to discuss concerns they hadn't yet articulated, or hadn't considered to be part of the "technical talk" of a technology planning process. For others, particularly the Native American groups we consulted, reflecting on the potential impact of the "white man's technology" was already high on their list, although they may not have discussed these issues outside of their communities.[2]

Our purposes here are to share others' stories in the hopes that they may suggest areas of consideration for your group, and to help you think concretely about how the introduction of technology might affect the way you organize, act, talk to each other, and do things together.

[1] We visited more than 50 communities and organizations across the country, interviewing community leaders and community members, both young and adult, and conducting focus groups and community conversations.

[2] Their stories dominate this piece because they were the most proactive about raising issues about the relationship of technology to culture. Other groups were also vocal, such as El Puente, which works to support the development and sustainability of the Williamsburg, Brooklyn community and the Dominican and Puerto Rican cultures within it.

Definitions of "Culture"

There are many definitions of "culture," and the term has multiple references in everyday language. We may be talking about a racial or ethnic group (e.g., "Latino culture"), a group of people engaged in similar activities (the culture of jazz musicians), a geographically defined neighborhood (the culture of the South Side), an institution (organizational culture), or the messages and media of the society at large (mass culture). Sullivan (1989, p. 244) defines culture as the "shared understanding of people in like circumstances," and these shared understandings may be around such areas as:

- Values, traditions, and beliefs
- Norms and expectations people have of one another
- Patterns of communication and interaction
- The division of roles and responsibilities
- Modes of collaboration and cooperation
- Structure, hierarchy, status, and who has formal and informal power and influence
- Codes of behavior, ethics, and sanctions
- Allocation of resources.

Technology, whether we are talking about simple tools or digital equipment, is not neutral. It is designed by people who are part of a culture or cultures. As such, it reflects assumptions about some or all of the elements of culture we've just listed, and those assumptions may favor some groups' preferred modes over others'. As with any innovation or new piece of the "material" culture, introducing technology is likely to change things and to have consequences, some of them unanticipated.[3]

The way in which the technology is used is bound up with the way that people do things in a particular culture. A member of the Gila River Indian Community in Arizona talks about "getting culture around the idea" of technology. If you drive a piece of technology called a truck in a rural area, he says, "you better know how to get out of the mud and

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[3] See *Human Problems in Technological Change* (Spicer, 1953) for a fascinating review of case studies of technological innovation intended to promote economic, agricultural, and community development.

how to trench." And if someone else's truck is stuck in the mud, you stop to lend a hand, "because you might need him to help you tomorrow." The norms surrounding how you use your truck are as important as operating the truck.

The new technologies afford opportunities to support and sustain cultures as they also have the potential to cause damage and division. In the following sections, we discuss some ways in which technology is being used as a deliberate means of cultural support, examples of how technology has changed cultural patterns, and ideas for discussion.

Technology and Communication

Technology affects how people gather, talk, and work together. It can increase—or decrease—the connections among people, and change the nature of those connections.

Staff of the American Indian Community House in New York City talk about how the Internet can be used as a "medium to unite and organize dispersed Native peoples around the world." For the Oyotunji African Village in South Carolina, whose mission is to restore pre-colonial tradition, knowledge, and dignity to people of African descent around the world, "The whole restoration process is about re-educating people that Africa is not the dark continent as it was popularized early on." Technology allows them to broadcast widely and have a global reach, which just a few years ago would have been an impossibly arduous and costly process for a small community with limited financial resources.

The new technologies make it possible for people to communicate and collaborate without being in the same place at the same time. That is, conversations can be "asynchronous." This is often a great support to building a community of affinity and action: the Reverend Willie Gable of the Progressive Baptist Church foresees the day when his African American congregation will be connected to others, and he will be instructing parishioners not to "open your Bibles," but to "turn your Bibles on."

In a culture that values in-person contact and makes decisions through actual physical meetings, people wonder what virtual contact will do to relationships of interdependence and influence. The director of an arts program for young people in the Bronx worries from the perspective of the culture of artists:

> *For us in the arts, the word communion is really important. It's really important for us to be able to share with someone face to face, to be able to respond off of someone. The computer is very isolating. It's very difficult to have a satisfying exchange in the same way that a face-to-face exchange can be satisfying. For me, that's a huge obstacle to moving ahead with the technology.*

In the Oyotunji Village, established in 1972 and built, literally, from the ground up, introducing basic water technologies affected the process of "communion" and interaction. As a young woman from the village described it:

> *Before we had running water, everybody had to go the pump and that was communicating socially. Now people can do everything in their house so they don't have to come outside and meet everybody else. So I guess that technology hurt the communications.*

Technology and Cultural Preservation

The new technologies ease the processes of documentation, compilation and archiving, reference, and dissemination, so groups can more readily capture oral languages and disappearing traditions in ways that can be shared and used. Language preservation is a focus for many indigenous groups in this country and around the world.

The potential of the technology to revitalize traditional practices is attractive as well. As Gilbert Innis, who directs education at the Gila River Indian Community in Arizona observes:

You find people from outside, native people wanting to come back, who want to participate in this culture and they have no way of doing it. I talked to one fellow who was trying to do a traditional ceremony, but he didn't know how because he had been off the reservation for a long time. He said he wished there were a CD to show him how to turn and enter the hogan and all the things he needed to know. The person was looking for a technical solution for a cultural problem.

The increased cross-cultural contact afforded by the global connections of the new technologies can also bolster cultural identity and connection. Innes says, "If you really want to know about your ethnic group, you almost have to look at another group and experience them as much as you can, so that you can compare, contrast, and really show, 'This is who I am; this is where my people come from.'"

The new media and the World Wide Web afford a vehicle for the expression of culture and diversity. Anyone and any group can develop a website and there is a cacophony of wonderfully variegated voices and images now on the Web. The medium is dynamic and nonlinear. You can enter in multiple ways, and travel through links of your own choosing and interest. Different approaches to telling stories and presenting information can be readily supported.

There are cautions associated with the use of technology, however. The dominant language of the Internet is English, for instance. That dominance privileges those whose first language is English, and disadvantages those cultures that use other than the Latin character set.

Putting traditional ceremonies and stories into digital format can be a concern as well, especially if digitizing makes it more difficult for a group to protect its heritage. Says Innis,

We are trying to revive our language because we have lost a lot of it. So we are putting our language on the computers, but some of the tribal elders are saying that this is another way that the white man is going to steal our language.

Technology can contribute to the destruction of cultures as well as their preservation. It is important to recognize differences in power and influence between those introducing the technology and those "receiving" it. Darrell Waldron, director of the Rhode Island Indian Council, talks about reactions to technology among his constituency:

> *Most of them are very negative about technology. Technology was one of the means by which they were defeated. The European population that came there had better technology, and utilized that technology against the Indian population. So that's one issue—an inherent mistrust of the system and a feeling that the technology is a means to better track them down, better figure out where they are, to be able to isolate them and keep them down. I've heard Indians refer to technology as the Devil's Ouija Board.*

What Can Community Groups Do?

Given the multiple definitions of culture and the complex, multicultural society in which we live, most of us belong to and participate in more than one culture. Community organizations may represent the interests and serve the needs of a particular culture, or may be the meeting ground for many. They also often mediate between their constituencies and the larger society.

Community organizations can help to promote involvement in decisions about technology access and to ensure access for all to the technologies that are of service rather than disservice. They can serve as a locus for discussion. They can help members of different groups to identify what is important to them and their cultures, voice their concerns and desires about technology's impact and effects, and bring those concerns and voices to policy and industry decision makers. They can be a means to help designers of technology and technology policy to understand the public's views, in all their diversity.

If you are concerned about the cultural impact of technology, you may want to

- Reflect on and articulate the elements of your community or organization's culture(s), and then explore how the introduction of new technologies might affect those elements.

- Consider the effect of new technologies on traditions and beliefs, norms and expectations, patterns of communication and interaction, modes of collaboration and cooperation, and the overall environment and atmosphere.

- Think about the technologies you currently use, and the degree to which they do or don't reflect your cultural values and designs. For example, in a culture where people do not interrupt one another in discussions, do you have an intercom system that makes announcements only at scheduled times, or does it continuously intrude in ways that would not happen in face-to-face interaction?

- Consider the kinds of new technologies you might introduce and what some of the effects on your culture and social organization might be. What are the opportunities that the technology might afford? What kind of interaction or activity might it inhibit? Highlight what you don't want to lose or change, and what you'd be just as happy to get rid of.

- Finally, think about whether there are areas in which you might want to take more concerted action to protect your cultural values in face of the changes that technology might introduce.

Reflection can help you be more deliberate about your choices. When you take the time to think about potential effects, you can turn some "unanticipated" consequences into anticipated ones. Obviously, there will always be outcomes you can't foresee. But when groups come together to discuss these questions, they may find that it allows them to articulate and underscore what is important to them. In so doing, they may strengthen their culture and make considered decisions about how to use technology well, in service to community.

About Access by Design

In 1996, Education Development Center, Inc./Center for Children and Technology, the American Association for the Advancement of Science, and Campbell-Kibler Associates, Inc., began a research and action project about the equity issues in technology. We conducted interviews with community leaders and organizations in more than 50 places across the country, in small and large cities, in rural areas and Indian reservations, with people from a range of ethnic, language, class, and racial groups. We spoke with people with disabilities and disability rights advocates, representatives from industry, community leaders and activists, youth workers and educators, funders and policymakers. We worked closely with a number of community-based and national organizations to examine the issues related to technology access, including how technology is designed and how well—or poorly—it serves diverse communities. Our partners included the Progressive Baptist Church in New Orleans, the Rhode Island Indian Council, El Puente in Williamsburg, Brooklyn, the Oyotunji African Village in South Carolina, the Accommodation Resource Center at the University of Nebraska–Lincoln, the Young Scientists Club in East Harlem, New York, the Collaborative Visualization (Co-Vis) project of Northwestern University and their afterschool career program at the Kelly High School in Chicago, and the Innovation Center for Community and Youth Development of the National 4-H Council.

The work began much earlier, however, among educators and activists in a variety of settings, including the Center for Children and Technology (CCT), established in 1980 at Bank Street College of Education and now part of Education Development Center. In pursuing how the new computer technologies could best support teaching and learning, researchers at CCT became aware of inequities in access and decisions about design that favored some groups over others, noticing first the gender issues and subsequently race and disability concerns. Yet even by 1996, relatively little attention and few resources were being dedicated to these concerns.

Access by Design was an attempt to gather together educators, activists, policymakers, and industry representatives to build awareness and action for increased equity and diversity in technology.

The products from this effort include materials for community leaders and organizations, as well as a report and action agenda based on the interviews, meetings, and policy efforts conducted from 1996 through the beginning of 2000.