A Case Study of a Community Technology Center in the Dual City

Historical inequalities condition new social developments. (1) In virtually every society at the dawn of the 21st century, polarities of income, class, color, and space are translating into a digital divide. (2) This divide is between those who can access and use phones, computers, and the Internet and those who cannot. There are economic, cultural, and also spatial dimensions to this divide, because, for example, the lower income inner city community is excluded structurally and physically, living in unmarked but well defined neighborhoods with different or fewer resources.

Digital divide measures usually focus on individual or household access. However, the digital divide also involves social applications of technology together with the content of networked information. Government surveys provide the most authoritative data to date on access. United States government statistics indicate household rates of access as: telephones 94.2%, computers 51.0% and Internet access 41.5%. At the highest income levels (annual household income of $75,000 or more) computers are in 86% of the households, with little difference between Blacks and whites at this income level.

But on the whole the digital divide is also a color divide, or as the U.S. Department of Commerce put it in 1999, "The digital divide is fast becoming a ‘racial ravine.’" (3) The current gap between Blacks and whites can be seen in 2000 household rates: 46.1% of all white households have Internet access, as against 23.5% of Black households. (4)

In addition to home and work, people access computers and the Internet in public settings such as government institutions (e.g. libraries and schools), commercial enterprises (e.g. copy shops and private business schools), and other venues making up the public sphere. (5) We call this public computing: public access to and use of information and communications technology. The community technology center (CTC) is a generic name given to a computer lab open to the public. Especially with recent government and private funding, CTCs are multiplying. They have formed into associations, often funding related, at the local, state, and national levels (table 1). Toledo, Ohio, the location of this study, is typical, with three associations at work, sometimes in coordination. (6)

Table 1. Community Technology Center Associations: Toledo, Ohio, and US, with Excerpted Mission Statements		
LOCAL	Coalition to Access Technology and Networking in Toledo (CATNeT) • Founded 1996 • 22 members	... to contribute to the empowerment of low income citizens and community-based organizations by providing or facilitating access to the technological tools that are more routinely available to our community's more affluent citizens and organizations.
STATE	Ohio Community Computing Centers Network (OCCCN) • Founded 1995 • 39 members	... dedicated to expanding access to technology in Ohio's low-income communities. ... Supports the efforts of centers that provide free public access to computers and the Internet for members of their communities.
NATIONAL	Community Technology Center Network (CTCNet) • Founded 1990 • 450+ members	... provide opportunities whereby people of all ages who typically lack access to computers and related technologies can learn to use these technologies in an environment that encourages exploration and discovery and, through this experience, develop personal skills and self-confidence. ... offers resources ... [to] facilitate telecommunications, print, and in-person linkages enabling members to benefit from shared experience and expertise. ... a leading advocate of equitable access to computers and related technologies; it will invite, initiate, and actively encourage partnerships and collaborations with other individuals and organizations that offer resources in support of its mission; and it will strive, in every arena, to bring about universal technological enfranchisement.

The actual development of public computing labs far exceeds the membership of the various associations. Preliminary results of a census of public computing in Toledo indicate numbers exceeding 120 sites, and generally for every competitive funding opportunity applicants far outnumber grant recipients.(7)

Theoretical framework

Our general research focus is on community technology centers in urban poor communities, especially communities of color. Our specific research question for this paper is this: How does social capital structure power in a community technology center (CTC) and influence its programs and

effectiveness for local residents? (Social capital, as we shall discuss below, describes the social relationships, expectations, obligations, and norms that facilitate productive human activity.)

Historical context

This research question is anchored in theoretical concerns about how the organization of society establishes the context for and conditions the sustainability of the African American freedom struggle. We are interested in how public computing can play a role in this freedom struggle. This struggle has been the theme of the Black experience, involving the dialectical interplay of social forces internal and external to the Black community. This dialectic is sometimes hidden under the ideological banner of nationalism versus integrationism, but the objective dynamic is that all organizations and movements of the Black freedom struggle use resources from both internal and external sources, as well as face obstacles from both as well. The success of an organization or movement depends on its resources being more powerful than the obstacles it faces.

Thus the two concepts of community and power are the main foci of the scientific literature that sets the context for our research question. Citing this literature, we formulate a theoretical framework for the case study and provide the basis for interpretation of our results.

The African American community is rooted in a history of struggle. (8) It came into being as the result of the global expansion of capitalism by means of four centuries of the slave trade. It has experienced three fundamental historical stages: slavery, tenancy, and industry. Each of these stages has ended and transitioned into the next based on disruptive processes: the Atlantic slave trade, the emancipation process from slavery, and the mass migration from the rural agricultural south to the urban industrial north. Beginning in the 1970's, another disruptive transition became apparent, as suggested by the new concepts used to describe the crisis: unemployment became structural and permanent unemployment, homelessness emerged, stagflation, etc. The economic expansion and political expansion of democratic inclusion that lasted from World War II through the 1960's was ended and a reversal began.

Table 2. Structural Parameters for Black Middle Class Advancement, 1950-1990

Expanding Economy	Politics of Reform and Transformation: -	Politics of Reform and Transformation: +
+	1950s	1960s
-	1980s	1970s

In his study of the Black middle class, Landry suggests a conceptual map of decades (table 2). (9) The 1950s was a decade of expanding economics but an absence of reform politics. The 1960s ushered in reform politics on top of economic expansion, and the Black middle class grew and advanced. In the 1970s, reform politics continued but the economy stalled; the Black middle class held steady. The 1980s, with neither an expanding economy nor reform politics, was another decade of relative incremental growth of the Black middle class. This meant that the 1960s saw an unprecedented and short-lived growth of the Black middle class.

Community Context

The 1970s and 1980s also produced unprecedented poverty in the inner cities of the United States. Wilson advances three concepts that sum up changes in the social organization of Black community life during this time: social buffer, social isolation and concentration effect. (10) These concepts capture the crisis facing Black people being marginalized through the birth process of the information society. Wilson states his argument:

“I believe that the exodus of middle- and working-class families from many ghetto neighborhoods removes an important "social buffer" that could deflect the full impact of the kind of prolonged and increasing joblessness that plagued inner-city neighborhoods in the 1970's and early 1980s. ... Thus, in a neighborhood with a paucity of regularly employed families and with the overwhelming majority of families having spells of long-term joblessness, people experience a social isolation that excludes them from the job network system that permeates other neighborhoods. ... The social transformation of the inner city has resulted in a disproportionate concentration of the most disadvantaged segments of the urban Black population, creating a social milieu significantly different from the environment that existed in these communities several decades ago.” (11)

As a result, the last quarter of the 20th century gave rise to a new Black middle class and a new-impoverished class.

The old Black middle class contained entrepreneurs, service professionals, and farmers. The new Black middle class has almost no farmers, and the service professionals have become overwhelmingly employed by the state. Over 70% of Black women with college degrees and 50% of Black men with college degree work for government. (12) This process started during Reconstruction after the Civil War, when government employment was the main avenue open to Black upward social mobility. It continues today as affirmative action applies only to employment in the state and in those private firms with government contracts.

While charting the main feature of what he calls the "network society," Castells analyses unprecedented urban poverty on a global scale. He argues that the new impoverishment and social exclusion is a systemic feature of this period.

This widespread, multiform process of social exclusion leads to the constitution of what I call, taking the liberty of a cosmic metaphor, the black information holes of informational capitalism. ... Social exclusion is often expressed in spatial terms. The territorial confinement of systemically worthless populations, disconnected from networks of valuable functions and people, is indeed a major characteristic of the spatial logic of the network society. (13)

Elsewhere, applying this analysis to the United States, he describes the informational city as a dual city.

By dual city, I understand an urban system socially and spatially polarized between high value-making groups and functions on the one hand and devalued social groups and downgraded spaces on the other hand. ... The power of new information technologies, however, enhances and deepens features present in the social structure and in power relationships. (14)

In this context we apply the concept of social capital to the inner city African American community. (15) Social capital, contrasted with physical capital (e.g. machines) and human capital (e.g. education), describes the social relationships, expectations, obligations, and norms that facilitate productive human activity. (16) Putnam measured U.S. social capital over the 20th century.

Collecting longitudinal data on American participation in all sorts of organized groups, he found that since roughly 1960 there has been an across the board decline in social capital. His thematic metaphor is that people used to bowl in organized leagues, and now are "bowling alone."
Putnam makes a distinction between bonding social capital, relationships within a group, and bridging social capital, relationships that link a group with others. These two types of social capital together make up the social capital of any given social group.

Bonding social capital is good for undergirding specific reciprocity and mobilizing solidarity. Dense networks in ethnic enclaves, for example, provide crucial social and psychological support for less fortunate members of the community. ... Bridging networks, by contrast, are better for linkage to external assets and for information diffusion. ... Moreover bridging social capital can generate broader identities and reciprocity, whereas bonding social capital bolsters our narrower selves. (17)
The distinction between bridging and bonding social capital plays a particular role when a community lacks key resources, for instance, money.

[A]mong the disadvantaged, "bridging" social capital may be the more lucrative form. All told, people in economically disadvantaged areas appear to suffer doubly. They lack the material resources to get ahead, and they lack the social resources that might enable them to amass these material resources. (18)

Discourse

The concept of the public sphere has been debated since its historical exegesis from European intellectual history by Habermas. (19) The pubic sphere is a social ecology for relevant discourse that shapes policy, public opinion, and the dominant intellectual themes of an era.

Dawson critiques Habermas in such a way that we can connect Putnam to our focus on the dual city. (20) Habermas concludes that the public sphere of capitalist society is a bourgeois phenomenon, but Dawson utilizes a concept from feminist theory to argue that the Black community has always had a "subaltern counterpublic" as the social basis for resistance.

An independent Black press, the production and circulation of socially and politically sharp popular music and the Black church have provided institutional bases for the Black counterpublic since the Civil War. (21)

After articulating an analysis of the same economic transformation discussed by Landry, Wilson, and Castells, Dawson states:
“[T]he ideological and political restructuring that accompanied this transformation was decisively accomplished in the 1980s by a number of extraordinary conservative regimes including those of Margaret Thatcher, Helmut Kohl and Ronald Reagan.” (22)

He then asks what continues to be a relevant research question in and after the same period discussed by Landry, Castells, and Wilson:

“The question before us becomes, what is the basis in the 1990s for restructuring an oppositional subaltern public in the aftermath of a rightist backlash of historic proportions. “(23)

In sum, our approach to community examines the dual city (Castells) for social capital (Putnam) in the socially isolated Black inner city (Wilson) to produce a Black counterpublic sphere (Dawson) by means of a community technology center.

Social Movements

Morris analyses the institutions that the Black counterpublic relied on during the civil rights movement in a case study of the Montgomery, Alabama, bus boycott movement in the 1950's led by Martin Luther King. (24) He employs an "indigenous perspective" use of resource mobilization theory to define the Black movement:

Resource mobilization theory emphasizes the resources necessary for the initiation and development of movements. They include formal and informal organizations, leaders, money, people, and communication networks. (25)

Landry describes how the Montgomery movement was led by a young middle class minister, Martin Luther King Jr., but was sustained by poor Blacks of the city, domestics, garbage collectors, and unskilled laborers as well as Blacks of other classes. (26)

Landry's data on this broad-based mobilization supports Morris in arguing the primacy of internal resources.

Morris anticipated Putnam's distinction between bonding and bridging social capital.
The basic resources enabling a dominated group to engage in sustained protest are well developed internal social institutions and organizations that provide the community with encompassing communication networks, organized groups, experienced leaders, and social resources, including money, labor, charisma, that can be mobilized to attain collective goals. ... The significance of outside resources, in this view, lies in the help they can give in sustaining movements. However, our evidence suggests that they are not a causal determinant. (27)

Cyberpower

Jordan advances the notion of cyberpower and identifies three interrelated regions of cyberpower, "the individual, the social, and the imaginary." (28) Cyberpower—the effect of online activity on power—can be measured and mapped. We use three definitions of these types of cyberpower:

- individual: gaining skills and connections for oneself
- social: gaining skills and connections for a group
- imaginary or as we renamed it, ideological: gaining skills and making connections in order to advance the imaginary: a vision, a movement, an ideological purpose.

Jim Walch argues for a research agenda in this area:

A new, 'wired' political community is emerging, a net-polis. The contours and nature of this political community are only in formation, nebulous. The task of research is to study what is happening, why, and what possible patterns might emerge. A major concern—for politicians, scholars and citizens—is maintaining democratic values in cyberspace: equal access, responsibility, representativity, public control and accountability. (29)

There is an emerging research literature on the community technology center. Researchers with the Educational Development Center have documented that users of CTCs gain computer-related job and job-hunting skills as well as advances in the areas of employment, learning, increased confidence, and sense of community. (30) Breeden et al found that CTCs are popular with all ages, provide a wide variety of benefits, but offer management and sustainability challenges to their operators. (31) The Department of Commerce has published three dozen case studies of CTCs funded by their Technology Opportunities program (formerly TIAAP). (32)

Somewhat in advance of the nationwide spread of CTCs, a sequence of studies by Bertot and McClure (with others) quantified the continuing expansion of public computer access across the nation's public library outlets. (33) Lentz et al observed computer users at seven CTCs and public libraries and found that environmental factors such as layout and staff behavior can structure access to technology in ways that sometimes discourage users. (34) From a background of building and studying community networks as well as CTCs, Bishop et al outline design recommendations for technology literacy projects in low-income communities: a community-wide approach, reliance on native talent rather than outsiders as staff, working through existing human networks for outreach, and adopting a "discovery" approach to educational goals. (35)

CTCs elsewhere in the world can also be found in the research literature. Relating to evaluation, Hudson has proposed a telecenter typology, which includes a range of services (phone, fax, computers, Internet, print matter, training, copying, design and research services) reflecting the developing world's simultaneous leap into all forms of telecommunications. (36) In the U.K., the PAT15 report, issued by one of the Policy Action Teams reporting to the government's Social Exclusion Unit, reviewed progress in community technology to date and recommended that by April 2002, "each deprived neighborhood should have at least one publicly accessible community based facility to complement any home access." (37) Gurstein and Loader (38) are among those who have identified community informatics as a strategy whereby information technology helps develop communities as well as individuals.

The global construction of the Internet has led to cyberpower as a tool in the fight for human survival and freedom. Marginalized and socially silenced groups have used information technology to build support and global media attention. (39) This includes East Timor, Nigeria, Congo, Yugoslavia, and South Africa. Three particular examples illustrate high levels of bonding social capital utilizing information technology to escape social isolation and leap into connectivity with a global abundance of bridging social capital.

1. Wilmington, North Carolina (40): Faced with a demolition/reconstruction plan that threatened their apartments and their community, residents of the Jervay Place public housing project purchased internet service for computers already in use in a resident training center and expanded their library-based research to include listserv participation and email communications and the publication of a well-received Jervay web site. With the help of online contacts, they produced a counter-plan for redevelopment of the housing project in the interest of current residents and negotiated their way into the planning process.

2. Chiapas, Mexico (41): Upon the implementation of NAFTA, the Zapatista National Liberation Army came out of the jungle and took over a series of towns in the state of Chiapas in order to make indigenous voices heard at the national level. Friends and reporters posted news about the Zapatistas on the Internet; more than a dozen support web sites and listservs were set up, in various languages. Once the Zapatistas and their allies began to use the Internet directly, they were able to mobilize 7,000 people from around the world to two conferences held in Chiapas and in Spain and to continue to provide "counterinformation" sidestepping local news blackouts.

3. WTO (42): The 1999 WTO protests in Seattle were the results of email mobilizing, and the Seattle Independent Media Center posted on the web moment-to-moment reports on the demonstrations and the police response. The resulting global visibility fueled subsequent protests, workshops and teach-ins. Indymedia.org, which received 1.5 million hits during the week in Seattle, now has 30 local spin-off sites. A16, which organized counterevents to the Washington D. C. IMF/WTO/World Bank meeting, can perhaps best be described as a networked movement center, with listservs, web pages linked to those of cooperating organizations, online donation mechanisms, etc.
Our general theoretical model is summed up in figure 1. Our thesis is that the social capital invested in a community technology center determines its role in the community and the continuing freedom struggle. Community technology center outcomes will be expressed in cyberpower. The overall question is whether social capital and cyberpower are creating a new Black counterpublic in the information society.

Figure 1. Theoretical Model

social capital --> community technology center --> cyberpower

Method

This study is an example of what the African American psychologist Kenneth Clarke called involved observation. (43) In his study of a social action agency in Harlem, New York, he played two roles simultaneously, executive director and researcher. He recruited another social scientist to help him debrief and escape the blinders of his own subjectivity. This is very different from the detachment required of participant observation.

The two authors of this paper are volunteers and board members at the center, involved in planning and implementing programs. We have used our two viewpoints to triangulate towards objectivity. We have also discussed this analysis with staff, volunteers, and other board members.

In addition, we made use of the center's archives, benefiting from cooperation with the center as a whole. The archives include 18 linear feet of papers in files and binders and a number of electronic documents. Part of our work was assembling and inventorying this material for the center: minutes and handouts from board and staff meetings, financial records, day-to-day program records, and program plans and reports. It is testimony to the care taken from the beginning days of the center that staff preserved these records. We also conducted interviews with key participants. In turn, we discussed research findings with board members, staff and volunteers, whose input only helped improve the study.

Historical Narrative

The object of our case study is the W. J. Murchison Community Center, a center which today carries out tutoring, community gardening, support for other community groups, and most of all computer classes and open computer time. The center has 17 PCs and is located at street level on a smaller arterial street in African American central Toledo, Ohio. The community garden is one block away, across from Martin Luther King Jr. Elementary School. Half of the computers are networked to the Internet. An average of 200 people use the center each month, and more than 170 have user IDs for which they paid $5 annually, $10 for families.

According to the 1990 U.S. census, 70% of households in the surrounding area live at or near federal poverty levels and 70% are female headed. Ninety-seven percent of residents are African-American. The area has lost population over the last 40 years. Many of the mostly wood houses, built around the turn of the century, are boarded up. The city has also torn down abandoned houses. Inhabited houses may be broken down or freshly painted and carefully maintained. Yards may be overgrown with weeds or rich with flowers and trimmed hedges. The community is also dotted with vegetable gardens with greens, tomatoes, and an occasional stand of corn.

Nine churches are located within one half mile, more beyond that radius. These churches serve both community residents and people who live in the generally more affluent and newer African-American communities to the west, many of them with ties to the old community. Hair salons, little stores selling candy, soda, junk food, and beer, and "big box" auto parts stores dominate the local economy. McDonalds is the morning coffee spot for older men in and from the community. The absence of a grocery store has been a political issue for some time.

Interstate 75, a major highway linking the southern and northern United States, slices the Toledo Museum of Art away from the community. The museum's programs, for instance, art class scholarships, are not publicized in the area, although the founder Edward Drummond Libbey, a local glass magnate, stipulated that admission to the museum was to remain always free, and built a wing that has long housed art classes for the general public, classes which many older white Toledoans remember fondly.

In 1998, in a well-publicized move against drug dealing, Toledo's mayor declared martial law on a side street next to the center. The police moved in and set up guard stations limiting people's access to their homes and preventing guests from visiting. This prompted a brief debate. After a few months the city removed the concrete barriers and martial law was lifted. In 2000, the federal government allocated over $4 million to gentrify part of the area, continuing a nationwide pattern of de-population preliminary to a (real or promised) return of the middle class to the central city.

Stage One: Church

Bishop W. J. Murchison is pastor of nearby St. James Baptist Church, which he founded in 1967. A retired construction worker and contractor originally from Georgia, he and his wife Sister Dorothy Murchison live six blocks away from the center. She sings and has for many years directed St. James's youth choir as well as a citywide fellowship choir. She is also known for her grassroots fundraising: gospel concerts, banquets, and especially her "brownies" funds (pennies).
In 1992 crack cocaine swept through the area, snatching up many vulnerable individuals of all ages and settling into buildings that became crack houses. Residents saw people lose their cars, even their houses, after falling prey to crack. For Bishop, who had always emphasized the church's ministry to youth, this recalled Ecclesiastes 3:1-8, especially "A time to plant, and a time to pluck up." He

experienced a vision, which was to found a community center. As he puts it, "We were about to lose a generation."

With crack tearing through the families of his own congregation, it was natural to draw together a group of church members to implement his vision. His own niece Deborah Hamilton, saved since her late 20s, was among the group. Bishop also recruited a younger minister Dr. C. E. Reese to administer the effort. Remembering the early days of the center, Sister Murchison references another bible verse, Proverbs 18:29: "Without a vision, the people perish."

In 1993, partly because drug treatment agencies had already set up nearby, the group decided to focus on prevention—agreeing in one early handout, "If the mind is replete with substance of the positive nature, then the need for further stimulus becomes a moot point." Dr. Reese outlined the center's original vision statement: "Awareness ... Education ... Outreach." The center's programs got underway in the basement of St. James Baptist Church.

Programs consisted of counseling, job preparation, and computer skill training. By 1994, there were two donated Wang word processors. When both computers were in use, participants practiced key stroking on spare and unconnected keyboards. In the eyes of Mrs. Hamilton, this was driven by their hunger for education and advancement.

In 1994 Dr. Reese left Toledo, and the board asked Deborah Hamilton to become the executive director. Members recall four reasons: She had a college degree, she knew how to use computers, she had served as secretary of the board, and she was a staunch member of the church.
Guided by Mrs. Hamilton's self-study on organizational development, the board became a fundraising committee. They obtained non-profit status in March 1994, thus moving from under the umbrella of the church to being a distinct organization. In the tradition of the Black church, a series of projects kept bringing money in, several hundred dollars at a time, and the organization always had close to $2,000 saved up. An effort to recruit a grant writer began, and in early 1995 grant writer Ms. Goletha D. C. K. Chestnut volunteered to work with Mrs. Hamilton on two grant proposals for public funding. The first of these was to the Ohio Department of Alcohol and Drug Addiction Services (ADAS) and the second was to the Community Development Block Grant (CDBG) program via the City of Toledo.

By February 1995, the board was so encouraged by the programs and the fundraising that when Bishop suggested for a second time that for $150 the center could rent part of a small building he built and owned on Lawrence Street, they agreed. Moving out of the church was a marker of the start of a second stage in the life of the Murchison Community Center.

Stage Two: State

Although it was rejected, the ADAS grant submission, done in communication with the responsible government agency, was a learning experience for the center, as was the successful CDBG grant. What the center began to learn was how to jump through the hoops set by the government bureaucracy. Once the funding started to flow—$44,000 in 1996, $25,000 in each of 1997, 1998, and 1999—it dwarfed the funds raised through the social networks of the board members, i.e. church members, and defined the terms under which the center operated for the next stage of its life.
For example, the mission statement of the center made no reference to the original vision statement, and was developed by Mrs. Hamilton and Ms. Chestnut with the aim of fitting the requirements of the grant application process. Within a year Ms. Chestnut joined the staff of the City of Toledo Department of Neighborhoods and was assigned for some time as the CDBG liaison to the center.

Since then, she has continued to look out for the interest of the center and provide valued unofficial advice.

CDBG is a program established in the 1980s when so many 1960s Great Society federal funding streams to impoverished communities were cut off. In their place, President Reagan and Congress directed a much smaller amount of funds through the Department of Housing and Urban Development to be doled out by city and county authorities according to federal guidelines. Thus CDBG provided federal funds, but local officials directed the flow.

Another example of an external authority setting the agenda for the center came when Mrs. Hamilton and a few others were working into the wee hours one night on another government grant proposal. They were stumped when it came to writing a needs statement, and read the suggestion "conduct a needs assessment of your community such as by means of a survey." They had never surveyed the community. The grant process used the same language of "needs assessment," so the idea of conducting a survey took hold.

In fact, most of them had been raised or had raised their own children in the community, but the exercise of a survey captured the attention of the center for several months. The board settled on 12 questions and eventually 116 surveys were gathered. It is not clear what use was made of the information, gathered in response to external bureaucracies rather than as an outgrowth of the center itself. Echoing the critique of John Kretzmann and John McKnight, the questions themselves portray the community as a collection of needs rather than a collection of resources that can be mobilized. (44)

When the local CBDG office reviewed the center's 1996 proposal, it recommended that the center partner with a startup Community Development Corporation. CDCs were again a product of the 1980s, which saw an epidemic of homelessness. By the 1990's in Toledo, the city had assigned most inner city districts to various CDCs and the CDCs were taking the lion's share of CDBG funding. This money subsidized them in building and occasionally renovating small numbers of inexpensive housing, and then selling them with great fanfare.

The Murchison Center neighborhood had been mostly left out of the gold rush. Roosevelt Revitalization and Development Corporation and the center were to partner and submit one proposal for 1996. This process again took attention away from the grassroots fundraising that the board had been focusing on, but the joint proposal led by the center was funded and stage two was really underway.

Because Murchison's governance was well established and programs were already underway relative to their partner, Ms. Chestnut, representing CDBG, recommended that the two organizations not collaborate financially after all. Roosevelt would go back to the drawing board. A new term, leverage, came to the board as Ms. Chestnut explained why the city had funded the center. The funds ($44,000) were to be used to leverage other dollars, so that the center would not remain 90% CDBG-funded. The city, the board learned, had funded the center 1) as part of the now-suspended Roosevelt partnership 2) as a fresh effort in census tracts 25 and 26 (which no doubt covered a CDBG gap) and 3) because the grant focused on job development.

Not only did the CDBG office recommend policy directions, but they required a complex of procurement, personnel, program and financial policies, procedures and reporting that the center had to master. One of the most onerous was the process of reimbursement. The monthly activity reports were to include every document produced that month plus a quantitative and descriptive report on

each area of program activity. These reports were required before a monthly check was sent. Then each expenditure had to be documented, every check copied, and together submitted monthly to CDBG. Several weeks later a check would arrive for all approved expenses. Disputed or incompletely documented expenses would be delayed one month or more. In order to provide service the center had to obtain a line of credit, which they did, with the personal assurance of Bishop Murchison and his construction business track record.

Financial administration became particularly difficult given that the payroll and all bookkeeping was being done by a personal contact of St. James, an older gentleman who was in bad health for more than a year, making any change a sensitive matter. By October 1998 the indebtedness ballooned to more than $11,000.

As a result of the reporting requirements, programs were documented like never before, and a monthly number, reflecting the number of people participating in center programs, was reported. The total number hovered around 55 per month during 1997-1998.

As soon as the first CDBG grant began, three new board members were elected and an assistant director and program coordinators, all working part time, were hired. The terms of the grant did not allow for a full time salary for Mrs. Hamilton, so she continued to work a full time day job and volunteer her time to the center, taking occasional payments that just about equaled her travel and incidental expenses. The new individuals were either not members of St. James or were more loosely tied to the church; the staff members, only one from St. James, worked during the day or after school hours rather than in the evening when the board met, so the close personal ties that the board had used to keep the center together began to loosen.

The role of the board changed during this time. What had been an active fundraising committee became a bureaucratic group that approved policies and financial reports without taking action on such things as the indebtedness. Meetings were held almost weekly over 1995 and early 1996; then monthly meetings became the norm. Near-perfect board meeting attendance also became a thing of the past. The 1997 strategic plan, for instance, was the result of just four of 12 board members attending a session with a paid consultant and a representative from the city's plan commission. These two people wrote up the strategic plan.

Accompanying this shift, staff rather than volunteers carried out programming during this time. For example, a children's program that started out with arts and crafts with one volunteer followed by a rap session with another, Mr. Hamilton, was converted into that same volunteer doing arts and crafts as paid staff, with various "guest speakers" following the arts and crafts. With the program carried out as a job rather than a church youth mission, speakers were often absent, and the effect on the kids was not nearly as powerful, because there were fewer ongoing relationships with adults apart from the arts and crafts leader. Eventually the program was arts and crafts only, with the modest supplies and skills of the staff member, who worked days as a security guard.

Computer classes continued over the years, with different projects to buy or get machines donated. The board investigated but then declined to pursue a 1996 opportunity to apply for $80,000 from another CDC to build a computer lab. The reason noted in the board's minutes was "not enough room;" the grant was in fact more complex and with more stipulations than the board or staff was comfortable with. That same night the board adopted a slogan for the center: "Knowledge is Power." It is a curious reflection of the balance of power in the organization: the cautiousness of staff and the determination of the St. James members. Donated computers were obtained in lieu of the $80,000 (peripherals from the local MidAm Bank and four PCs from Owens Corning Corporation) and the

organization connected with a more gradual citywide effort to bring computers into the community known as CATNeT.

CATNeT—the Coalition to Access Technology and Networking in Toledo—formed as a collaboration between the University of Toledo's Urban Affairs Center and a local subsidized housing agency related to the Catholic Church; this agency had won a U.S. Department of Housing and Urban Development Neighborhood Networks grant to build labs at six apartment complexes.

Stage Three: University

In early 1998 a University of Toledo Africana Studies course called the Poverty Seminar invited Mrs. Hamilton to speak. The seminar was discussing the question of "ending poverty once and for all," and made a special effort to look for ways to use computers and the Internet to end poverty and to bring participants up to date on the Web, email, etc. The Murchison Center attracted students' interest as a site teaching computers in a low-income African American community.

Soon after Mrs. Hamilton visited the seminar, the seminar organized a "Day of Dialogue" on "Ending Poverty versus Ending Welfare" and recruited center staff to host a lit table. More than 500 people attended three panel discussions held that day. The locations—a soup kitchen in the Black community, a local farm workers union in the Latino community, and the largest auditorium on campus—attracted a wide variety of people and helped to bond the organizers—the Africana Studies program—and the Murchison Center.

Summing up the event, the seminar decided to approach the Murchison Center about a partnership. The seminar would start meeting at the center and in exchange would contribute some volunteer time to the center and its programs.

While the students collected data about the community, the seminar helped the center in a number of ways. Most of these were summarized in a written letter of agreement between the director of Africana Studies and Deborah Hamilton:

- computerize accounts and train staff in Quicken
- design and help pay for a newsletter
- provide after school tutoring for elementary school children
- send student techs to troubleshoot and teach computer classes

Work on the accounts led to some work on grant proposals, and a university representative joined the board of the center. Data gathered and discussed in the seminar, together with the tutoring experience, led to a focus on mathematics and the proficiency tests.

During this time, other programs of the center ended as staff departed for various reasons. Last to leave were two women who worked or had worked for other social agencies in Toledo. They were each also ministers, oriented towards professional status as social service providers. At the same time they were struggling to make ends meet. Their formality, visible in their dress and comportment, was different from that of the university volunteers. The people from campus were "fresh legs" and brought from the seminar process a sense of mission similar to the church founders. They aimed to partner with poor people rather than deliver services to them. The university group was also more diverse: Blacks, Asians, whites, multiple faiths, experience with national social movements against racism, AIDS, nuclear weapons, environmental pollution, and the death penalty. They were 1960's,

Gen-X, and hip-hop in personal style. Mrs. Hamilton saw the differences but embraced both approaches.

The community research by the students turned up the fact that close to no local elementary students were passing the math proficiency tests, and everyone recognized that math skills are a ticket to high tech, high paying jobs, where African Americans are underrepresented. Moving past the original partnership, UT and the center launched a program of practice testing and tutoring, taking place in the center, the school, and on the university campus. A similarly oriented summer youth program followed. Most of the staff distanced themselves from the partnership without participating in any meetings before they left the center, but Mrs. Hamilton continued to hold the university volunteers in high regard, because of the focus on computers, the resources coming into the center, and the education she was getting along the way. One component of this was a group trip to the Black Radical Congress in Chicago, which was her first exposure to Black Power, to a movement.

The Black Radical Congress gathered together Black academics and social activists to rally African Americans who were critical of the mainstream efforts of elected officials and the conservative orientation of the Million Man March, which opted for atonement rather than activism to change state policy. The main tool used by the BRC in creating this counterpublic has been and continues to be the Internet via listservs discussions involving 15,000 subscribers.

The university's seminar approach carried over into program management. Work was evaluated in meetings that included staff, volunteers and parents. For instance, after discussing various approaches to discipline, the group developed an axiom: "Discipline is a result of engagement." In other words, policing kids who are not interested in an activity was not effective. The kids had to be drawn into an activity that would absorb their attention, the way video games did at home or learning Powerpoint did at the center. This would have to involve reasoning with children and making a convincing case for whatever activity was at hand.

Both administration and programming at the center was changing, but not only as a result of the university involvement. Bishop Murchison was pressing on with building a new center across the alley from the old one, and it was finished in June 1999.

Bishop Murchison invited the director of Africana Studies to give the keynote address at the grand opening, a gathering of more than 300 people in front of and inside the new center. Bishop had designed the facility with a distinct room for a computer lab, and small grants finally came in to allow the center to fill the lab with eight new computers. Slightly used computers were donated by UT, as was volunteer time and a student worker who kept the PCs up and networked. The center also hired three part-timers at wages lower than the earlier staff: two Africana Studies graduate students and a computer-savvy father from the neighborhood who had joined the practice proficiency testing.

In August 1999 the board acknowledged the changes when it added the phrase "community based cyberpower" to the mission statement and added strengthening the nearby school PTO to the center's goals and objectives. Over the next year the board voted in three people who came out of the work, one from UT and two grandmothers.

Fifteen hours a week of computer classes, tutoring in the schools, and practice math tests became the programming. The number of people served monthly climbed steadily from roughly 55 to more than 250 by early 2000. Parents—predominately grandmothers raising grandchildren—were recruited into the tutoring/testing activities and began to help make decisions and implement programs.

Several of them had computers or wanted computers, and an electronic discussion list was implemented via the online service eGroups.

With a free electronic discussion list via Egroups.com and two donated computers placed temporarily at grandmother's homes, four people from campus and four from the community were able to stay in touch and make decisions. An average of 62 messages were posted per month. One third of the messages came from the non-university list members, who were not accustomed to typing or to broadcasting their ideas. A breakthrough came when one grandmother succeeded in using Egroups to assign out tasks for a barbeque. This was done from her home without any direct assistance from others.

The center's computer classes ranged from elementary-Adult Basic Computing-to advanced, particularly when a new UT course, The Black Church, set a requirement that students build a web page for a local church. Cyberchurch, as it came to be called, evolved into a mainstay offering at the center. One of the students stepped forward to teach it.

This did not come without struggle. Board members representing local agencies within the government bureaucracy kept aloof from the center. One expressed strong disagreement with the center's programs. Elements at King School became defensive about new forces in the PTO and attempted to steal the PTO election. A controversy broke out over a passage in a report published by the center, a passage that one grandmother ultimately labeled a "wake up call:"

Year after year … the King Cougars win the city basketball tournament. Last year the team was undefeated, 28-0.

Also last year, no 4th or 6th grade King student passed all five proficiency tests. Nine percent of 4th graders and 7 percent of 6th graders passed the math test.
But with support and study, King students can excel in math just like they do in basketball. The test scores show how much the entire school (students, parents, teachers, administrators, and community) has to change to meet TPS's [Toledo Public Schools] stated goal of 75 percent passing.

A crisis came in spring 2000 when the CDBG grant proposal was 20 minutes late and as a result, rejected. The center's testimony before the city council—delivered by the director of Africana Studies—did not change matters. The center drew strong approval from longtime liaison workers at CDBG, who had read the detailed monthly reports and saw the center's tremendous growth trajectory. New people were brought onto the board and are at work raising funds.

As of now, the watchword at the center is "sustainability," both in terms of funding and in terms of people. The university forces brought a movement mentality to the center that supplanted the professional orientation of stage two. The state edged out the tight group of ideological St. James Church leaders of stage one. The future goal is to move firmly into a stage four, where the broader community itself is in the driver's seat at the Murchison Community Center. At that point St. James Baptist Church, the state, and the university, will all have to move into new supporting roles. The center is now an island of connectivity in the community; as it moves forward it will be poised to become just one station on the modern underground railroad, one node on a network into the information society promised land.

Analysis

The historical narrative of the Murchison Center is summed up in Table 3.

Table 3. Historical Stages of the Murchison Center, 1992-2000: Facilities, Budget, Partners

Stage	Facilities	Budget	Key Partners
Church (1992-1995)	St. James Baptist Church basement, 1520 Hoag Street (July 1992)	under $4,000 per year, raised by grassroots fundraising projects $1,000 or more in account	Roosevelt CDC (local startup)
State (1995-1998)	1610 Lawrence (February 1995)	average $30,000 per year, 90% from CDBG line of credit briefly tops $11,000	CDBG, Lucas County Human Services Department, CATNeT
University (1998-present)	1616 Lawrence (July 1999)	average $35,000 per year, primarily grants, contracts, grants, user fees, small donors	University of Toledo, PASS charter school, Toledo GROWS, OCCCN, CTCNet, Neighbors in Action/TCCN

Each stage is named after the form of social capital making the critical contribution in the life of the center at that time. This has been a cumulative process so at present there are four kinds of social capital on the board: church and community (bonding) and state and university (bridging) social capital.

As noted above, this pattern of social capital is highly suggestive of a broader pattern that has been repeated at various stages of Black community development and the freedom struggle. Innovation takes place based on initiatives generated within the Black community. The state steps in, either to stop what is new or to reconfigure it in line with agency specifications and funding requirements.

This process suggests a process of spontaneity followed by institutional cooptation. For instance, in 1964 the Mississippi Summer Project initiated by the Student Nonviolent Coordinating Committee (SNCC) started a network of "Freedom Schools" to intervene in the early childhood development of poor children. In 1965 the federal government took this project as inspiration for a federal program called Operation Head Start. In this case a state bureaucracy replaced a movement.

Several scholars have studied the intervention of the state to block the new tactics of the 1960s civil rights movement. Doug McAdam found that the state was not interested in advancing the movement but in preserving "public order." (45) Piven and Cloward found that "in the wake of the student sit-ins

and the freedom rides the Kennedy administration attempted to divert the civil rights forces from tactics of confrontation to the building of a Black electoral presence in the South." (46)

The difference in the case of the Murchison Center is the continuity of leadership. Throughout the history of the Murchison Center, continuity insuring the stability and growth of the center has rested on its founder, Bishop Murchison, and its founding institution the church, which has supported the third continuity in the form of Mrs. Deborah Hamilton. Mrs. Hamilton has been executive director, mostly without pay, since 1994. Bishop Murchison has attended 94 of the 107 recorded board meetings.

Attendance at meetings is a solidly documented empirical indicator of social capital. Putnam bases his social capital argument on a decline in attendance:
In short, in the mid-1970s near two-thirds of all Americans attended club meetings, but by the late 1990s near two-thirds of Americans never do. (47)

In table 4 we present data on attendance at board meetings from 1992 to 2000. Note that although not all 1993 and 1994 board meeting minutes were available, complete data on board membership for that period was.

Table 4. Social Capital: Attendance at Board Meetings by Institutional Affiliation, 1992-2000, as Percent of Total

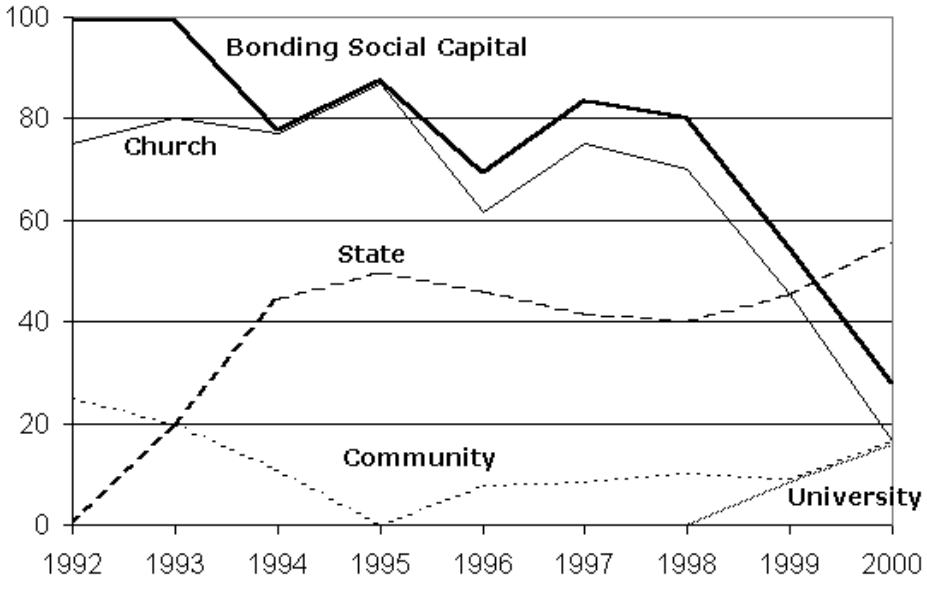


Table 4. Social Capital: Attendance at Board Meetings by Institutional Affiliation, 1992-2000, as Percent of Total (cont')									
Year	1992	1993	1994	1995	1996	1997	1998	1999	2000
Number of Board Meetings	3	2	2	35	20	12	11	13	10
Number of Participants	4	5	9	8	13	12	10	11	18
Each board member was coded twice. First, as bonding social capital (attends St. James Church, lives in area served, or is participant in the center's programs) or no. Second, into one of four categies: Church (attends St. James Church), State (works for government agency), University (student, staff or faculty), or Community (private sector employment, lives in area served, or is participant in programs of center).									

Board attendance is aggregated by the background of the board member and charted from 1992-2000. There is a general pattern consistent with our conception of three stages, basically 1992-95, 1995-98, and 1998-2000. Overall there has been a sharp decline in the relative importance of attendance by board members representing bonding social capital. Church members have been replaced by the state and the university. Part of this is subtle, as three board members are both church members and government employees. One of these individuals works as a claims examiner for the Ohio Bureau of Employment Security; another is a security supervisor with the Lucas County Department of Human Services (the welfare department).

The mission statement of an organization is a good indicator of its ideology. Table 5 below reviews changes to the center's mission statement over the three stages of its history. As noted above, the first statement reflects church language along with the grassroots slogan of "Awareness, Education, and Outreach." The second statement speaks the language of bureaucracy, but the slogan "Knowledge is Power," also adopted during stage two, expresses the orientation of Bishop Murchison and St. James Church, reflecting the historic Black commitment to education and to struggle. Stage three brought a new concept from the technologically oriented poverty seminar: community-based cyberpower.

Table 5. Ideological Development of the Murchison Center, 1992-2000	
Stage	**Vision/Mission Statements**
1: Church	Prevention is designed to focus upon [the] central city [with] Axiology/value ... Metaphysics/reality ... Epistemology/knowledge Awareness ... Education ... Outreach (May 1993)

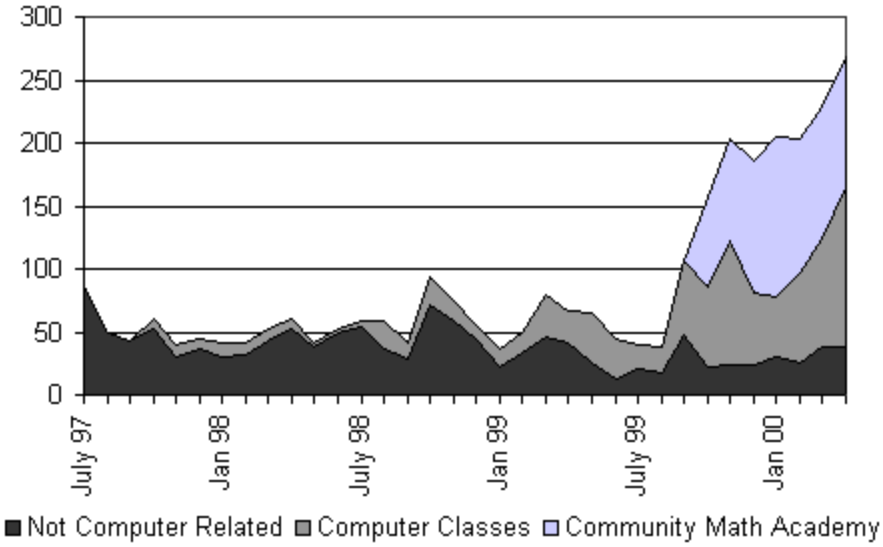
Table 5. Ideological Development of the Murchison Center, 1992-2000 (cont')	
Stage	**Vision/Mission Statements**
2: State	Knowledge is Power (Oct 1996) Our mission is to educate, counsel, and provide the necessary training to alleviate the problems of underemployment, drug/alcohol abuse, peer pressure, and violence. We are committed to enhancing the overall social and economic growth of the neighborhood residents in our service area. (February 1997)
3: University	Knowledge is Power (continued usage) Our mission is to educate and provide community support to alleviate the problems of underemployment, drug/alcohol abuse, peer pressure, and violence. We are committed to enhancing the overall social and economic growth of the neighborhood residents in our service area. Our main tool for change is community based cyberpower. community based cyberpower: community empowerment and organizing using computers and the Internet. (August 1999)

The board and its changing ideological orientation connect with the program activities of the center and related participation. Table 6 below charts attendance at different programs from 1997 to 2000. Computer related programs begin to grow in mid 1998 with the tech support and teaching input from campus. Tutoring and practice testing in cooperation with parents and the university began in January 1999, but figures were not incorporated into monthly reports until October 1999. This in itself is a reflection of the bureaucratization of the center, to the point where new developments were not swiftly incorporated into reporting. University volunteers had a big impact on mobilizing the community to participate. Demarcation between stage 2, state, and stage 3, university is visible.

It is important to note that the reporting that produced this record was originally mandated by the state and began in stage two of the center's history. The reporting mandates changed the way the center operated. Once state funding began, the center collected data and produced quantitative, narrative, and financial activity reports. At first these were quarterly, then every month. The center also followed guidelines from the state on procurement, personnel, financial management and other matters.

The university and the community brought expertise and training in Quicken and Excel which helped convert the center to internal bookkeeping and in other ways streamlined the reporting and record keeping, putting the center more in control of its own resources.

Table 6. Social Value: Participation in Murchison Center Programs, July 1997 to April 2000, in Number of Participants per Month



A closer look at the center's program offerings—computer classes and otherwise—allows us to identify the cyberpower that emerged from the social capital and other inputs that went into the center. Cyberpower was an outcome, but also, we will see, a further input into the center.

Individual Cyberpower

As soon as the center got computers, adult beginners were taught to use the computer, to type, and to produce resumes. Once educational games were available on CD-ROM, children came in to do that as part of tutoring. As computers modernized and more computer-savvy staff and volunteers were on hand, these job and/or school-related classes grew more sophisticated. For instance, one resourceful staffperson made use of the "What Color is Your Parachute" job hunters' web site and computerized the intake process for new job-seekers signing up at the center. By 1999, adults were learning Adult Basic Computing (Windows and Wordpad), Word, Excel; children were using CD-ROM games but also learning Kids Basic Computing, Word, Powerpoint, and being guided through using educational Web sites.

The individual power that resulted was seen in adult's job skills development and job hunt successes, their individual mastery over the software. It was also seen in their moving to teach others, either the student sitting at the next computer or a whole room of students, as they moved from learning to teaching a class. At this point individual cyberpower becomes social cyberpower.

Social Cyberpower

Long before "community based cyberpower" was part of the Murchison Center mission, it was in evidence. The first sign of this was in 1994 when Mrs. Hamilton explained her "field promotion" from board secretary to executive director. "I had been to college and I knew computers." At that point computer knowledge was seen as something to be shared with the community. According to

Mrs. Hamilton, the board at that time was not just looking for her to word process letters, but to teach others.

When the Community Math Academy began in January 1999 a local father began to volunteer at the monthly practice proficiency tests. When attendance at these was taken, it included not just name and phone but also email. His email address was piesqd@[...]. Pi is the ratio between the diameter and the circumference of a circle. (48) Asking about this creative screen name, other volunteers learned that he was a UT student, a working engineering technician and, for the neighborhood, an early adopter of computers. Within a few months he volunteered to teach the evening Word/resume production class. Soon after he was promoted to computer lab manager. He computerized attendance records so that the monthly quantitative reports were produced by Access instead of by pencil and paper.

The Community Math Academy itself was a product of and a generator of social cyberpower. As we have said, students in the UT Poverty Seminar had found the Murchison Center's computer lab in an online listing on the CATNeT site, and the partnership that resulted came from the shared attitude that computers were a key to Black community empowerment. Where the seminar managed to show its participants the Web and perhaps get a few people Hotmail accounts, the Community Math Academy went further, using Egroups to cement its volunteer leadership core and thus build social cyberpower. This involved some private computers as well as some loaners that went into people's homes, although they then decided to return the loaned computers and get their own more powerful units. In addition, center staff and volunteers contact school officials were by email instead of phone or letter writing, which was either unsuccessful or cumbersome.

A year after first inquiring about it, the Community Math Academy was able to make use of the school's computerized automatic phone message system to notify parents about the practice proficiency tests. In this way the voice of the newly elected King PTO delivered a message to 600 King families. Just as with the loaner computers from the university, this board of education system was a case of bridging social capital and bonding social capital investing together in building the center's programs.

Perhaps the pinnacle examples of social cyberpower are the two classes, Cyberchurch and Cyberschools, which began in 1999 and 2000 respectively. Here, though, we cross over once again, as social cyberpower becomes ideological cyberpower.

Ideological Cyberpower

The university brought to the scene the language of the digital divide, the Black liberation struggle, and the community technology movement. This language expressed, clarified, and advanced what the center was already doing to some extent. The ideology of community uplift using computers, rooted also in the concept "Knowledge is Power," was elaborated in the day-to-day work, the plans and the mission statement of the center. Embedded here was an ideological orientation towards the community as a set of assets as well as needs, best evidenced in the last sentence of the mission statement developed by the Community Math Academy (emphasized below). The goal of "ending poverty once and for all" was an early critical ideological issue.

The Community Math Academy aims to improve the math skills and change the math attitudes of young people in central city Toledo. We see math as an academic subject and a tool for social transformation. We see math as part of ending poverty once and for all.
The academy is a project of UT, the Murchison Center, and King School. We join with children and their parents to conduct educational activities in the school, the community and the home. *Parents*

are the leaders of the academy because parents love their children and, more than anyone, determine their futures.

Operating as it did over the Internet as well as through face-to-face meetings and sessions, the Community Math Academy program was itself an instance of ideological cyberpower.

But two classes, Cyberchurch and Cyberschools, begun in 1999 and 2000 respectively, also illustrate the ideological cyberpower generated through the center.

Cyberchurch emerged as an assignment in a university course on the Black Church. When each student went to complete a web site for a local church, they came to the center to build their site. This class then took on a life of its own, with word of mouth bringing more students, one student stepping forward to teach it, and more skills and web space being applied. The course assignment originated as an idea the director of Africana Studies sold to the instructor for Black Church. The instructor, a local pastor and high school guidance counselor, had pastored in various Toledo churches for 27 years, and provided his church space to the local Black Panther chapter when it formed. While the web site building assignment in his course was a burden to him at first-he was asking students to do something he hadn't done-one day after hearing a lecture by the director he told him, "I've heard you talk about this 'eBlack' many times, and I always agreed. But now I really, really get it! I have it so much on my mind that I'm thinking of taking out all the pews in my church and using folding chairs, and getting in some computers. It can still serve on Sundays but can be a lab the rest of the time." His plans began to unfold.

The ideological content of this form of cyberpower is the vision that if the Black church is online, then a good portion of he Black public sphere can be kept intact as our personal, cultural, political, and spiritual lives move into cyberspace, as more and more Black people get online. If the Black church is intact, then the Black liberation struggle has that important institution, with all the social capital imbedded therein, to rely on.

While Cyberchurch was a class that expresses the dynamic combination of university social capital (bridging) and church social capital (bonding) within the context of the center, Cyberschools had a slightly different origin. It originated from a combination of university social capital with community social capital (bonding), again within the context of the center.

Murchison's Community Math Academy project put the center and its volunteers, especially the university students, in close proximity to King Elementary School. The CMA, especially the involved parents, who were all grandmothers, attended the school's PTO meetings, seeking more parent involvement. CMA volunteers worked in the schools as classroom teacher aides and after school as tutors. As a result, new officers were voted in as PTO leaders.

The King PTO had two members, who were a couple with one son in the school, but had been unable to organize parents to do little more than bake sales and an annual book sale. The Murchison Center began to do outreach to get more parents to the PTO meetings. Thus the annual election brought in a full slate of PTO officers with new energy and a plan to build the library up, participate in practice proficiency testing, etc.

Cyberschools was begun to support these parents and others like them. Like Cyberchurch, it meets one night a week. Cyberschools sessions are dedicated to two things: organizing to get more families to the practice proficiency tests, and helping local PTOs get their plans and contact information posted onto web pages devoted to their schools and their families, plus email.

PTOs across the country have web pages and use email to keep parents in touch and organized. But these PTOs do not often appear to be in the Black community. With computers moving into homes and workplaces, anyone can take advantage of the Internet to organize. Not only that, the web sites that Cyberschools takes people to explore include the Toledo Public Schools, the teacher's union, the University of Toledo, the Ohio Board of Education (which posts information about schools, testing, standards, the Ohio 4th Grade Guarantee (no fourth grader failing the reading test will be advanced to 5th grade), and more. So the Internet is a source of information as well as a communication tool used by parents to impact children's experience in public schools. Parent involvement is proven to be perhaps the deciding factor in student and school success.

Implications

We are now able to elaborate further the theoretical framework emerging from our analysis. We will move beyond the particularity of this case study to conceptual implications for our general research focus, community technology centers in urban poor communities, especially communities of color. First we will concentrate the lessons of this case study into several propositions that in turn can serve as guidelines for further research. Second, we will discuss the implications of this research for the public sphere, especially the Black counterpublic sphere.

The first point is that these centers are social organizations, and therefore part of the structure of social relations in a community. This understanding requires a paradigm shift from the current dominant trend to study individuals who pass through the center, to the centers themselves as social units.

A second point is that the digital divide has to be understood as a community attribute, part of a broader phenomenon called public computing. The digital divide as community descriptor can be determined by how extensive and effective are the local organizations which provide and promote public computing.

A third point is that the CTC as community organization is the locus for the concentration of resources. These resources can be conceived as different forms of capital:

a. Physical capital: buildings and equipment
b. Human capital: staff
c. Financial capital: budget
d. Social capital: social background and ties of board members and the organized partnerships of the organization

A fourth point is that social capital is the key. Bonding social capital is the fundamental resource that makes something belong to a community. Without this form of community wealth and legitimacy the organization is an artificial construct. Bridging social capital is essential in acquiring temporary resources and external support. Whenever bridging social capital is dominant the organization is in crisis and in danger of dying or being transformed as an extension of external interests rather than the interest of the original community and its bonding social capital.
A fifth point is that the investment of these resources produces a social value, cyberpower. There are three forms of cyberpower.

a. individual cyberpower: new human capital
b. social cyberpower: collectives engaged in cyber organizing

c. ideological cyberpower: ideas and policy promoted by individual and social cyber power

A sixth and final point is that the success and sustainability of a center is a function of whether point five loops back and feeds into the capital resources of the organization. The organization produces bonding social capital or it fails the litmus test of success and sustainability.

On the basis of these six points it is critical to raise the issue of democracy and social inclusion of people who are living in the social isolation of the poor part of the dual city. The existence of a democratic system is not merely the actions of individuals at the polls. Democracy requires informed citizens who are socialized and live in a complex set of overlapping social networks. Each network is an interest group, and multiple memberships mean multiple interests, sometimes congruent and sometimes in conflict. This complexity is the basis for democratic discussion and compromise. We argue and compromise because while we have differences with others, on other issues we share common interests.

Building sustainable democratic equality in the information age means more than how many individuals are online. The key is to stabilize and support people working with information technology in the form of social organizations rooted in the legitimate social capital of the community. The key is to invest all forms of capital to produce social capital for the socially isolated inner city Black poor. In turn, this investment should be utilized to produce Black cyberpower. Powerlessness, especially the lack of cyberpower, is anathema to democracy in the information society.

Footnotes

1 In an earlier publication we discussed continuing social inequalities in the information revolution. See Alkalimat, Gills, and Williams (1995).

2 Benton Foundation, http://www.digitaldividenetwork.org; U. S. Department of Commerce. http://www.digitaldivide.gov. These and other URLs are listed under references.

3 Department of Commerce press release, July 8, 1999. On the web at http://www.ntia.doc.gov/ntiahome/press/fttn070899.html.

4 Telephone penetration rate from James McConnaughey, personal communication; other data from Department of Commerce (2000).

5 See Bertot and McClure (2000) for the use of library computers to access the Internet; Williams (2000) presents data on Internet service being provided by libraries in Ohio.

6 See references for URLs for CTCNet, OCCCN, and CATNeT.

7 Williams and Alkalimat (2001 forthcoming).

8 Alkalimat (1986).

9 Landry (1987).

10 Wilson (1987).

11 Ibid, pp 56-58.

12 Landry, op cit., pp 116-122.

13 Castells (1998) pp 162, 164.

14 Castells (1999) p 27.

15 Orr (1999) presents a useful case study of Black social capital in a historical study of Baltimore school reform in which he discusses bonding and bridging social capital as intergroup and intragroup relations of Blacks and whites.

16 For definitions and literature review on social capital see Resnick (2000), Feldman and Assaf (2000), and Putnam (2000).

17 Putnam (2000) pp 22-23.

18 Ibid, p 32.

19 Habermas (1991), Calhoun (1992), Negt and Kluge (1993).

20 Dawson (1994).

21 Ibid, p 206.

22 Ibid, pp 213-214.

23 Ibid, p 215.

24 Morris (1984).

25 Ibid, p 279.

26 Landry (1987), p 71.

27 Morris, op cit., pp 282-283.

28 Jordan (1999).

29 Walch (1999) p 23.

30 Mark et al (1997), Chow et al (1998, 2000).

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32 Department of Commerce (2000).

33 Bertot and McClure (2000). Previous studies were released in 1994, 1996, 1997, and 1998.

34 Lentz et al (2000).

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36 Hudson (2000).

37 Department of Trade and Industry (2000), p 6 of executive summary.

38 Gurstein (2000) and Loader (1998).

39 Dyer-Witheford (1999) pp 145-164.

40 Mele (1999).

41 Cleaver (1998) and Ronfeldt and Martinez (1997).

42 Vari (2000) and Tabb (2000).

43 Clarke (1989).

44 Kretzmann and McKnight (1993).

45 McAdam (1999).

46 Piven and Cloward (1979), p 231.

47 Putnam (2000), p 61.

48 Piesqd translates into pi squared. The symbol p, or pi, is mathematical notation for the irrational number 3.14159.... Found in Egyptian and Babylonian science, pi is a 2500-year-old constant.

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