

# ***cyberorganizing***

## **TABLE OF CONTENTS**

Introduction.....	1
<b>REVOLUTION IN TECHNOLOGY AND SOCIETY</b>	
1. Inequalities in the information society.....	2
2. Technological revolution and Black liberation.....	9
<b>THE COMMUNITY TECHNOLOGY CENTER</b>	
3. What is the digital divide? .....	22
4. A census of public computing in cyberspace.....	47
5. Social capital and cyberpower in the African American community .....	73
6. Toledo spiders: the archive .....	102
<b>SOCIAL CYBERPOWER PROJECTS</b>	
7. BRAIN: Black research archive on the internet .....	108
8. Social cyberpower in everyday life.....	124
9. Malcolm X in cyberspace .....	139
10. Third Saturday .....	144

## Introduction to this compilation

*Cyberorganizing* sums up our experience in Toledo, Ohio, the joint efforts of the Africana Studies program at the University of Toledo and the Murchison Community Center, a community technology center or CTC. The mission of the Murchison Center is "to educate and support our community by using cyberpower to generate social and economic development." Our work led to the name of our team of scholars, students and activists: the Toledo Spiders. "*When spiders unite, they can tie up lions,*" as the proverb tells us.

These chapters were first compiled as education for the board and staff of the Murchison Center. This second compilation, with a new introduction, is intended more broadly for scholars and activists. We continue to study and struggle.

We began this cycle of work just as the World Wide Web became such a dominant force. First we held a series of conferences with one published conference proceedings entitled *Job?Tech: The Technological Revolution and Its Impact on Society* (1995). The proceedings documented the work of scholars and activists dealing with the simultaneous destruction of industrial society and building of the new information society. This year we have published *The African American Experience in Cyberspace* (2004), which begins to guide people towards reorienting our intellectual production in order not to be colonized once again, this time in the virtual world. Self-determination in the 21<sup>st</sup> century means being a cyberorganizer.

The first two chapters in *Cyberorganizing* were speeches: chapter 1 at an information technology conference in Havana, Cuba (2002), and chapter 2 in Chicago at a conference on technology and culture (1996). The next four chapters define the concept of cyberorganizing as one form of applying information and community technologies in a community context, in our case in Toledo, Ohio. Chapter 3 is a research report made to an international workshop at the University of Michigan. Chapters 4 and 5 are studies published in the USA, the UK, and France. Chapter 6 is a description of ten years of archives of the Murchison Center and the UT Africana Studies program. Chapters 7 through 10 are self-determination projects. In other words, these chapters describe how Black studies, in collaboration with community activists and community institutions, is reclaiming the task of defining the Black experience by moving into cyberspace. These chapters describe successful pilot programs and propose ways to make them comprehensive and sustainable.

The question has been raised before: Where to begin? This compilation proposes a new model for building a movement for social transformation in the 21<sup>st</sup> century.

Abdul Alkalimat  
The Toledo Spiders  
April 19, 2004

**Inequalities in the information society: problems and solutions**

Abdul Alkalimat, University of Toledo

It is a great pleasure to be here speaking at this conference. We have come as a delegation from Toledo, Ohio--faculty and students, from the campus and the community. Our hope in coming to this conference was to meet new friends and exchange information that can contribute to a new era of cooperation based on these new technologies that we have, and a new political understanding that we so desperately need. We would like to extend a hand of friendship to everyone here and declare our commitment to build relationships of cooperation and reciprocity, of sharing what we have and joining any struggle we can to stop the evils of exploitation and build a better world for us all.

Will all of the Toledo spiders please stand up? After this session we will have a table in the IDICT booth, and the spiders will be there to answer and ask questions and pass out free our CDs and other publications so you can be more familiar with our work. We would like to learn about your work as well.

We work in a lower income inner city African American community in the post-industrial midwestern heartland of the USA. Toledo is a city of over 300,000 in a metropolitan area of 500,000. We are located one hour south of Detroit, 2 hours west of Cleveland, and 3 hours east of Chicago. We are in the heartland of the USA. The 2000 census figures indicate the city is 23% African American and 6% Latino. (The US census often reports these figures on Blacks and Latinos as if they are separate and not overlapping population categories.) Using the latest census figures the household income in Toledo was \$24,819 (USA = \$30,056, 25% more than Toledo), with a full 20% of the population below the official government poverty level. We are the home of the Jeep Cherokee for state of the art auto production, Libby glass, and the global headquarters of the Dana Corporation – auto parts and supplies are produced by over 70,000 employees, in 300 facilities in 34 countries with sales of over \$10 billion. In Toledo we have global capitalists, workers, and poor people being thrown out of industrial society.

In Toledo, Ohio, we are at the edge of industrial decline, a place where corporate decisions to maximize profit are life and death questions for entire communities. The old assembly line mass production capitalism created a solid foundation for the Toledo economy and drew to its neighborhoods immigrants from the US rural south and from Mexico, and from many parts of Europe, especially Germany, Hungary, and all of Eastern Europe. In the Great Depression the workers and their families launched a mass strike in 1936, the Auto-Lite Strike, and that led to the Great Sit Down Strike in Flint Michigan organized by the same activists. This strike wave that started in Toledo led to the Congress of Industrial Organizations, the CIO, and a new era of labor militancy was born. Now this industrial system is being transformed and the people who fed their families from the assembly line are now being abandoned at the beginning of this new information era Our current social crisis far exceeds the 1930's and goes back to the mid 19th century origins of industrial capitalism discussed by Marx and Engels. This is the historic context for our meeting this week, and the material conditions that require our intervention in history.

The world we live in is not the world of yesterday, and it is not the world of tomorrow, it is the world of today. This statement has special meaning as we begin a new century, as we begin the information revolution, as we face the end of the industrial system we have struggled in for all of the 20th century. The history of every country is the history of people fighting for a better life, sometimes in the realm of science, sometimes in the realm of politics, and always in the realm of culture we have been fighting for a better life. Our paper

is about this current moment, our need to intervene in history to understand and change the beginning of a new kind of society, the information society based on electrical digital technology.

There are two general themes of this talk. The first is to discuss key aspects of the information society, how it is different from industrial society, how it transforms the class polarities of industrial society into polarities defined by informational parameters. Then, secondly, we will attempt to suggest how we might move forward given the polarities we face. How do we intervene in this historical process of the birth of the information society to advance the cause of democracy, peace and justice? What is the future potential of this information society for achieving the strategic goal of human freedom?

### **The revolution in technology**

The information society is being born via a fundamental transformation in technology, digital electronic technology, hence many think of it as a revolutionary experience. This is a profound belief that we need to discuss. Are we in the midst of a revolutionary process? This is a key theoretical question with great practical implications. The word revolution means fundamental transformation, a change in the basic nature of society and the conditions for life itself. There can be many kinds of revolutions, revolution in music, in poetry, in all aspects of human activity, but there is a special sense in which the word revolution is used to define a new kind of society, the beginning of a stage of human history. It is in this latter sense that we are experiencing a revolution today – a fundamental transformation of the most important features of society, its basic character is being transformed. This is not merely a question of what is happening in a particular place, as clearly there are vast regions of the world without such technology. But, where these things exist so exists the global power that determines the well being of all of us, the forces we interact with whether we know it or not.

The machine driving this process is the computer, a tool that takes electricity to its highest level far exceeding being merely raw energy driving the moveable parts of machines. Now electricity is the environment in which information can be stored, manipulated, and presented. The first computer was probably the abacus created 5000 years ago. But the first computer to run on more than human energy was a steam driven machine created by Charles Babbage (1791 – 1871), a contemporary of Charles Darwin (1809 – 1882) and Karl Marx (1818 – 1883). Here we can observe a revolutionary moment in history – revolution in social science (Marx), revolution in natural science (Darwin), and a revolution in technology (Babbage). The full electrical revolution began when transistors became part of the process in 1948, followed by integrated circuits placed on silicon chips leading to the emergence of modern computing in the 1970's.

The computer has been linked with telephones and satellites to create networks for communication. This new global network is called the World Wide Web (WWW) and the Internet. For the first time humanity has the possibility of instantaneous communication of text, graphics (still and video), and sound on a global level.

At the base of this global network of computers and the Internet is the digital code. In fact we can say that the heart of the revolutionary process creating the information society is the universal digital code, a code that can take all forms of information, text, image and sound, and in a series of digits, 0's and 1's, store this information and access it at any time and any place on the network. It is an interesting fact that much like the mid nineteenth century this is a time of fundamental revolutionary action on all levels: the technological revolution of the digital code for computer based communication of all forms of information,

and the scientific revolution of the DNA code for life including the Human Genome. We are in search of such clarity about the nature of the social revolution that is happening now, and will surely be more and more obvious in the decades to come.

This use of the universal digital code is made possible by the rapid expansion of the capacity of the micro-chip based on Moore's law, an observation made in 1965 by an engineer Gordon Moore, co-founder of Intel, that every 18 months the capacity of the microchip doubles and the price is reduced by 50%. This is what has made the rapid explosion of opportunities like teleconferencing, DVD digital recording of movies and MP3 recording of music, etc. Given this explosion of technological capacity, there has been a massive investment, sometimes based on discovery and innovation but often based on a hunch and a gamble.

The rapid adoption of technologies of the Internet and the www is clear. In 1997 there were 40 million people on line representing about 1% of the world population, while by 2002 there were 544 million people on line making up 9% of the total population. But this general figure is quite polarized as Europe and North American make up 65% of online population, and the per cent goes up to 90% if you add the Asian countries of both parts of China (46 million), Japan (49 million), South Korea (22 million), Australia (10 million) and India (5 million).

Via this development in societies all over the world we have seen the development of three kinds of geospatial centers emerge:

1. Technopoles: specialized urban areas based on the new technologies
2. De-linked areas with virtually no connectivity, and
3. Dual centers in which some have high connectivity and others are isolated.

The majority of humanity is coming under the influence and control of the technological productivity of the technopoles – they invent the machines and write the software the corporate, military and governments use. On the other hand, most of us live in dual environments of cities or de-linked if in most rural areas of the world. In fact, in the third world of Asia, Africa, and Latin America the internet and web based technologies are dominated by the NGO's of the dominate countries of Europe and North America, therefore much technology in Asia, Africa, and Latin America does not represent indigenous capacity building but the infrastructure of globalization. It is in this context that we have to debate the issue of development – to what extent an appendage of the global system of capital, and to what extent a freestanding economic base for the home market.

### **Political Economy**

We have introduced the information society from a technical perspective merely hinting at social implications. But there are two aspects to our key concept, information – the technical part, and society – the social part. It is essential that our discussion of the technology be put in its proper historical social context. To get at this lets us take four key aspects of society to track the change from industrial society to the information society. This historical process leads to the current moment in which we have decisions to make which is the true meaning of this conference.

The paradigm for the basic production model of the industrial system is that created by Henry Ford (whose company launched the first assembly line production) and Frederick Taylor (a University of Pennsylvania professor who launched the time motion study to make sure people were appendages to machines). This became the dominant paradigm for

society, a model for our public schools, our government, and our social life including even family life. This production scheme was transformed into the Toyota system, a system that used computers and robots to build a new paradigm – lean production, based on just-in-time assembly using the team system. The Japanese lessened the time, cost, and labor power necessary for production. Lower cost led to higher rates of profit, with the most important lower cost being the decline in the cost of labor.

This new kind of production meant that new plants based on lighter faster newer technology replaced old plants, full of large old technology. This changed the geo-politics of production in that capital became more mobile and more and more delinked from the old nation states. Thus begins the new era of globalization.

One way to sum this up is to contrast general Motors with Microsoft as the paradigmatic corporations of the old industrial system and the new information system. General Motors was based in Michigan and maintained a workforce in life long skilled occupations, building on skilled immigrant workers from Europe. They built big buildings with hierarchal structures to fit the social organization of the corporation. They located near their production facilities, built near the natural resources they needed to function. On the other hand, Microsoft is located in Seattle Washington, not because it is the place where the largest number of engineers and computer scientists could be found, but it is simply the hometown of Bill Gates the founder. Their headquarters is more like a college campus and its divisions and work groups function like departments in a university, with one exception and that's the fact that like all capitalist corporations it is a dictatorship under the hand of its leader and board.

The basis for this is that it is the intellectual content of the soft ware and hardware that drives production. But this is more production with less human labor. In other words, there is a value crisis – surplus value is a result of exploiting human labor, and less human labor means less surplus value. This is a crisis as that is the basis on which the capitalist system exists. The World Trade Organization had at its founding a new international agreement by the big powers on intellectual property rights because that is the heart of their system. They must keep the intellectual content for production in private hands as commodities, and not shared by humanity. In fact, they are taking the lions shared wealth of the world, like the bio-diversity of global agriculture or the natural medicines developed by all of the world cultures and placing them under private patents for private profit. This is the age when the commons of the world are being closed in.

One aspect of this is the knowledge worker. This new worker is the new proletariat, sometimes in English called the cognitariat. The other side of this is that this new worker actively drives the system that downsizes to new levels. This in turn leads to the end of work thesis that argues that there is and will continue to be a reduction of people to be employed in material production and distribution, including service.

On a global scale things are more raw and explosive. On the one hand assembly line operations and other forms of production are being relocated to regions in decline, like some of the former socialist countries and key centers throughout the third world. On the other hand regions with labor superfluous to capital are being plunged into the terror of slavery, war, and genocide.

My argument is that the key social motion of globalization is the polarization of the world and most societies. The polarities we face define the times in which we live.

### **Social Organization**

The industrial system reinvented bureaucracy and various forms of parliamentary democracy as the dominant forms and principles for the social organization of society. A bureaucracy is a rule governed formal structure with a hierarchy of power and privilege, and in this context the word democracy seems neutral enough, it is always implemented in a social context, hence each social layer of society has associated power and that defines what kind of democracy we have – there is one democracy for capital and another for labor. Justice for poor people in such a society is hard to come by.

The vertical form of the paper based bureaucracy has been thrown down on its side by the new information technologies of computer based networks and interactive databases. The information society seems to be more horizontal and free flowing, a web rather than a pyramid. The General Motors of 20th century industrialization is quite different in as a corporation than the 21st century Microsoft.

We now live in networks and our economic life has become according to Emanuel Castells a space of flows, tied into computer networks and a global system of just in time production schemes taking the Toyota system to its natural limits. But is this a society that embodies freedom or slavery? On the one hand there is the police system and on the other the educational system. Clearly there is a polarity here between the police and the schools, but in fact the polarity is also within the schools as they have negated the full liberating impact of the technology and limited it to class specific functions – one function for the rich and another for the poor.

### **Culture and consciousness**

The rich own much of the cultural heritage of humanity, including new wealth like the Gates family of Microsoft, while popular culture has been high jacked by mass media. Corporations define culture in much of the world. Massive digitization is going on, but whose voices are missing. Herein is another polarity.

Moreover, our consciousness is manipulated by all of this. So in this era of information people are being nurtured back into the ideologies of extremism – rigid belief systems with fundamentalist interpretations. There is a polarity between ideology and information (what do you believe versus what do you know)

For each of the four aspects of society that we have just surveyed we have demonstrated two fundamental features of the historical process: One, there has been a change from industrialization to the information society. Two, the class polarities of industrial society have been reinvented as polarities of the information society. This polarity is a global process. We have to see things with the eagle's eye, grabbing the whole picture. The AIDS crisis in the world can't be understood unless it is put in this context, since the first stage of the intervention has moved the crisis from the advanced capitalist countries to the margins of Asia, Africa, and Latin America. This is a genocidal pattern. The vicious terror of ripping a society apart through imperialisms nefarious economic dealings and the manipulation of decadent social and political forces in each society leads to the fratricidal wars such as in Central and Eastern Africa, the Balkans, and the Middle East. And in this context there are crimes that boggle the mind, from millions being killed in Africa, to cold-blooded massacres being excused by major powers such as the current view of the United States on plight of the Palestinians.

### **Solution**

On a global scale this is a new situation, almost everything is changing, but where things will end up is not yet a settled question. We have a choice in the matter. We have basic choices.

To introduce our options it is useful to review a debate over how to conceptualize the problem we face. Three basic views have been advanced – we face a digital divide, a digital opportunity, or digital inequality. An African American official in the Clinton administration launched the term the digital divide voicing the spontaneous realization that what was emerging was a corporate/military technology and poor people and minorities would be excluded. It was counterattacked as a divisive almost Marxist concept that led to radical political thinking and action. The right counter attacked by saying things were much better than that, so instead of a digital divide (emphasizing differences) we need to call it a digital opportunity (emphasizing that options exist for everyone to get wired.). More modestly, and more oriented to the empirically oriented social sciences, there is the focus on the “digital inequality” that needs to be studied with regard to each new technology and its social realization in the social life of various communities.

We can take each position and show how the way forward can be envisioned and done no matter what set of questions we answer.

What do we do about the digital divide? Our view is that this is a theoretical question that must be guided by a values and vision, by ideology and theory. We have developed three key points to guide our work and we propose these for your consideration.

1. Cyberdemocracy--everybody gets access and gets connected
2. Collective intelligence--everybody gets to speak and have their voices heard, and
3. Information freedom--everybody can consumer the information ending the commodification of the worlds intellectual and cultural heritage.

Our response to the digital divide is to use these three points to imagine a world we want to live in, what we want instead of what we got. Our collective imagination can give shape and form to our fundamental ideological consensus. Together we can create intellectual wealth about society at its best.

What do we do about the digital opportunity? Our argument here is that our tasks are the same as at any time in history. The fight is a fight for power, now in the name of cybpower. We need to harness the tools of information technology and build power for the exploited and oppressed people of the world, the majority of the societies we live in and hope to transform. There are three kinds of power, individual, social and ideological. My colleague Kate Williams will present our concrete work on these forms of cybpower this afternoon, so stay tuned for that.

What do we do about digital inequality? Here I would like to introduce the key figure in the scenario we see unfolding--the spider. The spider is an insect that spins webs, a little spider, but as our tee shirts say, when spider unite, they can tie up lions. We know who the beasts are who claim to be the kings of the human jungle. We are the spiders. The web is dominated by corporate interests and this must be challenged by the poor and oppressed of the world, digitizing their identity and social and cultural wealth to create not only safe places for all of us in cyberspace, but a staging area to regroup our forces and build new offensives to liberated our selves – not only our minds but our entire societies.

In conclusion, I have argues that in the transition from industrial society to the information society we are facing great polarities, in political economy, in the social organization of

society, in culture and in our very consciousness. We face the challenge of three possible situations and we have to have a plan for all three. For the digital divide we have to dream the impossible revolutionary dream of information communism, my term for our strategic values and vision of cyberdemocracy, collective intelligence, and information freedom. We can take advantage of whatever digital opportunity that exists to build cyberpower in its three forms, individual cyberpower, social cyberpower, and ideological cyberpower. And to fight the positional war to step-by-step reverse digital inequality, we need the tactics based on the key cadre of the information revolution, the cyberorganizer, and the spider.

Can we dream a revolutionary dream that rescues information technology from the corporations and the military? Can we avoid becoming technocrats who marvel at the technology toys and lust after what we don't have? Can we use the technology to reclaim the high ground and bring the quest for freedom and justice back into the center of our lives and work?

Now is the time.

Spiders of the world unite! Weave your webs! We have lions to tie up and a world to win.

# Technological Revolution and Prospects for Black Liberation in the 21st Century

By Abdul Alkalimat

This talk will focus on two main points. The first point is that in the long run the greatest force for change in history is technology. As such, technological change is a historical force that, more than any other, sets the objective context for consciousness and social movement. In other words, what is usually missing in our celebrations of Black history is a focus on how technological change contributes to the structural basis for Black history. Once we have clarity on this, then it is possible to grasp how ideological positions and social movements did or did not, do or do not, contribute to real historical change.

My second point is to discuss how technological change, when fundamental and systemic, leads to conflicts that get resolved by changing society one way or another. Economic transformation through the polarization of wealth and poverty is usually at the base of these conflicts. This usually leads to the destruction of the old way of doing things and the construction of a new society.

This is the approach that seems most useful in explaining the deepening social crisis that we face today. What is truly unique about the end of the 20th century is that we are undergoing a transformation no less than the 19th century with the rise of the industrial stage of capitalism. We are at the beginning of a new revolutionary transformation, the most important aspect of which is the birth of a new class in history. At the heart of this new class are those Black and immigrant workers tossed into the street and forced to fight to survive.

So, my two points are first the technological revolution and its importance for Black history, second how the current technological revolution is forcing the fundamental restructuring of society, creating a new class which can be the basis for the new society.

## Technology and Black History

The entire sweep of Black history needs to be reexamined on the basis of the thesis that technological change creates the main structural context for the grand historical narrative of enslavement and the subsequent freedom struggle. However, for our immediate purposes the main point I want to make can be illustrated as part of the general process of the rise and fall of industrialization, specifically the two cases of the mechanization of cotton production and the electronic transformation of the auto industry. Cotton and auto, as the leading sectors of the US economy--19th century agricultural and 20th century industrial production--helped to structure more than 150 years of Black labor. It has been this economic structure of how agriculture and industry have

utilized Black labor that has set the stage for all of Black history.

The main point here is to demonstrate that, for both cotton and auto, technological innovation led to increasing the demand for Black labor. Conversely, subsequent technological innovation led to the expulsion of Black labor based on this same motive, the search for greater productivity, competitiveness and hence more profit. First the use of technology that leads to inclusion, and then technology used to exclude.

### **Cotton**

Cotton was grown in India and Egypt as the basis for cloth, but England had first used wool for that purpose. In fact the British woolen manufacturers were so set on maintaining their dominant market share that they got the Calico Act passed in 1721 forbidding the importation of Calico cotton cloth from India. But the political forces whose interests converged on cotton as the cheaper cloth helped get this act repealed by 1774. During these 50 years the British cotton industry developed without foreign competition. When the Calico Act was repealed, however, capital was forced to invest in efforts to invent machines to help the British cotton textile industry become competitive with the cheap, labor intensive, cotton production from the East.

The first new technology of spinning machines was patented in 1738 by John Wyatt. But the factory use of even more developed technology began in the 1770's with the water-powered cotton mills of Richard Arkwright, and in the 1780s with the steam engines of James Watt. In 1761 the cotton industry in England was so undeveloped that it did not employ any workers in Manchester, but by 1774 (just over 10 years later) there were 30,000 people in the industry in or near Manchester. This textile mill technology was imported illegally into the United States by Samuel Slater to set up the first US factory mill in Pawtucket, Rhode Island in 1790.

The expansion of slavery in the American colonies was thus a function of the demand for more cotton, especially by the textile industry in England. However, it is to the technological innovation within the US slave labor plantation system that we have to look for the critical turning point.

In 1792, Eli Whitney graduated from Yale University and went off to Georgia to teach school. In an environment of cotton plantations, he was quickly confronted with the major problem in cotton production: how to speed up the process of cleaning cotton in preparation for shipping cotton bales of 1,000 pounds each to the textile mills. There was a cotton gin in use that worked well with the long staple cotton of the sea islands, but that technology would not work with the short-fiber or green seed cotton that was suitable for most soil conditions of the South that had enabled cotton production to spread. It is generally believed that in less than two weeks, Whitney designed a cotton-gin for short-fiber cotton, although the historian Herbert Aptheker reports that this cotton

gin developed from the drawing of a slave in Mississippi. (Workers have been ripped off at the suggestion box for a long time!)

The cotton gin increased productivity in a very dramatic way. When cleaning the cotton by hand, it took one slave a complete day to clean one pound of cotton. The hand-powered cotton gin increased this productivity to 150 pounds per day. With steam power driving the gin, one slave could produce one bale or 1000 pounds per day. So the statistics speak for themselves. Before the cotton gin, in 1790, the US produced 6,000 bales of cotton, by 1810 this was up to 178,000 bales of cotton, and by 1860 four million bales of cotton. By 1820 cotton was more than 50% of all US exports and after 1825, US-produced cotton was 80% of the commercial supply on the entire world market. Cotton had become King, meaning that from 1830 to 1860 more money was invested in land and slaves for cotton production than all the rest of the US economy put together! In 1790 there were 700,000 slaves and by 1860 there were 4 million, of whom more than 70% were in cotton production.

Black people were pulled west by the expansion of the cotton belt, so that after beginning with a concentration in South Carolina, the main concentration of Blacks had moved over to Mississippi, Louisiana and Alabama. Moreover, this cotton-based economy persisted even after the Civil War. The Civil War was a war over control of the federal government and the commanding heights of the national economy. But, it was not over a fundamental economic revolution in the South as the tools and techniques for cotton cultivation remained the same. What changed was the form of political power, but most of the basic economic processes remained the same.

In the sharecropping system adopted after the end of slavery, the main change was the social organization of production--from forced group labor to family labor--although the rest basically remained the same. In fact, it was the low cost of labor under both slavery and sharecropping that enabled the US to generate the wealth out of the cotton industry that it did.

But this system also had the effect of forcing the South into stagnation and backwardness. Little industrial investment was encouraged, and social relations were polarized to maintain the elite culture of the plantocracy. Black people lived under a form of virtual fascist rule under slavery and sharecropping, a barbaric politics that served economic interests in the South and the North.

The political change of the Civil War was not equaled by changes in the economic system until World War II. The critical event was again a technological innovation, the mechanical cotton picker. Two brothers named John and Mack Rust had begun testing a machine in 1931. They achieved some success, but their machine was not commercially viable, as it was not structured for mass production.

The breakthrough came with the work of International Harvester, working with a plantation in Clarksdale, Mississippi. Here is how one account sums up the introduction of the first commercially viable version of the mechanical cotton picker:

"An estimated 2,500 to 3,000 people swarmed over the plantation on that one day. 800 to 1,000 automobiles leaving their tracks and scars throughout the property."...The pickers, painted red, drove down the white rows of cotton. Each one had mounted in front a row of spindles, looking like a wide mouth, full of metal teeth, that had been turned vertically. The spindles, about the size of human fingers, rotated in a way that stripped the cotton from the plants; then a vacuum pulled it up into the big wire basket that was mounted on top of a picker. In an hour, a good field hand could pick twenty pounds of cotton; each mechanical picker, in an hour picked as much as a thousand pounds....picking a bale of cotton by machine cost....\$5.25, and picking it by hand cost...\$39.41. Each machine did the work of fifty people...What the mechanical cotton picker did was make obsolete the sharecropping system....

The result of this technological innovation was that the sharecroppers were literally driven off the land in the great migration of Black people out of the rural South into the urban industrial North. From 1910 to 1970, more than six and a half million Black people migrated from the South, but 5 million left after 1940, showing the impact of the mechanical cotton picker. Now only half of the Black community was in the South, and only 25% remained rural. Everything began to change. The historical mass Black experience of cotton, under slavery and sharecropping, was bracketed by two technological innovations: it began with the cotton gin and ended with the mechanical cotton picker.

The cotton gin had pulled Black people into the plantation system of the Deep South, and under the control of fascist terror. While Black people were slaves, the resistance they adopted included a multitude of private acts of protest, while the public forms of collective protest included the underground railroad and the slave revolt. While sharecroppers, they faced peonage and the lynch rope, but continued to fight back in the form of organizations, from the Southern-based tenants union to the NAACP based in New York. However, it was only after the need for Black labor in the rural South had been eliminated, and Black people had migrated to the urban industrial scene gaining more education and resources of all kinds, did the right mix exist for the powerful civil rights movement to emerge.

### **The Auto Industry's Critical Role**

The driving engine of US capitalism has been its industrial development supported by its agricultural base. The automobile industry is critical as it represents the convergence of steel, glass, and rubber production with petroleum, highway construction, and massive repair and parts support

along with a wide diversity of other economic linkages. At its height the auto industry was one of the greatest employers in the economy.

The first commercially viable automobiles date from the late 19th century, when they were produced with highly complex craft techniques. Automobiles used to be produced one at a time. In the 20th century Henry Ford led the revolution that transformed auto technology, from universal standards for exchangeable parts to the moving assembly line initiated in 1913. Because of Ford, General Motors and Chrysler auto companies, Detroit was to auto as the Mississippi delta was to cotton.

The use of the term "technological innovation" should always be thought of as a diverse process of discovery through trial and error, a process of incremental gains that in the end, when successful, eventually produces a big impact. Auto is a good example. The moving assembly line was created in 1913, and it turns out to be the end of a long process of technological innovation. In 1908 auto's were put together by assemblers, people who performed a whole series of tasks, gathering up parts and then fitting them together. The average assembler worked nearly nine hours before they repeated one task a second time. The Ford company led in three kinds of innovations of auto parts and assembly: interchangeability, simplicity, and ease of attachment. Thus, by 1913 the task cycle was limited to one task and took only 2.3 minutes, with each assembler walking from spot to spot where each auto was being put together. The moving assembly line, however, meant that the worker would stand still would move. Each task cycle was thus reduced further to 1.2 minutes less than one year after the moving line was installed.

Ford was clear on what this could mean for his profits. Workers, especially Black workers, could see what it meant for them in wages. In 1917 when agricultural work meant less than one dollar per day in wages in Mississippi, Ford was paying five dollars a day. In 1910 there were 6,000 Black people in Detroit and by 1920 there were 41,000, making Detroit the fastest growing Black community of all major US cities. In 1916 there were 50 Black people working for Ford Motor Company in Detroit, and by 1920 there were 2,500. This means that if people were living in families of four each, then in 1910 about 3% of the Detroit Black community was connected to Ford, but by 1920 that was up to 25%.

In each instance advances were not automatic but were accomplished through struggles. Ford was faced with the militancy of a fighting workers' movement. Black people were convenient, so he used them. Ford gained an advantage, but other companies were forced to adopt similar policies in the end.

This auto-based economy continued to expand until the 1950's. By that time General Motors had grown so big that it was the nation's largest employer and by itself accounted for 3% of the entire US GNP. Detroit led the country in per capita home ownership, and gained worldwide recognition as a center of US corporate genius and secure blue collar

communities. Black people, mainly those with their roots in rural Tennessee and Alabama, migrated to Detroit and created an urban culture best represented by Motown Records and its popular icons of Smokey Robinson and the Miracles, Marvin Gaye, Stevey Wonder, Martha and the Vandellahs, etc. Generally it was a town of trade unionists, especially UAW Local 600, which was the world's largest trade union local based at the Ford River Rouge Plant. Even as late as the 1960's militant Black workers used to say that it was so good in Detroit that if you got fired at one plant you could get hired at another plant in time for the second shift.

But good things don't always last. The mass production techniques of Ford were challenged and overcome by the lean production system of Toyota, the Japanese auto company. Ford had gotten the idea of the assembly line from the meat packing industry for his endless chain conveyor. Toyota got its idea of lean production from the US supermarket, especially how they handled inventory control and work assignments, and how the supermarket industry maximized economy of time and space. These new management techniques for the social organization of production were linked to the increased use of computers and robots to initiate a new revolutionary transformation of all manufacturing. Once again the auto industry was leading the way for all industrial activity.

### **What is this "lean production?"**

Lean production...is 'lean' because it uses less of everything compared with mass production -half the human effort in the factory, half the manufacturing space, half the investment in tools, half the engineering hours to develop a new product in half the time. Also, it requires keeping far less than half the needed inventory on site, results in many fewer defects, and produces a greater and ever growing variety of products.  
(Machine that changed the world, p 13)

At a GM plant in the 1980's one car was build in 31 hours, in a little more than 8 square feet, with an average of 1.3 defects per car. At this same time Toyota built a car in 16 hours, in less than 5 square feet, with an average of 0.45 defects per car. Lean production began in the 1950's and by the 1970's and 80's has transformed standards for the auto industry on a global level. Here is one account of what happened to Ford during the 1980's:

Ford...carried out...investing \$28 billion to automate production and to eliminate excess capacity. The company's global work force was cut from 506,500 to 390,000. Most of the cuts were in the United States. Over a nine-year period, the number of robots in the North American plants rose from 236 to 1,300, and more than 80,000 hourly workers and 16,000 salaried white-collar workers were discharged. The number of hourly workers fell by 47 percent and

productivity increased by 57%....Computer driven machines to weld, stamp out parts, and schedule, control, and monitor production were introduced into Ford plants in Europe as well as in North America. Ford also adopted "just in time" production, enabling the company to reduce its inventories from three weeks to one week.... (Global Dreams, p. 268)

The overall picture is quite clear. Total US auto production in 1994 was 12.2 million cars, the highest since 1978 when 12.8 million cars were produced. The main point is that this was done in 1994 with 50% of the workforce they had in 1978. For Ford during this period, their US workforce was reduced from 200,000 to 101,000. The Ford Company has now abandoned all workers, including Black people, as a new plant announcement makes clear. The first new Ford plant since 1980 is being built in the US to forge steel crankshafts. In 1980 they would have hired 1500 workers. In this new plant on 103 acres at a cost of \$50 million they will employ 65 people in two shifts.

Detroit was yanked out of its economic security to become the nation's leading example of deindustrialization and urban decay. The entire period had not been without violent eruptions over the emergence of such a strong Black proletariat. There was a major rebellion in 1943 (4 days, 34 dead 25 Black) and in 1967 (6 days, 43 dead - 34 Black). But the most profound destruction is the death dance of permanent unemployment that came so abruptly to all too many people.

### **Technology and Social Transformation**

The main argument in this paper is that the most profound historical changes are linked to changes in technology. The examples we have documented here are the production of cotton and auto. This is not an argument for technological determinism, but an argument for the origin of classes and the structural basis for class conflict. Technology is created by people, used by people, and impacts people on the basis of definite historical interests for gain, for profit. In each instance this determines who benefits and reveals the motive behind how production is organized.

What is critical to understand is how the technological dialectic--first the inclusion, then the exclusion of labor--first created one kind of transformation after sharecropping was ended, and then created something vastly different on the other side of mass production. When the sharecropping system was destroyed by the new technology, there was another labor system crying out for the newly created surplus labor. These industrial centers became magnets for the newly freed workers, and they swarmed there leaving their old rural shacks abandoned as testaments to a past fading into memory. The journey of northern migration was a progressive movement to a higher quality of social life, to an economic position of greater security.

However, the transformation we are currently going through is quite

different, in fact rather the opposite. The current social transformation is expelling people from work and in this process is destroying the society built to serve the industrial system. The schools, hospitals, public transportation, affordable housing, and other institutions that used to make up society were designed to feed, clothe, house and care for factory workers to come to work, and care for their families as the source for the next generation of workers. Things are quite different now.

### **Five Revolutionary Processes**

The overall complex process can be schematically summed up by discussing five features of revolutionary transformation: technological, economic, social, political, and spiritual. Each is important and has its own logic, and yet each is conditioned by the others with the fundamental logic of change resting on the technological and economic.

1. Decline of Industrial Jobs. The first point is that this new technological revolution is creating the end of work as we have known it in the industrial system. In the 1950's 33% of the workforce was in manufacturing, while today less than 17% is engaged in such work. "From 1979 to 1992, productivity increased by 35% in the manufacturing sector while the workforce shrank by 15%." The service sector is restructuring, McDonalds testing its McRobots, or the banking and insurance industry which estimates that it will eliminate 700,000 jobs by the year 2000. In the last 5 years the wholesale sector has lost 240,000 to direct computer/telecommunications links between retailers and manufacturers. Employment in retail is threatened by computerized and televised shopping.

In *The End of Work*, Jeremy Rifkin estimates that only 20% of the current labor force will survive with wealth creating jobs, as productivity will rise very rapidly due to the new technology. >From 1953 to 1962 there were 1.6 million manufacturing jobs lost, and Black unemployment went from a previous high of 8.5% up to 12.4%. Since then, Black unemployment has been twice that of whites. Tom Kahn is quoted by Rifkin: "It is as if racism, having put the Negro in his economic place, stepped aside to watch technology destroy that place." US Steel had 120,000 workers in 1980. Ten years later, computer-based engineering and the new mini-mills allowed US Steel to leave the urban areas and Black workers residing there to make more product than ever with a work force of only 20,000.

It is common to hear that in fact the new economy is growing jobs. In 1992, however, 2 out of every 3 new private sector jobs were temporary or part time. Today overall more than 25% of all US jobs are temporary (a high figure, but not as high as in England where the figure is 40%). However, 40% of all faculty in post secondary education in the US are part time. The largest employer in the US is now Manpower, whose 1992 figure was 560,000. This is now a supranational corporation with

headquarters in London, and offices in 35 countries. So part time, temporary or contingent workers are what we're getting. These workers get less pay, and less security, not only on the job but over the long run. About 50% of full time workers get pensions, while for part time workers it is less than 20%. Technological innovation so far has meant forcing people onto a "slippery slope" whereby they descend into economic oblivion.

2. Growing Inequality. The second point is that this technological impact is producing a growing polarization of wealth. The number of poor people is growing faster than the overall population, and the rich are getting richer.

"We can measure rising inequality by comparing family incomes. Between 1980 and 1992 - for the bottom 25 per cent of all US families in terms of average incomes -- their share of the total national income fell from 7.6 percent to 6.5 percent. Real average incomes for the bottom 25 percent, adjusted by inflation, fell sharply from \$12,359 in 1980 to \$11,530 12 years later.

By sharp contrast, for the upper 25 percent of all US families, their share of the total national income rose between 1980 and 1992 from 48.2 percent to 51.3 percent. Their real average family incomes increased from \$78,844 to \$91,368. (Marable)

>From 1980 to 1994, factory wages rose 75% while executive pay on average rose 360%! The differences between Black and whites are even more stark. Overall, the net worth of the American households declined between 1988 and 1991-- the drop was 12%, an average of \$5,000 per household. The median wealth for a white household was \$44,408, while for Black people it was \$4,608 and for Latinos \$5,345. Within the Black community there has been polarization. From 1967 to 1990, Black families making less than \$5,000 a year increased from 8% to 12%, while those making more than \$50,000 increased from 7% to 15%.

3. Social Breakdown. The third point is that this economic polarization has led to a destruction of the social fabric of society. This is the focus of the underclass literature, examining the concentration of social ills on the poorest sections of society and the breakdown of all conventional social institutions. This point is in plain view for all to see. Who can argue that any social institution is stronger, more democratic and inclusive, and more legitimate in the eyes of the American people. No. The situation is quite the opposite. Since the school to work link has been broken, the schools don't seem to have the ability to teach any more. And, as Jonathan Kozol points out in his book *Savage Inequality*, education is going on is for the rich and secure suburban communities. The family is transforming as more people get married than divorced, and an unprecedented number of people, including parents, never get married. Today a majority of the countries children live in poverty. The same di can be repeated in health, housing, nutrition, etc.

This rapid social decay is plunging healthy communities so far down that they have become forbidden zones, areas that are stigmatized and avoided. This is obvious for inner city areas of Black and Latinos, but this includes the prisons, the Indian reservations, small town and rural areas where white poverty remains relatively invisible. The center piece of this is the way in which tv (legal) and crack (illegal) have captured the time of the poor and transformed many of their activities into anti-social and increasingly violent orgies. The mainstream media tends to place the blame on the moral degeneracy and lack of leadership within the communities suffering from poverty, rather than place these developments in a causal chain that starts with the liquidation of the economic structures that have enabled people to lead safe and secure lives.

4. Destroying the Safety Net. The political response to this crisis has been an attack on the poor and economically insecure. This is the fourth point. Both Clinton and Gingrich agree that the budget should be balanced in 7 years, that big government should be cut down to size, that people should be forced off of welfare, etc., etc. They argue about how fast this should happen, and how soft the process should be. The big point is their agreement, that the role of government is not to insure the economic security of the population. The Republicans are driving the national debate, moving it further and further to the right. One example of this is the current debate over taxes. >From 1954 to 1963, if you were single with kids you paid a tax rate of 78% of all the money you earned over \$75,000. Today the overall rate for these people is 31%. The plan for a so called flat tax, proposed by the super rich conservative Steve Forbes, would reduce this rate down to 17%. If we went back to the 196 could get rid of the deficit with little difficulty. They say its more difficult than that, but that's only because they want poor people to pay for the debt.

The Peoples Tribune carried an article by Bruce Parry that sums this budget crisis up very clearly as an attack on poor people:

The real questions about the budget are not over whether it can be balanced. They are about who is going to pay. The rulers of this country -- from Clinton and Gingrich on down -- are planning to make those with less -- ordinary people -- pay more. And they want those with more -- rich and business owners -- to pay less. That's just as backward as everything else they do! Cutting housing means people are freezing to death on the streets. Cutting public assistance means children are starving. Cutting Medicare and Medicaid means people are dying who could be saved. Cutting education means our kids are graduating illiterate and dropping out of what they consider useless schools because they see no future. So we must hold these people responsible.

Perhaps the most devastating transformation of the political culture is the criminalization of the poor. If poor people can't meet a middle class standard in terms of raising their children, they risk arrest, imprisonment

and the loss of custody of their children. You do more time in prison for crack possession than stealing a great deal of money. There are now over 5 million people behind bars. Further Blacks gets the worst end of this as well as nearly 7 percent of Black males are incarcerated. As drug offenders now account for 60% of prisoners, it is important to note the severity of sentences for crack which is clearly a class based attack. Black people make up 13% of the population and about that same level of drug use. But they are 35% of those arrested for drug use, 55% of those convicted, and 74% of those serving time as a result of this so called drug war.

5. Spiritual Crisis. Finally, the fifth point is that this crisis is sapping the idealism from the American spirit robbing people of their idealism, expectations of social progress, and belief in the American way of life. People are spiritually impoverished.

### **A New Class, A New Hope**

This portrayal should not, however, produce depression and the dread of defeat. There is a basis for hope and optimism. The key and historically most significant point of all is that these revolutionary developments are revolutionary mainly because they are bringing a new class into existence. This new class has both the necessity and possibility for transforming society. This is good news indeed.

A flower can be called a weed, and if we believe that it is, we will treat it as such. We will kill it and be content in our ignorance that we have done good. But if we study the situation and find out that this is not a weed but a sweet and beautiful flower, then we will nurture it and help it develop so that it reaches its full potential. Gingrich and Clinton call the new class a bunch of criminals, weeds in their garden. But, we are suggesting that members of the new class are the flowers destined to make the gardens of the world beautiful and sweet smelling in the 21st century. We are the gardeners, and we must plan for what has to be done.

A class is an aggregate of people forced into existence by a structural change in the economy, who are socially molded into a historical force destined to vie for power and control of the society. The concept of class is always associated with class struggle. Class struggle is not just the sum of every issue, little or big. This is about which class rules society, and how the economic wealth of the society is distributed.

The industrial system emerged with both the capitalists and the workers uniting to defeat the feudal powers. But the conditions of their relationship put the capitalists in control. The capitalists owned the means of production and forced the workers to sell their labor power because there was no other way to survive. In fact, it was the social organization of production, especially the factory system, that imposed a discipline upon the workers. Otherwise, the role of the police was to make sure that discipline was maintained.

The workers in turn fought the bosses and the police to achieve certain standards for their lives, especially in wages and benefits, hours of work, conditions of work, etc. This general set of terms can be summed up as the social contract. This can be summed up as the terms of class peace between the workers and the capitalists.

Now we have a new proletariat. They are people who not only have no means of earning a living other than going to work for somebody, but now they are useless labor in an economy run by smart machines. They are outside of the existing social contract. This is forcing the emergence of a police state, because there is no other way to impose discipline on these permanently unemployed workers.

The illegal ploy is the spread of drugs and gangs for the youth, so the legal state can rise to the dangers and throw folks in jail.

There are at least four approaches to this problem, where both scholars and theoreticians joined with politicians in developing policy.

1. Jeremy Rifkin understands that people will be permanently unemployed and calls for a new renaissance of benevolence, sort of like George Bush and his 1000 points of light in a kinder more gentle America.
2. Alvin and Heidi Toffler join with Gingrich and project a hi-tech future in which the knowledge workers join with the capitalists, while the rest are written off. This is a sort of 21st century Social Darwinism, the survival of the fittest.
3. Robert Reich joins with Clinton and sees a resurgence of jobs in the new hi-tech future. This is the "we can win if we give it the old college try" model.
4. Finally, we have the analysis put forth by Nelson Peery and the League of Revolutionaries for a New America. This position argues that we are in a revolutionary process of transformation, and thus far are heading fast toward the end of work and a police state. This is not because these people in power are bad or they have bad ideas, but because they are forced to do this in order to preserve their capitalist rule. This position argues for a revolutionary motion in the opposite direction toward rebuilding the US with a new vision, a new American Dream, one that is worth fighting for.

What all of this means for Black people is quite clear. The leading political leadership for the Black community has been the middle class, first at the head of a people driven by their condition in the rural South, and then by the urban workers. The 1960's was the end of the unity between the Black middle class leaders and the masses of Black poor and working people. Now, there is a political split, and the Black middle class has parted company with the Blacks in the new proletariat because they are relatively secure and the others are not.

In fact, the vision of the Black middle class will be promoted in campaign after campaign. But that vision will fail because it does not address the fundamental reality of the new class. The best two examples I can think of have to do with the two most important political events in the last few years for Black people in the USA--the 1992 Los Angeles rebellion and the Million Man March. Both events reflected great commitment and mobilization, but neither had a political program. Now each has attempted to define a political program--the outline of a plan for economic development attributed to the Cripps and the Bloods, as well as the general plan developed by the Summit of Black leadership after the MMM. Both of these efforts tried to argue that a program of Black capitalism under the leadership of the Black middle class would work.

This is a misunderstanding of history and the issues we have been discussing here. At the end of the 19th century, this program of Black capitalism was undertaken by Booker T Washington and others to consolidate the Black middle class as a leadership. This was a useful strategy, as there was room to maneuver in a segregated society based on an expanding industrial economy. Today, based on the five revolutionary processes, no such Black capitalist program makes any real sense at all. This is fantasy, pure and simple. The main character of the Black middle class is not Black business, but professional jobs in government and corporate settings. The masses of Black people are on their own.

### **By Way of Conclusion**

If this is the end of work as we've known it, then our discussions are not a luxury but a necessity. Placing history on an objective basis is the key to understanding historical necessity. Will we do what is necessary? I think so. As Nelson Peery stated in our recent conference: "Humanity has never failed to make reality from the possibilities created by each great advance in the means of production. This time there is no alternative to stepping across that nodal line and seizing tomorrow."

Now is a great time to be alive. Its time to seize the time, brothers and sisters, its time to seize the time. Phone 312-536-0374; Fax 312-538-1128; Email [alkalimat@aol.com](mailto:alkalimat@aol.com)

## What is the digital divide?

A working paper for the d3 workshop, Ann Arbor, MI, August 2001  
by Kate Williams (katewill@umich.edu <http://www.umich.edu/~katewill>)  
**draft – please cite only with permission**

Our goal at this workshop is to contribute to building a scholarly community around research on the digital divide. This means two things: evaluating the body of research to date and proposing a research agenda that places our work into a common framework and enables us to collaborate. If we are successful, then specific activities—reading and using each other’s work, being in communication online and at conferences and such, doing research together, and drawing in other people with us, will follow.

This paper, which also serves as an introduction to the rest of the papers, examines a set of widely varied research on the digital divide and proposes a framework that can organize and interrelate this research. The researchers we’ll review have been working in different disciplines. They use different vocabularies and different definitions of the term “digital divide,” each of them useful. We are picking up many colorful puzzle pieces strewn across a landscape, and laying them on a table to fit them together.

The puzzle pieces here are mainly products of the U.S. scholarly literature and this is part of why it is not a comprehensive set. They are primarily the strongest theoretical concepts and the established quantitative datasets.

First, we’ll consider the digital divide itself. Where did it originate? We will see that the concept is rich, that it has both a history and a future. We will see that the concept is not punditry or policy talk. It is an intellectual concept that is part of information science and part of the multidisciplinary study of the information society.

Next, we turn to the extant data. What do we know empirically about the digital divide? What patterns does the data reveal? What theoretical frameworks does it suggest?

Then, what other concepts—themes—emerge from conceptual work relating to the digital divide? These will help us build around our theoretical scaffolding.

Finally, where are the gaps where the data is missing or the concepts unexplored -- or at least undiscovered by this writer? What do we need to know?

### Origin of the term “digital divide”

#### *How it happened*

In a series of January 2001 emails<sup>1</sup> on the U.S.-based listserv digitaldividenetwork<sup>2</sup>, list moderator Andy Carvin and others presented their research and recollections of how and when the expression “digital divide” arose. During 1995-1997, both the

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<sup>1</sup> Irving 2000

<sup>2</sup> Benton Foundation, Washington, D.C. <http://www.digitaldividenetwork.org>

U.S. administration and U.S. journalists used the term to describe the social gap between those involved with technology, particularly between children and their schools. Speaking of a mobile computer lab in a truck, Al Gore said, "It's rolling into communities, connecting schools in our poorest neighborhoods and paving over the digital divide."

Larry Irving was the original head of the National Telecommunications Infrastructure Administration at the Department of Commerce, to which we will return later for their national survey data. In the email exchange, Irving affirms that the four NTIA household surveys were "the catalysts for the popularity, ubiquity, and redefinition" of the term. As those surveys defined it, the digital divide is the social gap between those who have access to and use computers and the Internet. The surveys examined telephone penetration and uncovered demographic patterns of information and communications technology (ICT) access and use. Among other things, the studies revealed a "racial ravine"<sup>3</sup>—a persistent and widening disparity between rates of ICT access and use by white Americans and African Americans.

In the email exchange, Larry Irving defends the term from recent attacks, most prominently by the Republican appointee to the Federal Communications Commission chairmanship, and notes

the wrongheadedness of trying to take a phrase that has near universal acceptance (except for a few K Street and Tysons Corner lobbyists) and understanding and turn it into typical Washington style Orwellian Newspeak, (i.e. Digital Opportunity, a truly meaningless and worthless term.)

Elsewhere, Irving roots U.S. concern about the digital divide in "our nation's almost century long commitment to universal service,"<sup>4</sup> which in the 1934 Communications Act referred to telephone service.

As Irving understands, names are important. The French are also divided over whether to call the digital divide a "fossé numérique" (digital ditch) or a "fracture numérique" (digital fracture).<sup>5</sup> These debates are rooted in a deeper history of the term, which we will now explore. This involves acknowledging the information technology revolution and the social polarities associated with it.

### *The information technology revolution*

Without the digital, there could be no digital divide. What is the origin of digital, of the electronic and binary form of information? Claude Shannon, then at Bell Labs in New Jersey, first postulated the bit in a thought experiment published in 1948. The information technology revolution has in many ways been the result of implementing Shannon's "engineering theory of communications," which was that information translated into 0s and 1s could be sent from source to destination via a channel.

By most accounts, the information technology revolution has been underway for roughly 50 years. Table 1<sup>6</sup> shows just a few of the many names and sources for conceptions of this phenomenon.

<sup>3</sup> Falling through the Net 1999, p 8.

<sup>4</sup> Irving 2001

<sup>5</sup> Garrett 2001

<sup>6</sup> Beniger 1986 p 4-5, and others as given.

**Table 1. Selected names for the information technology revolution, with sources**

computer revolution	Berkeley 1962, in Beniger 1986
knowledge economy	Machlup 1962, in Beniger 1986
global village based on new mass media and telecommunications	McLuhan 1964, in Beniger 1986
scientific-technological revolution	Prague Academy 1973, in Beniger 1986
third wave	Toffler 1980
post-industrial/post-service revolution, information revolution	Jones 1982
informationalism	Castells 1989
network society	Castells 1996

Beniger provides a much larger collection of conceptualizations of what Jones calls the “economic paradigm shifts” of the last 20th century. But even the few sources included here indicate how scholars have seen that the computer, telecommunications, knowledge, and information are at the heart of the social revolution. Beniger also demonstrates that the then-Soviet Bloc recognized and was studying these same developments. Toffler and Castells are just two who also include biotechnology, itself based on computers used in biology research and on a definition of information (the four nucleotide pairs that make up genetic material) borrowing from Claude Shannon.

Toffler’s Third Wave was the popularization of the concepts of a third technological revolution following the agricultural and the industrial, a revolution based on developing and linking new technologies—computers and electronics, materials from outer space and the oceans, genetic engineering, and new energy sources. Jones wrote from his position as Australia’s minister of science.

Castells presents the concept of the network society: A network of information and communications networks, organizations and people forms the backbone of knowledge generation and information flow, including financial and commercial transactions, marketing, culture. Just as the early builders of electricity systems and telephone systems understood, value arose from the number of customers or nodes on the network. And we return to the concept of the binary digital divide: one can be on or off the network.

### *Social polarization*

Castells and Jones are among those who describe a social polarization within the information technology revolution, within the new society. Castells, in a paper titled, “The informational city is a dual city: Can it be reversed?” writes:

[T]he two processes, informationalization and dualization, are intertwined under the current social, political, and economic conditions in most of the world, certainly including American cities. New information technologies are certainly not the cause of this association between informationalization and sociospatial exclusion. The roots of social exclusion are in the politics of capitalist restructuring that have prevailed in most societies since the 1980s. The power of new information technologies, however, enhances and deepens

features present in the social structure and in power relationships. ... A real possibility exists of evolving toward systemic urban schizophrenia, that is, toward the dissolution of urban civilization in an undifferentiated exurban sprawl through telecommunicated/freeway-connected, discontinuous spaces, leaving behind "black holes" of poverty, dereliction, and ignorance, abandoned to their fate.<sup>7</sup>

After examining the African American communities of Chicago, William Julius Wilson presented the concept of the underclass, living in communities recently abandoned by the Black middle class and working class and now inhabited only by unemployed or only briefly employed people and thus isolated from the "job network system that permeates other neighborhoods".<sup>8</sup>

**Table 2. Conceptions of social polarity within the information technology revolution**

Underclass/truly disadvantaged Class society	Wilson 1987 Attali 1991, McChesney 1996, Perelman 1998, Dyer-Witthford 1999, Hodges 2000
Public sphere/counterpublic sphere (proletarian, Black, feminist)	Habermas 1989, Fraser 1992, Negt and Kluge 1993, Dawson 1994, Alkalimat and Williams 2000
Racial ravine	Falling through the Net 1999

Table 2 includes the concepts and sources relating to the social polarity which precedes and is contemporaneous with the digital divide. One set of writers explicitly connect the concept of class society to the information technology revolution. McChesney<sup>9</sup> documents the concentration of wealth and power in just five to eight global media companies making use of ICT and deregulation for cross selling that puts other media organizations at a disadvantage. Perelman describes the social fractures and the "panopticism" (worker surveillance) involved in what he calls the "mirage of the classless information society". Dyer-Witthford sees the information age as the latest battleground in the encounter between capital and labor, while Hodges asserts that the expertise of the knowledge worker has overtaken the capital of the corporate owner so that today's class struggle is in fact post-capitalist, between the professional and the ordinary worker. Among the most vivid and nonchalant of these descriptions of class in the information age comes from the then-president of the European Bank for Reconstruction and Development, Jacques Attali:

Severed from any national allegiance or family ties by microchip-based gadgets that will enable individuals to carry out for themselves many of the functions of health, education, and security, the consumer-citizens of the world's privileged regions will be "rich nomads." Able to participate in the liberal market culture of political and economic choice, they will roam the planet seeking ways to use their free time, shopping for information, sensations, and goods only they can afford, while yearning for human fellowship, and the certitudes of home and community that no longer exist

<sup>7</sup> Castells, in Schön 1999, page 28.

<sup>8</sup> Wilson 1987 p 57.

<sup>9</sup> McChesney 1996

because their functions have become obsolete. Like New Yorkers who every day face homeless beggars who loiter around automated teller machines pleading for spare change, these wealthy wanderers will everywhere be confronted by roving masses of “poor nomads”—boat people on a planetary scale—seeking to escape from the destitute periphery, where most of the earth’s population will continue to live. These impoverished migrants will ply the planet, searching for sustenance and shelter, their desires inflamed by the ubiquitous and seductive images of consumerism they will see on satellite TV broadcasts from Paris, Los Angeles or Tokyo.<sup>10</sup>

Distinct from the discussions of class society in the information technology revolution is another theoretical debate concerning social polarity. This is the discussion of the public sphere and the counterpublic sphere. The public sphere is the site of public discourse, a discourse which shapes intellectual and cultural life, policy and public opinion and, along with the economy, the state, and the family sphere, constitutes a society, serving as a space from which to critique the three other spheres. Various scholars have answered this concept, with descriptions of a counterpublic sphere or spheres, created and used by those who have been excluded from the public sphere in order to make their critiques and bring about transformation. Fraser describes the late 20th century feminist subaltern counterpublic, with its ... journals, bookstores, publishing companies, film and video distribution” creating new vocabulary such as the word sexism.<sup>11</sup> Negt and Kluge examine a proletarian counterpublic sphere in dynamic opposition to the bourgeois public sphere as technologies and media evolve. Dawson relates: “An independent Black press, the production and circulation of socially and politically sharp popular Black music and the Black church have provided institutional bases for the Black counterpublic since the Civil War.”<sup>12</sup> Alkalimat and Williams<sup>13</sup> document how a community technology center in the African American inner city can be a new institutional base for a counterpublic sphere by means of social cybpower, the effective use of ICT by groups of people.

In sum, then, the term digital divide has an etymological history which has a strong basis in quantitative data in the United States as well as actual roots in the evolution of the information technology revolution and the social polarities it inherited, enhanced, and deepened.

### **Empirical data**

Having identified the digital divide as a social phenomenon rather than merely a technological one, we can now proceed to evaluate how social science has mobilized to measure and understand it.

Table 3 summarizes a collection of 31 social surveys or reports of surveys concerning the digital divide, 30 from the U.S. and one from the U.K. These surveys are coded according to whether they are national or local, whether the unit of analysis is some type of individual/household or some type of community institution, and who collected the data.

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<sup>10</sup> Attali 1991 p 5.

<sup>11</sup> Fraser 1992 p 123.

<sup>12</sup> Dawson 1994 p 206.

<sup>13</sup> Alkalimat and Williams 2000 p 25.

<b>Table 3. Selected digital divide surveys</b>					
<b>Citation</b> (note that year of citation may not equal year of data collection)	<b>N</b>	<b>Unit of Analysis</b>	<b>National or Local</b>	<b>Individual or Community Institution</b>	<b>Dataset</b>
Kominski 1999	50,000	Households	N	I	government
McConnaughey 1995	54,000	Households	N	I	government
Birdsell 1998	15,000 in 15 different surveys	Individuals	N	I	commercial
McConnaughey 1998	48,000	Households	N	I	government
Chow 1998	817	Users of community technology centers	N	I	non-profit
Falling through the Net 1999	48,000	Households	N	I	government
John J. Heldrich Center for Workforce Development 2000	1,005	Adults in the workforce	N	I	academic
UCLA 2000	2,096	Households (panel study)	N	I	academic
Turow 2000	1,001 parents and 304 children	Parents and their children	N	I	academic
Lenhart 2000, also Spooner 2000	12,751 (some Qs smaller)	Households	N	I	commercial
Falling through the Net 2000	48,000	Households	N	I	government
Simms 2000	1,606 (1998) and 1,678 (1999)	Adults	N	I	non-profit
Czerwinski 2001	1,135	Internet users	N	I	commercial
Novak 1997, 1998	6,487	Individuals	N	I	commercial
Hoffman 1999, 2000	5,813 (1996-97), 7,157 (1997), and 4,042 (1998)	Individuals	N	I	commercial
Hawkins 1997	570	Undergraduates at a northeastern university	L	I	academic
Wilhelm 1997	72	Middle income Hispanic Californians	L	I	academic
Ervin 1999	247	Students at a Pacific northwest university	L	I	academic
Lentz 2000	830	Users of libraries and community technology centers	L	I	academic
City of Seattle 2000	1,011	Seattle residents	L	I	commercial
U. S. Department of Education 2001	1,000 each year since 1994	K-12 schools	N	CI	government
Bertot 1996	1,059	Public library systems	N	CI	academic
Bertot 1997	1,426	Public library systems	N	CI	academic
Melchior 1998	100	Youth serving organizations	N	CI	academic
U. S. National Commission on Libraries and Information Science 1999	1,888	Public library outlets	N	CI	academic
Policy Action Team 15 (U.K.) 2000	200+	Public computing sites	N	CI	government
U. S. Department of Commerce 2000	80	HBCUs and other equal opportunity educational institutions	N	CI	government
Hecht	68	Community networks	N	CI	non-profit
Stoecker 1997	189	Ohio neighborhood based organizations	L	CI	academic
Bertot 1997	188	Pennsylvania public library outlets	L	CI	academic
Wyden 2000	100	Oregon senior centers	L	CI	government
Williams 2000	18	Toledo public library outlets	L	CI	academic

The baseline research questions across many of the individual or household studies are the same:

Do you have a computer at home?  
 Do you use a computer at work?  
 Do you use a computer elsewhere?

These questions correspond to three different settings for computer/Internet use, and allow us to organize the field of digital divide research by three types of computing as in Table 4 on the next page:

personal computing,  
 private computing, and  
 public computing.

Chow 1998, Stoecker 1997 and Williams 2002 (forthcoming) identify 29 settings for public computing. To date, judging from our 32 surveys, only a few of these have been either the subject of a digital divide survey or the location for a digital divide survey of individuals.

There are also country studies and global studies of the digital divide (for example Barnard 2001, Courrier 1997, Understanding the Digital Divide 2001). But none of those obtained for this paper were surveys.

Table 5 suggests where the focus of research has been. National surveys outnumber (and generally have preceded) local surveys (23 to 8). Surveys of individuals outnumber surveys of community institutions (20 to 11). Only one survey of individuals focused on workers and therefore was located in the realm of private computing. Table 5 does not indicate this, but returning to table 3, just one survey of community institutions was of a virtual institution: the community network. (See van den Besselaar 2000 for a case study of two European digital cities, also virtual).

**Table 5. Typology of the 32 digital divide surveys in table 3.**

	Individual: Personal Computing	Individual: Private Computing	Community Institution or Users: Public Computing	Grand Total
National	14	1	8	23
Local	5	0	4	9
Grand Total	19	1	12	32

The extensive social informatics literature on workplace transformations in the digital age largely relies on case studies, ethnographies, interviews, participant observation. For business organization surveys, we need to further explore the U.S. Census Bureau and other agencies, which might fill what appears here as a gap.

With respect to the type of institution that built the dataset: the government began surveys on this issue 1984; academics in 1994, commercial survey organizations in

**Table 4. Where to find the digital divide**

<b>Type of computing</b>	<b>Baseline research question</b>	<b>Setting</b>
1. Personal	Do you have a computer at home?	Home
2. Private	Do you use a computer at work?	Work
3. Public	Do you use a computer elsewhere?	In the community: adult education center assistive center cable access center church college or university community network center community technology center copy shop cybercafe day care center government office hospital housing development center job training agency laundromat library literacy center mental health agency multiservice agency museum national urban league neighborhood based organization rehabilitation/drug abuse center school senior center settlement house standalone computer center youth organization other

4. National or country studies of the digital divide sum up one or more of the above three settings for a given nation.

5. Global studies of the digital divide compare one or more of the above three settings across countries.

Sources: Public settings from Chow et al 1998, Stoecker and Stuber 1997, and Williams and Alkalimat, 2002 forthcoming.

1996, and non-profits in 1998. Figure 1 points up some possible data issues. One of the prominent commercial datasets used by Novak 1997, 1998 and Hoffman 1999, 2000 is from Nielsen/CommerceNet. Only their percentages for white and African American households with computers is available, but as figure 1 indicates, that data appears to overestimate computer ownership compared to rates from the U.S. Census/Falling through the Net studies, which are of much larger populations.

In general, the largest and longest running surveys are the government surveys, particularly the U.S. Census (reported in Kominski 1999) and the Falling through the Net studies, which have been carried out in partnership with the U.S. Census.

The 32 quantitative surveys of the digital divide shows that the digital divide has been quantified in different ways across three domains of social life (home, workplace, and public spaces) and three corresponding types of computing. For the United States, chief among the public spaces are the nation's public schools and libraries.

Making use of the 16 year span of data collection by the U.S. Census Bureau and their Falling through the Net partners, we can operationalize the three types of computing as shown in Table 6. Figures 2, 3, and 4 (on pages 8, 9, and 10) present the data.

**Table 6. One way to operationalize three key concepts in digital divide research**

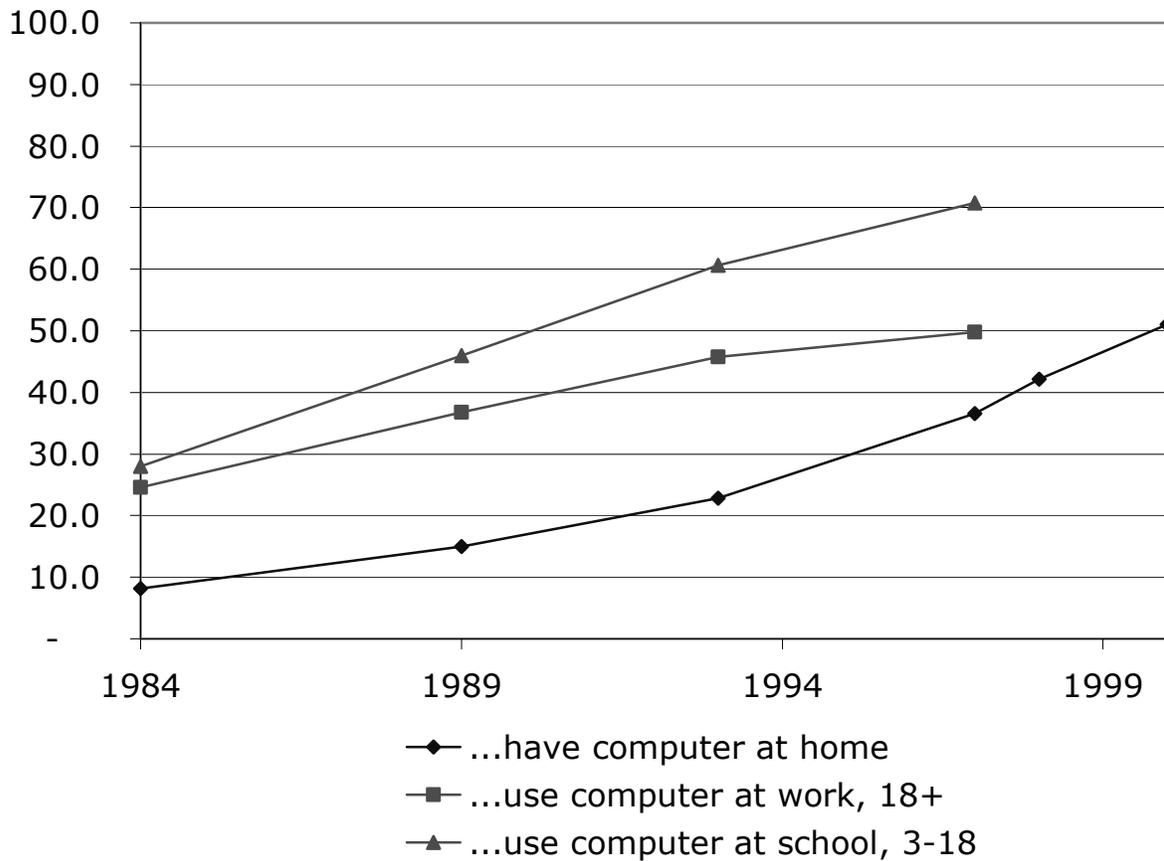
<b>Concept</b>	<b>Measure</b>
Personal computing	Percent of households with computer at home
Private computing	Percent of adults 18 and older using a computer at work
Public computing	Percent of children age 3-18 using a computer at school

Figure 2 points up public computing as the most distributed across the population, one could say (but only very roughly) the most democratic, reaching 71% of children by 1997. We can see personal computing as the least distributed, reaching 51% of households by 2000.

Crosstabulating technology data with demographic data points up digital divides not just between individuals, but between socioeconomic groups. Some groups are more likely to be "wired" than others. Figure 3 looks at white and African American households as an example. Again public computing, operationalized as children using computers at school, is the best equalizer. Private computing (using computers at work) shows a steady gap. Personal computing shows a widening gap, the gap the NTIA called a racial ravine.

Figure 4 examines the economic differential across households. It was not possible to take the highest and lowest income groups because college student households with temporarily low incomes skew into the low income strata. Educational attainment here is thus a proxy for income level. With the two most extreme education strata, the difference between the three domains is even more dramatic. Private computing and personal computing both show very wide digital divides. Public computing again is the place for equalizing or democratizing.

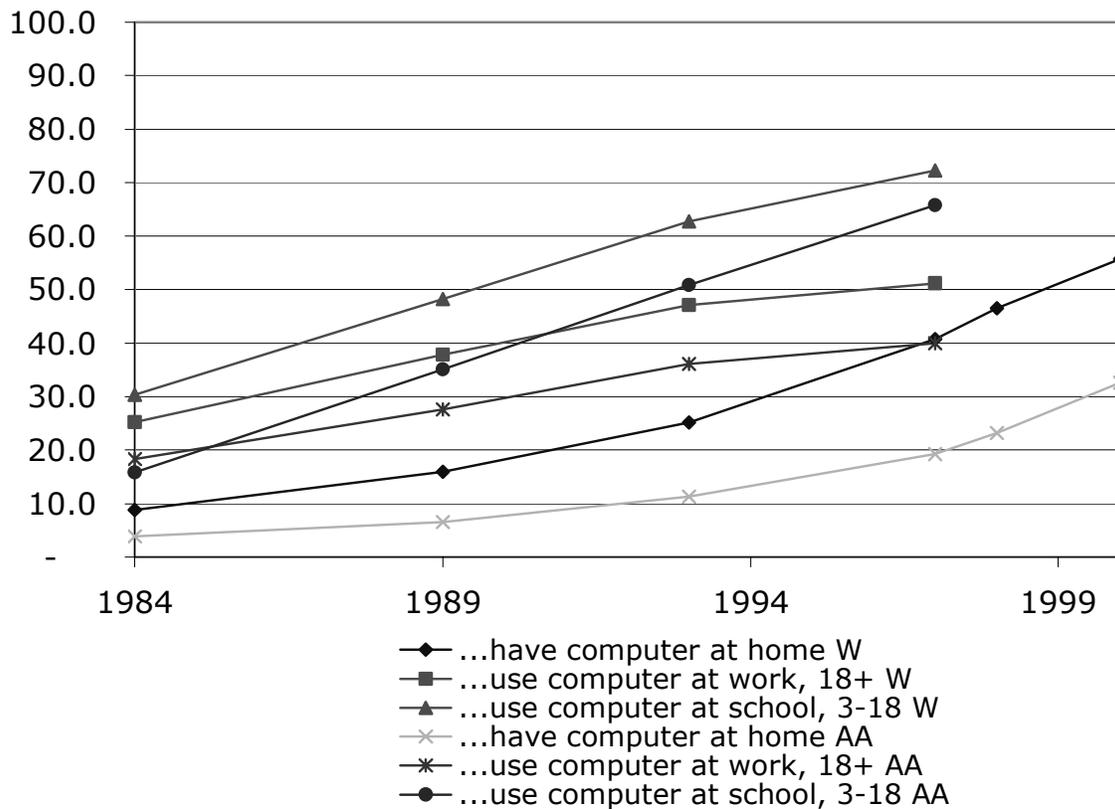
**Figure 2. Operationalizing personal, private, and public computing: Percent of U.S. households which...**



Percent of U.S. households which...	...have computer at home	...use computer at work, 18+	...use computer at school, 3-18
1984	8.2	24.6	28.0
1989	15.0	36.8	46.0
1993	22.8	45.8	60.6
1997	36.6	49.8	70.8
1998	42.1		
2000	51.0		

Source: 1998 and 2000 data from Falling through the Net 2000, other data from Kominski 1999.

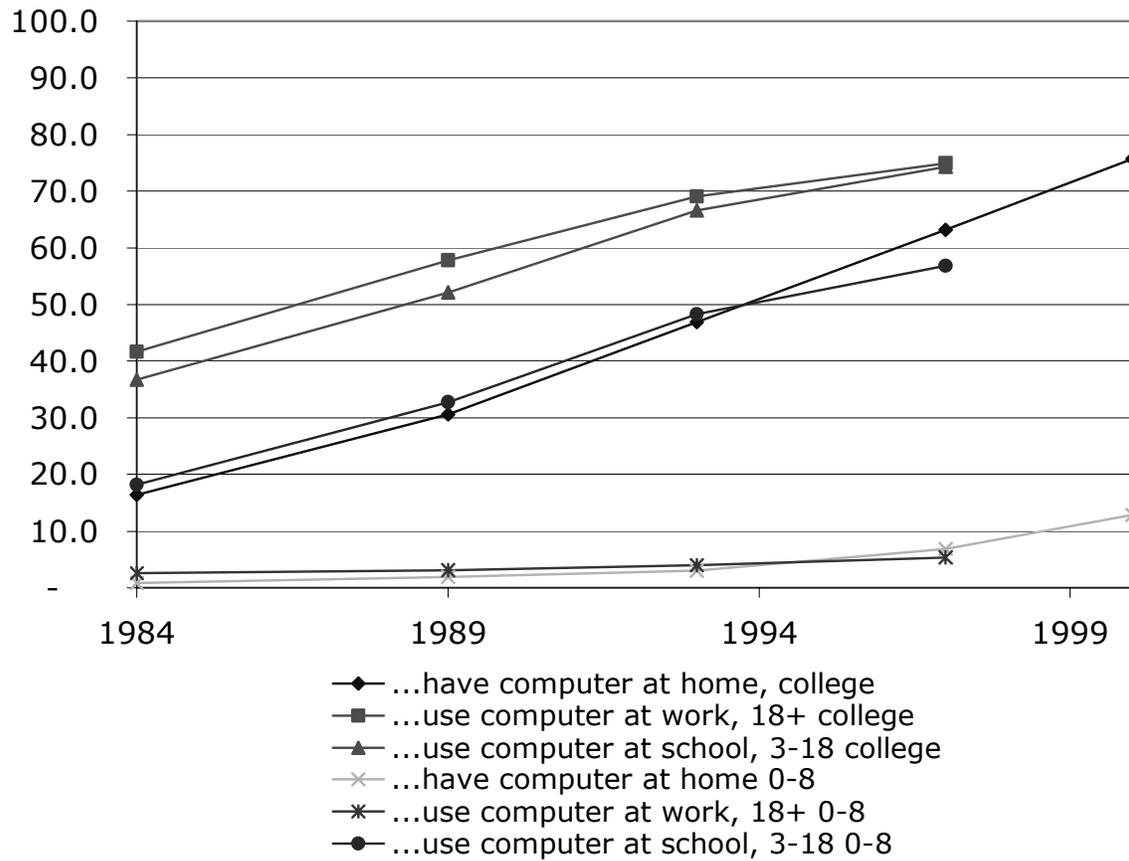
**Figure 3. Comparing white and African American households**



	White			African American		
	...have computer at home W	...use computer at work, 18+ W	...use computer at school, 3-18 W	...have computer at home AA	...use computer at work, 18+ AA	...use computer at school, 3-18 AA
1984	8.8	25.3	30.3	3.8	18.3	15.9
1989	16.0	37.8	48.2	6.6	27.6	35.1
1993	25.1	47.1	62.7	11.3	36.1	50.9
1997	40.8	51.2	72.2	19.3	40.0	65.8
1998	46.6			23.2		
2000	55.7			32.6		

Source: 1998 and 2000 data from Falling through the Net 2000, other data from Kominski 1999.

**Figure 4. Comparing households with a college degree and those who completed 8 grades or less**



	...have computer at home, college	...use computer at work, 18+ college	...use computer at school, 3-18 college	...have computer at home 0-8	...use computer at work, 18+ 0-8	...use computer at school, 3-18 0-8
1984	16.4	41.7	36.7	0.9	2.6	18.2
1989	30.6	57.8	52.1	1.9	3.1	32.8
1993	46.9	69.1	66.6	3.0	4.0	48.3
1997	63.2	75.0	74.3	6.8	5.3	56.9
2000	75.7			12.8		

Source: 1998 and 2000 data from Falling through the Net 2000, other data from Kominski 1999.

Before we move on, we must take note of at least three caveats to these charts.

First, in figure 4, literacy differences are at work as well as a digital divide. The personal computer is not user friendly for illiterate people as, say, a handheld computer game is.

Second, school is not all of public computing. Colleges, universities, libraries, are also important sites for public computing, not to mention all the 29 types of sites we saw in table 4. They may not be as equalizing as K-12 school computer usage is.

Third, school is compulsory. Compulsory computer use might be good at equalizing usage, but is it desirable? Is it something to rely on exclusively?

Finally, and we will discuss this more below, a great deal of information about the varied reality of personal, private and public computing, will remain invisible as long as we just examine answers to the baseline research questions.

But these three figures, limited just to data on the three baseline research questions regarding the digital divide, suggest a second dimension to our nascent research framework of personal, private, and public computing. We now can see there are various types of people who either use those sites or do not. Table 6 provides a 3 by 8 matrix which identifies eight types of individuals in a digitally divided society.

**Table 7. Becoming digital: A typology of individuals in a digitally divided society**

Personal computing	Private computing	Public computing		
+	+	+	1	netizenship
+	+	-	2	cyberactivism: 2 locales of connectivity
+	-	+	3	
-	+	+	4	connectivity (in one locale)
+	-	-	5	
-	+	-	6	exclusion
-	-	+	7	
-	-	-	8	

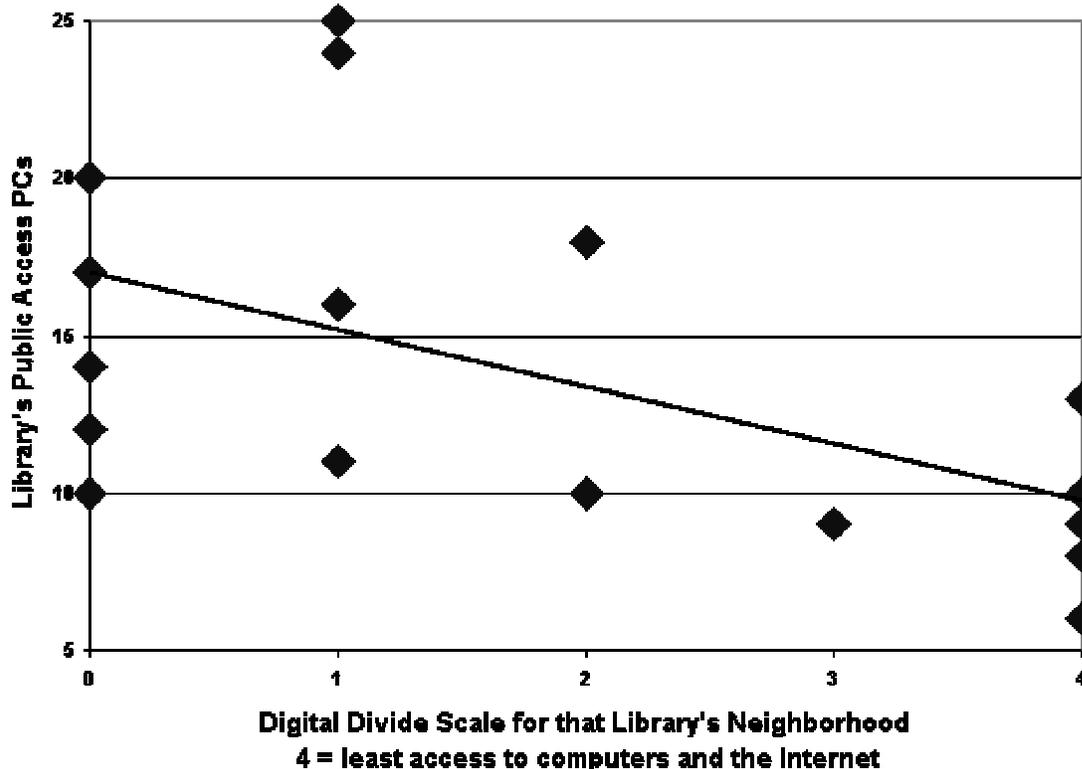


In the dynamic societies across the globe today, one can postulate that people are moving from exclusion to netizenship through various middle stages. Each movement, each stage is far more complex than computer ownership, yes or no, or computer use, yes or no. Past and future research from a variety of disciplines can be organized according to which cell or cells in this matrix it examines.

In addition, as we have seen in 12 of our 32 surveys, the unit of analysis does not have to be the individual. The institutional setting also needs to be interrogated and understood. For instance, Williams 2000 takes as its unit of analysis the public library outlet. The paper operationalizes public computing as the number of public access PCs in a given public library outlet, and measures that against a community's

digital divide status. The paper uses GIS (a geographic information system) and U.S. census demographic data to derive a measure of a community's digital divide status (as suggested by the Falling through the Net studies) within one mile of each outlet. The results in figure 5 indicate a definite trend line: library outlets in digitally divided communities have fewer computers than those in communities on the rich side of the divide. In this situation, the public libraries appear to be exacerbating the digital divide. These results bear further research, because the number of computers is an imperfect indicator of public computing: perhaps the libraries with fewer computers have allocated extra money to computer classes?

**Figure 5. Public computing measured against a community's need for it**



Each diamond is one of 17 library outlets (main library not included). The number of public access PCs in each outlet is on the vertical scale; the 4-point indicator of a community's being underresourced with respect to computers is on the horizontal scale. Source: Williams 2000.

### **Additional key concepts: Literacy and agency**

Now, having boiled down the mass of data in 32 surveys to one 3 by 8 matrix-style framework for researching the digital divide, we can finish by arming ourselves as scholars with just two additional concepts: literacy and agency.

#### *Literacy*

Literacy is itself a sociotechnical system that predates the computer. We could consider the pen, paper and book in this or any recent century or the stylus, wax

tablet and papyrus scroll two millennia ago. It will be still more important to consider conceptual spin-offs from information literacy (Adler 1999) to computer fluency (National Research Council). But for now let us sum up the contributions and the experience of literacy scholars in light of the IT revolution and its social polarities.

Over two decades or more, New Literacy Studies has emerged as a network of scholars who see literacy as situated, social, cultural, and relating to power. Writing from the Australia, the U.K. and the United States, they conceptualize literacy practices generally as a variable that is dependent on myriad sociocultural realities.

Over the same time, literacy studies (lowercase) has become a split discipline. Apart from New Literacy Studies, other scholars have tended to literacy as an independent variable, upon which school and employment success depend. Projects such as an repeated multinational survey of functional literacy – testing, for example, the ability to read instructions or fill in a form, or applying and testing methods of elementary reading instruction that rely on recognizing words or sounds. For these scholars, literacy is not so much situated as mandated by the dominant communications channels in order for people to get ahead and get by.

There is also discussion between and among literacy scholars over what the workforce—and the public sphere—of the information technology revolution will require: more highly literate workers, or fewer; more functionally literate workers, or fewer; more workers, or more people prepared for leisure or idleness.

In an extended comment on a National Research Council book on the reading crisis (another phenomenon debated across literacy studies), James Paul Gee proposes some approaches to reassembling and combining the data and concepts of the New Literacy Studies and of other literacy scholars.

Many literacy scholars (Finn 2000, Lankshear 1997, Lankshear and Lawler 1987, and Rassool 1999, and Warschauer 1999 among them) are examining literacy in a computer-rich environment as well as literacy in our (so-called) information age. They have explored the daily texture of computer use in rich and low-income schools, communities, and countries and uncovered the power differentials that facilitate the maintenance of a digital divide. For instance, Lankshear and Finn are two literacy scholars who have each established that computer use by lower-income students tends to be more drill, less exploration; less time per week; and more student per computer. This close-up work merits more attention from digital divide scholars. But we must also see that these scholars are already headed our way, bringing a rich, even if (or because) contended, research literature to bear on the problem of the digital divide.

In advance of deeper exploration, what we can take from literacy studies is the recognition that the world of bridging the digital divide includes many identical issues. In general, people access computers and the Internet in order to better navigate their world as it is (in a rough correspondence to functional literacy) as well as to transform their communities and thereby the world (situated, social, cultural, multiliteracies). What we can see from our work in the digital divide is that people in fact need to and want to do both. And this is possible.

*Agency*

And this brings us to Agency. If we hold the rich concept of literacy in one hand, agency is the concept to hold in our other hand. Agency means examining the “digitally divided” not as mute objects of a powerful sociotechnical phenomenon, but as subjects of their own lives and active agents in the information technology revolution we started at in this paper. Our discussion of the counterpublic prepared us for this. As an example, Christopher Mele (1999) documents how mothers and grandmothers living on public assistance in public housing in North Carolina used the Internet via one previous locked-up public access computer to rally professional resources and win a seat at the planning table when housing managers decided to tear down apartments. Alondra Nelson (2000) presents a book of examples of less-powerful communities, cultures, and individuals “appropriating technology” for self expression and political mobilization—a new-technology echo of the literacy/power/culture nexus that the literacy scholars have uncovered in their studies

Ron Eglash (1999, 2001a, 2001b) carries this concept further by describing the digital divide as a two-way bridge, because knowledge and technology exist on both sides of the divide and spanning the divide means bringing both together usefully. Commenting on a project in rural Africa, he writes in an email:

Rather than view the rural community as a place of technological absence, view it as having a \*different\* set of technologies than the west does. Your challenge is then to provide a kind of "translation" to make both sets of technologies—indigenous and western—available to both sides.

In studying such phenomena as low-rider “street engineering” of cars and fractal patterns in African architecture and hair design, Eglash focuses on the production of sociotechnical artifacts by people at the margins, with the orientation that:

[a] society may be at the margins of political and economic power, but their knowledge systems can produce information that winds up in a first world high tech laboratory.

\* \* \* \* \*

In the ten days of finishing this paper,

- The leaders of the G-8 governments convened in Genoa with one agenda item being their plans for bridging the digital divide, a full year after commissioning a report on the issue
- A photo of the first McDonalds restaurant providing Internet access to customers (in Israel) was printed in the Toledo (Ohio) Blade

The 20-odd doctoral students convening in Ann Arbor have experienced ourselves the excitement and the sometimes-unwarranted enthusiasm of those already wired who see the digital opportunity. We have also seen and experienced ourselves the frustration and sometimes-unwarranted feeling of powerlessness of those who see the digital divide.

Science, particular interdisciplinary, international, youthful science as it can be today with its laboratories and institutions wired, its universities as anchors for knowledge

development, its doctoral students among the most technologically adept, has a key role to play in making sense of these and other such developments, and then contributing to policy development. The work, let alone hitting the mark, is quite exciting.

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# A Census of Public Computing in Toledo, Ohio (2002)<sup>1</sup>

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This chapter reports on research that was designed to identify every public computing site in the city of Toledo, Ohio. As well as describing these sites, we analyze their social environment. Our goal is to explore how different social processes are influencing the informatization of society and the persistence (or not) of the digital divide.

## Three bridges across the digital divide

The digital divide is a concept about inequality that grabbed the imagination of scholars, activists, policymakers, and all varieties of hardware and software producers.<sup>2</sup> Being wired started out as an interesting innovation for scientists and the military and now has become a systemic norm for social and economic life. Moreover, social and technological change makes the digital divide a moving target. The digital divide concept, explicitly or not, is now at the heart of most discussions about workforce development, architectural and urban planning, youth and social welfare, and all levels of education.<sup>3</sup> The fundamental assumption is that computer literacy is a requirement for being a first class member of society.<sup>4</sup>

The most frequently cited measures of the digital divide focus on access (by ownership or some other means) and use. There are multiple and related conceptions and measures.<sup>5</sup> Elsewhere (Alkalimat and Williams 2001) we advanced the concept of cyberpower, a measure of to what extent individuals, groups or institutions are able to wield power with information and communications technology (ICT).<sup>6</sup>

There are three ways people bridge the digital divide to access and use information and communications technologies and even have the possibility of cyberpower. They may use a computer (with or without Internet) at home; we call that personal computing. They may use ICT on the job; we call that private computing. Market forces drive personal and private computing, involving individuals as consumers or as workers, respectively. But there are many other places where people can access and use computers and the Internet: universities,

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<sup>2</sup> A good overview might include Norris 2001, the Benton Foundation's <http://www.digitaldividenetwork.org>, the Pew Internet and American Life reports at <http://www.pewinternet.org/>, and Williams 2001.

<sup>3</sup> Schön et al 1999.

<sup>4</sup> NRC 1998, Williams 2002.

<sup>5</sup> NTIA 1995, 1998, 1999, 2000, and 2002, Loader 1998, DiMaggio and Hargittai 2001.

<sup>6</sup> Alkalimat and Williams 2001.

schools, libraries, cybercafes, and so on. New ICTs are being introduced as well. On one block in Boston, several shops and cafes offer free wireless access to anyone who has a laptop and wireless network card.<sup>7</sup> On New York City streets as well as in many airports, a public telephone-like booth offers web browsing and email.<sup>8</sup> As part of its plan to combat the digital divide, the city of Atlanta is rolling out a mobile computer lab on a bus, building on earlier rolling computer labs in Indianapolis and elsewhere.<sup>9</sup> All these settings for using ICT apart from home or work we call *public computing*.

Outside the US, public computing is at least equally important. Franchise convenience stores in Japan linked to their corporate partner are the site of e-commerce opportunities for their customers using a public access terminal hooked up to the infrastructure previously used only for store-corporation communications.<sup>10</sup> Beijing is reported to have 2000 cybercafes used heavily for games, chatting, email and web. In Britain a recent initiative to provide public access computer in libraries is linked with community digitization work.<sup>11</sup> India's telephone shops often also provide an online computer. Cuba has a string of youth computer clubs where the public learns on networked computers and where teams of people write software; they have also begun setting up public browsing rooms (*salas de navegación*). Mexico created a small sensation recently when it agreed to purchase from Microsoft rather than adopt a set of open source software tools for the nation's public schools; and the Gates Foundation has been active in the US and abroad funding the installation of public computing to serve what it sees as marginalized communities. A 1998 survey reported that Canadian reliance on school and "public sites" for accessing the Internet increased at lower income levels.<sup>12</sup>

Public computing is a major aspect of how space is and will be allocated in society. This is a collaborative process involving professionals such as architects, urban planners, social service agencies, librarians, and educators as well as advocates or activists, be they politicians, community interest groups, or social movements. This process of designing public computing into urban spaces is one theme running through a stream of books published out of MIT over the last decade by a set of public intellectuals of the information revolution, scholars and cheerleaders for their versions of the future.<sup>13</sup> Magazines from MIT's own *Technology Review* to the trade-oriented *Archi-Tech*<sup>14</sup> address this problem of designing smart spaces.

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<sup>7</sup> Bray 2002.

<sup>8</sup> Emling 2002.

<sup>9</sup> Holsendolph 2001 on Atlanta; Drumm and Groom 1998 on Indiana

<sup>10</sup> Aoyama 2001.

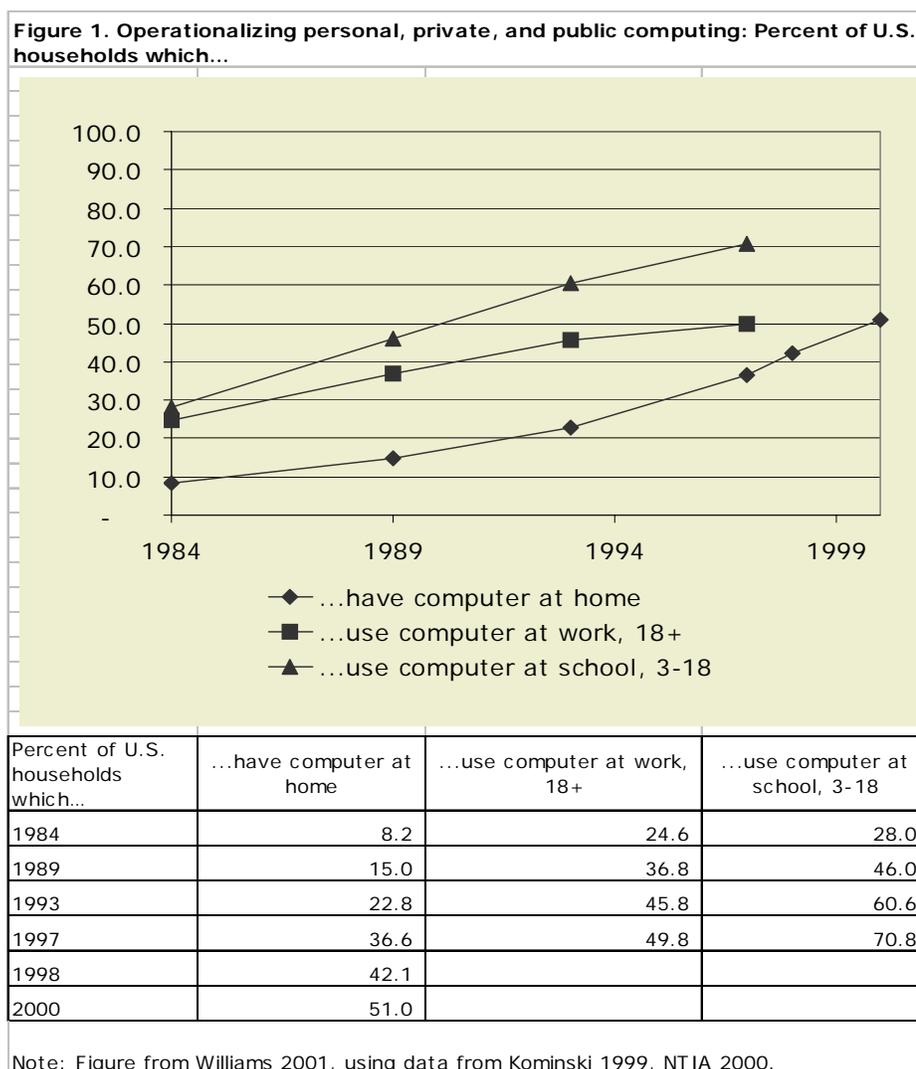
<sup>11</sup> <http://www.peoplesnetwork.gov.uk>

<sup>12</sup> Ekos 1998, referenced in figure 4 in Rideout 2000 p 13.

<sup>13</sup> From MIT's departments of architecture, artificial intelligence, computer science, and the Media Lab, in chronological order: Brand 1987, Mitchell 1994, Negroponte 1995, Dertouzos 1997, Gershenfeld 1999, Mitchell 1999, Dertouzos 2001, and Brooks 2002.

<sup>14</sup> Turket 2002

Figure 1 below compares personal, private, and public computing using data from US federal surveys.<sup>15</sup> By 1990, more than half of K-12 students had ICT access in school. By 1997, more than half of adults had access at work. By 2000, more than half of American households had a computer at home. This table suggests that the greatest and certainly the earliest equality of access might be found in public computing. The quality of that access—part of which is expressed in the social environment of a given public computing site—is an important determinant of digital equality. But before we can evaluate the quality of a public computing site we have to know it exists. Many public computing sites are invisible even to their neighbors and thus overlooked at the many levels of research, policy formation, and practice. Our method, explained below, can be applied to bring these sites into plain view so that research, policy and practice can be more informed.



## Two social processes

<sup>15</sup> Figure from Williams 2001, using data from Kominski 1999, NTIA 2000.

We are concerned with how democracy will fare in the transition to the information society, and this has been another thread through the literature.<sup>16</sup> The early adoption of information and communications technology followed the dynamic of the marketplace, taking place at high income levels and in occupations related to the military, science and technology, banking and finance, and the media.

But two social processes are at work. Society functions with and within the world's markets and also depends on a democratic tradition. This tradition, encoded in laws and cultural practices, can complement or counterbalance the impact of the market on national policy and on the life chances of those with the least—people with marginal or no employment or dependent on low incomes. We are accustomed to the interplay between these two traditions of social life and social change, the market and the democratic public sphere.

The strength of the market is that innovation in search of profit drives change. With regard to ICT, new hardware and software, new uses and applications, are being produced constantly and prices tend to fall. Moore's Law—every 18 months, chip capacity and doubles chip prices fall by 50%—is holding true into the 21st century.<sup>17</sup> The problem with the market is that we see persistent and even worsening inequalities that threaten the fabric of society.

The strength of the democratic tradition is that its emphasis on equality mediates against alienation and social conflicts. But at the same time, poverty nurtures the legacies of intolerance and authoritarianism that undercut the trust and stability necessary for democracy to be sustained.

From the earliest public computing projects—Community Memory in Berkeley, California; Playing to Win in East Harlem, New York City, and the Cleveland FreeNet in Ohio, for example<sup>18</sup>—to the relatively recent federal eRate legislation, the US has seen considerable democratic activity designed to provide ICT access for all. As we will see, public computing itself expresses the interplay and contradictions between forces of the market and forces for democracy. This can help us to understand prospects for the digital divide.

## **The social environment of public computing**

People enter virtual space—to browse the Web or to play a game of virtual Solitaire—via technology that is located in actual space.<sup>19</sup> That space is a social environment, the result of a confluence of social forces, institutions, and histories. People negotiate their way through and into social spaces when entering a public computing site, and operate in social space when online.

The social environment of public computing includes four aspects. First, is the hardware and software configuration. Second is the institution which hosts a given public computing site. Third is the immediate surrounding community. Finally, each community is located in a larger territory or macroenvironment: a city, country

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<sup>16</sup> Toffler 1995, Schuler 1996, Lévy 1997, Miller 1996, Lee 1997, Perelman 1998, McChesney 1999, Walch 1999, Rifkin 2000, Hodges 2000.

<sup>17</sup> Kelly 1998, Schiller 1999, Gilder 2000.

<sup>18</sup> Schuler 1995.

<sup>19</sup> Lévy 1997, 1998, 2001.

and region. This social environment in turn impacts and shapes our use of ICT and of cyberspace.

Castells<sup>20</sup> has categorized various macroenvironments according to their position in the global transition to the networked society. Relying on Castells, we see three categories: the technopole, the unconnected areas, and the dual city.

In the technopole, almost everyone is connected to and with ICT. In the world's unconnected regions, almost everyone is generally delinked from ICTs. In the dual city, some communities and strata of people are connected, and other communities and strata are not. Most of the world's industrial cities in transition to the information society are dual cities. So are most national capitals, even if the only ICT-connected are the armies, the NGOs, the state and supranational institutions, and the inevitable business and luxury hotels.

Castells and Hall<sup>21</sup> discusses four kinds of technopoles: industrial complexes, science cities, technology parks, and certain regions with a comprehensive technopolis program for regional development. Their summary points to three main functions of these cities: reindustrialization, regional development, and synergy for innovation. Castells<sup>22</sup> also advances the concept of the Fourth World, the world's delinked regions and countries. He explores<sup>23</sup> how the typical "informational city" is a dual city and asks whether and how the digital and other social divides in such a place can be reversed. There are many empirical measures being discussed in these works, but it appears that public computing is not in the picture.

Examining Toledo, Ohio, as a dual city, we have pursued two research questions. What are the public computing sites? What is the social environment of public computing?

## **Public computing: The national picture**

There is a growing body of research literature on the process of informatization of US society. Here we scan this literature with four questions in mind:

- 1) To what extent are people using ICT?
- 2) What has been the impact of government policy on public computing?
- 3) What has been the contribution of the community technology center?
- 4) What trends provide leading models for change?

### ***People using ICT***

The US Department of Commerce released its latest digital divide report in 2001. As of fall 2001, the number of people using the Internet in the US was increasing by 2 million people per month. Overall, 66 percent of individuals use

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<sup>20</sup> Castells 1989, 1996, 1997, 1998, 1999, Castells and Hall 1994.

<sup>21</sup> Castells and Hall 1994 p 10-11.

<sup>22</sup> Castells 1998.

<sup>23</sup> Castells 1999.

computers, 54% use the Internet, and 45 % use email. Among children age 5-17, 96% use computers.<sup>24</sup>

Table 1 below uses data from the last Department of Commerce/NTIA report to summarize trends among selected population strata.<sup>25</sup> Each of these population strata increased its use of computers and the Internet during the 1997-2001. The digital divide between men and women practically vanished. But the other paired strata show a different trend, as the shaded cells in the table highlight. For white/Black and college degree/no high school, the digital divide in both computer use and Internet use widened. For employed/unemployed and >\$75,000 income/<\$15,000 income, the computer use gap narrowed, but the internet use gap widened.

		Computer Use		Internet Use	
		October 1997	September 2001	October 1997	September 2001
<b>Gender</b>	Men	53.8	65.5	24.3	53.9
	Women	53.3	65.8	20.2	53.8
	<b>difference</b>	<b>0.5</b>	<b>(0.3)</b>	<b>4.1</b>	<b>0.1</b>
<b>Employment</b>	Employed	61.7	73.2	28.5	65.4
	Unemployed	24.8	40.8	12.4	36.9
	<b>difference</b>	<b>36.9</b>	<b>32.4</b>	<b>16.1</b>	<b>28.5</b>
<b>Household income</b>	\$75,000 and above	80.8	88.0	44.5	78.9
	less than \$15,000	29.8	37.3	9.2	25.0
	<b>difference</b>	<b>51.0</b>	<b>50.7</b>	<b>35.3</b>	<b>53.9</b>
<b>Ethnicity</b>	White	57.5	70.0	25.3	59.9
	Black	43.6	55.7	13.2	39.8
	<b>difference</b>	<b>13.9</b>	<b>14.3</b>	<b>12.1</b>	<b>20.1</b>
<b>Education</b>	College degree	74.3	84.9	41.4	80.8
	No high school diploma	7.9	17.0	1.8	12.8
	<b>difference</b>	<b>66.4</b>	<b>67.9</b>	<b>39.6</b>	<b>68.0</b>

Source: NTIA 2001.

Eventually, every strata could be on par. But the widening divide in the interim is troubling because late adopters have a different relationship than early adopters with the technology -- and with the economy and society that are structured around this technology.

### ***Government public computing policy***

<sup>24</sup> NTIA 2001.

<sup>25</sup> NTIA 2001.

Government policy with regard to public computing has resulted in expanding funds for schools, libraries and community centers. Where there is quantitative data, we see different rates of ICT availability across the population within the overall trend of increased ICT availability to all.

The eRate, which provides technology funds for schools and libraries, has amounted to a \$6 billion investment in public computing since it was implemented as part of the 1996 Telecommunications Act. In 1994, 35% of US schools were connected to the Internet; by 2000 98% were. Table 2 below summarizes trends among selected types of schools.<sup>26</sup> Each of these types of schools has more school Internet and more classroom Internet in 2000 than they did in 1994. But as the shaded cells in the table indicate, certain gaps widened: between high and low minority-enrollment schools and between schools with high and low percent of students receiving free lunches (the most measured indicator of student poverty). In minority/poor schools, Internet access tends to be more limited to libraries, computer labs, or computers used only by teachers and administrators.

		Schools with Internet		Classrooms with Internet	
		1994	2000	1994	2000
<b>Minority enrollment</b>	6% or lower	38	98	4	85
	50% or higher	27	96	2	64
	<b>difference</b>	<b>11</b>	<b>2</b>	<b>2</b>	<b>21</b>
<b>Percent of students receiving free lunch</b>	35% or lower	39	99	3	82
	75% or higher	20	94	2	60
	<b>difference</b>	<b>19</b>	<b>5</b>	<b>1</b>	<b>22</b>

Source: U. S. Department of Education, Office of Educational Research and Improvement 2001.

Library provision of computers and Internet is nearly universal, with 95.7% of the country's libraries having Internet connections, 94.5% making Internet connections available to their patrons, and an average of 8.3 workstations per library location.<sup>27</sup> The Gates Foundation has set out to boost public computing in library branches located in low income communities, and in a study of Toledo libraries, we found that each library branch did provide public computing, but that the branches with more ICT were located in communities that were more white, with higher income, and more educated. So our small local study of libraries suggests a trend similar to the schools and to ICT use across the population.<sup>28</sup>

The Pew Public Internet Project has been issuing a stream of empirical reports which include data on public awareness of public computing. They report 51% of the adult population knowing of a public place to use computers and get on the Internet

<sup>26</sup> U. S. Department of Education, Office of Educational Research and Improvement 2001.

<sup>27</sup> Bertot and McClure 2000 p 25.

<sup>28</sup> Williams 2002.

(whites 53%, Blacks 44%). Among computer users, awareness increases to 63%. Of various sites they mention libraries (42% aware of these), schools (2%), cybercafés (1%) and copy centers (1%).<sup>29</sup> Gordon reports a survey in which 76% of Americans agree that “public access to computers and the Internet will help to narrow the gap between the haves and have-nots in our society,” and a “substantial majority” of those surveyed are willing to pay to guarantee public access computing.<sup>30</sup>

### ***Community technology centers and community networks***

The community technology center is a more varied category than schools and libraries and has so far included technology centers in community centers, apartment complexes, churches, and trade unions. A combination of grassroots efforts and federal funds (Department of Education, Commerce, Housing and Urban Affairs, and NSF), state funds (in Ohio, for instance, via settlements against Ameritech as part of its agreements with the state's public utilities commission<sup>31</sup>) and private funds has resulted in the proliferation of these organizations. Today a number of CTCs are organized on the national, state, and local levels. The Community Memory project mentioned above, where computer hobbyists installed a public access terminal outside a shop in Berkeley, is perhaps the earliest community technology site.<sup>32</sup> Community networks, which originated before the Internet to network home computer users together, were early originators of CTCs, placing terminals in laundromats and elsewhere to broaden access beyond computer owners.<sup>33</sup>

Ohioans work in active CTC associations at all three levels. CTCNeT (more than 650 members) was launched in 1994 based on the experience of the early CTC Playing to Win, established by Antonia Stone in New York City.<sup>34</sup> Ohio Community Computing Network (more than 66 members<sup>35</sup>) formed in 1995 to oversee the allocation of funds for community technology projects from a settlement against Ameritech for unequal phone service provision across the state. CATNeT, based at the Urban Affairs Center of the University of Toledo, formed in 1996 and has a current membership of 31 centers.<sup>36</sup>

### ***Model cities for public computing***

The national projects mentioned above could certainly be taken as models. But on a smaller scale, a number of cities have taken the initiative to overcome a digital divide identified between communities and organizations. These cities have set out to create and shape public computing. Some are technopoles and other are readily identifiable as dual cities:

- Technopoles such as Austin, Seattle, and Portland, Oregon
- Government cities such as Nashville, Atlanta, and Washington, D.C.

<sup>29</sup> Horrigan 2001 p 26.

<sup>30</sup> Gordon et al 2002

<sup>31</sup> Children's Partnership, <http://www.techpolicybank.org/ohdesc.html>, and Ohio Community Computing Network, <http://www.occcn.org/history.html>

<sup>32</sup> Farrington and Pine 1997.

<sup>33</sup> Bishop 1993, Agre and Schuler 1997.

<sup>34</sup> <http://www.ctcnet.org>

<sup>35</sup> Stuber, personal communication; see also <http://www.occcn.org>

<sup>36</sup> <http://www.uac.utoledo.edu>

- University towns such as Blacksburg, Virginia, and Urbana-Champaign, Illinois
- Diversified cities such as New York and Boston.<sup>37</sup>

Noteworthy among these cities is Seattle, where public computing is a major thrust for city government. The city department of information technology is implementing Citizens Technology Literacy and Access programs, providing funds, and conducting research aimed at making Seattle a "technology healthy city."<sup>38</sup> Seattle is the home of Microsoft Corporation and also the highly successful Seattle Community Network, which played an early role in public computing by installing and supporting computers in libraries, laundromats and other public locations.

The city has created an online directory which links to 132 Seattle CTCs.<sup>39</sup> In a recent survey, 82% of residents reported having access to the Internet, 72% having home Internet access. The 10% reporting access only outside the home report using the Internet at work (81%), school (76%), an Internet café (62%), a community center (39%), or a public library (34%).<sup>40</sup>

## Method

Our method depends on surveys, key informant interviews, statistical analysis, and keeping our eyes open as involved actors in the city under study. But in order to recruit students to responsible positions within the research project, we reconceptualized our method as the D6 method. This served to orient inexperienced young people both to what scientific research is about and to the specific tasks of researching public computing in Toledo. Several of the students then used the D6 method in their master's theses.<sup>41</sup>

We call the method the D6 method because it has six parts, each beginning with the letter D: definition of the problem, data collection, digitization, discovery, design, and dissemination. Table 3 describes the basic activities associated with each concept.

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<sup>37</sup> Among many approaches to categorizing and ranking cities with respect to informationalization, see Levy 1998 and Sassen 2002.

<sup>38</sup> <http://www.cityofseattle.net/tech/>

<sup>39</sup> <http://www.cityofseattle.net/tech/techmap/>

<sup>40</sup> Information Technology Indicators Residential Survey 2000 p 24.

<sup>41</sup> Hamilton 2002, McGreevy 2002, Zelip 2002.

<b>Definition</b>	Defining the problem, summing up the relevant literature and formulating the research question and/or hypothesis
<b>Data collection</b>	Operationalizing the variables, drawing a population sample, collecting data regarding the variables
<b>Digitization</b>	Inputting, scanning, otherwise putting the data on computer, organized in a useful way
<b>Discovery</b>	Analyzing the data to test the hypothesis or answer the research question
<b>Design</b>	Laying out in the data and the analysis in text, tables, and figures in order to convey the findings to various audiences.
<b>Dissemination</b>	Sharing the findings with the various audiences as widely and effectively as possible.

### ***D1, Definition of the problem***

Our definition of the problem came as much out of experience as it did the research literature. Dealing early on with technology as a potential solution to social problems, with technology as ubiquitous on major campuses but hard to find off-campus, we experienced the importance of public computing. We searched constantly for places where people could get online, and eventually became involved in a community technology center.<sup>42</sup> The large datasets such as the NTIA surveys have not placed much emphasis here, but the literature close to everyday practice with technology tells many tales that suggest its value to people seeking work, social connections, even political impact.<sup>43</sup>

### ***D2, Data collection***

We collected data in the setting of an academic department and a community technology center, using students who worked in both. The students were paid by the Federal work-study program and/or were earning academic credit through enrollment in the University of Toledo course "Cyberspace and the Black Experience."<sup>44</sup> Data collection included a phone survey, visits to sites, and the use of various digital devices – camera and tape recorder.

<sup>42</sup> Alkalimat and Williams 2000

<sup>43</sup> McKeown 1991, Mark 1997, Chow 1998, 2000, and Williams 2001.

<sup>44</sup> Chronicle of Higher Education 2000.

We created a list of all of the potential sites for public computing that we could find. Our starting point was the telephone as a near universal feature of organized public life. In the United States nearly 90% of the entire population has at least one telephone at home, or lives with a few block of a public phone. We assumed that organizations would have a phone, and used the phone directory as the starting point in our enumeration.

We constructed a list of organizations to contact using the hard copy yellow pages, an online yellow pages then available for free at [www.555-1212.com](http://www.555-1212.com), several local directories, news clippings, and personal leads. We identified 96 yellow page categories as relevant to our search, based on personal familiarity and on our review of the research and policy literature about community computing and other forms of public computing.<sup>45</sup> The daily newspaper, for example, mentioned a children's hospital providing computers for patients to use, so for that reason alone we included hospitals as a category for potential sites. We called coffee houses because we knew of at least one cybercafé in town.

After compiling a list of more than 1,578 organizations that might host public computing sites, we began canvassing them by telephone to find out who actually did provide computers for non-staff to use. Students made most of the calls. Each call began as follows: "Hello I'm calling from the University of Toledo researching computer use in the area. Do you have any computers for (the public/your members/parishioners/students/other relevant term for that institution) to use?" We made on the average of three attempted calls before recording the site as a no response. These calls were made over 18 months during 2000 and 2001. As we made the calls, we also located the addresses and verified that exactly 1,578 of the organizations were actually within Toledo city limits. Those outside the city were omitted from the dataset. We also contacted institutions that we estimated would host multiple sites (the public library, public schools, Catholic schools, and so on) and gathered data from them in person.

### ***D3, Digitization***

Digitization began when we used the online yellow pages to build our call list and continued building a database of our call data. We also used geographic information systems software for geolocating the possible and actual sites.

### ***D4, Discovery***

Discovery proceeded using GIS software (ArcView) to map the location of the public computing sites and the demographics of Toledo, and using a statistical package (SPSS). We made use of class sessions and team meetings to discuss results periodically.

### ***D5, Design***

Design involved writing this paper and producing a website that will provide information about the public computing sites in a searchable database.<sup>46</sup> The University of Toledo Urban Affairs Center will also publish the paper.

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<sup>45</sup> Available from authors.

<sup>46</sup> <http://www.communitytechnology.org/toledo>.

### ***D6, Dissemination***

In addition to disseminating the book and the website via academic and online channels, we will present findings to a growing network of business and community leaders who are interested in a technology plan for Toledo to advance new-technology-related local industries and boost the skills and connectivity of the local and future workforce.

### **Enumeration and analysis of data**

Our search for public computing in Toledo, Ohio found 253 sites hosted by a variety of institutions, as shown in table 4 below. We coded these 253 public computing sites as community, government, commercial and university, according to their host institutions. *Government* public computing sites are those located in public institutions, a direct reflection of public policy and political forces. *Community* public computing sites are those hosted by non-governmental, not-for-profit organizations. These represent the diversity of civil society. *Commercial* public computing sites are those operating for a profit, in response to market opportunities. *University* public computing sites are those established at colleges and universities. While they will always be fewer in number, they will likely be the most technology-intensive public computing facilities in any community. Each type of public computing has its own economic imperatives, social dynamics, and spatial realities or demographics.

<b>Table 4. Public computing in Toledo, Ohio, by host institution.</b>	
Schools - K-12 public	92
Public libraries	14
Apartments, hotels, and other group residences - public	2
Government offices	1
<b>Total Government</b>	<b>109</b>
Schools - K-12 private	29
Schools - preschools and child care - nonprofit	8
Schools - other	1
Churches and temples	29
Civic organizations - other	12
Civic organizations - youth	4
Civic organizations - seniors	6
Apartments, hotels, and other group residences - nonprofit	4
Civic organizations - unions	3
Museums and parks	2
Hospitals and health care centers	1
<b>Total Community</b>	<b>99</b>
Schools - preschools and child care - for profit	13
Schools - trade - for profit	10
Apartments, hotels, and other group residences - for profit	15
Copy shops, cybercafes, stores	4
<b>Total Commercial</b>	<b>42</b>
Schools - universities and colleges	3
<b>Total University</b>	<b>3</b>
<b>Grand Total</b>	<b>253</b>

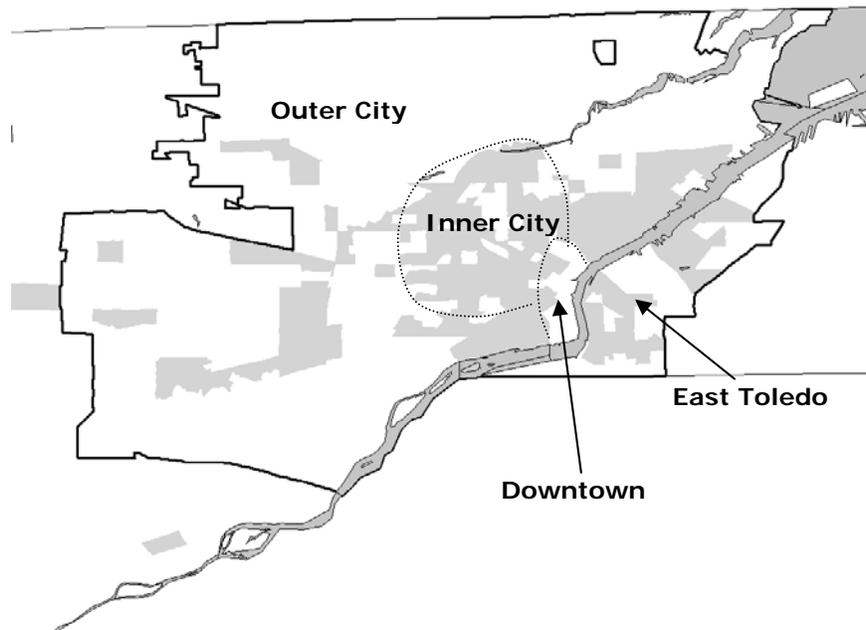
As table 4 indicates, schools are the largest number of sites in each of the four categories. So government sites are primarily schools and libraries. Community sites are primarily schools, churches, and community centers. Commercial sites are primarily schools and apartment complexes.

Table 5 below provides an overview of the response rates that led to the enumeration in table 4. We can use these figures to estimate the actual count of public computing sites in the city. Of the 1,578 potential hosts we sought to ask, we got yes or no responses from 761, or 48%. Of these, 253 (33%) reported that they do host public computing. The 817 sites we could not contact may or may not host public computing. So we calculate that between 16% (253 out of 1578) and 33% (253 out of 817) of the institutions on our list of 1,578 do host public computing. We believe the sites we could not contact are less likely to host public computing. As a result, we chose to settle on a rate of 20%, and estimate that Toledo is likely to have 316 public computing sites.

**Table 5. Contact data on public computing in Toledo, Ohio.**

	Potential host institutions	No, do not host public computing	Yes, host public computing	Yes as percent of all responses	No response	Response rate
Government	138	21	109	84	8	94.2
Community	935	270	99	27	566	39.5
Commercial	501	216	42	16	243	51.5
University	4	1	3	75	-	100.0
Grand Total	1,578	508	253	33	817	48.2

Toledo is a “rust belt” industrial city, historically connected to the auto and glass industries. The 2000 US Census reports its population as 313,619, 23.5% African American.<sup>47</sup> The distribution of the population is similar to other Midwestern cities: the Black population is concentrated in the inner city and people with higher incomes live near the periphery or in the suburbs. Toledo also has a working-class east side, home to many Latinos and to a concentration of Toledoans of Hungarian descent. This demographic pattern allows us to identify four areas: East Toledo, a commercial downtown, the inner city, and the outer city. Toledoans call the outer city the North, West and South Sides. The map below shows these four areas. Shaded areas represent poverty rates of greater than 25%. With this in mind, we can examine the four types of public computing uncovered in our enumeration.



**Figure 2. Four areas of Toledo, showing census block groups of 25% or higher poverty rates.**

<sup>47</sup> <http://www.census.gov>

***Government public computing***

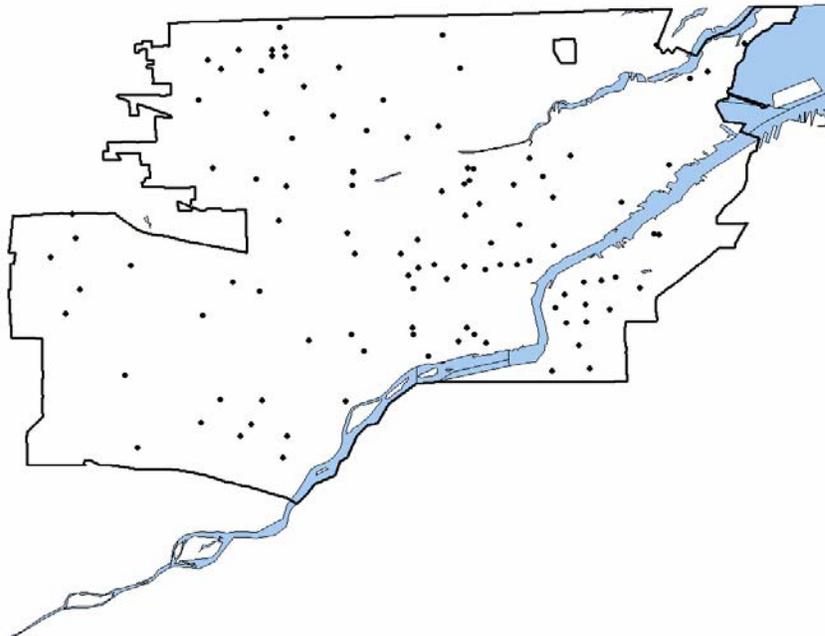
Of the 109 government public computing sites, 92 are public schools and 14 are public libraries. There are also two computer labs operated by the county's public housing administration, and one county tax assessor's office. This office provides computers for the public to use to search the county's real estate databases.

Toledo is a city with five overlapping school systems: the Toledo Public Schools, Washington School District (an autonomous district wholly within the Toledo district), the Catholic schools, charter schools, private schools, and an emerging but tentative statewide virtual school system of online schools. Except for the virtual high schools, all of these are surrounded by suburban school systems. In Toledo Public Schools there are eight high schools, eight junior high schools, and 44 elementary schools.<sup>48</sup> There are over 37,000 students, of whom 46% are African American, and 7% are Latino. On the other hand the staff is only 20% Black. The legacy of segregation persists, such that the high schools fit into three groups. One school is mainly Black (95% Black), three schools are in the middle (Blacks making up 61, 56, and 51% of enrollment), and four make up the third group (26, 24, 19, and 13% Black enrollment). Thus the school system suffers from de facto segregation based on class and race. The Supreme Court of Ohio has ruled that the current arrangement of school districts in Ohio is unfair as it produces major inequities in funding levels for different school districts, especially ones like Toledo.<sup>49</sup>

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<sup>48</sup> Toledo Public Schools, <http://www.tps.org>.

<sup>49</sup> DeRolph v. State (2000), 88 Ohio St.3d, <http://www.catalyst-cleveland.org/06-00/DeRolph.htm>



**Figure 3. Government public computing sites.**

The technology transformation of the public schools got a boost when a bond issue passed in 1994 providing additional funding. A technology commission was set up within TPS that also included telecommunications industry representatives. The period from 1995 into 2001 was a period of rapid technological development. The State of Ohio invested over \$800 million in K-12 technology. A TPS official reported that the system grew from about 4,000 client computers to its current size of 10,000 clients, and the figure would rise to 15,000 within a year and a half.<sup>50</sup> As of early 2001, every elementary classroom had about five networked computers, and almost every school has at least one computer lab for the entire school.

There are many organizations attempting to expand technology access in the schools and enhance training. The State of Ohio has SchoolNet and SchoolNet Plus which offer funding and training.<sup>51</sup> They fund support for Tech-Prep programs for students going into technical careers, but this functions primarily in the suburbs of Toledo. Federal and state funds are channeled through the University of Toledo to other programs like Prep-Tech, Excel, and Gear Up, which are designed to enhance the educational achievement of either at-risk or minority students.

The public schools' computer labs service the student body of each school. In the past the Toledo Public School System has had an open door policy, e.g., the lighted school concept involved having an open school for community use one night a week. This is no longer commonplace, and would certainly not involve the use of the computer labs. In contrast, some of the suburban schools do exactly this, running

<sup>50</sup> "Toledo Public Schools: NetApp Scores an A+ for Improving Content Delivery", no date.

<sup>51</sup> <http://www.osn.state.oh.us/home/>

computer classes in the evening for the public. Another important feature of the computer labs is that Toledo Public Schools invested in reading and math drill software<sup>52</sup> and have avoided providing Internet access in the labs in order to drive teachers to make full use of the software. However, many TPS teachers are not trained to use the diagnostic powers of the software to customize test questions to the strengths and weaknesses of the individual student. The district runs free classes on the software in the summer but few teachers take the course.

The public library sites are all part of the Toledo-Lucas County Public Library.<sup>53</sup> In addition to the 14 sites in Toledo, there are four branch libraries in the suburbs. There are approximately 250 computers in the system dedicated to Internet and/or database access, children's software, or word processing functions are available. The library sought and won several grants from the Gates Foundation to acquire computers to equalize the access of lower income communities, and these computer were allocated primarily to the most needy branches, as mentioned above.<sup>54</sup>

The library has a part-volunteer, part-paid program of Web Wizards who assist patrons in using the Internet. Printing used to be free but for the last year has cost 10 cents a page. In general, the Wizards and the general library staff help anyone who comes in with this technology. In answer to the state requiring a plan to protect children from pornography, children have to have their parent's signature and be issued a card before going online at the library.

Public schools and public libraries are located in all neighborhoods of the city. They are government agencies and fall under the mandate of the 14th Amendment that requires equal access under the law for all citizens. Our sense is that this government mandate, even supplemented by private initiatives, is not yet enough to overcome the disparities of race and class.

### ***Community public computing***

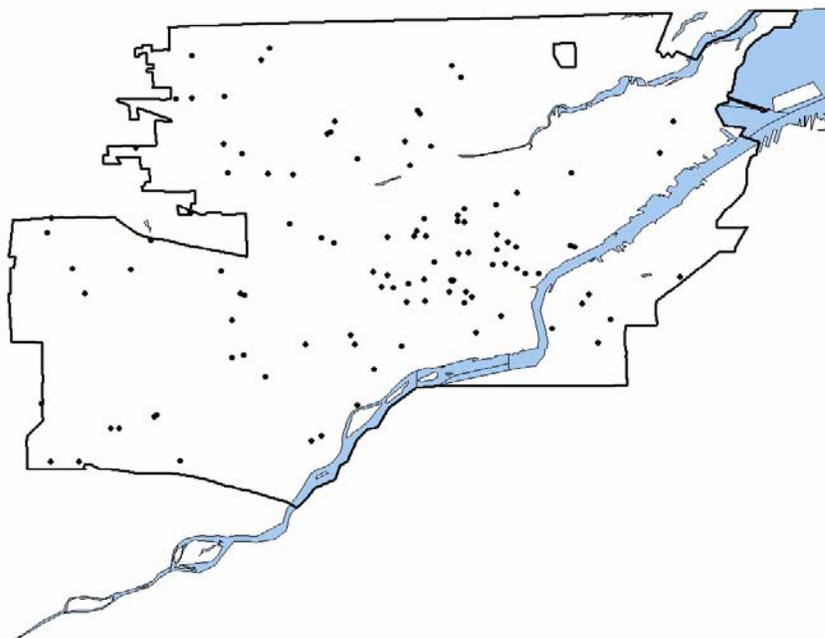
There are a total of 99 community computing sites. The host institutions are non-profit organizations, neither commercial nor government, although they may receive public funds. There are 38 schools and preschools, 29 churches, 28 community facilities or centers of various kinds, and 4 apartment complexes.

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<sup>52</sup> Computer Curriculum Corporation, <http://www.ccclearn.com>.

<sup>53</sup> <http://www.toledolibrary.org>.

<sup>54</sup> Williams 2000.



**Figure 4. Community public computing sites.**

Of the 38 schools, 22 are part of the Catholic Diocese of Toledo. As elsewhere in the US, many of the European immigrant populations were Catholic and built churches in what was a smaller city. In a sense, the Catholic schools<sup>55</sup> are a parallel system to Toledo Public Schools as well as link to their respective churches. But these schools are tuition based, so they represent a form of community schooling oriented to those who can pay. As such, they are more friendly to parents, community, and congregation. In most northern US cities, about 10 percent of students attend Catholic schools; for Toledo the rate is an unusually high 20 percent.<sup>56</sup>

The 29 churches include 17 different Christian denominations. The highest representations are Lutheran (10), Baptist (7), and Catholic (3). In many cases these are churches with affiliated schools, but they have computer access for church use.

The remainder of the community public computing sites consists of community centers oriented either to the general public or a specific constituency. They include community centers for the general public (e.g. Wayman Palmer YMCA, W. J. Murchison Community Center, Adelante), for seniors (e.g. Alpha Community Programs, Eleanor Kahle Senior Center), for youth (e.g. Boys and Girls Clubs, Black Data Processing Associates), for union members (Farm Labor Organizing Committee, Toledo Federation of Teachers, Police Patrolmen's Association), for museum visitors (Center for Science and Industry and the Toledo Museum of Art) and the Medical

<sup>55</sup> <http://www.cyss.org/Schools/SchoolPage.html>

<sup>56</sup> McGuire, personal communication.

College of Ohio hospital. The last two are unusual: the museum has a computer in its K-12 resources center that is used by children and teachers, and the hospital has a PC set up in a lounge near its physical therapy department for inpatients to use.

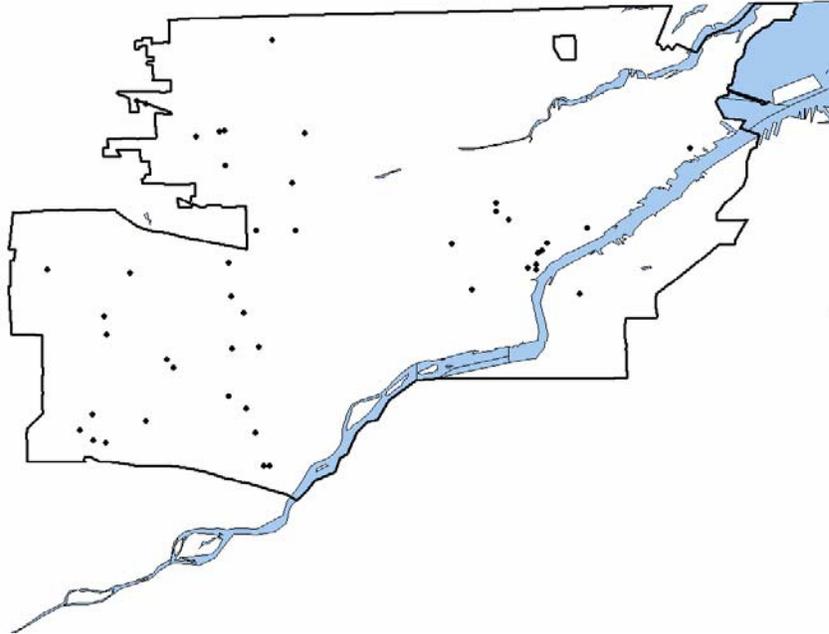
The map shows a concentration of community sites in the inner city along with sites in higher income areas near the northwest suburbs. The community centers with computers are primarily dedicated to poorer central city populations, and the remainder of the sites are located in communities which can afford computer labs.

### ***Commercial public computing***

There are 42 commercial public computing sites in Toledo. Of these 23 are commercial schools and preschools, 15 are apartment complexes, 3 are Kinko's copy shops and one is a cybercafé. The map makes it clear that these public computing sites are either in the downtown area or in the outer city, especially in the western part of the city.

Several of the apartment complexes belong to the same owner, who won a Department of Housing and Urban Development grant to set up computer labs and thus improve his apartments. He has helped to grow the CTC association in town, CATNeT.

Kinko's is a copy shop that developed a business model and a reputation around public computing. Their sites are near the suburbs and the University of Toledo campus. The cybercafé is also near campus.



**Figure 5. Commercial public computing sites.**

Commercial sites are far fewer than government or community sites. This might reflect a lack of effective demand from the local population, or a lack of imaginative capital from Toledo entrepreneurs.

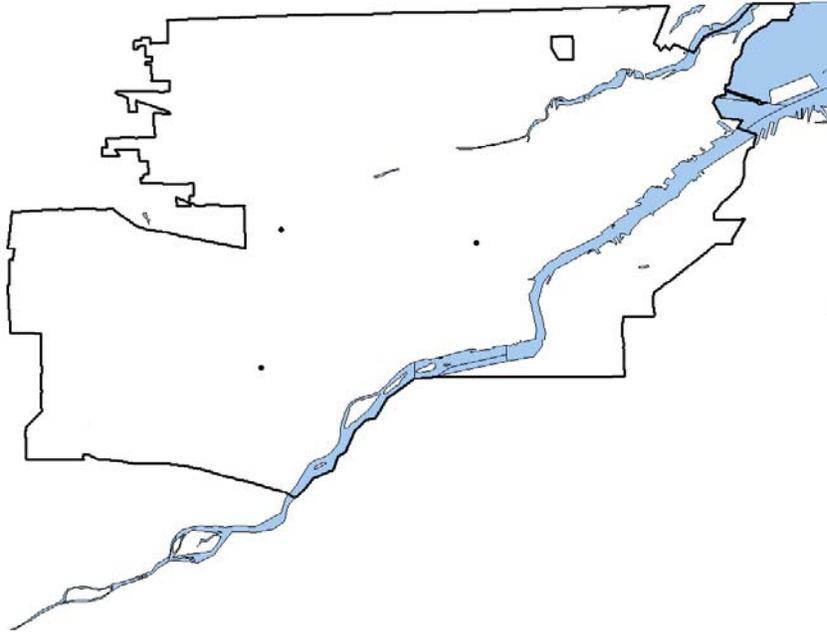
### ***University public computing***

Three universities and colleges in Toledo provide computer labs for their students: the University of Toledo, the Medical College of Ohio, and Mercy College of Northwest Ohio, a nursing and allied health college. Each of these institutions is oriented towards educating professionals and technical workers. UT and MCO are located in outer Toledo, and Mercy College is located in the inner city near what was once a hospital complex.

Their computer facilities are open only to students or rare one-time public events, with two important exceptions. Mentioned above is the computer available for patients at MCO hospital. UT's women's studies program operates a women's computer lab as part of their support to un- or underemployed women in Toledo.

The university and college facilities are possibly the most advanced public computing sites in the city. For instance, the UT business school is a wireless zone for laptop access to the network. Many departments provide specialized hardware and software. UT also teaches computer classes of all kinds in several off-campus labs downtown.

The university is an important partner for public computing. UT faculty helped start and continue to work with CATNeT, the local association of community technology centers. A larger group of faculty is also proposing a sociology minor in social informatics. This program would link with public computing across the city in order to place interns for potential future employment, conduct research, and collaborate for advocacy and policy formulation.



**Figure 6. University public computing sites.**

## **Social Environment of Public Computing**

We hypothesize that the four kinds of public computing fit three patterns in relationship to the social environment.

- Government sites are randomly located, the same proximity to rich and poor.
- Community sites are located close to the opposite ends of the social spectrum, the rich and the poor having community sites but not the middle strata.
- Commercial and university sites are located according to market demand, closer to upper income and students.

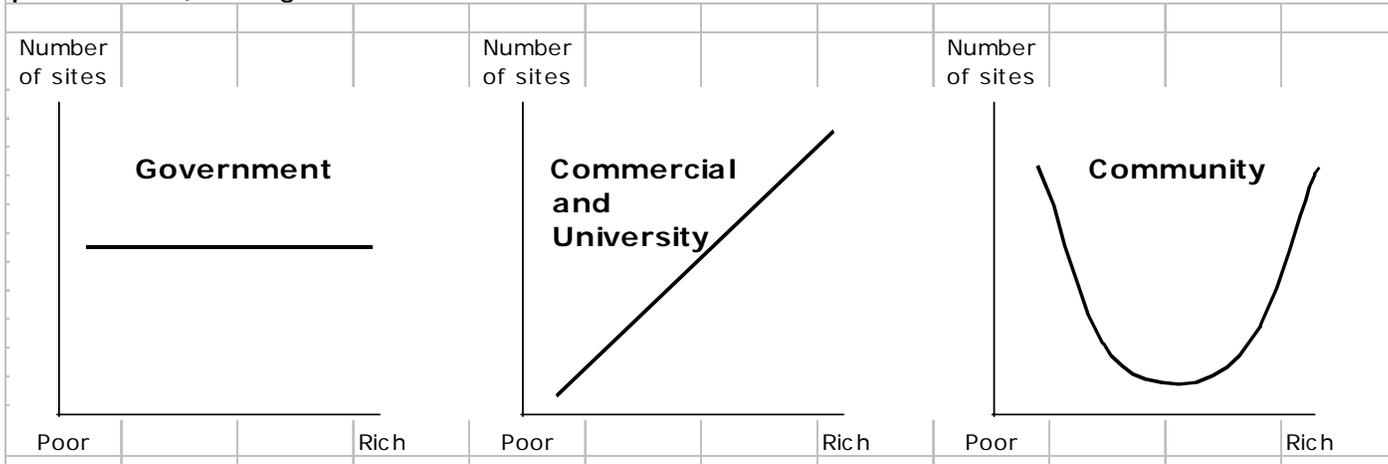
As the maps indicate, our data suggest this pattern, but weakly. We expect that a broader dataset would make a more compelling case.

The marketplace has a direct impact on the location of commercial and university sites. There are however, two important particularities. University sites combine upscale owner occupied single family homes with low cost apartment complexes for students. Further, a large concentration of ICT users live in relatively affluent suburbs (Sylvania, Perrysburg, Maumee, etc), which transforms this urban pattern into a metropolitan one.

The U-shaped pattern of the predicted community public computing sites may prove to be the best counteraction to the market as a foundation for democratic traditions. The role of the church and other institutions of bonding social capital is to give poor and working populations a basis for collective consciousness and action, including self-empowerment projects with ICT.

Government public computing sites are a result of public spending that reflects increasing commitment to an ICT transformation of education at all levels. As figure 7 below indicates, the informationalization will be equal, but the level of access and use is a matter of available state revenue and relative level of commitment. In times of expanding revenue, an egalitarian state is a major factor, but in dire times the impact can be relatively negligible.

**Figure 7. Modeling the distribution of public computing. Government distributed equally across poor and rich communities, commercial and university distributed more to rich, community distributed more to poor and rich, leaving out middle income.**



In general, changes in the hardware and software will dramatically impact what we mean by public computing, especially the increasing use of wireless, voice recognition, broadband, and technology convergence (phone, computer, TV, music, camera, etc.). But we will still have the basic four categories of public computing. In each case, we are interested in the rate of adoption and pattern of use, and then in what cyberpower<sup>57</sup>—people’s ability to use ICT to achieve their goals—results.

We are arguing that the stream of technical innovation is a force banging against society and like the beginning of a game of billiards the balls are scattering.

<sup>57</sup> In an earlier study (Alkalimat and Williams 2001) we elaborate on the concept of cyberpower as an outcome of a community technology center.

Each type of public computing expresses a structural force, an aggregation of institutions, people and spaces, constituting a power dynamic. All together it is the configuration of all the power dynamics of a society that determines the likely course history will take.

We envision two stages of future research. First, to confirm this description of public computing and measure variation in different urban and rural areas as well as different countries. Second, to examine what is going on in public computing sites, what users are doing, and what cyberpower emerges. We believe the stakes to be the nature of democracy in the information age.

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**Social Capital and Cyberpower in the African American Community:  
A Case Study of a Community Technology Center in the Dual City**

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This chapter is about the community technology center as a new organizational basis for democracy and social inclusion in the information society. We present a theoretical framework and an empirical case study, concluding with some reflections on democracy and cyberorganizing.

### **Background**

Historical inequalities condition new social developments.<sup>1</sup> In virtually every society at the dawn of the 21st century, polarities of income, class, color, and space are translating into a digital divide.<sup>2</sup> 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.'"<sup>3</sup> 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.<sup>4</sup>

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.<sup>5</sup>

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

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

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

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

<sup>5</sup> 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.

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.<sup>6</sup>

**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  400+ 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.

<sup>6</sup> See references for URLs for CTCNet, OCCCN, and CATNeT.

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.<sup>7</sup>

### **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.<sup>8</sup> 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.

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<sup>7</sup> Williams and Alkalimat (2001 forthcoming).

<sup>8</sup> Alkalimat (1986).

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

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

In his study of the Black middle class, Landry suggests a conceptual map of decades (table 2).<sup>9</sup> 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.<sup>10</sup> 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

<sup>9</sup> Landry (1987).

<sup>10</sup> Wilson (1987).

Black population, creating a social milieu significantly different from the environment that existed in these communities several decades ago.<sup>11</sup>

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.<sup>12</sup> 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.<sup>13</sup>

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.<sup>14</sup>

In this context we apply the concept of social capital to the inner city African American community.<sup>15</sup> 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.<sup>16</sup> 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."

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<sup>11</sup> Ibid, pp 56-58.

<sup>12</sup> Landry, op cit., pp 116-122.

<sup>13</sup> Castells (1998) pp 162, 164.

<sup>14</sup> Castells (1999) p 27.

<sup>15</sup> 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.

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

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.<sup>17</sup>

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.<sup>18</sup>

### *Discourse*

The concept of the public sphere has been debated since its historical exegesis from European intellectual history by Habermas.<sup>19</sup> The public 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.<sup>20</sup> 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.<sup>21</sup>

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.<sup>22</sup>

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

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<sup>17</sup> Putnam (2000) pp 22-23.

<sup>18</sup> Ibid, p 32.

<sup>19</sup> Habermas (1991), Calhoun (1992), Negt and Kluge (1993).

<sup>20</sup> Dawson (1994).

<sup>21</sup> Ibid, p 206.

<sup>22</sup> Ibid, pp 213-214.

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.<sup>23</sup>

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.<sup>24</sup> 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.<sup>25</sup>

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.<sup>26</sup>

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.<sup>27</sup>

### *Cyberpower*

Jordan advances the notion of cyberpower and identifies three interrelated regions of cyberpower, "the individual, the social, and the imaginary."<sup>28</sup> 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

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<sup>23</sup> Ibid, p 215.

<sup>24</sup> Morris (1984).

<sup>25</sup> Ibid, p 279.

<sup>26</sup> Landry (1987), p 71.

<sup>27</sup> Morris, op cit., pp 282-283.

<sup>28</sup> Jordan (1999).

- 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<sup>29</sup> 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.

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.<sup>30</sup> 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.<sup>31</sup> The Department of Commerce has published three dozen case studies of CTCs funded by their Technology Opportunities program (formerly TIAAP).<sup>32</sup>

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.<sup>33</sup> 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.<sup>34</sup> 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.<sup>35</sup>

CTCs elsewhere in the world can also be found in the research literature. Relating to evaluation, Hudson<sup>36</sup> 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. 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."<sup>37</sup> Gurstein and Loader<sup>38</sup> are among those who have identified community

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<sup>29</sup> Walch (1999) p 23.

<sup>30</sup> Mark et al (1997), Chow et al (1998, 2000).

<sup>31</sup> Breeden et al (1998)

<sup>32</sup> Department of Commerce (2000).

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

<sup>34</sup> Lentz et al (2000).

<sup>35</sup> Bishop et al (2000).

<sup>36</sup> Hudson (2000).

<sup>37</sup> Department of Trade and Industry (2000), p 6 of executive summary.

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.<sup>39</sup> 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<sup>40</sup>: 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<sup>41</sup>: 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<sup>42</sup>: 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](http://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

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<sup>38</sup> Gurstein (2000) and Loader (1998).

<sup>39</sup> Dyer-Witheford (1999) pp 145-164.

<sup>40</sup> Mele (1999).

<sup>41</sup> Cleaver (1998) and Ronfeldt and Martinez (1997).

<sup>42</sup> Vari (2000) and Tabb (2000).

## Method

This study is an example of what the African American psychologist Kenneth Clarke called involved observation.<sup>43</sup> 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.

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<sup>43</sup> Clarke (1989).

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 keystroking 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 grantwriter began, and in early 1995 grantwriter 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.<sup>44</sup>

When the local CDBG office reviewed the center's first proposal in 1996, 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

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<sup>44</sup> Kretzmann and McKnight (1993).

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."<sup>45</sup> 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."<sup>46</sup>

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.<sup>47</sup>

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.

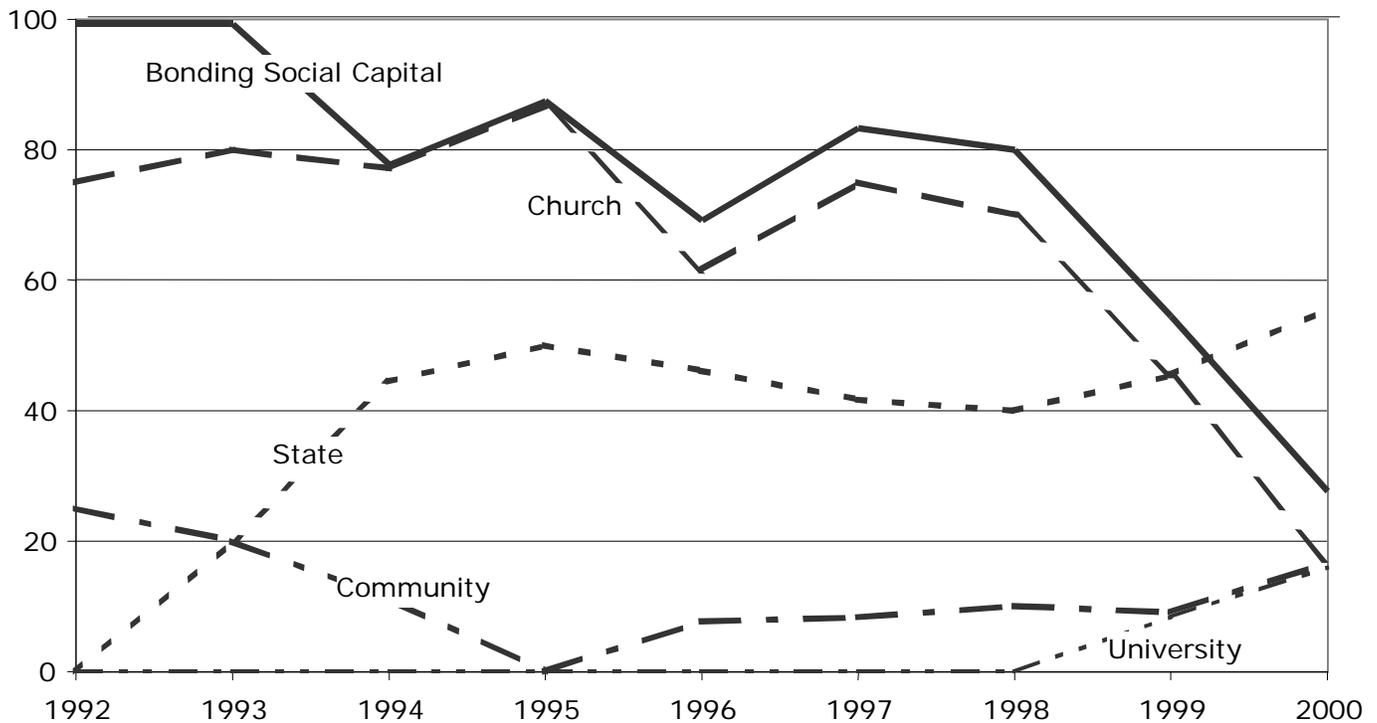
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<sup>45</sup> McAdam (1999).

<sup>46</sup> Piven and Cloward (1979), p 231.

<sup>47</sup> Putnam (2000), p 61.

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



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 categories: 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**

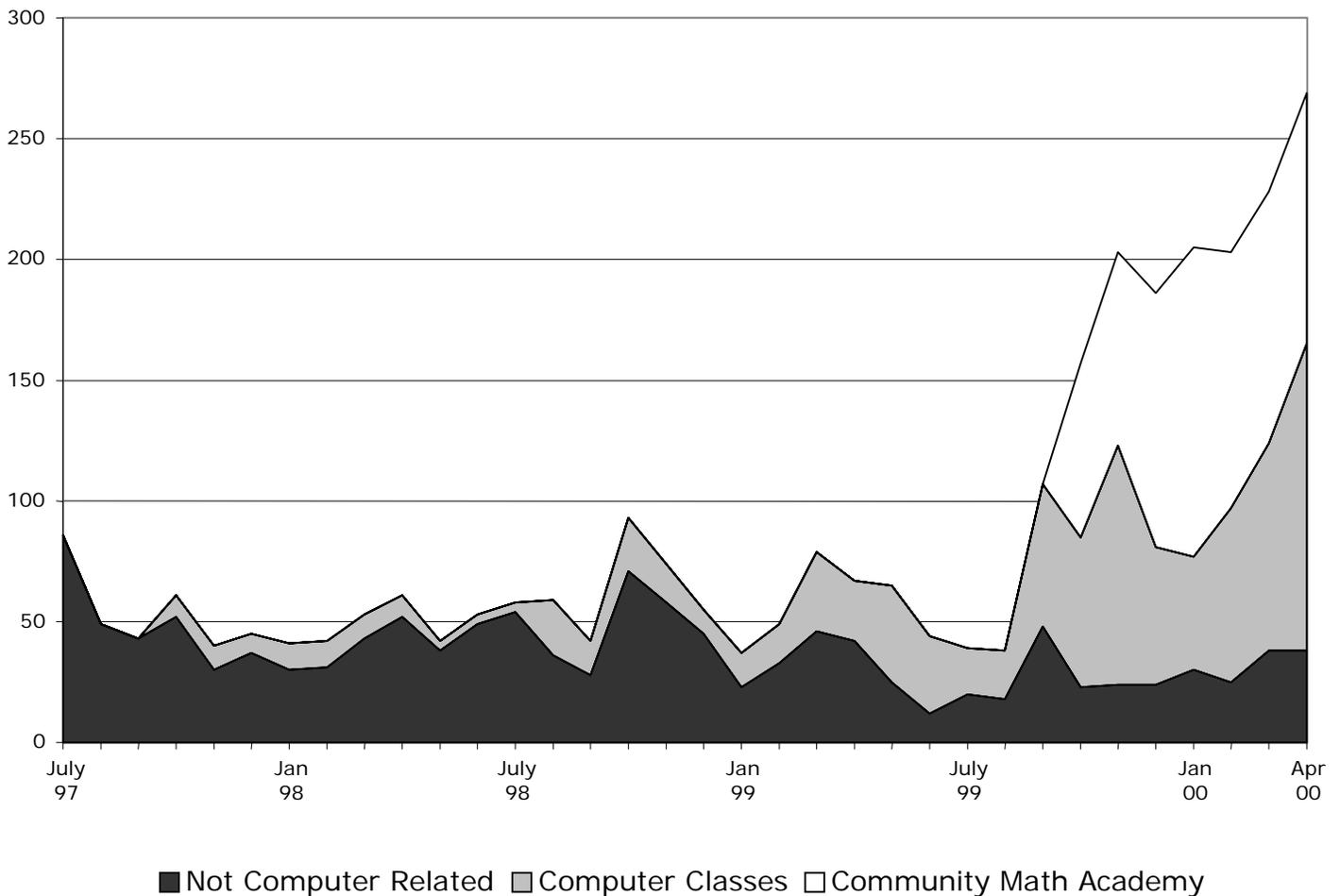
Stage	Vision/Mission Statements
1: Church	Prevention is designed to focus upon [the] central city [with] Axiology/value ... Metaphysics/reality ... Epistemology/knowledge Awareness ... Education ... Outreach (May 1993)
2: State	Knowledge is Power (Oct 1996) Our mission is to educate, counsel, and provide 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.<sup>48</sup> 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

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<sup>48</sup> Piesqd translates into  $\pi^2$ . The symbol  $\pi$ , or pi, is mathematical notation for the irrational number 3.14159.... Found in Egyptian and Babylonian science, pi is a 2500-year-old constant.

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 the 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 counter public 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 cyberpower

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.

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**Toledo Spiders: A joint archive of the W. J. Murchison Community Center and the University of Toledo Africana Studies program.**

**Finding aid written July 2002 by Kate Williams**

**Overview of the collection**

Creators: The collection was created in the course of the work of the Murchison Center and the Africana Studies program.

The following people organized the collection for binding and archiving:

Abdul Alkalimat, Director, UT Africana Studies program and president, W. J. Murchison Community Center  
Deborah Hamilton, Executive Director, W. J. Murchison Community Center  
Micheline McGreevy, master's student in the UT Africana Studies program and volunteer at the Murchison Center  
Kate Williams, doctoral student at the University of Michigan School of Information and treasurer of the Murchison Center  
Brian Zelip, master's student in the UT Africana Studies program and Vista worker at the Murchison Center.

Title: Toledo Spiders: A joint archive of the W. J. Murchison Community Center and the University of Toledo Africana Studies program.

Date: 1992-2002

Quantity: Forty-seven (47) volumes contained in 6 cubic feet (3 boxes total). A total of slightly more than 9,000 pages, mostly printed on one side. Four sets of these volumes were created, one original and three copies.

Location: One set will be kept by the Murchison Community Center and one by the Africana Studies program. It is planned to deposit a set with each of two local archives, namely Toledo-Lucas County Public Library and the Ward M. Canaday Center for Special Collections at The University of Toledo.

**Acknowledgements**

Thanks go first to Kathleen Arquette, program secretary for the University of Toledo Africana Studies, whose consistency helped see this project to completion. We also thank Professor Elizabeth Yakel of the University of Michigan and University Archivist Barbara Lloyd of the University of Toledo for their advice and encouragement. Finally, we are indebted to the producers of the Getty Information Institute's online *Introduction to Archival Organization and*

*Description: Access to Cultural Heritage* (<http://www.schistory.org/getty/>). This self-described "archivist's primer" made our task much easier.

### **History of the institutions and activities documented herein**

The W. J. Murchison Community Center was founded in 1992 by the St. James Church of Toledo, Ohio. The University of Toledo Africana Studies Program was established in 1996. The Africana Studies program began a weekly Poverty Seminar which reached out to community organizations and leaders and invited the Murchison Center to be a guest at the seminar. Because the two groups shared a commitment to 1) struggling against poverty and its conditions and 2) using computers and the Internet, a partnership was launched in 1998. The two institutions have jointly carried out numerous programs and activities: particularly the Community Math Academy, First Saturday, bridge program, a community garden, an expansion of the computer lab and of classes offered, and the Wednesday night seminar. The Murchison Center, the Africana Studies program, and their partnership all continue to operate.

The collection was created at a time when three Africana Studies students, each involved in the Center as well, completed their master theses on some aspect of the joint partnership. The collection is intended as the foundation for continued archiving by both the Murchison Center and the Africana Studies program.

Research on the W. J. Murchison Center to date includes the three masters theses, to be included in the archive at a future date but also in the collection of the University of Toledo Library, and the following book chapter:

Abdul Alkalimat and Kate Williams, "Social Capital and Cyberpower in the African American Community: A Case Study of a Community Technology Center in the Dual City." In *Community Informatics: Shaping Computer Mediated Social Relations*, Leigh Keeble and Brian Loader, editors. London: Routledge, 2001.

### **Scope and contents of the collection**

Meeting minutes and handouts, grant applications, program reports, flyers and announcements, registration sheets, attendance records, job applicant resumes, practice math proficiency tests, printouts of emails, program documents, name and address lists, journal or diary entries, activity logs, newspaper and journal articles, unpublished articles and collected writings, pamphlets, web page printouts, of the W. J. Murchison Community Center and the University of Toledo Africana Studies program and their joint activities.

The collection specifically excludes the financial records of the W. J. Murchison Community Center. It also excludes a number of day-to-day working files which had been kept by individual center staff. These files remain in the care of the center.

Likewise, administrative and financial records of the Africana Studies program are excluded from this collection and remain in the care of the university program.

See below for a detailed description of the collection.

### **Arrangement of the collection**

In spring 2002, the Murchison Center and the Africana Studies program began to gather and arrange these documents. We organized them by institution, by program, by activity, and/or chronologically into volumes and hand them bound for safekeeping. The two organizations' documents were kept separate where possible.

A finding aid such as this is usually written by archivists, not the originators of a collection. But in keeping with recent archival theory, organizational activity and archiving are merging, particularly with digital technology. In our case, we felt we knew the material best.

### **Preferred citation**

Abdul Alkalimat, Kate Williams, et al. Toledo Spiders: Joint Archive of the W. J. Murchison Community Center and the University of Toledo Africana Studies program, Volume [X]. [name of depository and any location information provided by that depository]. Toledo, Ohio.

### **Detailed description of the collection and list of volumes**

A list of volumes with brief descriptive phrases is below. For an overall view:

Volumes 1-17 concern primarily the Murchison Center and not the Africana Studies program.

Volumes 18 and 34-38 concern the social cyberpower projects that the two partners carried out. These are projects aimed at facilitating groups and institutions in the Black community making use of cyberspace.

Volumes 19 and 20 concern public computing, the sites where people can use computers and the Internet (information and communications technology) besides at home or at work.

Volumes 21-29 and 31-33 are from the Africana Studies program.

Volume 30 contains documents from the theory seminar and is very much a mutual volume. This seminar has taken place every Wednesday at the center, led by Dr. Alkalimat, with participation from the center as well as the university. The theory seminar has been part of orienting the center's work in the context of the digital divide and the information revolution.

Volumes 39-47 concern First Saturday, a joint project to offer practice math proficiency tests to local elementary and secondary school students. Since they were established on a citywide scale, the practice tests have taken place every First Saturday.

Temporary volume numbers are provided in the list below because these numbers were written on the page edges of some of the volumes, and could be confusing, since they differ from the final volume numbers.

1. MC Board of Directors meeting minutes and related items 1992-1997. Temporary volume number was 1. 247 pages.
2. MC Board of Directors meeting minutes and related items 1998-1999. Temporary volume number was 2. 238 pages.
3. MC Board of Directors meeting minutes and related items 2000-2001. Temporary volume number was 3. 281 pages.
4. MC applications for CDBG 1996 1997, CDBG policy and procedure manual. Temporary volume number was 109. 184 pages.
5. Murchison Center Applications to City of Toledo/Community Development Block Grant program 1999, 2000, 2001, 2002. Temporary volume number was 121. 151 pages.
6. Murchison Center program reports to City of Toledo/Community Development Block Grant program 1996-1997. Temporary volume number was 113. 165 pages.
7. Murchison Center program reports to City of Toledo/Community Development Block Grant program 1998. Temporary volume number was 114. 156 pages.
8. Murchison Center program reports to City of Toledo/Community Development Block Grant program 1999. Temporary volume number was 115. 283 pages.
9. Program reports to City of Toledo, Community Development Block Grant program May 00-Jun-01 2000-2001. Temporary volume number was 126. 70 pages.
10. Program reports to City of Toledo, Community Development Block Grant program July 01- Feb 02 2001-2002. Temporary volume number was 125. 205 pages.
11. MC Yearly Financials 1994, 1995; Audited Financials 1996-1997-1998, Publicity/PR ?-2000, City of Toledo CDBG Policy and Procedure Manual 1998 -- 1994-2000. Temporary volume number was 124. 124 pages.
12. Murchison Center Corporate Book 1996-2001. Temporary volume number was 122. 133 pages.
13. Murchison Center board member lists AND YOCA and other program items AND CATNeT and IDPE program items 1992-2000. Temporary volume number was 120. 210 pages.
14. MC resumes of those who applied to work at the center. Temporary volume number was 110. 115 pages.

15. Activity Log 1997-2000. Temporary volume number was 111. 147 pages.
16. MC registration forms . Temporary volume number was 108. 272 pages.
17. Murchison Center printout of web site February 2002. Temporary volume number was 117. 214 pages.
18. Inventories 1996-1997, Bridge Attendance and Parent database 1999?-2001, Class Attendance 1999?-2001, Friends of the MC 2002. Temporary volume number was 128. 166 pages.
19. OCCCN (Ohio Community Computing Center Network) grant documents 2001. Temporary volume number was 129. 49 pages.
20. OCCCN (Ohio Community Computing Center Network) 2000-2001 AND CATNeT (Coalition to Access Technology and Networking in Toledo) 1999-2002. Temporary volume number was 123. 168 pages.
21. Africana Studies 1996-1997. Temporary volume number was 100. 187 pages.
22. Africana Studies 1997-1998 part 1 of 2. Temporary volume number was 101. 122 pages.
23. Africana Studies 1997-1998 part 2 of 2. Temporary volume number was 102. 150 pages.
24. Africana Studies 1998-1999. Temporary volume number was 103. 231 pages.
25. Africana Studies public seminar February 1997. Temporary volume number was 112. 117 pages.
26. Africana Studies, the Toledo Seminar 1998. Temporary volume number was 104. 122 pages.
27. Africana Studies Papers and Documents: The Toledo Seminar: Political Economy and the Black Radical Congress (Volume 2) (first part is volume 104) 1998. Temporary volume number was 118. 296 pages.
28. Africana Studies, AfroCybertech Seminar 1999. Temporary volume number was 105. 174 pages.
29. Africana Studies. Cybertechnology and the Black Experience: Essays on the Political Economy of Technological Revolution and Black Liberation. A book proposal. 1998? 1999?. Temporary volume number was 119. 157 pages.
30. MLS theory seminar discussion papers 2001. Temporary volume number was 106. 331 pages.
31. Lou Turner; Chesapeake Seminar 2000. Temporary volume number was 107. 240 pages.

32. Wamba dia Wamba book proposal 1999. Temporary volume number was 12. 295 pages.
33. Encyclopedia Africana 2000. Temporary volume number was 11. 224 pages.
34. Garden and bridge 1999-2000. Temporary volume number was 4. 177 pages.
35. Garden and bridge 2001. Temporary volume number was 6. 86 pages.
36. dorrstreet8 emails number 1-157, 1 of 3 2000. Temporary volume number was 7. 121 pages.
37. dorrstreet8 emails number 158-318, 2 of 3 2000. Temporary volume number was 8. 241 pages.
38. dorrstreet8 emails number 319-504, 3 of 3 2000-2001. Temporary volume number was 9. 186 pages.
39. First Saturday 1999-2001. Temporary volume number was 10. 243 pages.
40. Practice tests 4th grade 1999-2002. Temporary volume number was 17. 244 pages.
41. Practice tests 6th and 9th grade 1999-2002. Temporary volume number was 18. 190 pages.
42. TPS observations Brian 1999-2000. Temporary volume number was 16. 148 pages.
43. TPS observations Michelene 1999-2000. Temporary volume number was 15. 330 pages.
44. TPS training materials to align the CCC software with curriculum, recd 2001. Temporary volume number was 111. 140 pages.
45. TPS documents 1995-2000. Temporary volume number was 13. 308 pages.
46. TPS documents; articles about testing and public schools 1995-2000. Temporary volume number was 14. 235 pages.
47. Mayor Jack Ford transition book, sections missing 2002. Temporary volume number was 116. 135 pages.

# BRAIN<sup>1</sup>, Black Research Archive on the Internet: Toward a research program for eBlack Studies

Abdul Alkalimat, University of Toledo

## *Introduction*

We are living at the beginning of a social revolution based on the revolutionary advances of information technologies. There are various models of historical periodization, but most are in agreement about this being a time of revolutionary change. There are some key theorists emerging whose work deserves close attention for their conceptual clarity and empirical measurement:

1. Jeremy Rifkin <sup>2</sup>
2. Manuel Castells <sup>3</sup>
3. Barry Wellman <sup>4</sup>
4. Alvin and Heidi Toffler <sup>5</sup>
5. Jim Davis et al

There are also institutional knowledge portals into this social revolution:

1. Media Union <sup>6</sup>: The Massachusetts Institute of Technology is a leading center for technological and scientific research, and the Media Union is a center for information and new media work. However, MIT is home to major theorists who have other views. Nicholas Negroponte <sup>7</sup> leads the Media Union while Michael Dertouzos <sup>8</sup> leads the Department of Computer Science. This is an example of following the technological policy debate through an academic gateway.

2. Digital Divide <sup>9</sup>: Under the last presidential administration a Black official (Larry Irving of the Department of Commerce) led the way in defining an entire stage of the fight for Black liberation struggle - the problem of the "digital divide." Now, under this administration a Black official (FCC Chairman Michael Powell, son of Secretary of State Colin Powell) is leading the fight to reverse this and de-legitimate the term as "that old class warfare ideology of the past."

3. Community Connector <sup>10</sup>: There is a social impact and in turn people who organize to do something about it. The Community Connector is a gateway to a vast network of resources where cyberspace directly connects with community forces on the information-poor side of the digital divide.

4. BRC <sup>11</sup>: Black radicalism continues to germinate. Black academics like Manning Marable (Columbia University) and Jen Hamer (Southern Illinois University), and labor leaders like Bill Fletcher (AFL-CO Education Director) represent the Co-Chairs of the Black Radical Congress. The BRC operates 8 major listserv discussions (36 overall) and a website.

Revolution in society means fundamental change. You can want it and not get it, but you can also be in the middle of it and not know it, or not know what to do, how to influence the

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<sup>1</sup> BRAIN stands for Black Research Archive on the Internet. This summation is dedicated to Mary Wrihten, librarian at Bowling Green State University, who challenged me to develop the BRAIN project proposal. Her criticism was additional motivation. Thank you.

direction of history. In a revolution opposite outcomes are possible. It depends on what we do.

Different intellectual traditions sum up this historical experience of social context and social action, each using its own language. One American tradition is Pragmatism<sup>12</sup> that includes John Dewey's emphasis on the social function of critical intelligence. The Marxist tradition<sup>13</sup> refers to the necessary unity of theory and practice. Postmodernists<sup>14</sup> speak of the critical importance of the subjective factor of agency. Black Christians<sup>15</sup> talk about the Gospel (good news) and bearing witness (acts of good will). All of these approaches basically say that when change is possible it is necessary to jump in there and get the job done.

Rethinking Black history in terms of technology is critical for this assessment about where and when to jump in. The following three stages of development seem to have taken place in terms of tools, instruments of labor:

1. a labor-intensive labor system based on the machine tools of the slave system, but also the sharecropping system
2. a capital-intensive mass industrial factory labor system
3. the capital-intensive lean production system of the computer age.

This third period, the early stage of the information revolution, also brings us the crisis of the digital divide.<sup>16</sup>

### ***The problem: Building a new architecture of knowledge***

Today we are addressing the transformation of scholarship in this social revolution. How can scholarship advance on the basis of advances in information technology? How can Black Studies be reinvented as eBlack Studies<sup>17</sup>? I will put before you a proposed research agenda to debate, build consensus around, and implement.

The critical factor is that we are in the position of designing cyberspace to look and feel like us, and to work for us. At this stage in the information revolution we are the masters of our fate. There has never been an opportunity for self determination greater than this. This is a moment of fundamental practical importance on a philosophical level. The issue is as deep as the architecture of knowledge<sup>18</sup>, our epistemological deep structure. We can embrace our particularity as well as universal knowledge, from our one can come a model for the many.

Knowledge and all forms of documentation (including audio and video) of the Black experience can be translated into digital code<sup>19</sup>. This is something we can do for ourselves, with or without a grant. Our survival in cyberspace is in our own hands. The only solution is a group effort. This is an "all hands on deck!" situation.

Everything being discussed in this article can be accomplished with about \$2,000 in hardware and software (CPU, keyboard, monitor, mouse, printer, digital camera, and scanner), less than \$1,000 if used. This equipment is even available free at public computing sites such as schools, libraries, and community technology centers.

The new technology makes this period as basic for knowledge production as when the slave narratives<sup>20</sup> were collected, as the Atlanta conferences of W. E. B. DuBois<sup>21</sup>, or as the history conferences of Carter G. Woodson<sup>22</sup>. In each instance the campus united with

community and research was combined with audacity. Conferences were held and proceedings published. The near-unlimited capacity of new technology to store and manipulate information means that now is an ultimate moment to pay attention to the details. Nothing has to be left out in this period of eBlack Studies unless we leave it out. Everybody, everywhere, whenever can be included. We can unite. We must.

### ***Historical background***

A universal impulse that drives all people is to understand, to know. This is a goal usually suspended between the polarities of summation and innovation. Of course there is unity between these two polarities. We can identify innovation today because we know what has come before it through a process of summation. On the other hand, that same innovation will itself be part of a new summation tomorrow. This is more of a fractal<sup>23</sup> and dialectical process than a linear and metaphysical one. There is a pattern, but not a straight line. Nor is it cumulative or repetitive.

It seems the historical process forces people in the midst of change, especially revolutionary change, to sum up so as to fully grasp the importance of the innovation changing their lives.

There are many historically repeated forms of written summation: the encyclopedia, the anthology, the directory, the dictionary, the bibliography, the collected works, the textbook, the journal, the survey course, and conference proceedings, and, most encompassing of all, the special collection or library. Each of these forms of summation involves a textual dataset created to define an entire corpus of knowledge.

These are relatively modern forms. Ancient forms tend to be some combination of orality and ritual, narratives of cultural and political significance. When knowledge breaks from faith, when science drives knowledge, the sheer quantity of specialized knowledge and the speed of change require ongoing summation as an aspect of professional scholarship. In Europe this emerges in the so-called "Enlightenment." In the USA this process begins to fully develop for African Americans in the 20th century.

Table 1 contains examples from 20th century Black intellectual history of major attempts at summation. Central to this process has been the role of the Historical Black College and University, the independent Black publishing firms, the rise of literacy and curriculum at all levels of education, and consciousness raising social movements.

**Table 1: Selected summations in 20<sup>th</sup> century Black intellectual history.**  
Links are to web pages or to book covers and tables of contents.

Encyclopedia	W. E. B. DuBois, <i>Encyclopedia Africana</i> <sup>24</sup> Henry Louis Gates, <i>Encarta</i> <sup>25</sup>
Anthology	Alaine Locke, <i>The New Negro</i> Amiri Baraka and Larry Neal, <i>Black Fire</i>
Annuals	Negro Year Books State of Black America
Bibliography	Monroe Work, <i>A Bibliography of the Negro in Africa and America</i> <i>Afro-Scholar Newsletter</i>
Collected Works	W. E. B. DuBois <sup>26</sup> Booker T. Washington <sup>27</sup>
Textbooks	Maulana Karenga, <i>Introduction to Black Studies</i> Abdul Alkalimat and Associates, <i>Introduction to Afro-American Studies</i>
Autobiography	Three autobiographies of W. E. B. DuBois The Autobiography of Malcolm X
Who's Who	Who's Who in Colored America (for example 1930, 1931, 1932) Who's Who among Black Americans (for example 1985)
Conference Proceedings	Black People and the 1980 Census Malcolm X: Radical Tradition and Legacy of Struggle <sup>28</sup> (1990)
Special Collections	Arturo Schomberg Collection <sup>29</sup> , New York City Public Library Vivian Harsh Collection <sup>30</sup> , Chicago Public Library

One current example will help illuminate this impulse toward summation. In the recent period three major anthology projects have been published, each from a particular theoretical orientation, each designed to be an inclusive compilation.

1. Molefi Kete Asante and Abu S. Abarry, eds., *African Intellectual Heritage: A Book of Sources* (1996) 828 pages
2. Henry Louis Gates and Nellie McKay, eds., *The Norton Anthology of African American Literature* (1997) 2,665 pages
3. Manning Marable and Leith Mullings, eds., *Let Nobody Turns Us Around: Voices of Resistance, Reform and Renewal* (1999) 704 pages

This is a total of 4,197 pages. Each of these summations has the strength of ideological focus, but the weakness of excluding other voices. Hard copy constraints are more important in the long run than critical judgment.

There is no such constraint in cyberspace. The summation possible in the context of eBlack Studies can include all of the ideological threads, all of the voices. Moreover, it can embrace the editorial contributions of all scholars. In cyberspace there need not be any barriers to sharing knowledge, and we can grow our unity based on hyper-linked texts. This preserves our individual identities while at the same time forming a growing, unified architecture of knowledge.

The modern institutional foundation for knowledge is the library: the public library and its special collections, and the academic library and its special collections. Our summations have always been encoded and written up in texts, hard copy. Libraries have served as warehouses for all of the summations, as centers for scholarly research, as well as the wellsprings of democracy in every local grassroots community. The preservation of our summations creates an intellectual foundation for each next generation.

Now we are at a great crossroads in the history of knowledge production, distribution, and consumption. The information revolution has increased the quantity for each process exponentially. If there ever was a time for summation it is now.

The point is that there is a wonderful convergence of (1) a great need to sum up and (2) the revolutionary new tools of information technology. eBlack is necessary and possible. So we also have to focus on the use to which we can put the current tools of computers and the Internet.

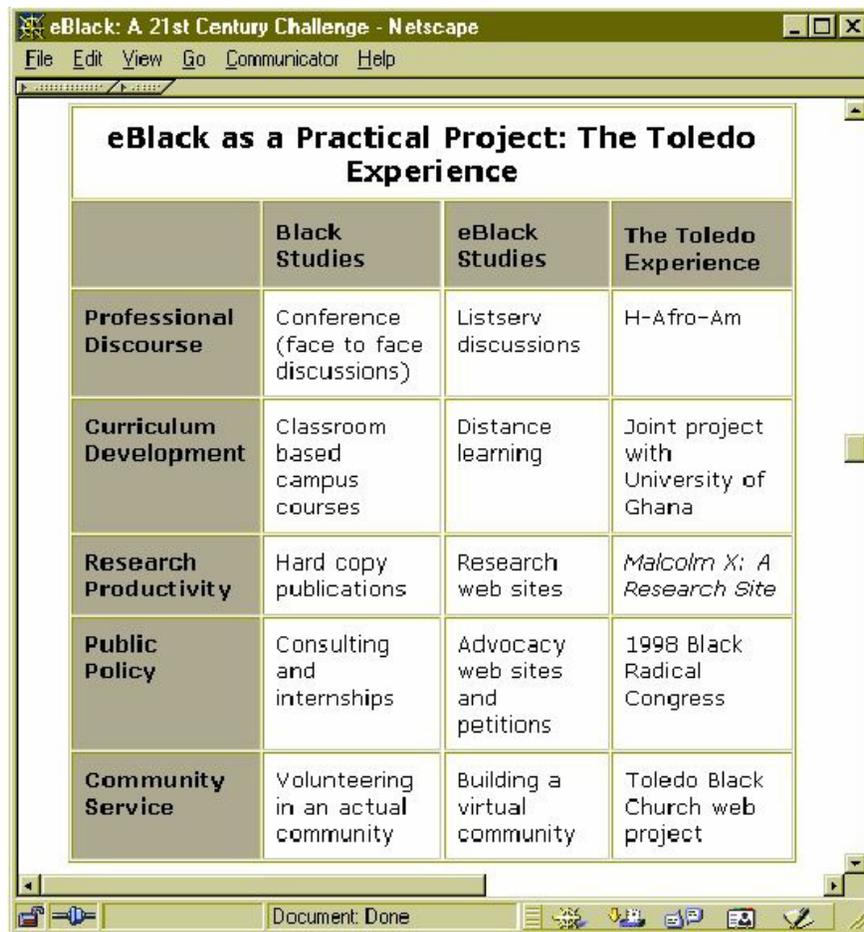
### ***The Toledo experience***

Our starting point is the fledging effort at the University of Toledo. The Africana Studies program is in its fifth year. Ours is a report of a work in progress, an example of what can be tried.

A common conception of conventional academic work includes five points: professional discourse, curriculum development, research, policy and community service. This holds for Black Studies and eBlack Studies as well (table 2). The five most current aspects of eBlack studies in Toledo are:

1. **H-Afro-Am** <sup>31</sup>istserv of academic professionals and serious students of the Black experience. Part of H-Net.
2. **University of Ghana Distance Learning Project**, two courses presented over the Internet by a professor based in Ghana.
3. **Malcolm X: A Research Site** <sup>32</sup>a comprehensive web site to sum up Malcolm X and make possible his cyberresurrection.
4. **Murchison Center** <sup>33</sup>a community technology center, providing a basic link between campus and community.
5. **Black Hair**, a site mapping experience which is deep inside the cultural and economic life of the community.

Table 2. Five aspects of eBlack Studies as a practical project (1998).



The screenshot shows a Netscape browser window with the title 'eBlack: A 21st Century Challenge - Netscape'. The main content is a table with the following structure:

	Black Studies	eBlack Studies	The Toledo Experience
<b>Professional Discourse</b>	Conference (face to face discussions)	Listserv discussions	H-Afro-Am
<b>Curriculum Development</b>	Classroom based campus courses	Distance learning	Joint project with University of Ghana
<b>Research Productivity</b>	Hard copy publications	Research web sites	<i>Malcolm X: A Research Site</i>
<b>Public Policy</b>	Consulting and internships	Advocacy web sites and petitions	1998 Black Radical Congress
<b>Community Service</b>	Volunteering in an actual community	Building a virtual community	Toledo Black Church web project

### *Three core values*

Out of our experience we have identified three fundamental values that are both desirable and possible. The critical issue is to have a general orientation that can unite us as we build a new practical program of scholarship.

**1. Cyberdemocracy.** Everyone has to be included. On one level this is like fighting for the public library and public education. Inclusion is a matter of access and of literacy. Literacy is a matter of skill, what some call functional literacy, and of application, what I call social literacy. Our civil rights must be protected as cyberrights.

This is one of the great targets of any serious reparations program<sup>34</sup>. To repair what has been done to Black people would have to mean reestablishing them securely and fairly in the 21st century. A minimum demand has to be the core cyberright, cyberdemocracy.

Cyberrights are protected in the public sphere and should not be pushed back into the realm of the private sphere, at home or at work. So cyberdemocracy calls for public computing. The leading places have been public libraries and schools at all levels.

Every public institution needs public computing to guarantee cyberrights.

**2. Collective intelligence.** Today we have large datasets, and IT provides the tools to analyze them. For example, we need every slave narrative digitized and formatted as a searchable data set, along with an archive of the research done on the entire texts. Our knowledge is about to leap exponentially as such a new scale of research takes off.

A major aspect of collective intelligence is consensus. Consensus is the ultimate summation of consciousness. On the basis of cyberdemocracy we can build connectivity to achieve consensus. This will require shifting our focus from hierarchy to egalitarian interdependence.

Collective intelligence overpowers the segmentation of knowledge. Different disciplines contribute to our databases without prejudice. The community contributes as well as the campus, on the basis of lifelong learning. The map of knowledge structures and clusters, now organized in distinct academic disciplines, is about to be reconceptualized and reorganized.

**3. Information freedom.** The new information technologies produce and distribute information in such a way that drives its exchange value down towards zero. For example, new software is soon discounted and then distributed with hardware in a bundle at minimal cost. This new thinking has impacted scholarly discourse and exchange of information so global networks are emerging based on information freedom. H-Net <sup>35</sup> is a good example of this. Government officials at the National Institutes of Health <sup>36</sup> have also decided that it is in the national interest that government sponsored health related research will be available for free as well.

The privatization of global culture is a dangerous trend. Information about our species, every group and all their experience and knowledge has to be preserved for all of us and all our collective descendents. In fact, as it is privatized it is slowly extracted from the main forces driving our evolution so everyone will be the less for it. Taken to its logical conclusion, we can foster inmanageable species differentiation.

It doesn't make sense in the age of the Internet and the World Wide Web that we still have to pay to read the major leaders in our intellectual tradition, be they W. E. B. DuBois, Martin Luther King, or Malcolm X.

### ***BRAIN: Black Research Archive on the Internet***

This brings us to our major proposal.

We have posed the problem as summation. We have shared some of our research and related activities in launching eBlack Studies. We have summed up our experience as three basic core values to guide us. Now, our proposal is called BRAIN, an acronym for Black Research Archive on the Internet. We propose a web portal filled with knowledge about the Black experience. Our goal is to design and create the digital being of Blackness, eBlack.

The brain metaphor has been used again and again. One early example is H.G. Wells's World Brain <sup>37</sup> (1938). Perhaps the latest example is Howard Bloom, Global Brain: The Evolution of the Mass Mind from the Big Bang to the 21st Century <sup>38</sup> (2000). Such efforts are attempts to grasp a rational pattern that defines how reality operates. The brain is the scientist's metaphor for the overall. Others choose the heart, the soul or the spirit. At Toledo our community slogan in working with kids is "learning + labor + love = life." This combines everything: brain and muscle, spirit and emotion.

Our brains (and nervous systems) are where biological knowledge processing goes on. The Internet is the silicon based environment for new sites of knowledge processing. This time the brain will be collective and we will be wired together with one continuous flow of information: contradictions, negations, and arguments included!

We are in the first stage of this process: digitizing hard copy (atoms of material things) into electronic files (bits of digital code). If it's true that a thousand mile journey begins with a single step, this is it.

The basic model is one of transformation:



This is the transformation of atoms into bits, of natural, bioevolutionary modes of experience into intentional, digital-evolutionary modes of experience. This is based on computer technology, the most crucial part of which is that all forms of perceivable experience can be reduced to a universal digital code.

The issue is therefore information and not artifact, though one is contingent on the other at the point of digitization. The artifact will always retain value, but its contribution to the future will mainly be through the code that represents its digital being.

Just as crucial as information is ideology, our concept of this experience, what we conceive/perceive and therefore what we choose to code and retain. The foundation of ideology remains, however: the material, economic, and social interests of classes expressed through alternative political cultures of different communities, or, in other words, the old class/color/culture/consciousness nexus in the actual world we live in.

In this context the academic field of Black studies is in need of transformation (in fact is being transformed) into eBlack Studies. This is a post-ideological or informational stage. This is an inclusive model.

Our proposal is BRAIN. The issue is to design an appropriate architecture of knowledge about the Black experience for cyberspace. The design will be based on the three core values of cyber democracy, collective intelligence, and information freedom. We are not carving in relatively inert stone but launching a new life form. We are giving birth to the united digital being of Africa and the African Diaspora. We are waking up all of the mighty spirits and calling them to sit in council. Really this will be the first time everybody can be at the table.

The proposal is to build a movement for the digitization of the Black experience. We have to get into cyberspace, and begin to evolve into new and more powerful datasets and databases that tell the whole story.

BRAIN will be launched with three primary sources of content:

1. experience: databases of objective and subjective forms of knowledge that describes and represents Black people defined in all possible ways;

2. scholarship: everything considered appropriate knowledge produced by academic professionals;
3. discourse: archives of conference proceedings, listservs, and bulletin boards.

These three categories represent perception, conception, and conversation. So now in reviewing this process of the three digitizations we will share more of our work and then propose a national project for collaborative work. This is a real proposal, but also a model for many such proposals that are welcome.

### ***Digitization of experience***

Experience is knowable. To accomplish this we have an approach to the objective/subjective problem that links them together. We begin within the subjectivity of the Black community to find our experiential target - we identify the objective Black experience within the subjective conceptual framework of some current within Black intellectual history, and then we match that with some form of hard copy representation (audio, visual, texts, etc.).

The thesis is that the empirical data identified through the lens of this Black particularity will anchor knowledge of more universal applications. Anyone can look through the eye of the needle of our experience and see the whole world.

We are working on two levels of Black subjectivity: (1) ideology and intellectual currents, and (2) the political culture of everyday life.

Our project on ideology is about Malcolm X. We developed a basic compilation of information over several years of research. The web site is called a research site." We intended to distinguish this kind of knowledge portal as one beginning a consensus building process of a foundational aspect of Black ideology overall. We explained the site in a brief introduction <sup>39</sup>.

We have in this site a model database for all individuals of ideological significance. This breaks down into five basic categories:

1. Family
2. Chronology
3. Words
4. Bibliography
5. Webliography

Every community has had important voices that need to be accounted for in the overall story of the ideological life of the Black community. When enough people are in this kind of global database then we can prove that ultimately wisdom is found among the great masses of people and not a select powerful few.

For the political culture of everyday life we are exploring two kinds of space to understand how an actual community becomes a cyber community. For physical space we are digitizing a street: Dorr Street. For social space we are digitizing the Beauty salons - hair culture.

We believe that our project is making headway on the first aspect of digitization, the transformation of the external public experience. But this keeps the community as an object of what we do and not in the drivers seat. This is the second step. Now that we have

digitized content of compelling interest, it is assumed that there will be a high motivation for interactivity of like minded people.

The national action project we would like to propose is Cyberchurch (see box).

### **Cyberchurch: A proposal for a national action research project**

This project has been initiated by the Africana Studies Program at the University of Toledo under the leadership of Abdul Alkalimat.

The purpose of the Cyberchurch project is to organize Black Studies programs to collaborate with churches in their local areas to develop web pages for the churches.

The following points sum up this proposal for a national action-research project.

1. Black studies programs in institutions of higher education are the most wired aspect of the Black community. This includes access and literacy with hardware and software, as well as the student, faculty, and staff who are skilled in high-tech.
2. The Black church is the major institutional base for the Black community. At all levels of class stratification the Black church far exceeds any other institution in terms of levels of participation, leadership development, resource accumulation, meeting space, national and international networking, and spatial distribution.
3. The University of Toledo Africana Studies Program is part of MetroNet, a service by the University of Toledo to provide free web pages for non-profit organizations. We will use MetroNet until we have 500 churches online, and then we will migrate this to our own server by the end of 2002.
4. Each page will have at least the following:
  - a. photo of church
  - b. photo and bio of minister and family
  - c. history and mission
  - d. church calendar and weekly service/meeting schedule
  - e. church organization and ministries
  - f. contact information
  - g. online donation link (optional)
  - h. map of location
5. Our long range goals are to set up these web pages, get at least 20% of each church congregation to have email, set up online discussion groups, post sound files of the minister preaching and the choir singing, and organize national Cyberchurch workshops.
6. Action/research teams are being formed to carry out the Cyberchurch project. Anyone interested in joining this program please contact Professor Abdul Alkalimat at [abdul.alkalimat@utoledo.edu](mailto:abdul.alkalimat@utoledo.edu).

The basic proposal is to establish a digital institution of Black experience. The Black church has adapted to communicating through radio and cable television, and now it is time for the Internet. Cyberchurch will grow into a self-evolving global network of individuals and institutions.

### ***Digitization of scholarship***

It goes without saying that any new architecture of knowledge will draw on professional academic research. We have established a baseline webliography for this community of professional academic research in our site <http://alkalimat.org/eblackstudies>.<sup>40</sup> The main datasets are the following:

1. Journals <sup>41</sup>
2. Organizations <sup>42</sup>
3. Undergraduate degree programs <sup>43</sup>
4. Graduate degree programs <sup>44</sup>

The new project we are proposing is Project BAD: Black American Doctorate (see box).

#### **Project BAD: Black American Doctorate**

This project has been initiated by the Africana Studies Program at the University of Toledo under the leadership of Abdul Alkalimat.

The purpose of Project BAD is to establish a public database of the Black American doctorate. Our goal is to include every African American awarded the PhD or equivalent degree. This does not include honorary degrees.

The following points sum up this project:

1. There is a great need to build empirical databases that sum up Black intellectual history, especially as contained in the empirical record of intellectual and artistic production.
2. The highest level of academic scholarship is the PhD dissertation. The people who successfully completed the PhD degree constitute a base line for the academic component of Black intellectual history. Every institution keeps detailed records on every person awarded the doctoral degree.
3. Most of the PhD granting institutions in the USA have some kind of Black Studies related professional staff and faculty in an academic unit or the library.
4. On a campus by campus basis lists of Black PhD's can be compiled and organized as a research report. On a discipline by discipline basis people who have earned the PhD can be compiled.
5. The model for this project is the work by Harry Greene,  Holders of Doctorates Among American Negroes  (1946). He listed over 300 people and presented detailed

information. His data is already in an excel spreadsheet <sup>45</sup>.

6. Each campus list will be considered provisional until the official Registrar of the institution validates each degree holder.

7. We are interested in the following data about each person:

- a. name
- b. gender
- c. undergraduate institution, major, degree, and date
- d. graduate institution, major, date and title of thesis for the MA
- e. graduate institution, major, date and title of dissertation for PhD

Our proposal is for people at PhD granting institutions to begin digging into local records to compile and document portions of the database. This level of intellectual production is certainly part of the basic architecture of knowledge for information about the Black experience.

### ***Digitization of discourse***

There are two opposing views of what constitutes a canon for Black intellectual history, dogma or debate. Some believe that a canon can be named by selecting texts of language and conceptual clarity. We believe this orientation is towards dogma and what will inevitably turn into a conservative orientation. The canon of the Black radical tradition is debate, the interaction of voices in which each challenges and interrogates the other.

The main logic of this history follows three great debates that have shaped Black intellectual history and reveals its logic of development:

1. the emancipation debates that began with the National Negro Convention movement in 1830
2. self-determination debate of DuBois, Garvey, and Booker T Washington early part of the 20th century, and
3. Black liberation debate of Martin Luther King, and Malcolm X in the 1960's.

Our name for the digitization of these past debates is cyber resurrection. Our main project in this regard is the digitization of a conference held in 1990: Malcolm X, Radical Tradition and Legacy of Struggle. We have audio and video tapes, photographs, hard copy archives, and continuous contact with many of the conference speakers. Three thousand people from twenty countries attended, but now we have it on the World Wide Web. There were 24 sessions during the conference. We are posting one session per week for 6 months to relive the 1990 conference in 2001. After merely 6 weeks the conference web site has twenty thousand hits from nearly 50 countries.

This process of digitizing discourse also applies to contemporary exchanges. The most interesting application of information technology in this regard is that on a listserv email can be automatically archived. H-Net is a major example of this. H-Net sponsors over 100

listserv discussion networks of scholars. Every list has a log or archive of all messages. These logs can be searched as individual lists or for any combination of list up to a search of all lists. This is emerging as the definitive way to access the most current thinking in a given field or research area. Or experience has been with H-Afro-Am. This listserv has about 1,500 subscribers from every region of the world.

There is a need to aggregate all listserv networks in some way related to professional academic scholarship in Black Studies. This is a major initiative for the systematic codification and sharing of this discourse. There is a key leadership role in this process for librarians at research institutions.

## ***Organizing for change***

In general we are proposing a model for research and collaboration that relies on limited local resources. Of course we aspire to building a movement, and for this movement (to digitize the Black experience) to get off the ground local efforts will have to put three resources in place:

### **1. Campus base**

The first concern is to have the project initiated by one or more persons (usually one or more graduate students, faculty, or professional staff) who take leadership. This is a professional activity, the building of a research program, especially one that will redefine an academic field of study. Productive leadership in this area deserves full recognition as scholarship.

Every project could be staffed in part by student workers paid for by the work-study federally funded student aid program. Every project needs a data delivery technical code writer. My suggestion is a student from the closest College of Engineering. We have had luck with students from National Society of Black Engineers and students who have just arrived from India. There is a healthy attitude and a willingness to work hard, especially when it is socially and morally engaging by people who identify with what is being done. We have also found students who are politically active to be good recruits, including all kinds of non-Black students.

Academic credit should be awarded for successful participation in a community project. In higher education circles this is being called "service learning."<sup>46</sup> This is what we call the method of "involved observation," being an activist in a situation one is also studying. Sometimes it is appropriate to involve an entire class and sometimes a single person through some form of independent study arrangement.

National projects like Cyberchurch should be offered as part of the curriculum on a regular basis.

Black Studies needs to build a coalition with everyone practicing any form of social informatics, in every case including the library. Every program needs a student lab and a production lab for digitization. Every digitization center needs to begin with a local project and consolidate campus-community ties.

### **2. Community base**

The first task is to identify an institution to serve as a base of operations in the community. The best examples are the local library and the local community technology center. If these

don't exist then the first task is to get them set up. Our experience is in linking the Africana Studies Program, at the University of Toledo with an inner city community technology center, The Murchison Center. Our experience can be summed up into five guidelines or rules:

First rule is that our purpose is to serve the people. At the Murchison Center we have a community garden <sup>47</sup> to teach this to the young people, and to practice it ourselves.

The second rule <sup>48</sup> is that the practical application of eBlack Studies in the community is social cyber power, the use of cyber power for the end of poverty once and for all.

The third rule <sup>49</sup> is that our focus is on building a bridge across the digital divide.

The fourth rule <sup>50</sup> is that programs of research will always support an action project to serve the local community.

The fifth rule is that there should always be free classes in the community on various forms of information technologies, hardware and software.

### **3. National research program**

The beginning of the information age is the ultimate moment for self determination - creating a new architecture of knowledge in cyberspace. This new knowledge is a launching pad for the new society we need free of all historical forms of exploitation and oppression.

We are proposing three new national research projects that provide examples of how new forms of national cooperative research programs might look:

1. Cyberchurch
2. Project BAD: Black American Doctorate
3. Hyper-unification of eBlack Studies listserv discussions.

Now is the time.

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## **Social Cyberpower in the Everyday Life of an African American Community: A Report on Action-Research in Toledo, Ohio**

by Abdul Alkalimat, University of Toledo

(To appear in *Community Practice in the Network Society*, Peter Day and Doug Schuler, editors. London: Routledge, 2003 forthcoming)

What will the experience of the African American community be in the information age? This is a critical question as it appears more and more that the social transformation underway utilizing information technology is permanent, and increasingly redefining standards for social life: literacy, job readiness, upward social mobility, and social power. Most African Americans were not among the early adopters of this new technology and therefore appear to be beginning the 21st century in much the same way as the 20th century, not at the cutting edge of economic development. This reality can be changed.

This article reports on an action-research project designed to explore the ways in which the everyday life of a community can become the content of its virtual community identity, and by so doing create a bridge over the digital divide. The project is based in Toledo, Ohio (USA) and is a joint effort by the Africana Studies Program at the University of Toledo and the Murchison Community Center. The field work for much of the research reported here was done by the first masters' degree graduates in eBlack Studies, Africana Studies based on information technology. They continue to work together in the Murchison Center as executive director, Americorps VISTA volunteer, and volunteer teacher.

The Murchison Center began in 1992 as a program of the St. James Baptist Church. It has become a full service community technology center, with 20 networked workstations, cable internet connection, and capacity for printing and multimedia. The program includes after school tutoring and adult classes four nights a week. The annual budget of the Murchison Center has been about \$30,000, not including VISTA funding, which pays several volunteers just under \$800 per month. There have been stages when the decisive influence on the center was the church, the government, and then the university. Each stage was cumulative, so that previous influence and contributions were not lost. Current transformations appear to be towards greater community influence and inputs to the Murchison Center (Alkalimat and Williams 2001).

The local community is the kind of neighborhood where people are usually locked out of the access and training needed to be an active part of the information society. As master's student, center co-founder and executive director Deborah Hamilton described the area,

It is located in central city Toledo where the community...is 70% poor or near poor. Ninety-seven per cent are African American in the immediate area (census tracts 25 and 26, Toledo, Ohio). The 1990 median income is \$12,400 and \$15,400 respectively in both census tracts. Single mothers head more than 60% of the households. One fourth of the residents are under 13 years of age.

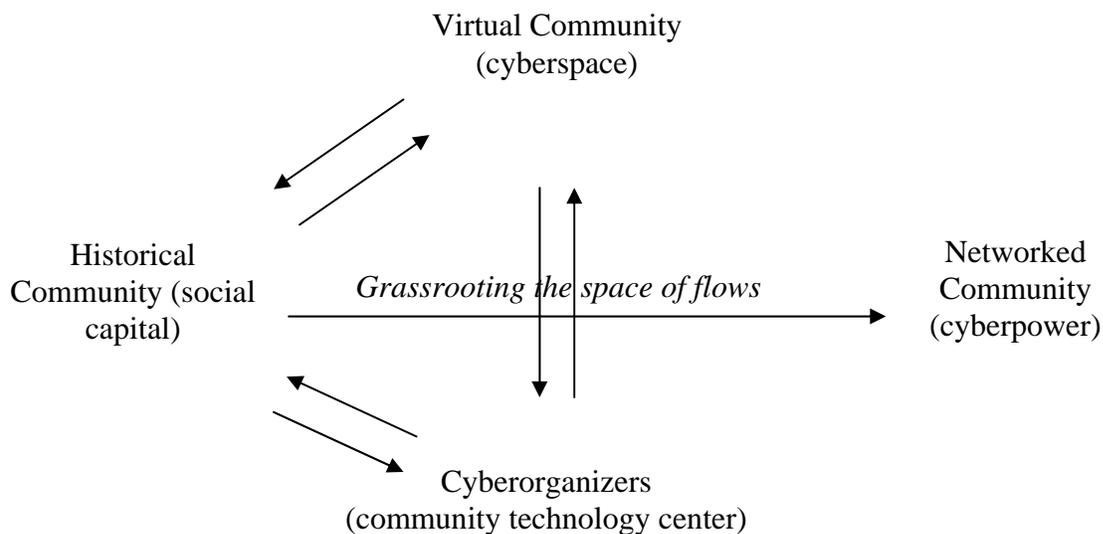
(Hamilton 2002: 13)

Overall, Toledo is a metropolitan area of over 500,000 people, 20 percent of whom are African American. It has a shrinking manufacturing base historically linked to the auto industry headquartered in Detroit 50 miles to the north. Its irony in the global economy is that

Toledo produced the classic World War II Jeep that was vital in the war against Germany. Now today Daimler-Benz owns the plant, which produces the Jeep Cherokee. Toledo's capital used to be local, community based, and big enough to finance local projects like building a major art museum (1901), university (1872), and manufacturing, especially glass and auto components. Now most of the big capital is absentee-owned.

Toledo has had considerable effort put into developing community level technology resources. Two 1996 initiatives led to the formation of a local organization called Coalition to Access Technology and Networking in Toledo or CATNeT (<http://uac.utoledo.edu/metronet/catnet/>). A local housing manager got a Housing and Urban Development grant to build and staff several computer labs in private apartment complexes, and a local academic researcher got involved with a State of Ohio initiative, the Urban University Neighborhood Network. The network started with 9 labs and now has a membership of 34 labs (Stoecker and Stuber 1997). A recent survey to locate all of the public computing in Toledo found over 250 public access sites including schools and libraries (Williams and Alkalimat 2003 forthcoming). In addition, the Toledo labs are active in a statewide organization (Ohio Community Computing Network, <http://www.occcn.org>) and a national organization (Community Technology Centers Network, <http://www.ctcnet.org>).

**Figure X.1. The Toledo Model**



The Toledo model shown in Figure X.1 proposes how a socially excluded community can be transformed into a networked community, able to mobilize cyberpower to advance its interests. In the model, the transformation from a historical community to a networked community is catalyzed by cyberorganizers and by the organizing and mobilizing impact of the content and interactivity of cyberspace. This is how the actual social organization of the community can create or cooperate with cyberorganizers to build an existence in cyberspace. The process intensifies as the community becomes more engaged in using information technology and dependent on the new opportunities of an entire community sharing a virtual collectivity. It is precisely this collective that will learn how to act, first in cyberspace like sending mass emails or signing a petition, or swarming emails, then by leaving cyberspace

and taking action in the real world. Both of these actions, virtual and actual can be called cyberpower as the key staging area for the collective action was in cyberspace.

We will now use this four part framework to report on four of the cyberpower projects. Cyberfamilies is a project to utilize the existing practice of research for family genealogy to build a database beginning with individual extended families to network and link-up an entire community. Cyberhair is a project based on databases of beauty salons, combs, and information resources about hair care and design. Cyberchurch is a project to build a dynamic database of church websites, and extend that into a comprehensive virtual community of individual churches and the entire religious community. Cyberschools is a project to use cyberspace in two ways, as a directory of individual school web pages, and a site for a community wide campaign to pass a state mandated proficiency test. This is a work in process.

**Table X.1. The Historical Community: The Actual Experience and Its Virtual Representation (The Toledo Model)**

<b>Actual Experience</b>	<b>Virtual Experience</b>	<b>URL</b>
Neighborhood	Virtual Dorr Street	<a href="http://www.murchisoncenter.org/dorrstreet/">http://www.murchisoncenter.org/dorrstreet/</a>
Family	Cyberfamily	<a href="http://www.murchisoncenter.org/cyberfamilies/">http://www.murchisoncenter.org/cyberfamilies/</a>
Church	Cyberchurch	<a href="http://www.cyber-church.us">http://www.cyber-church.us</a>
School	Cyberschool	<a href="http://www.murchisoncenter.org/cyberschools">http://www.murchisoncenter.org/cyberschools</a>
	First Saturday	<a href="http://www.murchisoncenter.org/firstsaturday/">http://www.murchisoncenter.org/firstsaturday/</a>
Business	Cyberhair	<a href="http://www.murchisoncenter.org/cyberhair">http://www.murchisoncenter.org/cyberhair</a>
CTC	Murchison Center	<a href="http://www.murchisoncenter.org">http://www.murchisoncenter.org</a>

## **Cyberfamilies**

### *Historical community*

The family is generally regarded as a core institution of every society. It has been the vehicle for procreation and social reproduction – people have babies to replenish the community by creating a family, and then in turn rely on the family to socialize the children to become members of society. The research focus on the Black family, especially on changes in Black family organization, has charted the Black family from its origins in Africa through the destructive terror of slavery, sharecropping tenancy, and industrial city life. Within this, the most persistent debate has been over the relative importance of slavery in understanding the persistence of family disorganization today.

This leads to one of the main obstacles in building a family database. There are limited records of biological parenting under slavery. Although a slave culture did emerge and provide a counterweight to the system, official records regarding family continuity were based on the slave owner and not the slave. In addition, family relations without formal legal marriage, and generally without documentation, presents a problem for anyone researching family history. On the other hand, it is precisely these problems that lead people to value the successful attempt to reconstruct family networks.

Cyberfamilies pointed up a big difference between lineage as tracing ones origins versus family history as tracing ones socio-biological network, inclusive of all its many branches and hubs. A lineage network will include the shortest available distance between two points in a family network, but a social network includes all available branches. Some family members seek historical meaning by linking with a particular ancestor, others by linking with broad social forces in society and the world. In my own family, the progenitor is Free Frank, a slave who bought himself and 19 other family members. The family points to him as the main frame of reference. The question is, How are you related to Free Frank? On the other hand, during family gatherings people might have spoken of the role the family played in different wars, of the different professions and industries people worked in, cities where different family hubs were located, and so on (Simpson 1983).

The family has been a hot topic in cyberspace, even for African Americans who are not online to the same extent as other ethnic groups. We identified two main kinds of genealogical sites designed for African Americans: general genealogical sites on African Americans, and research databases such as the census, government records and so on, including a great deal of information on specific families. (See the following: <http://www.afrigeneas.com>, <http://www.prairiebluff.com/aacemetery>, and <http://freedmensbureau.com>) In addition, many personal websites have some kind of reference or link to family content. The people who make up the content in most of these sites often do not know that information about them is available in cyberspace. This is public information.

### *Cyberorganizer*

The cyberorganizer for this project is Pauline Kynard. Ms. Kynard completed her undergraduate degree in Africana Studies while working as Director of the Art Tatum Resource Center in African American Culture of the Toledo-Lucas County Public Library, Kent Branch. She developed the Cyberfamilies project as her undergraduate thesis project. The project is now a formal collaboration between Africana Studies at the University of Toledo and the Art Tatum Center.

The first stage was to identify one or more families who met three criteria: basic research materials have been collected, a family member is willing to work with the project as liaison with the family, and the family agrees to have this information freely available on the cyber families web site. Working with her on their respective families are another undergraduate major in Africana Studies representing the Jaynes family, and my sister who had started a web project on our McWorter family. The three families were different in their approach to family history, but each already had completed a great deal of research. The Kynard and Jaynes families are large families settled in Toledo for three generations. The McWorter family is part of the official record of African Americans in the state of Illinois from the 1830's.

### *Cyberspace*

Ms. Kynard worked with each family to organize available material and assist in additional research. When discussing the digitization aspect of the project it was necessary to discuss continuing research on the family. Once she has gathered and codified the information the task was for the Africana Studies Media Lab to write software for a database to express the full branching of a family social network. The working model enables every person in the network to become the center of an investigation that can follow every branch of the network

that we have information for. It is a matter of statistical calculation to determine how many links we are away from each other. The most celebrated finding is that people are no more than six connections away from each other in actual reality, but the way that cyberspace has been constructed any given web page is 19 clicks from any other, but this finding only applies to the 24% of cyberspace that is available via simple surfing (Barabasi 2002: 25-40, 165). Clearly our actual social lives are more connected than our representations in cyberspace. But this need not be the case.

Each individual in a family network has a page. This places them at the center of kinship links to the broader network, through their parents and their children. Each individual is at the same time at the center and the periphery of an expanding network of humanity, going back into history and forward into the future. Stable communities will be more closely connected, but over generations most groups are likely to be much closer than people think.

#### *Networked community*

The first outcome from the pilot stage of this project is that Ms. Kynard was asked to prepare a CD for the Jaynes family reunion. This project has now become an organizing activity in the family to digitize their history and current make up. Secondly, she is preparing a slide-lecture presentation on the project for community groups interested in genealogy. And, the library is considering expanding its uploading functions such as is required by the cyberfamilies project, i.e., giving more importance to creating digital libraries of local content.

The project is moving to an institutional process that will create a new generation of family cyberarchivists, e.g., students in school. Plans have been developed to implement a module for graduating seniors at the local Black high school to develop digital family history. They will have the option to contribute their family information to the database of cyberfamilies. As the families interconnect then the identity of the network will shift from family in a narrow sense to community in a broad sense. We will discover as never before the logic of kinship and be able to transform it as a network into a communications channel for cyber activity. The latent social cyberpower of this dormant network will be activated. This will be its digital awakening and engagement.

### **Cyberhair**

#### *Historical community*

Taken together, hair care and hair design are an important part of social life, culture and identity in every society. In the Black community they are especially critical because African hair has unique qualities for hair sculpture and because there is a long tradition of African American cultural excellence in this activity. The hair salons are centers of economic, cultural and social action. Doing hair is rooted in deep cultural economics, encompassing family labor, barter with friends, or doing it by oneself.

The beauty salon was created to provide a service in the urban Black community, especially in the 20th century. As a result of proletarianization, African American families became smaller, family networks were de-territorialized, and many services became commodified. The salons became centers of cultural production and economic exchange as well as “third places,” sites of public discourse that form a hub serving across a dense network of families,

friends and acquaintances. Transgenerational interlocking networks of families and churches are vehicles for discourse. Beauty salons are a vital part of the African American public sphere.

The main icon of the Black woman as entrepreneur is Madame C. J. Walker, founding leader of the Black hair care industry. She invented a new chemical process for hair care and design. But her impact went way beyond this. She recruited and trained a corps of hair care workers thereby giving beauticians a greater professional profile. This was the most stable form of independent business ownership for Black women in the 20th century. She provided significant financial and moral support to the writers, artists, and institution-builders who became known as the “Harlem Renaissance.” She also did so with the political militants of the “New Negro” movement.

However, today the political economy of the Black hair care industry is changing. One major example is the retailing and wholesaling of Black hair care products. In Toledo there is one Black hair products distribution company over 40 years old. Over the last ten years Asian business interests have opened at least four megastores, each with more than ten times the floor space and product selection. Salons located in the major malls and department stores now include Black people in their market. This has led to a tension between the traditionally more networked, “conversation-intense,” and slower beauty parlor in the community and doing hair as a commodity in a time-driven, mass market, mall environment.

The beauty salon in the Black community has historical roots but is in a state of crisis. There is some hope for the future, however, as the main Black high school has a growing cosmetology program. Enrollment there is greater than that in many of the more high tech areas that lead to a college major in engineering and computer science. Enrolling in cosmetology is also evidence of a desire to get a skill and possibly be self-employed and able to support oneself and a family.

### *Cyberorganizing*

The Cyberhair project emerged in three stages: a conference, a class project, and a MA thesis project. The conference defined the project, the class began the enumeration of salons, and the thesis work built the Cyberhair website, “Black People’s Hair.”

A symposium was held on 6-7 March 1997, “Black Peoples Hair: A Symposium on the Political Culture of Everyday Life.” (See <http://www.murchisoncenter.org/cyberhair/conference.htm>) It was the first year of the UT Africana Studies program. As a way to bring Black studies to life for UT students, many of whom are first in their families to attend college, a day when art historians who focus on African hair, hair braiders, and students could bring their knowledge together. The conference was scholarly, with presentations on the mutual influence of African and African America hairstyles over the last five centuries. It was practical, with hair braiders demonstrating their work on volunteers. And it was emotional and personal, with participants sharing stories of their struggles with their hair and their identity.

The conference set the framework for the Cyberhair project in three ways. The project would focus on cultural production rather than cultural performance. It would advocate

Panafricanism as a cultural approach. And it would advocate the adoption of information technology as a technological foundation.

The Africana Studies program then organized an undergraduate course called “Cyberspace and the Black Experience.” (Chronicle of Higher Education 19 May 2000: A18) Along with readings and seminar discussions, the course initiated a practical research project to build a database of Toledo’s African American beauty salons. Here a debate emerged over whether it was a “politically correct” action to study places that were hostile to a positive Black identity, meaning did anything other than natural hairstyles. The one sister in the class with “trendy locks” was opposed to going to the beauty salons for this reason, but the others who all wore styles more in the mainstream of Black Toledo agreed that this project would make a big impact on the overall Black community. They were responding to the design of the assignment, to build a cyberresource that might motivate people to become computer literate and cross over the digital divide.

The one young man in the class took up the task of completing the database as his masters project in Africana Studies. In his thesis, Brian Zelip explains his situation:

I am a white male. Every salon I went to was a Black salon. 78% of the salons were owned by women. All of the salon owners were in their mid-30’s or older, whereas at the time of the research I was 24 years old. ... It was anticipated that the research being carried out by me would be faced with some degree of resistance and non-cooperation.”

(Zelip 2002: 88)

He bases this on the social meaning of color, gender, hair and age. However, he then attributes his success to how these barriers were overcome: the salon owners’ respect for the research sponsors (UT Africana Studies and the Murchison Center) and for his knowledge of the African American community and culture. Zelip had been the hip-hop deejay on the campus radio station.

### *Cyberspace*

The website was built around the 1997 hair conference, the database of beauty salons, and a collection of images of Afro combs. This anchored the digital identity of virtual Black hair in the actual space of cultural production rather than cultural performance. Beauty magazines stress cultural performance – gorgeous women, lots of documentation of spectacular events, product ads, and celebrities. The magazines are like dream books to guide stylist and the customer. In contrast, Cyberhair’s emphasis on cultural production targeted the universal experience of everyday life:

The Africana Studies Media Lab digitized a collection of combs from the US and elsewhere that the author gathered over a 35 year period. The process of organizing the digitized images facilitated our discovery that the Afro comb has passed through four historical stages: traditional, industrial, Panafrican, and global. The combs began in traditional society (made of wood), underwent further development in industrial society (metal), took new forms during the struggles for national liberation (wood, metal, and plastic), and now reflect the reality of globalization (extruded plastic).

*Networked community*

In the project, students become cyberorganizers, relying on the historical community of salon owners, stylists, and customers to help build the site and determine its future evolution. Out of fifty salons, seven owners were found to have active email addresses, but none of the shops had a computer in the salon for business or the public. But as a result of contact with our project several salon owners and stylists have taken computer classes at the Murchison Center.

Zelip went on a study tour of South Africa and took the opportunity to document hair care practices. On one occasion he found a beauty salon next to a cybercafé. The hair stylists had never been online. He gathered them in the cybercafé to view Black People's Hair on the web. When he returned to Toledo, he showed slides of the South African experience to the stylists who were in the site. This is a small example of cyberspace creating a Panafrican experience at the grass roots in the 21st century.

Survey data collected by students identified a small number of salon owners who are interested in making efforts to use computers and the Internet. The Murchison Center set aside computers to place into salons, and a masters student from the University of Michigan School of Information joined the project as cyberorganizer to carry out the installation and support of the PCs. This will enable the project to support the use of software for the salon as business, and the Internet and the World Wide Web for customers. In the future we will investigate the possibility of uniting an intensely individualistic group of entrepreneurs into a collectivity to serve common interests.

**Cyberchurch***Historical community*

The church is the most comprehensive social institution in the African American community. It provides a total experience based on its embodiment of culture, ideology, social organization, economic development, leadership, ritual, and a moral order. It is important among the social cyberpower projects because it also has had a long history of adopting new advances in communications technology. Today one can experience the Black church in person, on the radio, on television, in print, on video, CD, DVD, the Internet and the World Wide Web. The actual church takes up regular time each week and provides host space for many community activities. It seems only a matter of time before the church in cyberspace will rival the traditional gathering of a congregation.

Our survey suggests that there are at least 300 churches that primarily serve African Americans in Toledo. This constitutes the most powerful set of leaders, real estate interests, ideological consensus, and mass mobilization in the Black community. However, the church has to adapt to the new technology if it is to serve youth as they become cyberactivists. When we began our project less than 10 churches had their own web page reflecting the community wide impact of the digital divide. When the church adopts a new technology it also has the role of infusing it into other community activities as well. It is in this sense that Cyberchurch is a pivotal project.

*Cyberorganizing*

Cyberchurch began as a research assignment in an Africana Studies course on the Black church. Reverend Al Reed, a local minister with a social activist background, was recruited to teach the course once a week every Saturday morning. This schedule was set to allow for non-traditional working students to enroll in the course. Each student was assigned to gather church information for a web page. We began without a lot of computer literacy. However, the majority of students became comfortable and fluent with basic computer software and aspects of the web. In fact, out of this course, a couple of students even became teachers at the Murchison Center and leaders of the Cyberchurch project.

A second process was outreach to church leadership to attend free computer literacy orientation sessions offered weekly by the Africana Studies program. The main result of this has been a greater interest in the project. Many of the participants in the early morning outreach sessions also began attending evening workshop sessions. The process of building a virtual community was itself becoming a meaningful social group meeting on a face-to-face basis. These discussions were important for several reasons: they became focus groups to get community feedback on the project, they educated people about the project and got them to buy into the plan, and it allowed for students to emerge and make the transitions from student to community worker.

The project plans four progressive levels in the expansion of the Black church into cyberchurch. Level one is a church in the online church directory, with a web page containing publicly available information about the church, including a photo. Level two is a church that has supplied information about its staff, organization, calendar, and program and that has at least ten of its members with email signed up to a Cyberchurch electronic discussion list. Level three is a church web site with sound files, and/or video of at least one sermon and one song by the choir. Level four is a church with its own community technology center.

An action-research team called the Toledo Spiders carried out the data collection for level one. This team was made up of undergraduates and led by a graduate student in Africana Studies, all paid with federal work-study funds. The team used digital cameras and tape recorders to document conferences and churches as part of the Cyberchurch project. The project began to take off as people were motivated to get their own church online, and community organizers began to see this as a positive organizing project. The Murchison Center staff is currently organizing to visit each church to make direct contact with the church leadership. Unless a church member has participated in Cyberchurch classes, this visit is generally the first notice the congregation has of the project, which is usually followed by a regular announcement in the printed church bulletin distributed every Sunday.

There are five main lessons from this work: First, standardization of a main template for the project solved problems created by first trying to use freeware and free web hosting with people with low computer literacy. Second, emphasis on email seems a more democratic way to build a networked community while building a main web location as a virtual base of operations. Third, early adopters of this program were church seniors, but the critical mass for the church to become a networked community will be the youth. Fifth, student workers have to be mentored in terms of technical skill, attitude, and time management. Lastly, the greatest resource in building a cyberorganizing project is the bonding social capital that sustains participation.

*Cyberspace*

The general plan for the page is to combine the feature of a general portal with a database of individual church web pages. Again, our emphasis is on cultural production. We are approaching the church in terms of sites of cultural production (churches, seminaries, and publications) and tools of production (holy texts, hymns, and theologians). Linking all of this together can create an environment embracing all organized religious activity. One sister attending a Cyberchurch session responded to this design with a smile on her face saying, "My Lord, if we can all get together like this in cyberspace then we can all be in the same church."

On the site, each church's web page is based on a standardized template. The page allows for voluntary submission of information to start the process of a church being added to the database. Confirmation by the Cyberchurch team is necessary before any information is posted.

The logic of this structure follows an intervention by cyberorganizers into the internal organization of the church resulting in the church becoming itself a cyberorganizing force within the community. The cyberorganizer can join the church or just work with it, but also there will be church members who have or gain the skill who become cyberorganizers as well. In fact it is not too early to see the emergence of a new field for church professionals, cyberministry. The digital archive of the Black church experience will constitute its historical identity, and digital interaction will become a major vehicle for collectivizing religious experience.

*Networked community*

The church as a networked community can come into existence as each of the four levels of the cyber church project is achieved. The key is level two, when church members join the electronic discussion list. With more than 250 churches at level one now, level two may result in more than 2,500 people on an emailing list. We are currently in the process of building level two and the mailing list. The Cyberchurch team meets in a working session once a week. They will constitute the editorial collective for a newsletter based on a unified church calendar. This will be sent out as an email message, while the annual calendar will be archived on the web site. While starting out as a mailing list, the role of cyberorganizing in this case is to building a discussion list.

A community organization in Chicago has also joined Cyberchurch, adding Chicago churches to the site. On a national level, the project has been joined by the National Society of Black Engineers (<http://www.nsbe.org>) with more than 300 local college chapters of African American students in engineering and computer science.

The project is also networking the existing resources in the community. Five women who have become cyberorganizers in the cyber church project are also now the webmasters for their respective churches. Several churches have started labs on their own, and have affiliated with CATNeT.

## Cyberschools

### *Historical community*

The school as a social institution and a site for social change has always been an important part of the African American community. Free Black communities established schools before the Civil War in the 18th century, and then universal public education was established during the Reconstruction in the South in the 19th century. A third level was reached in the 1950's and 60's, when the school became a key battleground in the 20th century. Throughout these high points were critical shifts in the political orientation of the Black public sphere. There were different great debates that dominated public discourse: the emancipation debate (including the abolitionists, the Civil War, and the Reconstruction), the self-determination debate (the alternative views of people such as Marcus Garvey, Booker T. Washington, and W. E. B. DuBois), and the Black liberation debate (especially the alternative perspectives of Malcolm X, Martin Luther King).

Schools are vehicles for socialization. Each school level with a simultaneous experience (for example, the students in one high school at one time) constitutes a generation. This same group will share social experience throughout their life cycle. The schools in Toledo had a functional fit with the economy when industrial mass production required lots of workers with general skills. People graduated from high school into the factories and got good, often lifelong, jobs. In the 1960's, Black youth were overcoming lower rates of success, but by the 21st century the process has been reversed. At this stage of deindustrialization, the Toledo schools have become dysfunctional, falling far short of expected levels of achievement. The teachers are mainly white, and the students are mainly Black. The economic interests of the union are discussed independent from the quality of education facing the children and their parents. The school is the primary battleground over whether the future of the current generation of Black youth is to be part of the information society or delinked in isolated lower-income inner city "forbidden zones."

### *Cyberorganizing*

There have been three stages to this project:

1. The Community Math Academy: a two year long initiative at the Martin Luther King Elementary School focusing on "parent power" and information technology.
2. Cyberschools: a networking from the base of one school to create a web portal for a groups of schools;
3. Online practice proficiency test: a web page with new practice math tests every month from September to March.

The core group of the CMA included eight people, four cyberorganizers based in the university (one faculty and three graduate students) and four grandmothers based at the Murchison Center and the surrounding community. Every person in the group had a computer or was provided a refurbished one through a program of the Murchison Center. The CMA established a discussion list. We knew it was working when one of the grandmothers used the list to organize a community barbeque. Michelene McGreevy was the student cyberorganizer

on this project and she based her master's thesis in Africana Studies on her work (McGreevy 2002).

Our first initiative of after school tutoring in the Murchison Center led to meeting with parents and grandparents with a concern for school reform. Their focus was on the school where everything seemed to be going wrong. The parents were demobilized and the teachers union did not have a positive relationship with the community. The CMA became active in building the local Parent Teachers Organization. When we joined, the meetings were called and attended by a husband and wife team of parents with little or no support. After meetings increased in size up to 10 per meeting conflict led to a contested election. A new principal was appointed for the next year and demobilization was chosen as the new administrations strategy for control.

In response to this the project shifted focus from the actual to the virtual, to building web pages for schools to recruit parent, teachers, and students to unite in an effort to take virtual control of their schools by defining them in cyberspace. The initial focus was on building web pages for each school, going well beyond the administrative page on the main web site of the Toledo Public Schools. This was aimed at making the school a transparent user-friendly seeming place. We also wanted to demonstrate the power of machine assisted community memory. One example of this is that when the local Black high school won the city championship in basketball it was in the newspapers for one day and that was the end of it. We put up a web page on it and it remains there today as fresh as ever to bolster the local spirit of excellence.

This second stage shifted from a focus on a high school and its nine feeder schools to a focus on the high school alone. There was positive recognition of each new page of local content, but as the school and the local community leadership did not promote the necessity of building a virtual identity this was a good but not very utilized community resource. Our attempt to digitize the bonding social capital was a highly valued but seldom used resource. The missing element was support from the local school culture, especially the legitimacy of support from parents and teachers.

The third phase of this project focused on the crisis of poor academic achievement as measured by low scores on state mandated proficiency tests. These annual tests cover five subject areas, and are given to three grade levels (4th, 6th, and 9th). It is now necessary to pass these tests or be held back to repeat the grade level until you pass the test.

We began giving practice proficiency tests in math every first Saturday. The project grew from nine students to 400 students. The tests are composed based on official state guidelines by a student community teacher work team, and the tests are monitored and graded by a collective of college student volunteers. Now the first Saturday practice tests are online and available for access to everyone (<http://www.murchisoncenter.org/firstsaturday/>). The tests are a major battlefield in education, as the state is requiring more testing. Our project is designed to mobilize people in the struggle for good test scores. Some people will be helped in the short run and their children will get higher scores. In the longer run we are building a social process that can be linked to other efforts for school reform.

*Cyberspace*

Each stage of this project has had a corresponding representation in cyberspace. A webliography of links served as a resource for the tutoring activity. Cyberschools was a portal with a common template for web pages about each of the 10 schools. The tests online are for printing and administering, with a separate answer sheet for immediate review and study. Each of these cyberspaces is useful: global, local, struggle for good test scores.

*Networked community*

We have positioned two paths to networking in this project, the digitization of local school culture and the digitization of test preparation. One is a focus on the local, the particular differences of each school, while the other is global, and points to the universal struggle faced by all students. As computer literacy becomes universal in the high schools then both paths will be used, but under these circumstances the use of the online tests has had the greatest result as it maximizes the potential of a small group to meet the needs of a very large group. The proficiency test is a state level law hence our project online is of immediate use to everyone in Ohio.

The greatest potential for new cyberinitiatives lies within the high schools in the USA. There is widespread availability of computers and high speed Internet access. The youth are wellsprings of creative energy. Our work is but a prelude to the revolution being born among the hackers, gamers, texters, and all the other smart mobs that Howard Rheingold (2002) has helped bring to our attention.

**Conclusions**

Just as there are many bridges across the digital divide, there are alternative ways for a community to become networked. There are at least five models: 1) early utopian community free-net projects, 2) experimental communities like Netville, 3) dot-coms built for mass participation like eBay, 4) Social movements and political campaigns, and 5) public computing for social cyberpower. We have reported on action-research in Toledo, Ohio involving a project to implement and study the public computing model, based at the Murchison Community Center.

Our approach focuses on four factors: historical community, cyberorganizers, cyberspace, and the networked community.

1. The historical community: We have found the content of the historical community in the institutional structures that sustain and reproduce the community. We have concentrated on the family, the church, the school, and the beauty salon as key institutional contexts. In addition to digitizing the content of institutional life, two other points of focus emerged. The first is to pay attention to the antagonisms that the community faces because these struggles create the social future of the community; and the second is the recruitment of emerging cyberorganizers from the indigenous activists that keep these institutions going. The search is for the ways in which social cyberpower contributes to the sustainability of an institution and the overall community.

2. The cyberorganizer: Social cyberpower is associated with public computing, especially the school, the library, and the community technology center. Organizing forces for actual social struggle in this way is emerging as a new field for research and curriculum development as there is a growing need for the kind of work reported in this article. We anticipate that information technology will induce changes in the fundamental methods of social research and social activism alike. The challenge is for academic programs to learn how to link research and practical experience. The land grant college system did it for agriculture and mass production industry, and now we need to do it again in terms of information technology.
3. Cyberspace: The work thus far has emphasized collecting and uploading content into dynamic databases that are configured to assist poor communities in organizing efforts for their own behalf. In addition, all of our databases must be configured to interface with each other so we will in fact be reaching higher and higher levels of collectivity.
4. Networked community: We have merely put basic ingredients together for the virtual reincarnation of a community. The magic of cyberspace's future will be created as more of humanity gets online. It is in this context that the virtual struggle for the future is on. In general what is at stake is the fundamental social structure of cyberspace, and that is one of the most critical factors that will be influencing democracy and quality of life. We have the polar opposite choices of the corporation or the community. Our action-research is to learn about and work for the community paradigm as the future of the information age.

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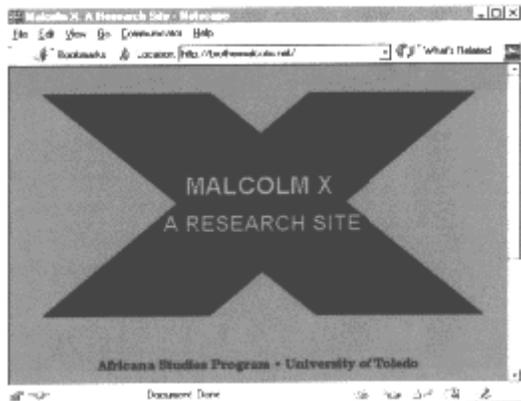
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## MALCOLM IN CYBERSPACE



As more and more information about and by Malcolm X is digitized and published on the Web, Malcolm X is being reborn. This is part of the new information revolution. Malcolm X created *Muhammad Speaks*, a newspaper that became a major communication tool for the Black liberation movement of its time. We assume that Malcolm would have been a cyberorganizer for the information revolution.

The memory of humanity is being relocated into a new brain, silicon based electronic environment, a global asynchronous cluster of images, sounds, and text that represents all that is documented about his life and work. This is the main way that humanity will experience Malcolm in the future. This CyberMalcolm represents a new reality.

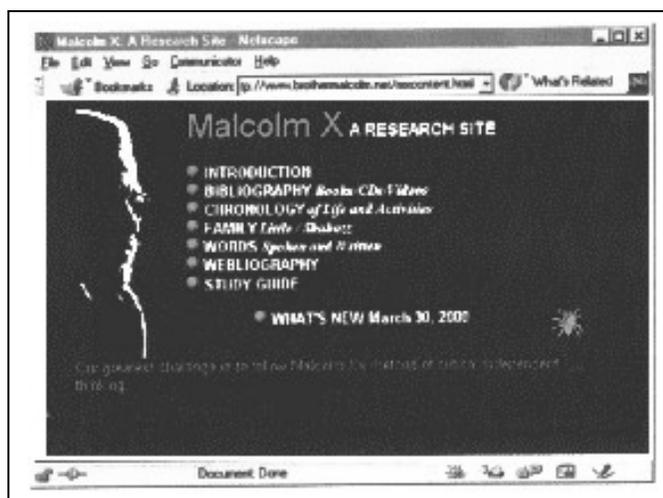
Cyberspace is new and different from the spaces we have occupied, so we have to distinguish how we have been living – the actual – from the new opportunities of cyberspace – the virtual. The actual has been shaped in terms of capitalist practices, the private ownership of property, the sale of goods and services for profit, and the hegemony of the power and knowledge of the capitalist class. New principles are emerging in cyberspace.

As these new principles combine and clash with the old principals and practices, cyberspace is the battleground of the information revolution. In cyberspace three principles define the greatest potential:

- cyberdemocracy: everyone has access to cyberspace;
- collective intelligence: everyone's voice can be heard;
- information freedom: information is available to all for free.

The digitization of the Black experience includes Black intellectual history. Since the 1960s, the study of Black intellectual history has included biographies, anthologies, reprints, and archives. The most important projects have been to publish the collected works of key historical figures. So far this includes Frederick Douglass, W.E.B. DuBois, Booker T. Washington, Marcus Garvey, and Martin Luther King. Each of these collected works projects began as book projects, and now all include major web sites. It is imperative that Malcolm X join the list. He needs to be remembered as much as anyone.

As of March 2000, the Web included at least 150 sites and several thousand web pages devoted to Malcolm X. Search engines returned 24,522 pages (altavista.com) and 29,800 pages (google.com). Malcolm pages are posted in the following countries: Australia, Burkina Faso, Canada, Denmark, England, Germany, Italy, Netherlands, Sweden, and Switzerland, and the United States.



The two most comprehensive and inclusive digital collections of materials concerning Malcolm X are a listserv for online discussions maintained by F. Leon Wilson and a research web site maintained by the author.

### The Web Site

"Malcolm X: A Research Site," (<http://www.brothermalcolm.net>) was launched May 19, 1999 and is maintained at the Africana Studies program of the University of Toledo. The introduction to this site states:

This Web page is designed to be a resource for scholarship in Black Studies and the political development of activists in the Black Liberation Movement. Malcolm X: A Research Site has been developed in the spirit of Academic Excellence and Social Responsibility, intending to make a contribution toward preserving the radical Black tradition. We are interested in growing this site based on mass participation.

The site averaged 1,000 hits per day during February 2000 and averaged 600 hits per day through Spring 2000.

The site includes a family section with data on six generations. The source for the early family history is a book by Rodnell Collins, *Seventh Child: A Family Memoir of Malcolm X* (1998). Collins is the son of Ella Collins, half-sister to Malcolm X. The six generations begin with the African progenitor from Mali, a Bambara man named Ajar. Ajar's son Tony had 22 children. Tony's son John had 6 children. As of April 2000, there were four web pages on Malcolm's parents and nine web pages on his brothers and sisters.

There are links to 24 web pages about Betty Shabazz, the wife of Malcolm X. These are organized into the following categories: chronology (1 page), memories of Malcolm X (4 pages), speeches-interviews (3), tributes-honors (6), and death (10). Malcolm and Betty had six daughters. Twelve pages on the site discuss three of the daughters.

The research site includes a rich chronology, a day by day accounting of the life of

Malcolm X. As with all parts of the site, the number one source for this chronology was *The Autobiography of Malcolm X*. A second most useful source was contemporary newspapers, especially *The New York Times*. This leads us to the crisis of authenticity that arises from using official government surveillance reports acquired under the Freedom of Information Act. The material has to be considered, but it is dangerous to use it as the sole source. Overall, of the near 40 years Malcolm lived data is posted on 32 of those years.

The research site also lists books, CDs, and videos about Malcolm X. There are total of 129 links to these materials: bibliographies (3), biographies (30), words by Malcolm X (10), youth-oriented books (15), struggle (22), doctoral dissertations (35), CD's (5), and videos (9). Each link allows for online purchasing. This is vital for global distribution of these materials. While it does require a buyer to have a credit card in a hard international currency, this e-commerce system is the best commercial approach seen thus far to distributing material about Malcolm X worldwide.

Malcolm X: A Research Site links to pages that digitize the words of Malcolm X. A total of 132 texts are cited: speeches, articles, letters, interviews, and an autobiography. Fifteen links are to full text pages. Twenty-two links are to audio clips.

date	texts cited	texts online	audio clips
1941-59	19	2	0
1960-63	26	6	6
1964	47	7	13
1965	36	0	3
Total	132	15	22

### The Listserv

The pioneering cyberorganizer F. Leon Wilson established the Malcolm X Listserv in 1997. His is the definitive discussion list on Malcolm X in cyberspace. In the first post to the list on May 3, 1997, Wilson stated its purpose:

The purpose of this list is to identify, examine and separate the myths about Malcolm X from his actual philosophical beliefs and values and to develop a clearer understanding of his works. Malcolm X has come to symbolize power, solidarity and self-empowerment within the Black community. As this millennium draws to a close, it becomes more compelling to understand the agents of change which have shaped African Americans thought, rhetorical bases and collective actions within the confines of Western culture. The icon "X" has come to signify one man's words and ideals. It is important that Malcolm X's concepts and ideas of group empowerment, rebellion against injustice and the ultimate refusal to assimilate, not be overshadowed by commercial exploitation and other romantic notions of Malcolm X.

The Malcolm X Listserv is a free discussion list maintained at St. Johns University. It started out as a monitored list and is now open and unmonitored. Full logs are published on the web, searchable by month. As this list is open to the general public, it combines scholarship about Malcolm X with personal opinion. What can be considered information is mixed with ideological discussion and debate.

As of April 10, 2000, 171 people subscribed to the list. Posts to the list include at least four basic types of discussion. There are many people who continue to be newly exposed to Malcolm X and come to the list for basic introductory information. There are ideologues that participate in the list to debate and contend with other points of view. There are non-Black people from the U.S. who intervene and end up resurrecting old discussions of the role of white people in the Black movement, rather than any particular question they might have raised. And finally, there are questions from the international community that place Malcolm X in a global context.

This listserv demonstrates that the power of the Internet as global interaction is cheap, fast, and possible--certainly for those who want to discuss the life and meaning of Malcolm X.

### The Future

Malcolm X in cyberspace is essential for the current organization of knowledge. This is a real way for knowledge to be democratic, as there is little likelihood that physical books can be acquired by all libraries to make up for the inequalities. The Internet is a different story. Most institutions are coming online and will have equal access to whatever is on the web. CyberMalcolm is available to whoever can participate in those institutions--especially schools, universities, and libraries--on an equal basis.

Yet there are several critical problems that define the limits of Malcolm in cyberspace. The first limitation is that the core texts are under copyright, in the hands of private owners. This became a major issue in the precyberspace era, up to and including legal action against efforts to share the words of Malcolm. (See, for example, the supplement to the study guide on Malcolm X: A Research Site.)

The second limitation is that most of the archived materials--letters and other unpublished matter--are also in private collections. This has been essential, for without private collectors much of this material would have been lost. The best example is Preston Wilcox of Harlem, NY, who has maintained the newsletter-based Malcolm X Lovers Network for decades. Since information technology gives us the opportunity to practice collective intelligence and information freedom, we must begin to consider ways to consolidate the archives in cyberspace, by putting them online and building links between web sites. Malcolm X spoke whenever he could to every possible type of audience. We have the responsibility to making his words and deeds available to all.

The third issue is the need to establish an international commission, served by a staff of serious academics, to oversee the development of an official website for the collected words and actions of Malcolm X.

CyberMalcolm means more than just the person of Malcolm X. An official website would be an anchor for the radical Black tradition as a whole. All scholars recognize that Malcolm X is a critical nodal point linking historical traditions with the contemporary diversity of ideological positions. His life, his ideas, his context are together the beginning of defining the traditions of Black liberation theology, Pan-Africanism, Black nationalism, Black Marxism, and Black feminism. Material online about and by Malcolm is essential if the great debates of Black intellectual history are to be presented in cyberspace: the emancipation debate (as expressed in the National Negro Convention movement), the self-determination debate (Du Bois, Booker T. Washington, and Marcus Garvey), and the Black liberation debate (Malcolm X and Martin Luther King).

The purpose of an archive is to preserve material for future generations and enable people from all points of view to examine materials and make an assessment. We all learn from preserving our history. Up to the 21<sup>st</sup> century, this has been done in limited-access institutions usually reserved for formal academic scholars. Now cyberspace gives us the opportunity to save everything on a given subject and make it available to everyone at all times. The only requirement is being hooked up to the Internet, and in the U.S. this is available in almost every public library. For everyone concerned about Malcolm X, the primary focus must turn to cyberspace and the birth of CyberMalcolm.

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Malcolm X: A Research Site

<http://www.brothermalcolm.net>

Malcolm X Listserv

<http://maelstrom.stjohns.edu/archives/malcolm-x.html>

eBlack Studies

<http://alkalimat.org/eblackstudies>

### **Third Saturday: Proposal for an Action Research Program 2003-04 (August 2003)**

This is a proposal from the Africana Studies Program at the University of Toledo to other Ohioans in Africana Studies programs, community technology centers, social action groups in the community (especially the ones concerned with education), African American churches, and churches in general. The proposal is focused on people in the major urban communities of the State of Ohio. We hope to partner with you.

**We propose here a statewide campaign to take place every third Saturday of the month.** A community-campus team of people from Toledo and elsewhere in Ohio will converge on a city on a given third Saturday. We will collect data on the Black experience. This data will be uploaded to websites where the community as well as students engaged in the study of the African American community can make use of it. In addition to the data collection, we will organize workshops so that we can sum up and share experiences, learn about Ohio, and explore ways of increasing our cooperation and sharing of resources.

There are three specific goals:

1. To build virtual communities that begin to unite African American communities in cyberspace;
2. To relink campus based African American studies with communities and their action projects to improve the quality of life;
3. To provide training and participation in cyberorganizing, the application of information technology to community based education and advocacy.

#### Theoretical Background

The theoretical basis for this project is focused on the concept of eBlack: using the digital technology to represent the Black experience and enable new understanding and action. Aspects of the eBlack concept that are applicable to this project:

- eBlack represents the mapping and networking of the African American community so that its relatively abundant resources can be networked and mobilized. Even in the state of Ohio, with relatively short distances between campuses and between communities, there is relative isolation and ignorance of each other; hence, there can be little cooperation and no multiplier effect whereby our respective resources build on each other and create a win-win situation for everyone.
- There are three core values for the application and full realization of eBlack today:
  1. cyberdemocracy (whereby everyone has access and skills to implement information technology),

2. collective intelligence (where everyone is actively engaged in documenting their experience and creating texts that can be uploaded and made part of the digital reflection of the black community in its fullness),
3. and information freedom (whereby information generated by the people can be fully and freely accessed by everyone without the intervention of the private ownership of any of this information).

In addition to these three core values, there are also three foci of empirical work whereby collective intelligence can be fully realized. We regard these as the three digitizations:

- (a) the digitization of scholarship (our example of this is [alkalimat.org/eblackstudies](http://alkalimat.org/eblackstudies), a website we have created to facilitate access to scholarship),
- (b) the digitization of discourse (our example is H-Afro-Am, the largest listserv whereby professionals and serious students in Africana studies engage in the sharing of information and in discussions of relevant topics of scholarly and policy issues regarding the black experience), and
- (c) the digitization of experience (our example is [www.brothermalcolm.net](http://www.brothermalcolm.net), a website that details the experience and the legacy of Malcolm X).

These three digitizations can provide for the collective intelligence needed to fully exploit the intellectual wealth and the lessons learned by black people in their struggle for freedom. All of this work at the University of Toledo has been carried out by the Toledo Spiders. Spiders are small creatures, but they spin webs that allow them achievements far beyond what one might consider possible.

Now is a time when we have resources at hand such as were available to the federal Works Progress Administration of the 1930s, and many of us know of the important contributions of people in the WPA. Our experience in Toledo is that the federal Work Study program on campus and the VISTA program in the community mean that people can come together and get done what we need to get done, even in this period of cutbacks and contraction of budgets and thinking.

### The Practical Project

We piloted Third Saturday in Toledo, Ohio. Our current work is online at [www.cyber-church.us](http://www.cyber-church.us). We have also started to collect data on Chicago as well as a way of beginning to be as comprehensive as possible.

The cyberchurch website is organized in three basic parts. The first part, in a frame on the left and another frame across the bottom of the page, is links to information supplementary to the cyberchurch site covering holy texts, theologians, related organizations, and music. There are also links to the University of Toledo and the Toledo community technology center which are co-sponsoring this site. The second part of the site has to do with posting the information that we collected on the churches in Toledo and Chicago. The third part of the site is interactive: you click on one link to add

information about a church, and another to get involved, including having the opportunity to make the cyberchurch website the starting web page when you go out on the Web.

The cyberchurch website is currently at level one, which means we have a directory of churches with basic information and a photo. You can search for churches in a given city by church name, denomination or religion, zip code, name of minister, or street address.

This online church directory is the first of four levels that we anticipate building for cyberchurch. The four levels are as follows:

1. A Directory of Churches, a picture and relevant contact information on each church in an accessible database searchable by name, minister's name, denomination, and location.
2. The Institutional Church Online, a full representation of the history of the church, the current leadership including the ministers and trustees, the organizational structure, a full year's calendar, and religious events. In addition, level two will involve the church organizing ten of its members to have emails and be placed on the cyberchurch mailing list.
3. The Voice of the Church, a sermon, a choir, song, and selected interviews with selected church members will be posted on the church website as downloadable sound files.
4. The Church Organizing a community technology center in its own space, providing computer and internet access and training to its members and people living nearby.

This project is a collaboration between the Africana Studies Program at the University of Toledo, the Murchison Center, and the National Society for Black Engineers. The Africana Studies Program at the University of Toledo is primarily focused on what we are calling eBlack studies in the sense that we are basing our research, scholarship, and curriculum on the use of information technology. We have an office designed as our "media lab," a full service technology facility in which we digitize via scanning of hard copy and slides, digitizing audio and video, and building web pages and maintaining interactive databases to serve those web pages. In addition to this facility, we also teach a Black Church course in which regular students as well as non-traditional students engage in a text based study of the Black Church as well as intensive field work that enables them to creatively participate in building cyberchurch while at the same time developing first hand familiarity with a wide variety of religious organizations and institutions including having the opportunity to network with church leadership.

#### Third Saturday: The Action Research Plan

Every third Saturday of the month a team will go to a different city in order to have a one-day jumpstart activity for data collection in the field and discussions between the

team and the local community. The team will include Toledoans from the three partner organizations and any new partners from other Ohio cities, i.e., you. Below is our proposed itinerary:

9/20/03	Oberlin
10/18/03	Akron
11/15/03	Youngstown
12/20/03	no travel this month
1/17/04	Cleveland
2/21/04	Dayton
3/20/04	Columbus
4/17/04	Cincinnati
5/15/04	Findlay

Thus far, the team has carried out a number of projects all relate to what we call cyberorganizing, or social justice activism in the community using technology. The main base of all of this is the Africana Studies Program at the University of Toledo. These projects include:

1. Cyberchurch – [www.cyber-church.us](http://www.cyber-church.us)
2. Murchison Center, a community technology center – [www.murchisoncenter.org](http://www.murchisoncenter.org)
3. Educational activity – [www.murchisoncenter.org/firstsaturday](http://www.murchisoncenter.org/firstsaturday)
4. Genealogy – [www.murchisoncenter.org/cyberfamilies](http://www.murchisoncenter.org/cyberfamilies)
5. Local Black History

This proposal asks for the following from each local city:

- A. Local Sponsorship: We are hoping that we will be able to have letters of invitation and co-sponsorship from Africana studies programs, community technology centers, social justice organizations, and church institutions. We are simply looking for an email or a letter on stationery that invites us to come on that weekend to engage in collaboration for the project.
- B. We are inviting activists and researchers in your city to pitch in on the third Saturday that we visit your city. This includes the following: at least three cars and local drivers and/or guides that will make it easier to negotiate traveling around the community while the Toledo team is focused on data gathering and collecting information necessary to build the local web site. One of the side purposes of the field teams being jointly between Toledo and the local community is that people will have an opportunity to get to know each other and to talk about their mutual work, as we would like to match people who are engaged in the same kind of work so they can exchange information and gain as much as possible from having this opportunity to share the experience of two cities.

Therefore the action research plan has the following objectives:

1. To gather data for a web page on the local community. This web page will be offered as a link from any local black studies program, enabling it to use Third Saturday to build better relations between the campus and the community.
2. All of the data collected as well as associated library research will then be compiled into a general report on the city, and therefore, we anticipate having a set of these reports covering each major city that is part of the project.
3. We will be summing up our work in a March 12, 2004 conference on cyberchurch in Toledo, Ohio, and at that conference we will be discussing future work, evaluating the year, as well as planning research work on the cyberchurch project for the next academic year 2004-05.

### Next Steps

This proposal is going to black studies programs and other potential sponsors throughout the Ohio, especially the cities that we hope to visit during the academic year 2003-04.

We are hoping to get letters or emails of sponsorship even if the sponsorship is a one-sentence offer to co-sponsor the project, followed by a whole series of questions that will have to be clarified. We know that this brief proposal is not going to answer every conceivable question that anyone will have, although we hope that the web sites and this letter will together represent enough to warrant expressions of solidarity and support that can then be turned into a more practical negotiated detailed plan of action.

After we receive a letter of sponsorship, we will be in turn sending out forms that will cover two main questions.

- Background pre-trip questionnaire to gather as much information as we can prior to the trip and,
- A questionnaire that will enable us to plan in great detail the actual day of activities in town and also to begin to clarify the exact participation and logistics of Third Saturday.

If you are at all interested in supporting this activity and involving your organization in such a project, we would very much like to talk to you so please send us email or give a call, and we will certainly get back in touch with you promptly.

Thank you for your consideration.

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