

Social Informatics of the Black Experience: The Emergence of a Research Literature

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The rise of new fields for academic research and public policy frequently follow major sociotechnological change (Bernal 1954; Mumford 1934). This has been true for many technologies including the printing press, automobile, telephone, television, telescope, and microscope. This is also true for computers and related information technologies. We are in the birth process of a networked society, an information society, a third wave of revolutionary social transformation following the agricultural and industrial revolutions (Jones 1990; Toffler 1980; Attali 1991; Webster 1995; Castells 1996). The field of social informatics has emerged to focus on the transformative impact and social functioning of information technologies on and in society (Kling 1999).

The focus of this review essay is on how an emerging literature is presenting initial empirical findings and conceptual approaches to the Black experience in this context. The critical questions are the following: How and in what ways do Black people have access to IT (information technologies, including computers)? What do Black people do with computers and what do they do when they are online? What Black experience has been digitized and is currently the 'stuff' of Black virtual reality in cyberspace? How does the virtual Black experience impact the actual Black experience and vice versa? What can be the meaning of Black liberation in cyberspace?

We have advanced the term 'eBlack Studies' to refer to the transformation of the academic field of Black Studies based on the new information technologies (Alkalimat 2001, 2004, and see also <http://www.eblackstudies.org>). We have been concerned with eBlack pedagogy and collaborative action research strategies. This article is a review of the emerging research literature that reveals key aspects of the sociology of eBlack studies: alternative methods and corresponding datasets, empirical findings and theoretical summations, policy considerations and action agendas.

Background in Science and Struggle

On the heels of the civil rights victories of the 1960s, when the illusion emerged that Black progress represented the end of racism, the concepts of class and class conflict were resurrected to describe new data on Blacks who remained at the bottom of or at the margins of society. A leading academic promoting this approach has been the sociologist William J. Wilson. Alternatively, rooted in the radical Black tradition, activist intellectuals outside the academy have raised their voices as well, such as Nelson Peery (USA) and John LaRose (Trinidad/England).

Wilson made a signal contribution to launch a new era of social research and theory building that brought class back into theoretical discourse (Wilson 1978, 1987, 1996). However, two major issues led to a broad and polemical debate (Washington 1979; Katz 1992; Jencks 1993; Lawson 1992; Moore & Pinderhughes 1993; Massey & Denton 1993). First, Wilson described a trend he called 'the declining significance of race.' Second, Wilson noted that the new social forces he identified in the 1970s had

produced an economically marginalized group he named the “underclass. He subsequently abandoned this term for the phrase ‘truly disadvantaged,’ which reflected his rediscovery of racism as pervasively encoded in the social structure. Wilson anchored his work in the process of the de-industrialization of cities and the development of what I call the ‘forbidden zones of American apartheid.’ He focuses on the aggregation of social problems into a ‘concentration effect’ that destroys communities by forcing them into ‘social isolation.’ Essentially, Wilson had honed in on the dystopian aspect of the birth of the information society. In this sense his work needs to be placed alongside that of Castells, Jones, Rifkin, Toffler, and others who discuss the social polarities that characterize the birth of the information society.

Outside of the academy, Black radicals began to address these issues as part of a systemic transformation of society on a level comparable to the nineteenth-century changes that led to industrial capitalism. Peery and his colleagues advanced a theory about technological revolution based on the end of the old assembly-line industrial economy and the emergence of the new economy. This can be thought of as basically the move from the system of Ford to that initiated by Toyota, with the latter’s use of computers and robots to create such new innovations as lean production, just-in-time inventory, and the team system (Peery 1992, 1993). Peery (1993) uses as his theoretical point of departure a famous insight by Karl Marx:

At a certain stage of their development, the material productive forces of society come in conflict with the existing relations of production, or—what is but a legal expression for the same thing—with the property relations within which they have been at work hitherto. From forms of development of the productive forces these

relations turn into their fetters. Then begins an epoch of social revolution. (Marx 1970/1859, p. 21)

La Rose, originally an activist intellectual from Trinidad and later an established publisher and bookstore owner based in London, had earlier developed compatible ideas about a class-based fight that reflects the potential of the new technologies (Alleyne 2002; White et al. 2005). He argued that just as with the fight for the 8-hour work day within the industrial system, the new period of the information society will result in the fight to shorten the working day once again to provide even more time for rest, recreation, and creativity to enhance the social life of the toilers. His argument is that new tools and the virtual elimination of labor-intensive industries will lead to a fight to reorganize production to shorten the working day and the working life. This is a position summed up by Marx:

Hence it is that in the history of capitalist production, the determination of what is a working day, presents itself as the result of a struggle, a struggle between collective capital, i.e., the class of capitalists, and collective labor, i.e., the working class. (Marx 1887, p. 235)

La Rose and his colleagues have been particularly concerned with the emergence of a new (forced) leisure class of former workers now de-linked from employment on a more or less permanent basis. Their position was stated in a 1985 publication for their annual book fair:

The post-war world has been passing through an historical period of automation and computerization of the labor process. This has resulted in the mass displacement of workers on a permanent scale only glimpsed historically before

in colonial societies. What have those displaced in the past created and what will they now create? The main forum of the Fourth Book Fair and Book Fair Festival will therefore focus on 'New Technology, the Working Day and Cultural Creativity.' (reprinted in White et al. 2005, p. xxx)

In sum, the last third of the twentieth century reveals a negation, the birth pains of the new society as the old society is being destroyed. A body of research literature in the social sciences and the humanities focused on this process is growing. eBlack studies arises out of this context. Our focus is now shifting, from destruction to construction, so we are now developing a literature, eBlack studies, that analyses the Black experience within the new information society.

Rise of a Research Literature

This review essay focuses on 23 book-length treatments of eBlack, the Black experience and the revolution in information technology. Our focus on information technology cannot be entirely separated from a more general concern for all forms of technology. We need to read technology back into Black intellectual history. These authors and books are not in conscious dialogue yet, in part because the authors are still fighting to break out of limited disciplinary networks. We need a hypertext literature that ignores these inherited limits and boldly moves to create new networks based on methods, empirical and theoretical analysis, strategy and tactics for policy guidelines, and action agendas. These authors are like people in a circle turned away from each other, facing outward, talking to other people, other networks. This review is a call for people to

turn and face each other, to realize that productive discourse awaits us as a network of researchers in the area of eBlack studies. In general, this will be a necessary dynamic to invigorate and diversify the general field of social informatics.

Each of these 23 books pays attention to a key focus of eBlack studies; each can be thought of as advancing a major thesis on the nature of the eBlack experience. Of course all of the books are broader than this, and consequently overlap to an extent. They also tend to confirm the four theses which form the overall framework of the work being done in this emerging field.

1. The social polarization thesis: Alkalimat et al. (1995), Jennings (1995/1996), Mack (2001) and Green (2001). The basic argument is that the social dynamics of the birth of the information revolution produced a digital divide that was exacerbated by a preexisting social divide.
2. The Afrocentric thesis: Battle & Harris (1996), Jenkins & Om-Ra Set (1997), Eglash (1999), Sobol (2002), Nelson (2002), Alkalimat (2004), Sinclair (2004), and Pursell (2005). The argument is that Black culture is a basis for participating in the information revolution.
3. The anti-racist thesis: Ebo (1998), Kolko et al. (2000), Chinn (2000), Nakamura (2002), and Kevorkian (2006). This argument is that racism in society and cyberspace impacts identity and cultural practices.
4. The cyberpower thesis: Barber & Tait (2001), Nelson et al. (2001), Nuwere & Chanoff (2002), Williams (2003), Alkalimat (2004), and Banks (2006). The argument is that Black people can change physical space and cyberspace by acting virtually.

Each of these theses can be found in empirical research and theoretical formulations. In general, all four aspects link cyberspace-based virtual reality to our actual lived experiential reality. This literature is just emerging, usually in collections of articles, and is tentative and suggestive, exciting and path-breaking.

The Social Polarization Thesis

Job?Tech (Alkalimat et al. 1995) marks the beginning of the eBlack studies literature and anchors it in the social changes associated with this new revolution in information technology. The ‘Job?Tech’ conference pointed to the differential impact of technological innovation on different sectors of society, as well as alternative scenarios of prosperity and poverty. In this volume the birth of the new society is clearly defined as one of destruction simultaneous with construction. At every point there were Black people coming into the dialogue, and at every point the experience of the most marginalized Black people was kept at the center of the discussion. As a Black studies scholar activist, I was the main organizer of the conference.

This book contains conference proceedings that include 20 plenary presentations and discussions, as well as summations of over 50 people speaking in 17 workshops over three days at the University of Illinois-Chicago. The conference plan united the community (employed and unemployed workers, community activists, and youth) with scientists (computer specialists, molecular biologists, engineers, and social scientists), the creators of science and technology with those who experience the social impact of these innovations. In particular the conference was intended to give voice to those at the

bottom of society who are rarely consulted concerning how things are done, what technology is made, and how it is applied to the society and their lives. The purpose of this conference is stated in the introduction to *Job?Tech*:

The scientists are in their laboratories, the educators are in schools, and people are in their homes and on their jobs (if they aren't homeless and if they are employed). In each setting there is discussion, sometimes guided by scientific information and sometimes by the popular media but too often limited by the urgency of the situation: a workplace automating, budgets being cut, a company downsizing, and so on. What is not occurring is a broad and democratic dialogue to sum up what is going on and how we can direct things toward a future that maximizes freedom and economic well-being for everyone. (Alkalimat et al. 1995, pp. 1-2)

Jeremy Rifkin gave the conference keynote address. He argues that there is a polarity in every society.

The top 20 % are hooked into the knowledge sector and the global village. They're producing and consuming for each other. The bottom 80 % are out of the loop. They're on the outside of that electronic village trying to get in. Most never will. So the reality is that working people around the world face a common threat and a common opportunity as we move into the first decades of the twenty-first century. (Alkalimat et al. 1995, p. 16)

One chapter in his book, *The End of Work*, is focused on the Black experience in this regard. He states:

Today, millions of African Americans find themselves hopelessly trapped in a permanent underclass. Unskilled and unneeded, the commodity value of their labor has been rendered virtually useless by the automated technologies that have come to displace them in the new high-tech global economy. (Rifkin 1995, p. 180)

However, in his analysis does not end up in dystopia but dialectics:

One the one hand, it has the possibility of tremendous dislocation and disintegration of the social fabric in every country. On the other hand, this technology could free us, could create a renaissance for civilization in the coming decade. What we need is a political moment for a debate, and that debate centers around this question: how do we share the great productivity gains in this technology revolution with all people? (Alkalimat et al. 1995, p. 17)

Our conference was part of such a debate. One plenary presentation consisted of leading science scholars discussing cutting-edge work: engineering design based on virtual reality for research and development, the socio-technical makeover of a library into an information service center, computers in production agriculture, and the production applications of molecular biology. The next plenary presentation consisted of reports from people who are being marginalized in part by the social consequences resulting from how these new technologies are being used: a former mayor of a postindustrial city, a striking worker from the food-processing industry, an autoworker facing downsizing, and an immigrant Latino worker. This volume contains presentations from both scientists and community activists. The final two plenary sessions dealt with short-term local and long-term global solutions.

One of the driving social concerns that led to this conference was the crisis facing the knowledge worker, a crisis within the information revolution. Prof Jonathan King, professor of biology at MIT, drew attention to this crisis in New England, a crisis that affects graduates of MIT as well. He established the framework for the initial conference on 'Technology and Employment' held at MIT (January 1994) that led to the Chicago conference (March 1995). Through this process we networked with key hubs of activity, including the Communications Workers of America, the Computer Professionals for Social Responsibility, *cy. Rev: A Journal for Technology, Sustainable Socialism, and Radical Democracy*, and a similar conference being sponsored by the Department of Sociology at the Graduate Center of the City University of New York. All of these intellectual hubs were linked into the conference. (Key theorists from all this continue to be Stanley Aronowitz, Jerry Harris, and Carl Davidson.)

'The Information Society and Communities of Color' (Jennings 1996) is a special issue of *The Trotter Review*, a journal published by The William Monroe Trotter Institute at the University of Massachusetts-Boston. This issue is a monograph-length collection of articles about issues facing people of color concerning cyberspace, namely 'how to access, and manage, and control, significant facets and processes associated with the information highway,' (Jennings 1996, p. 3). J. Jennings, the editor, defines the digital divide in terms of technology and social power: 'The issue of "have and have-not" involves much more than mere access to this new form of technology. It also includes issues related to the management and control of resources of the information highway.' (Jennings 1996, p. 3).

Public computing is a connecting theme in this collection. On the basis of a 1995 survey of Boston Black community residents, Jennings concludes that 'the linkage between public schools, community based organizations, and the general public is a vital one in expanding access and broad understanding of computer and information technology,' (Jennings 1996, p. 21). M. Roberts, in this same volume, makes a similar point: 'If inner city communities are to catch up to speed with the rest of the country in fully utilizing computer technology, community-based organizations will have to become one of the focal points for introducing this resource into their community,' (Jennings 1996, p. 25).

A critical perspective on global policy is presented by Nelson Mandela whose essay opens the Jennings volume:

If more than half the world is denied access to the means of communication, the people of developing countries will not be fully part of the modern world. For in the twenty-first century, the capacity to communicate will almost certainly be a key human right. Eliminating the distinction between information rich and information poor countries is also critical to eliminating economic and other inequalities between North and South, and to improving the quality of life of all humanity. (Jennings 1996, p. 4)

Mack (2001) presents a comprehensive introductory survey of historical reasons for the digital divide, its current impact, and proposals for its solution. She argues that the digital divide is based on a long-standing and justified fear of science and technology based on the historical examples of science under slavery, the pseudoscience of IQ testing, and the infamous Tuskegee experiment during which the US government's

sanctioned and funded research used 600 Black men in Alabama (1930s) without their consent as test subjects to study the long-term impact of syphilis. In addition, she discusses historical inequities in the economy and educational opportunities. The impact of the digital divide is discussed in terms of communication and networking, e-commerce, and e-government. She proposes an emphasis on public computing as a solution, specifically the development of community access centers. She discusses these centers by reviewing the initiatives of the federal government, specifically HUD and the Department of Education, and the centers that make up the national network of CTCNet.

Green (2001) breaks new ground in a study of Black workers in the telephone industry. This study is of a working-class experience mediated by the structural factors of race and gender in a foundational aspect of the information revolution:

The telephone industry constructed an image of white womanhood that excluded Black women and simultaneously inhibited the development of a feminist working-class consciousness among white women. This book argues that white women's acceptance of a white identity in effect contributed to Bell System management's ability to control the work and the workplace. (Green 2001, p. 3)

The technological transformation of the telephone industry is presented in three stages: mechanization (1878--1920), automation (1920--60), and computerization (1960--80). In the 1930s there were no Black telephone operators, but '[f]inally, in December 1944, the New York Telephone Company hired the first Black operators in the Bell System,' (Green 2001, p. 210). The impact of technology on this industry is one of the most dramatic cases of technological downsizing, with Black people being brought into the industry precisely at the moment when it was under greatest stress:

In less than 10 years African American operators replaced white operators in the major cities as a result of a hiring policy that segregated most of the African American women into one department and one kind of job.... In effect, as soon as job opportunities opened for Black women, computerization and occupational segregation closed them. Between 1960 and 1981, women operators in the Bell System decreased by one half. (Green 2001, p. 227)

Green is critical of the union's role in the experience of Black women and women in general in the telephone industry. Specifically, the issues about which she is most concerned are 'technological deskilling and degradation of operators' work.' Furthermore, she is equally unimpressed by the federal government's role: 'For women and minorities, especially Black women, the federal government's supervision of the telephone industry contributed to the continuation of the Bell System's policy of racial and sexual segregation in the workplace,' (Green 2001, p. 257).

Overall, Alkalimat presents a general conceptual framework for social polarization to sum up the various divides that structure the contradictions at the birth of the information society:

'The five revolutionary processes that define the twenty-first century are as follows:

1. Technological revolution: the transformation of tools and techniques based on the computer and biotechnology;
2. Economic revolution: the transformation of the workplace, and the resultant economic polarization toward extremes of wealth and poverty, from the wealthy to the homeless;

3. Social revolution: the destruction of public institutions connected to industrial society, the privatization of social life, and the polarization of social environments from gilded gated high-tech suburbs, to inner-city forbidden zones;
4. Political revolution: the destruction of the welfare state and an emerging struggle between conservatism and the creation of a police state versus the expansion of economic security and democratic rights for everyone; and
5. Spiritual revolution: the end of the old American dream and the emerging battle between the fatalistic hedonism of a consumer society and a hopeful vision rooted in collective rituals of celebration and mobilization to build a new future.' (Jennings 1995/1996, p. 37)

This social polarization thesis became a focus of a widespread public policy debate that engaged government and civil society, namely, the digital divide debate. This debate has led to three formulations of the polarity crisis: the digital divide, digital opportunity, and digital inequality. Herein we have the respective conceptualizations of macrosociological theory, public policy, and empirical research.

The Afrocentric Thesis

Two important publications from MIT Press argue critical points about African American autonomous contributions both as cultural retentions from Africa and within their working experience with different kinds of technology. Sinclair (2004) states that

‘white, Anglo-Saxon, Protestant Americans made technology...central to (the)...way they represented themselves. Just as plainly they contrasted themselves to people of color, whom they judged incapable of such things.’ (Sinclair 2004, p. 5) Pursell (2005) states the purpose of both volumes as having been ‘intended to demonstrate that enslaved Africans, and African-Americans after them, always have been deeply involved in the creation and use of a full range of technologies, and that they therefore must now be included in histories of American technology.’ (Pursell 2005, p. xv)

Sinclair (2004) contains articles that demonstrate African Technology transfer to the new world. Garvey, for example, contrasts multiple systems of West African rice cultivation (encompassing field layout, irrigation methods, and rice processing) and their transfer to South Carolina by enslaved Africans. In South Carolina ‘the rice economy began as an African knowledge system.’ There is also documentation on how a culture of work songs was an integral part of shaping the work process. Under repressive conditions in the fishing industry, Black workers generally worked without owning any of the productive forces other than their labor, but Garvey notes

What did belong to the African American crewmen, however, was the technology of song that lay at the heart of the fishing process, with which they not only lifted the unliftable but expressed desires and discontents that were, if not unspeakable, risky to express for the times. Singing was thus a way Black workers rendered their work culturally meaningful and effective in a context that otherwise devalued their contributions and racially divided them from their employers. (Sinclair 2004, p. 115)

Pursell (2005) organizes a documentary history of Black technological contributions into seven historical periods beginning with an original creation of a smallpox inoculation technique used in Boston in 1722. But mostly Black contributions to technology were stolen.

During the antebellum period, the U.S. patent office had refused to recognize inventions made by enslaved Africans, even when their owners wished to take out patents in their own names. After the outbreak of the Civil War, however, the new Confederate government allowed owners to claim patent rights for the discoveries of their enslaved laborers. (Pursell 2005, p. 89)

The Afrocentric thesis posits a cultural basis for what Black people actually do in cyberspace. Battle and Harris (1996) marked the 30-year anniversary of the Black power slogan by taking the theme ‘the Internet and the New Black Power’ as the title of their first chapter. They echo Mandela’s position:

The New Black Power is knowledge: how to get it and how to use it wisely, profitably. The New Black Power can set fire to a million minds, instantaneously, but it does not burn. It can build. It can bring together people separated by oceans and dialects. It can uplift. And the best exchange of knowledge is through the vast, worldwide river of information known as the internet, of the information superhighway.... It is not simply a matter of equality, it is a matter of survival.... Anyone who does not have access will be a non-citizen—a Neanderthal living on the fringes of human society. (Battle and Harris, pp. 3, 8)

Battle and Harris also focus on public computing. They advocate local community networks as important vehicles to provide low-cost connectivity. The community

networking movement continues to maintain its activity in most places although many local networks have folded up. Joining the networks are the community technology centers. The network links people together wherever they access the Net, whereas the CTC is a physical place in which people congregate for face-to-face synergy and hands-on use of IT. Usually the CTC is stand alone and the network provides online content as well as various approaches to hands-on activity including the CTC.

Battle and Harris provide an early directory to Black experience content and networks on the World Wide Web. It is very much a historical piece as software, Web addresses, and associated content have changed fundamentally over the last five years. However, this remains a major historical text in that it established both a model and a baseline of information for mapping Black Web content. Art McGee compiled the earliest Weblibliography of Black Web content, followed closely by the Universal Black Pages, a directory of Black Web content set up and maintained by Black graduate students at Georgia State University. Prof Ali Ali Dinar at the African Studies Center (University of Pennsylvania) runs the most comprehensive directory on Africa. F. Leon Wilson has distinguished himself as a major producer of popular listservs. H-Net, based at Michigan State University, hosts the main academic listservs including H-Afro-Am.

Since the Battle and Harris book activity has increased, in the form of Black virtual community portals, one-stop shopping that includes directories and interactive features such as bulletin boards and chat rooms. The main early example of this is Net Noir, initially sponsored by AOL. Current examples are www.Africana.com, and Black Planet.com. eBlack Studies is a Web portal for professional and academic Web resources,

specifically comprehensive links to journals, organizations, and academic programs on the undergraduate and graduate levels (www.eBlackstudies.org).

Alkalimat (2004) builds on the earlier work by Battle and Harris and presents a comprehensive mapping of 'Black homesteading on the electronic frontier' in cyberspace. On one level this is a popular practical guide to Websites, turning the Web into a sort of distributed encyclopedia. On the other hand it specifically targets Web-based resources that contain digital collections of primary data, databases of our actual experience. So it is a resource for serious researchers as well. This book is a companion volume to the text *Introduction to Afro-American Studies* (www.eblackstudies.org/intro).

Alkalimat states:

There are basically four approaches to the use of cyber space in Black Studies. One is digital history, the digitization of historical information that brings a topic back to life in a digital format. This is a major task, to empty out the archives and turn them into digital computer files. Experiments are being explored with various kinds of storage strategies and designs for data base management and data mining. The main center for this is the Virginia Center for Digital History, especially their collaboration with the Woodson Institute, also at the University of Virginia. A second approach is called Afro-Futurism. This is a school of cultural criticism taking on the notion of a race-less cyber space by demonstrating that the social production of racisms and 'cyber-typing' will continue into the age of information. The third approach is virtual community, the use of information technology to digitize the social life of a community. The fourth approach is cyber

organizing to produce cyberpower for the empowerment of a new movement for social justice in the information society. (Alkalimat 2004, p. 5)

This covers the past, the present, the future, and the role of agency.

Jenkins and Om-Ra Seti (1997) anchor their text in the social polarization thesis: Black people, suffering in the early stages of the Information Age, may be like the canary in a coal mine, forecasting climatic dangers before they become a general manifestation. Thus, as the euphoria sweeps the nation regarding the exciting developments of the Information Age, African Americans must sound the alarm on the dangers of systematic exclusion. (Jenkins and Om-Ra Seti 1997, p. 4)

On the other hand, they also believe that the information revolution can lead to 'unheard of strategies of liberation.' They go on: 'The exercise of values in our allocation or relevant technological resources will be the critical challenge.... But to do this we must first reinvent our leaders.' Andrew Young, former associate of Martin Luther King, Congressman, and US Ambassador to the UN, echoes these views in his introduction: 'They have articulated what we have been thinking about, and now it is time to put it all together.' (Jenkins and Om-Ra Seti 1997, p. 6)

Jenkins and Om-Ra Seti advance the concept of KyberGenesis for this current period:

We have identified this unprecedented period of opportunities and development, as it relates to the Black experience, as KyberGenesis! KyberGenesis is the futuristic beginning of a major industry movement for scientific and technological development in the Black world. If Black people are to be successful and prosper in the twenty-first century, there has to be a major movement to harness the

dynamic power of science and technology on a level similar to the Moorish dynasties in Spain and Portugal during the eighth to fourteenth centuries. A serious lack of unity and well-defined vision and mission are the roadblocks to this critical development. This new and dynamic era is a major door of opportunity that should not be bypassed by those who are fully aware of what time it is. (Jenkins and Om-Ra Seti 1997, pp. 55-56)

This text calls forth the concept of 'Sankofa,' using history for the future. The authors weave together themes about ancient and traditional culture through a roll-call of major Black scientists and their contributions to the current technological revolution, with sweeping descriptions of current industry development. The Dogon people of Mali almost 1,000 years ago identified a star—Sirius—that modern astronomy 'found' in 1950 (Jenkins and Om-Ra Seti 1997, pp. 74--5). Om-Ra Seti profiles nearly 30 distinguished Black scientists and engineers currently contributing to a Black Scientific legacy. (Jenkins and Om-Ra Seti 1997, pp. 79--99). They place science and technology at the center of cultural life.

They have several proposals for greater use of the current technology. For example, they argue for the development of Black courseware for use in distance education, and the use of interactive local networks. Furthermore, they target two main issues as the challenges of the new era. Seti focuses on wireless technology and personal communications services (now called PDAs). As people have migrated from the pages to the cell phone they will likely move on to a PDA integration of several current tools (phone, camera, PC, Internet, etc.).

Jenkins focuses on 'the politics and ethics of telecom.' His argument is that the control of access to bandwidth and Web-based content is the great power struggle that will determine the course of twenty-first-century democracy. The 1996 Telecommunications Act established the legal framework for a new period of corporate concentration and merger. On the other hand, to the extent that democracy does continue to exist, the Web offers the promise for a renaissance of human culture and freedom.

Sobol (2002) updates the focus on Black cultural expression by linking jazz and Hip Hop to the digital transformation of culture. He states:

Hip Hop's four elements—rapping, scratching, bombing, and breaking—are a populist avant-garde, heralds of the information age announcing, celebrating, and exacting the neo-oral post-literate cultural experience with an intensity and sophistication that puts the exclusionary theorizing of academic post-modernists to shame. (Sobol 2002, p. 117)

But Sobol also takes this cultural experience as the expression of revolutionary politics:

This was a revolutionary concept[:]... [t]he dangerously disruptive potential these poor Black kids represented...behaving as if sound didn't belong to anybody.... They didn't care about the legal, authorial, economic, or material sanctity.... They live in sound and their values were based on the exploitation of the creative potential of sound. (Sobol 2002, p. 122)

Sobol criticizes the commodification of revolutionary culture: 'Specifically, the media-entertainment complex has elevated reproduction over improvisation in Hip Hop....It has hidden the creative process from public view....(This constitutes a)

fundamental redefinition of key aspects of Hip Hop as product rather than process.’
(Sobol 2002, p. 129). They replace a cultural movement with cultural commodities.

Every Hip Hop activist knows what Sobol concludes:

Digital Technology makes digital products economically redundant
because they can be infinitely reproduced at virtually no cost and also
because authorship is irrelevant in cut-and-paste culture, making a product
based economy of ideas difficult to maintain in the long run. (Sobol 2002,
p. 135)

Nelson (2002) is a special issue of the journal *Social Text* containing articles on
the general theme of ‘Afro Futurism.’ This is part of a network of scholars, artists, and
activists who generally converge on a Web site by the same name—www.afrofuturism.net,
edited by Alondra Nelson and Kali Tal. This tendency can be contrasted with
Afrocentricity; Afro Futurism looks to and imagines the future while Afrocentricity looks
to the past for cultural origins and foundations. This volume has articles that define Afro
Futuristic identity in terms of digital vocal music as post-human, science fiction
literature, the digital Afro-Diaspora, and the ‘nerd’ stereotype. I will now offer brief
summaries of some of the volume’s articles.

In his essay, Eglash identifies Afro Futurism as finding the dynamic source of the
future in unity with the fundamentals of Black culture: ‘Afro Futurists blur the
distinctions between the alien mother ship and mother Africa, the Middle Passage of the
Black Atlantic and the musical passages of the Black electronic, the Mojo hand the
mouse,’ (Nelson 2002, p. 59).

Kali Tal devotes her essay to an analysis of an imaginative thread of militant African American science fiction:

Works belonging to this sub genre generally focus on a future in which African Americans engage in armed rebellion against their white oppressors, and they feature the following themes: secret societies, charismatic leaders, tension between positions of violence and non violence, differing status among African Americans (often symbolized by skin color), and marginalization of women characters, whose sole purpose is to further the plot and enhance our understanding of the protagonist. (Nelson 2002, p. 88--9)

Finally, Everett seeks to provide an alternative to the 'master-slave' terminology of computer jargon. She describes the task of Afro Futuristic scholarship to be the 'tracking and analysing Black homesteading on the electronic frontier,' (Nelson 2002, p. 129).

Eglash (1999) is a direct attack on the notion that reason is a unique feature of the Western experience. He titles his book, *African Fractals: Modern Computing and Indigenous Design*, because his central thesis is that fractals are more characteristically African than European, Asian, or Native American, although fractals are to some extent found everywhere in human society and nature. The fractal has five basic features: recursion, scaling, self-similarity, infinity, and fractional dimension. Eglash documents these fractal properties in the design of settlements, architecture, traditional hairstyling, textiles, sculpture, painting, carving, religion, games, and symbol systems. Eglash demonstrates that the fractal represents a fundamental feature of an African architecture of knowledge and cultural pre-direction. He carefully discusses this in six chapters:

geometric algorithms, scaling, numeric systems, recursion, infinity, and complexity. He links design in the material culture with the ideological. For examples, he shows how the streets in Cairo, Egypt demonstrate a branching pattern, and then how the diversity of relatively enclosed spaces allowed diverse religious institutions to coexist in close proximity. The second chapter, 'Fractals in African Settlement Architecture,' contrasts the use of circular fractals in Zambia with branching fractals used in Senegal and Egypt. This is a marvelous combination of similarity and difference, unity without uniformity. There is a quiet argument building here that the design complexity in Africa is parallel to the biodiversity in nature, including the genetic variability of the African genome.

The chaos theorists discuss the emergence of order at the edge of chaos. The promise of fractal design and patterns of thought might provide a clue to a rational course of action to avoid the abyss. This might be demonstrated by documenting how fractal logic defines the survival patterns of the political culture of the African Diaspora. Eglash quotes Paul Gilroy's argument that the flow of cultural influence within the African Diaspora was composed of 'mutations produced during its contingent loops and fractal trajectories,' whether about the spread of the spirituals or Rastafarianism. (Eglash 1999, pages 199-200)

It is worth noting that Eglash is working in a new field called ethno-mathematics. Professor Scott W. Williams at the University of Buffalo maintains the Web site Mathematicians of the African Diaspora. This site is a model for reconstructing Black intellectual history. A leading figure in this field in Africa is Paulus Gerdes from Mozambique.

The Anti-Racism Thesis

Chinn (2000) anchors the anti-racist thesis in a critique of how technology has used the body as evidence of racism. 'She examines a range of primary social case studies such as the American Red Cross's lamentable decision to segregate the Blood of Black and White donors during World War II, and its ramifications for American culture, and more recent examples that reveal the eugenicist roots of criminology, such as the trial of O.J. Simpson.' (Chinn 2000, backcover) She creatively combines criticism of science, law, literature, and journalism.

Ebo (1998) focuses on the social structures of racism. He contrasts the concept of cybertopia (the Internet will be 'the great equalizer,' it will 'disrupt gender induced biases' and merge 'discourse and anonymity.') with the concept of the cyberghetto (the virtual can't escape the actual; therefore cyberspace will reflect the racist social structure we live everyday) (Ebo 1998, pp. 2--3). The unifying theme of the volume is the centrality of the social structures of racism and systemic patterns. Wolf refers to 'information redlining,' taking a term from the geo-economic racism of the insurance industry (Ebo 1998, p. 29). Ender and Segal find differences even in the military, a context they claim is more democratic than civil society in general:

White spouses (30%) were more likely to use the community email than were spouses of color (19%). This statistic is not associated with the rank of the spouse.

White spouses appear to have greater access to communication media not afforded spouses of color, who are either relegated to the older, less interactive, and less timely communication media or prefer it. (Ebo 1998, p. 71)

Robinson presents a summary statement of the social structure of racism thesis:

The gap in access to technology for minorities and the poor, while improving in some areas, continues to widen overall. When the lack of minority participation in technology is examined, several access factors emerge: poverty and the overrepresentation of minorities in the ranks of the poor, lack of role models, the use of technology predominantly at the remedial drill-and-practice level, fear of technology by parents who see technology replacing them at work, de facto segregation, and an unconscious stereotyping of the abilities of minorities. (Ebo 1998, pp. 137--8)

Kolko et al. (2000) target a key postmodern subject, identity, and race in particular as a central feature of identity. As opposed to the race is biology crowd, they define themselves as social constructionists, contending that 'the various ways people conceive of Race are rooted, not in nature, but in culture,' (Kolko et al. 2000, p. 3). First, they establish the nature of identity in cyberspace:

To have a virtual presence means deliberately constructing an identity for yourself, whether it is choosing an email name, putting together a web page, designing a graphical avatar, or creating a nickname for a chat room or virtual world. Within such a constructivist environment the construction of identity becomes even more important. (Kolko et al. 2000, p. 6)

On this basis they state their theoretical position;

Cyberspace and race are both constructed cultural phenomena, not products of nature; they are made up of ongoing processes of definition, performance, enactment, and identity creation. Just as cyberspace is not a place...but rather a locus around which coalesce a hypertext of texts, modes of social interaction,

commercial interests, and other discursive and imaging practices, so too race needs to be understood as a category created through social discourse and performance. (Kolko et al. 2000, p.10)

The rest of the collection consists of two sets of papers, 'online (re)presentations of racial identity, and racialized representations of cyberspace,' (Kolko et al. 2000, p. 11). The first set studies identity as "digital assemblage" and takes on racism in Internet ads, games, and films. The second set connects cyberspace to actual social forces. McPherson studies Dixie-Net, not merely as an imagined community but one that operates in the actual world with the force of violence. Silver studies the well-known Blacksbury Village and finds its online identity is less diverse than its actual makeup. Warchauer examines online language use and sums up a wired person as 'someone who uses Standard English in certain Internet forums but chooses alternate languages or dialects in other online domains, and the exercise of this choice represents an act of cultural resistance against the homogeneity of a white, monolingual America,' (Kolko et al. 2000, p.168).

The editors use the language of Cornel West, noting:

[R]ace matters in cyberspace precisely because all of us who spend time online are already shaped by the ways in which race matters offline, and we can't help but bring our own knowledge, experiences and values with us when we log on. (Kolko et al. 2000, pp. 4--5)

Sterne argues that we should study 'the relationship between the politics of race online and the politics of race as such,' (Kolko et al. 2000, p. 191). He makes a clear point on philosophical method: 'Discussion of cyberspace that abstracts it from computer culture more generally risks mistaking the experiential for the ontological,' (Kolko et al. 2000, p.

194). Therefore, '[t]he politics of access are not simply a matter of getting more people online. It is also a matter of how, when, and on what terms people are coming online, and what they discover upon arrival,' (Kolko et al. 2000, p. 209).

Kolko takes an activist approach to this scholarship. She is building MOOScape, a virtual world in which the social construction of race can be studied:

It is my contention that bringing race to the forefront in a text-based virtual world will provide information that can be useful in graphical worlds and other computer-mediated communications systems as well as tell us something about how users bring perceptions and patterns into cyberspace. (Kolko et al. 2000, p. 230)

Nakamura (2002) signifies on Turkle's multiple or fluid identities thesis by inventing the term 'Cybertype.' This is her key concept to provide an alternative to the utopian view that cyber space represents the end of race and racism; '[C]ybertyping is the process by which computer/human interfaces, the dynamics and economics of access, and the means by which users are able to express themselves online interacts with "cultural layers" or ideologies regarding race that they bring with them into cyberspace,' (Nakamura 2002, p. 3). She anchors her analysis of race in cyber space with a fundamental assumption about race in the material world:

Conversations about how the web can 'wipe out' race may obscure the fact that users do indeed possess bodies that are raced-bodies that are denied housing and discriminated against in job interviews and that suffer institutional forms of racism offline. Despite the various techniques the web offers for hiding one's

race, the fact that race deeply impacts most users' experiences in the world cannot be erased. (Nakamura 2002, p. 107)

Nakamura's was the first book-length study of race in cyberspace. In this work of cultural criticism, the objects of study are films, works of science fiction, computer games, advertising, and studies of cyberculture. She contrasts two polar opposite cybertypes (stereotypes in cyber space), the wired and cyber-smart Asian, and the delinked cyber-dumb African American. Her research is particularly revealing in her analysis of what she terms cybernetic or identity tourism (the exploration of the exotic other by 'cross-racial impersonation in an online community'). Similar patterns are found in the patterns of avatar creation for the purpose of game playing, the creation of an online identity as part of a game. She sees racial patterns in how these games are constructed as well as in how they are played.

In conclusion, Nakamura comments on the relative absence of Black scholars in the field of cyberstudies as a partial explanation for the relative dearth of scholarship on race in cyber space. As mentioned she contrasts this with the relatively high-level recruitment efforts to get Asians with high-tech skills, especially from India, into high-tech jobs. Her conclusion points to the need for more research, as well as a change in the composition of those undertaking the research, a point that should impact the diversity recruitment and admissions policy of the growing number of social informatics academic programs. It is also critical that Black studies programs move in the direction of Social Informatics.

Kevorkian (2006) flips the script on Nakamura's concept of cyber type as applied to African Americans. He wants to analyse why in the popular cultural media Black faces

are so frequently connected with a computer and high technology. His analysis focuses on:

Cyberphobic whiteness—fearing technology’s capacity to disembody humanity, to take bodies out of the circuit of action—unconsciously projects technology out of the one set of bodies that it most fears. The image of the obliging Black man behind the monitor reassures viewers that the displayed body is safely occupied, both contained by and containing the threat of the computer. (Kevorkian 2006, p. 2)

His analysis begins with a reflection on *Invisible Man* by Ralph Ellison and ends with some thoughts on *Blue Light* by Walter Mosely, both novels in the Afro-futuristic mode.

The Cyberpower Thesis

Barber and Tait (2001) change the discourse to focus on power. The questions they raise evidence the primary orientation of their work: ‘What amount of influence and power will Black Americans exert in transmitting messages and images about themselves and their culture in a society that is grounded in information development, processing, production, and distribution?’ (Barber and Tait 2001, page xiii) They organize their anthology around the basic categories used by Frank Webster in his *Theories of the Information Society* (1995): technology, economy, occupations, space, and culture. Barber and Tait present an optimistic perspective: ‘As the Internet continues to evolve, more Blacks go on-line, so it seems safe to predict that this pattern will continue and that the Internet will become a major communication source for the Black community,’

(Barber and Tait 2001, p.15). They present data from 1996 covering a diverse set of information technologies, including cellular phones, long-distance service, fax, voice mail, cable TV, VCRs, computers, and online services. Their summary runs counter to generally held views:

Government and other research tend to indicate that Blacks are falling behind Whites and others in the technology race. Our most outstanding finding, however, is that in many demographics, across all connective and interactive technologies, Blacks are adopting information technologies at a greater rate than Whites. One of the areas where this seems to be significant is among young Blacks 18 to 34 years of age. Their rate of adoption outpaced that of Whites of the same age for nearly all technologies examined here. (Barber and Tait 2001, p. 56)

Gandy, based on evidence from a phone survey and focus groups, adds a perspective on privacy and the technology policy debate;

African Americans appear to be concerned about privacy because the loss of control over personal information means greater susceptibility to discriminatory exclusion from employment, insurance, and credit. African Americans continue to be distrustful of power, but they are apparently no more distrustful of government than are other citizens. (Barber and Tait 2001, p.71)

In the economic realm, Barber and Tait include articles that discuss government policy and Black business use of technology. Wilson presents an article on FCC policy and Black entrepreneurship and argues 'that the combined regulatory policies and (nonenforcement) practices of the FCC, EDA, and lending institutions discouraged the sustained growth of minority ownership of broadcast stations,' (Barber and Tait 2001, p.

97). Wilson argues that the Telecommunications Act of 1996 exacerbated the situation by encouraging a 'merge mania' that cut Blacks out. Barber extends this analysis to African American investment in wireless telephony. Syvie examines the use of information technology by Black newspapers. He states, '[T]echnology use at the observed Black newspapers varies, ranging from pervasive use of more common, relatively inexpensive technology (fax and personal computers), to lesser and, in some cases, almost universal nonuse of more select recent technologies (pagination and satellite transmission),' (Barber and Tait 2001, p. 84). Burroughs updates this with a discussion of how Black newspapers have started putting their contents online. Perhaps the most unique development is *The Black World Today*, a Black online newspaper with no hard-copy edition.

Finally, Barber and Tait present a case study of the most technologically advanced Black-owned media company, BET. While Black newspapers have historical origins in a segregated past and therefore form a model of an independent Black business class, BET is a model of collaboration with big capital. 'The keys to BET's success are strong ties with influential media players, securing major advertising support, and expanding its subscription base,' (Barber and Tait 2001, p. 111). BET has developed relationships with Time-Warner, Proctor and Gamble, Hilton Hotels, and Walt Disney, among others. With this backing, BET is the major media company with major Black ownership, and offers film, cable TV, and online Web-based programming. Ziegler discusses the emergence of new online information services established by Blacks. The earliest example of this is NetNoir, a full-service information portal that followed the same kind of mainstream partnering strategy as BET.

The empowerment of the Black community and social groups can be tracked through individual achievement. Two routes to the information revolution have been elite technological education on the one hand and the hacker social movement on the other. Williams (2003) is a major collection of autobiographical interviews of faculty and staff at MIT from 1941--99. It is a massive tome of over one thousand pages with an accompanying CD with more than double that number of pages. At the highest level of academic achievement, these stories demonstrate that the political culture of Black consciousness was needed to transform the social organization of science. He finds three different historical periods at MIT: 1941--54, 1955--68, and 1969--99. In general MIT was summed up as 'painful but worthwhile.' (Williams 2003, page 28) In contrast, Nuwere and Chanoff (2002) narrates the entrance into the high-tech world via the hobby culture of hacking. From the street hustle Nuwere found a faster game in cyberspace and a new culture of sharing.

Nelson et al. (2001) states they 'refuse essentialism' but 'recognize that individuals and communities employ technologies for very specific goals, linked often to their histories and social locations.' They state the purpose of their anthology: 'The essays here show that for disadvantaged communities, technologies have been used to address historical exclusions and continuing inequalities—sometimes to offer more democratic alternatives, other times to manufacture profit, most often simply to fill a need,' (Nelson et al. 2001, p.5).

Hill argues that new digital politics have emerged at four primary sites of struggle: high-tech labor, policy for universal access, community technology centers, and

racial/ethnic content providers. The digital divide is a problem 'that requires multiple avenues of intervention,' (Nelson et al. 2001, p. 29). The intent of this volume is not to

[try] to persuade anyone that we are worthy of inclusion....What we want is to 'politicize' the debate, to 'brownify' virtual space, to 'spanglishize the Net,' ...to find grassroots applications to new technologies and hopefully to do all this with humor and intelligence. (Nelson et al. 2001, p. 197)

Most of the articles in this collection are about the empowerment of cultural activists using information technologies. Nelson, Tu, and Bald discuss film-making, Chappel discusses low-riding automobile culture, Lum examines karaoke and the empowering use of music to construct identity, and the Rose interview of Coleman discusses the empowering of Black women in Hip Hop. Ross and Greave make the most important distinction between the online activities of downloading versus uploading. In the first instance one is merely choosing from options provided by others, whereas being an uploader to the Web means that one is empowered to set the options and create cyber space in one's own image or design.

The major contribution in this collection is a case study of how information technology has been used to create a new form of African American music, called 'Detroit techno.' Williams states that this music 'is a specifically African American variation on the themes of inner-city collapse by Toffler, Scott, and Gibson, a variation that teleports African diasporic traditions into the disembodied world of computer networks,' (Nelson et al. 2001, p. 155). Juan Atkins, the originator of this music, reflects on how he consciously chose to fashion his music as an expression of the Black experience at the birth of the information society: Atkins is quoted as saying,

Barry Gordy built the Motown sound on the same principles as the conveyor belt system of Ford.... Today the plants don't work that way. They use computers and robots to build the cars.... I'm probably more interested in robots than Barry Gordy's music. (Nelson et al. 2001, pp. 160--1)

The crisis in this new cultural expression is that high-tech Detroit techno has few Black listeners outside of Detroit.

Alkalimat (2004) links cyberpower to the activist term 'cyber organizing.' The basic point of this collection of essays is that the Black community can mobilize its own resources to create its own cyberpower, Black power in the digital age. Several of the essays sum up a program of activist research based on a collaboration of a community technology center with a Black studies program. The key ideological principles that emerged in this process of empowerment were cyber democracy, collective intelligence, and information freedom. On the basis of these three principles these essays look at several cyberpower projects developed in Toledo, Ohio: Malcolm X: A Research Site, Cyber Church, First Saturday, and Black peoples hair.

Banks (2006) is a critical reading of rhetoric as technology. His argument is that Black people have been impacted by technology, just as they have appropriated and changed that very technology. It is bidirectional. To look at Black agency Banks develops the concept of 'a Black digital ethos—a set of attitudes, knowledges, expectations, and commitments that we need to develop and teach and bring to our engagement with things technological,' (Banks 2006, p. 48). It is 'an informed, critical perspective to the project of transforming a nation in this digital age.' (Banks 2006, p. 48) In response to the digital divide Banks discusses his taxonomy of access—material access, functional access,

experiential access, critical access, and transformative access. His main issue is transformation, a theme that guides his analysis of online chat rooms, the protest leadership of Martin Luther King and Malcolm X, critical legal race theory, and design in quilts and architecture. Quilt design was used to guide Blacks to freedom from slavery, whereas Black architects designed spaces for living on the assumption that people had gained their freedom. Finally, Banks calls for action. He discusses 'a technological agenda for African American rhetoric' and begins with a call to 'digitize the tradition as thoroughly as possible.' Power can come from turning atoms into bits.

Charting the Discourse, Framing the Research

The four theses outlined above are points of emphasis, and collectively make up the main features of an overall interconnected social process. The social polarization thesis is about the basic conflict in society, the dialectics of haves and have-nots. The Afro centrism thesis is about the importance of culture, the role that tradition, continuity, and community can play in advancing the information revolution from a Black perspective. The anti-racism thesis is a combative thesis that takes on omissions and distortions about Black people and argues the importance of destroying stereotypes. Finally, the cyber-power thesis argues that the key process is the empowerment of social groups and communities to use information technology in the struggle for self-determination and social justice.

Each thesis deserves to be tested on the basis of empirical research. The extent to which Black people use information technology needs to be examined in all four aspects:

social polarity, culture, racism, and cyberpower. On the basis of the literature covered in this review we can begin to construct a research framework.

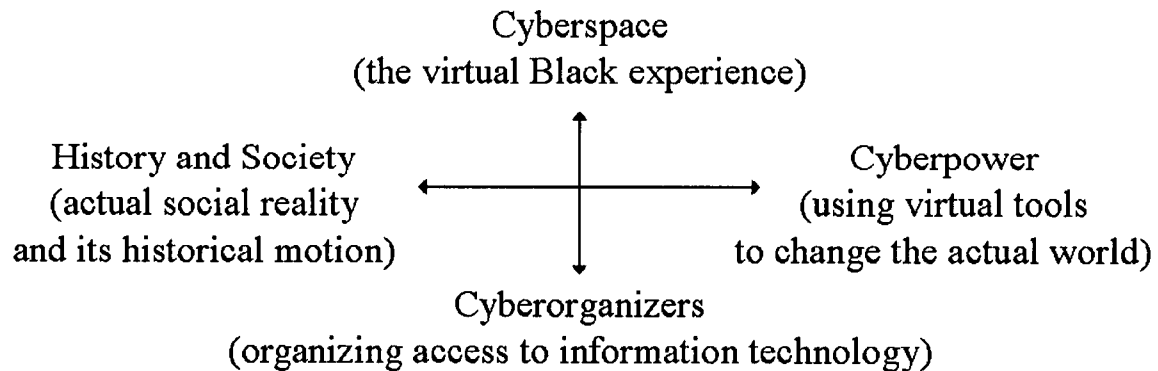


Figure 1. The sociology of eBlack: a research framework. The process from left to right is capacity building, from right to left, social change.

Figure 1 presents a research framework for a sociology of eBlack. From left to right cyberpower is theorized to be created by forces in society as mediated by access to and use of information technologies. From right to left social change is theorized to be caused by the use of cyberpower, cyberorganizers using cyber space to impact actual space. Each thesis discusses a critical aspect of this process. The critical research issue is how to create data sets that can accommodate such analysis.

The capacity-building research focus is on the historical logic of how Black people are becoming part of the information society. The dependent variable is

cyberpower, a person or group's capacity to act in a virtual environment—to provide digital representations and take digital action, including linking the virtual and the actual. The main independent variable is social origin/background, especially social differences, both objective and subjective. This flow of influence/determination is mediated by access to the tools of information technology and the result and content of digital production.

Social polarities are discussed in terms of inequalities associated with class, color, gender, generation, residence, country, language, religion, and so forth. While an eBlack focus is based on the autonomous existence of a black social reality, all issues of social inequality are relevant.

The social change which this research examines is how Black people use information technology to consolidate identity networks and to mobilize resources to impart their reality—economic, political, social and psychological, and cultural. In general this research examines the impact of virtual reality on actual social situations.

The immediate instrumental goals are the most clear because of convenient empirical measures. Such goals relate to the realms of commerce, and many forms of social life. However, we are also interested in how cyberpower is changing the routines of political culture. This extends to such fundamental issues as the nature of democracy, the need for good connectivity, and digital skills.

This conceptual framework targets key research foci: society in general, the Black community, racism, and social change. This framework has the advantage of constructing a consensual work plan for students of eBlack studies and social informatics in general, as well as providing links to the broader historical literature on the Black experience that forms the backbone of research on that experience. In the end, the current stage of

experience will be studied as a comparative historical point of reference. An example of this is Alkalimat (1996) which contrasts the impact of technology on the Black experience by looking at the production of cotton in the eighteenth and nineteenth centuries in tandem with automobile production in the twentieth century. This kind of analysis will have to be carried out in the twenty-first century, paying attention to comparable categories for analysis that can be sustained as part of studies of different technologies at different periods of time.

There is a classic tension in this literature between descriptive narrative and analytical causal analysis, the telling of stories versus statistical analysis of empirically measured variables. Both are useful and have a role to play. Alkalimat and Williams (2004) give a model for how to utilize the strengths of both. This is a case study of a community technology center that presents a narrative of its stages of development and then disaggregates the story into key variables and reconfigures the analysis into tables and charts. eBlack studies does not have to reproduce the disciplinary wars in the social sciences and the humanities in which these two approaches have been pitted against each other. This can be a new moment in scholarship at which we reinvent our disciplines and rediscover the magic of the college sophomore year in which we synthesize grand ideas and major research traditions to meet our general education requirements.

The general theoretical propositions that are central to the sociology of eBlack lead us to gather and summarize diverse sets of empirical data. Our concern with capacity building and social change is fundamental. We focus on the four research theses (social polarity, Afrocentricity, racism, and cyberpower) because they constitute the main parameters for studying the Black experience in the information age. They will define

whether democracy is possible in the twenty-first-century information society. This literature is an excellent beginning. Future research along these lines will make a contribution to scholarship and policy formulations.

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