

From Microchip to Mass Media: Culture and the Technological Age

Report on the DePaul Conference

Several articles in this issue of cy.Rev were presented, in one form or another, at the DePaul Conference on Technology and Culture, May 2-4, 1996, in Chicago. They include:

- Abdul Alkalimat's article was delivered as a major plenary speech.
- Carl Davidson's and Jerry Harris's article served as the background material for two workshops.
- Bruce Parry's article was delivered as a workshop presentation.
- Liane Casten's article was a major plenary speech.
- Stanley Aronowitz's opening plenary speech was based, in part, on the excerpt reprinted in this issue from *The Jobless Future*.

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Email: democracynet@worldnet.att.net

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This article, by two of the main organizers at DePaul, explains the thinking that went into the conference and sums up the results.

Report on the DePaul Conference “From Microchip to Mass Media”: Culture and the Technological Age

By Brodie Dollinger and Paul Schafer DePaul Graduate Student Council

In the late Spring of 1995, graduate students from DePaul University's Liberal Arts & Sciences Graduate Student Council met to discuss the possibility of hosting a conference during the following academic year. Is there any single issue, it was asked, that crosses academic disciplines and unites us in common concern? Typically, academic departments at large Universities reflect the alarming tendency in American society to compartmentalize issues; each discipline operates within its own "discursive space," accessible only to those who know the code. Most Universities fail to embody any sense of shared ideas or a common spirit. How, then, could a handful of graduate students possibly organize a conference around a single, unifying theme? What matter of importance could we all talk about fruitfully?

After ten minutes of discussion the answer was clear, even obvious--Technology. Whether philosopher, historian, sociologist, or artist; whether working-class or middle-class, conservative or liberal; whether Luddite or computer geek--technology touches each of us and in ways we have not yet fully comprehended. More than ever, the time demands critical thinking about some basic questions concerning technology: What is the meaning of the new technology; how does it shape our society and its culture; and where is it leading?

The conference, entitled "From Microchip to Mass Media: Culture and the Technological Age" was held May 2-4, 1996 at DePaul University. Along with the GSC, the co-sponsors included Computer Professionals for Social Responsibility, Chicago Coalition for Information Access, and Networking for Democracy. About 250 people participated in one or more of the sessions over the three day period.

The conference's success was secured by a diverse group of organizers and participants. Students, teachers, and community activists worked together to plan a series of events intended both to educate and to provoke. The conference agenda was composed of individual paper presentations, plenary discussions, workshops, and small art exhibitions. Participants included scholars, graduate students, activists, artists, computer professionals, and journalists. Among those attending, in addition to those mentioned above, was a number of concerned citizens from various parts of the city, and a surprisingly large group of undergraduate students from Chicago area colleges, including an enthusiastic contingent from the Chicago DeVry Institute of Technology. The result was a truly stimulating "event," as one DePaul Faculty put it, not at all like most academic conferences. By the end of the gathering, one thing was clear: the issues at stake in a world increasingly affected by technology are recognized by all elements of the population.

The conference committee agreed from the outset to present a critical stance on technology. The banal virtues of new tools and devices are extolled every day on television, in print, and through our popular culture: technology is hip, entertaining, and it works for you. With the recent explosion of interest in the Internet and the proliferation of PCs and accompanying software, there is more than enough hype about the efficient powers of technology. What is needed today is a more active engagement with the emerging technologies, an engagement that cuts through the corporate hype and

reaches beyond the narrow intersection of technology and the elite classes. This means, first of all, analyzing the role of technology in shaping the organization and character of our society as a whole. Such a fundamental investigation must address the status of technology from multiple perspectives, not the least of which is the philosophical question: what is the essence of technology? Secondly, we must assess our collective needs and resources as a technological society approaching the turn of the century. As our needs and resources change, the old industrial-based forms of organizing and administering civil society must change with them. Finally, it must be understood that these issues affect all people, regardless of their particular status or niche in society. It is our very culture, the way we interact and do business and the way we come together as citizens, that is undergoing rapid transformation. In this sense we are all equally involved, from programmer to business executive to bricklayer.

Taken together, these three broadly defined issues formed the heart of the conference agenda. There were no definitive answers delivered at the conference, though a clear sense of urgency and purpose was present. For many in attendance, including organizers, the conference provided a forum for the collection of information and ideas necessary for creating a vision of the future determined by participation, opportunity, and freedom. Finally, the meeting was not an isolated event, but was part of a pattern of similar gathering across the country. What follows is an initial reflection on the topic of "Culture and the Technological Age," organized around the aforementioned issues and inspired by the proceedings of the conference.

The first step in any effort to comprehend or utilize what is collected under the term "technology" is to formulate some understanding of its meaning. Thinkers as diverse as Marx and Heidegger, among others, have realized that the essence of technology is far more complex than the utilitarian derived conception of technology-as-instrument will admit. Technology is not a neutral instrument of efficiency; it is socially and existentially transformative because it affects the way we interact with each other and the environment. In other words, technology is not merely an instrument of production, for it transforms the mode of our life at its core, there where the values and ideas by which we define ourselves and our human projects reside. The essence of technology resides not in machines and computers, or even in their output, but in something more profoundly human: language and forms of communication, the status of knowledge, leisure and entertainment, not to mention the structure and organization of the workplace.

Thus, any critical discussion of technology should be centered not around the latest "advance" or the newest "breakthrough." Instead the focus should be on the values and ideas of a technological society, and, ultimately, on the social structures and institutions through which such ideas find actuality and affect people's lives most significantly. We must stop believing that technology is the province of experts and technicians, and realize the technological component of our own personal values, civic institutions, and political sensibilities.

Secondly, we must re-assess the assumptions by which our civil society has functioned since industrialization. As we enter an age dominated more than ever by the influx of information and communication technology--the so-called "Third Wave"--the ideas and institutions constituting Western industrial capitalism have become increasingly problematic. Downsizing, insecurity, anxiety, and bitterness are the reality for most, while an elite few retain unprecedented, massive amounts of capital. Third Wave technology holds the promise of new opportunity on a large scale, but only if real power is accessible to non-corporate individuals.

New systems of socio-economic organization must be defined so that both human and material resources are best utilized in order to ensure the optimum level of participation and reward. To start,

we must ensure that people at all levels of society have the skills, education, and services they need to flourish in a changing economy. More to the point, it has recently been argued by Stanley Aronowitz and Jeremy Rifkin, among others, that the status of work itself needs rethinking. As automation and communication technology improve efficiency in the workplace while eliminating many traditional jobs, we must ask what definition of work best serves the collective interest of society. Productivity and profits are empty abstractions if society as a whole does not benefit.

The final point of fundamental concern, as we embark on an uncertain journey toward the high-tech future, involves the redefinition of one of the key political concepts of modernity: universalism. In an age of increasing individualism and its accompanying ethics of personal choices, there seems to be little discussion about the common good or even much honest analysis about the bonds that bring us together as citizens and, more essentially, as human beings.

It is undeniable that in advanced societies like the United States more people than ever have the freedom to exercise their will in ways that they see fit. Yet the individual opportunity and well-being enjoyed by so many is itself made possible by a system of universal social and economic interconnection. A well-refined division of labor places migrant farm worker, temporary office assistant, doctor, and bank president all together on the same socio-economic matrix. In reality, of course, the matrix is skewed in favor of a small minority who take advantage of the fact that everyone is dependent on the present system. Traditionally, capital has used its power and position to exploit labor.

In itself, advanced information and communication technology does not change the current pattern of social relations; yet it does introduce new possibilities. Global communication through cyberspace has the potential to affect the socio-economic matrix in two ways. If access is limited to corporate and capitalist elites, it seems certain that relations within society will continue to deteriorate as the gap widens between haves and have nots: more downsizing and underemployment, more crime, increased racism, immigrant bashing, etc. However, if access to knowledge and information is held open and can be accessed by the majority, then a new universalism becomes possible.

Superficially, the social matrix has always been universal, since everyone is to some degree a "member" of society. Actual participation, however, has traditionally been limited to a narrow stratum of the population, a fact which has led to many corrupted forms of individualism at the heart of our society. The possibility of full (or fuller) participation in the determination of society means redefining the social, economic, and political concepts by which we understand ourselves.

The concept of freedom finds full expression only when it is defined in terms of the whole of society. After all, the rules and organization of the social body are what makes individual freedom possible in the first place. Thus, freedom must be understood not as an abstract expression of the individual will, but as a concrete expression of the interest of society. This means that genuine freedom must be determined not through the particular interest of the individual, but through the collective interest of the universal-society. Advanced technology does not change the terms of this analysis, but it certainly can and will affect the way people perceive the relation of individual to society, particular to universal. We must act to ensure that the culture of technology enriches rather than degrades the universal, and that service technology is linked to freedom rather than exploitation.

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 woollen 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 1910-16 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, Stevie Wonder, Martha and the Vandellas, 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 built 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 1960s 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

“Fighting for the Soul of the GOP”: Buchanan's 2nd Wave Reactionaries Challenge Gingrich's 3rd Wave Conservatives

By Carl Davidson and Jerry Harris Chicago Third Wave Study Group

First it was Gingrich, now it's Buchanan. We hate to belabor the point, but the country's right wing keeps making gains these days by stealing rhetorical thunder from the left. As Cy.Rev #2 noted, House Speaker Newt Gingrich launched the biggest attack on the state since the 1960's left. Now Pat Buchanan has emerged as an opposition force within the GOP, only he's aiming his populist invective at the corporate elite rather than government. Pat recently even had his fellow pundits on the Channel 11 News Hour asking, half seriously, "Has Wall Street replaced Communism as America's enemy?!"

This new turn puts President Clinton in a quandry, with Pat stealing blue-collar votes by attacking him from the left while Newt goes after the yuppies from the right. A lot of people keep hoping Clinton will pick-up the ball of old-fashioned New Deal liberalism and make a mad dash down the center. Instead the President wobbles, first telling us the economy, thanks to him, is doing just fine for most people, then warning us that it sucks for most people, especially the 40% who are scared for their jobs.

When it comes to social or redistributive programs, the Clinton White House has more in common with Herbert Hoover than Franklin Roosevelt. The limits of the debate in Washington have become so conservative that Clinton's best package of "liberal" reforms is considerably to the right of the Nixon-Moynihan domestic programs of the 1970s. When Clinton's left-leaning Labor Secretary Robert Reich, in response to Buchanan, made the meager suggestion that government give tax breaks to corporations who avoid layoffs, even that cautious idea was attacked as "socialist" on Nightline by corporate spokesman Albert Dunlap.

But no one seems to think the happy days are here again. Instead every major newspaper and magazine are running stories about the new insecurity, the gap in wealth, and greedy CEOs. These are nothing new to unskilled production workers, who have always expected layoffs and job insecurity. But the spreading of insecurity to skilled workers, professionals and managerial employees at the big money loaded corporations is a different matter. It reflects a shrinking political and economic base for what Newsweek calls "in-your-face capitalism."

Into this breach steps, Pat Buchanan, the new working class hero. By attacking NAFTA and Wall Street, Buchanan has split the conservative movement in two. Who ever heard of a Republican criticizing corporate America in this way! Even Gingrich quickly distanced himself, as did the whole wing of economic conservatives.

What is going on here? Is Buchanan really espousing left social democracy wrapped in right wing cultural values? Is he a nationalist and populist in the same way that Hitler's fascists were "national socialists?" Or what?

One fruitful approach to this question is to place the Gingrich-Buchanan split in the GOP in the context of the basic changes in the productive forces and the emergence of new ways of creating and accumulating wealth--the relative decline of second wave "smokestack" industries and the emergence of third wave, information-based industries. Simply put, Buchanan is a second wave reactionary trying to top circle the wagons around the old order, while Gingrich wants to stake out the conservative pole within the third wave society of the future.

The focus of their difference is globalization. Cybertechnology has allowed capitalism more freedom to employ anybody anywhere to make or sell anything--and to do it fast. The rapid decentralization of production and the octopus of world financial markets was made possible by the development of computers that can program a production robot in Indonesia from an office in New York.

Telecommunication systems now keep open a 24-hour on-line world speculative market which functions in real time. Today's digital technology allows a San Francisco bank to do its accounting in the Caymen Islands as if the department was down the hall from the CEO's office.

This new freedom has resulted in a tremendous surge of financial power. Outsourcing doesn't just mean giving autoworker's jobs to the non-union shop across town. Cheap labor can now be readily recruited anywhere in the world. The destruction of corporate liberalism's post-World War 2 social contract--well paying union jobs and work security in America's industrial heartland-- is the result of a many tiered technological revolution, at home and abroad.

Gingrich understands this process, cheers it on, and hopes to become the main spokesman for the infotech global finance capitalists and marketeers within this third wave economy. As production, markets, and finances all globalize, attacks on national government and its regulatory power is only natural. NAFTA is thus the practical symbol of this new world order.

Buchanan has mapped out an alternative course. He is a conservative who has decided to base his reactionary populism in the anger caused by these changes. He has thus become the defender of the diehard nationalists of the old second wave national economy. In his speeches, he explicitly refers to industrial jobs, textiles, and even our lost shoe factories. Buchanan blames immigrants from the third world as much as global corporations who move to the third world. It's no wonder silicon valley executives got upset when he called for a ban on all legal immigration for five years. For some of these corporations 40% of their labor force is composed of computer literate immigrants recruited from the global workforce. Buchanan not only targets the CEOs of the new elite, he also threatens their workforce and access to new sources of intellectual capital.

Insecurity in the labor force is not a temporary issue. The current economic recovery, our first real third wave boom, is called "jobless recovery" for just that reason. Production and profits are up, but downsizing is spreading and most new jobs are part-time or temporary. Two-thirds of all new jobs in the last quarter paid under \$20,000 a year.

The driving force behind stock prices and the new profitability is the ability of information technology to downsize the labor force. Just think of how much more work a secretary can do on a PC than a typewriter, and the speed in which she does it. If her output increases by 20% you can turn her into a part-timer with no loss of productivity, and with savings on wages, benefits, pensions, and vacations. There are similar examples at every level of corporate life. In fact, in 1992 capital investment in information technology outstripped investment in manufacturing by for the first time in history. The gap was \$25 billion, and is only growing wider.

Even much of the new investment in manufacturing is based on the application of information technology. At U.S. Steel in Chicago in the 1970s, it took five years to qualify as a machinist's apprentice-- and the worker still had to learn the complexity of blue print reading, metallurgy, and trigonometry. It's a fairly interesting job and it takes considerable concentration to run even one machine well. But information technology came along in the form of numerical control machines. The machinist's knowledge was encoded on chips, those chips were put into the machines, and now

the job was reduced to punching codes into a board for a few minutes at the start of your shift. The rest of the day was spent watching the machine work itself. Of course now rather than working one machine, a worker could punch up and watch several, meaning a general layoff for apprentices.

These changes are the competitive edge of the new world order. Both Gingrich and Clinton know it and embrace it; they just disagree on whether the government or the market should be responsible for moving people into the new economy. Buchanan, on the other hand, is against the new world order and the new economy underlying it.

How can the left and progressive movements respond to Buchanan? Unfortunately, when one subtracts the racism, the left sounds a lot like him. Like Buchanan, the left, for the most part, defends a national industrial policy program of the sort that confronts the third wave economy with second wave demands.

One would think with all this mistrust in government and anger against corporations the left should be growing by leaps and bounds. Much of what progressives say is right on target and has a good deal of support, simply as popular ideas. Economic fairness and racial equality are just as important as ever. It's not so much that the left has dropped the ball, it's the fact that we keep carrying the same one without realizing the game has changed. It's not what we're saying, as much as what we aren't.

Economics of Abundance

In its strategic thinking and proposals, the left needs to break away from an economics of scarcity and embrace an economics of abundance. For the first time in history the creation of wealth is being accomplished with little or no direct connection to wage labor. Intellectual design allows machines to work faster, more accurate, and more efficient than people. As the necessary time of labor falls, digitally driven production replaces wage related jobs.

Here's society's new dilemma: We may face a future of joblessness, yet at the same time we are developing the ability to create material abundance and social security for everyone. We should keep in mind that wage related jobs are a historic product of second wave industrialism. For the first 10,000 years of human civilization the vast majority of people didn't have "jobs" nor a paycheck. Everyone worked, people consumed the product of their labor, and bartered for items they didn't make. The idea that people needed to be employed by a boss for a specific number of hours, for a specific amount of pay is actually new to human history, and only saw widespread development with capitalism. Of course, we are not calling for a return to the medieval manor. Wage labor actually represents a step forward in history. We only want to emphasize that the new productive forces are pushing us to move beyond wage labor as the main means of securing the survival and reproduction of the labor force redistribution of wealth.

Third wave technology now makes possible the creation of wealth with less jobs and in less time. The political vision and economic program we need is one that grasps this change. We need to recognize all work, paid and unpaid, that adds value to society. Work for the community, the home, and self-improvement. The jobless future doesn't mean the end of work, but the recognition of all work. National wealth should count all forms of productive labor, in and outside of the wage-structured market.

Since society revolves around the creation of wealth and its distribution, we need to ask how will that take place in a third wave economy? First of all, everyone needs to be supplied with a "universal toolbox", in effect the means, opportunities, and education to participate in the new economy. These

need to be social guarantees in an economy where income and job insecurity are becoming part of most everyone's life.

One way to begin to achieve this is the redefinition of labor to value work at home, in the community, and the full recognition of women's labor. This may not lead to the wage\money nexus, but perhaps to vouchers for education, childcare, food, health care, and other basic needs. In effect, a social wage. We need to ask what type of work adds value to the national economy, and what type of work is of use. If coaching youth at the local park or environmental clean-ups are of use, then how do we reward and recognize their value?

Within the new job structures what are the different forms of political or social organizations needed to promote the demands of workers? Just as industrial relations created unions in the second wave, what new forms will conform to relations created in the third wave? Already we see strong political trends toward freedom of speech and information, and demands for universal access to the tools of information production. If information technology really leads to less hierarchy and less bureaucracy can these be inroads to socialist forms of labor and greater participation in the control of work? Will entrepreneurial openings for small businesses on the Internet lay a solid basis for the micro economy of market socialism?

Another idea already being addressed in Europe is the shorter workweek. In the face of technologically driven layoffs everyone should benefit from an increase in productivity. If you can create more wealth in less time, it should be reflected in your wages or hours. Socially controlled technology can create jobs, not destroy them.

The challenge is to develop a program and explanation, which aligns with the changing world. To do so our analysis needs to focus on the central force reshaping the world, the revolution in the means of production, and the resulting fundamental shifts in the relations of production. There is no shortage to the questions, yet the left's response is denial or to only see a developing distopia. Class struggle will still determine the contours of future history. Can the second wave left revolutionize itself, or like Pat Buchanan, lead the fight in the wrong direction defending the barricades of industrialism.

Mass Media and the Corruption of Democracy

By Liane Casten Chicago Media Watch

It was a Thursday night. I'm in bed, half asleep, about 11:30 PM with the remote gadget in my hand and I'm cruising the tube. I'd already seen the "salute" to John Wayne re-runs on cable and was not about to watch a thoroughly amateurish attempt to make a Sci-Fi movie into anything more than a diversion for ten-year olds. My remote caught another station and there standing in front of a live audience was some longhaired, shaggy, blue-jeaned performer who looked like my memory of George Carlin. Remember him? He's supposed to be a comedian.

While I only caught the last few minutes, I did catch his message. "Don't vote!" he was screaming at the audience clearly gobbling up his every word. "Then, if we don't vote, we can't say we're the ones responsible for the mess. If you do vote, then you're responsible for putting those assholes in office." And then he concluded with the following, "Me, when I stay home and masturbate, at least I'll have something to show for it folks." And then Carlin made a series of hand motions in the general vicinity of his crotch. And the audience was standing on its feet, clapping as if this comedian had created a painless dentist drill.

The show was over. Immediately, Click on a commercial, a preview first of an x-rated movie exposing a great deal of bare female flesh, and then a preview of another movie: the menacing picture of a black-haired, fierce, red-lipped woman with a gun pointed dead center.

This my friends is our culture. Forget "Lassie Come Home" reruns. Carlin's presentation was not an isolated moment, but part of an ominous trend that has begun to define who we are and what kind of people we are becoming: base, alienated, violent, lacking in civility, civic spirit or a sense of responsibility, deeply cynical -- and yet very hungry for something -- however that something is defined.

Years ago, when I was growing up, my parents would take me and my brother to the home of our maternal grandmother, an amazing turn of the century woman who migrated to Chicago as a young, recently married bride. She taught me how to knit and crochet, and told me how during World War I, she rolled bandages for the war effort in the old country -- Czechoslovakia. She quoted with great emotion the poet Goethe extensively but had only gone to primary school, I listened to her tales about her husband, Grandpa Rudy, who got up at 4:00 am to go by streetcar to the factory by 5:00 am to stoke the fires in order warm the place for the workers who came at 6 am -- so they could start making the dresses and blouses which eventually fed, housed and clothed a great, great many people.

I loved those tales: they were about hard work, commitment, a sense of duty to those who helped make the company grow, and deep gratitude that this family had come to America. But now, for the first time in human history -- thanks to unprecedented media technology, most children are born into homes where most of the stories do not come from their grandparents, parents, communities, schools, churches, or synagogues with their own stories to tell, but from a handful of media conglomerates with something to sell. The cultural environment of the 1980s and 1990s is defined by a system of symbols, logos, images, words, jingles, concepts, pat answers to complex problems, promises of instant gratification, stories -- created by others -- and value systems that serve to cultivate much of who we are as a people, defining what we think and do and how we conduct our affairs.

Million dollar public relations and advertising budgets cover up and misdirect the public's attention away from the criminal behavior of many offending corporations. We live virtually our entire lives

within this environment, locked into systems and programmed opportunities to change channels, but not to exchange ideas, locked into pre-ordained perceptions and emotional reactions -- without ever touching reality. Prime time TV has us believe there's a murder between each commercial.

And while television channels proliferate and new technologies pervade our homes and offices, at the same time mergers and bottom-line pressures shrink creative alternatives, reduce diversity of content and concentrate control in a few hands. With hundreds of cable channels, we have less and less to think about, more and more variations of the same. Media are coalescing into a seamless, integrated cultural environment, depriving all of us of civic debate or even a meaningful spiritual connection. In fact, the Christian Right has co-opted and redefined spirituality, using the media as a power base to raise millions from thousands and thousands of very hungry people.

At this point, mass media is a shared garbage dump of mental and spiritual pollution, depriving us all of opportunities to ask tough questions, communicate our deepest fears or celebrate and not deride or fear our vast diversity. Audiences, basely entertained and driven only to the marketplace, are suffering from a national lobotomy.

Some might protest: but there are talk shows. Well, I'm not talking about Rush Limbaugh -- clearly a media coward and liar since he screens all his questions and allows no debate, or former Watergate felon G. Gordon Liddy -- for whom there is precious little rebuttal on the airwaves. I'm talking about those that pretend intellectual challenge on TV -- even Public TV. These talk shows offer far more style than substance; more empty posturing and hot air than true debate since the majority of the experts are deliberately chosen from the far right, or at best from the center of the political spectrum. A few luminary talk experts and reporters even worked for the CIA before doubling or tripling their salaries by serving up their opinions for the media masters.

Where are spokespersons from labor, from the newly unemployed, from poor women barely surviving on the \$8,000 a year minimum wage, or from the Latino community -- which is portrayed mostly negatively? Do we get anyone on network TV revealing the hard truth about Bob Dole's indentured relationship with the tobacco industry, or Bill Clinton's deep pocket connection with the incinerator industry, the dirtiest technology for waste disposal going these days?

Turn on the morning TV shows like "Good Morning America" and I can promise you there will be a moment in time -- at the exact same time -- when all three shows will be interviewing an overpaid media critic pontificating on what TV shows will be biting the dust next season. They entertain us by telling us about entertainment -- an effective diversion from the crucial issues regarding this country.

What does that mean for us? The pervasive, over-arching media shapes our language, our ideology, our perceptions of the world, our self-images, our relations with others, our expectations about life and our capacity to participate in community. Our attention is diverted from the basic needs and aspirations of all people. As we drift towards ecological suicide and the silent crumbling of our vital infrastructure, we are diverted away from society's cruel neglect of children, the poor and other vulnerable people -- who can't buy the advertised products. Glamorized media violence desensitizes, terrorizes, and brutalizes us. People are dehumanized, stereotyped, marginalized and stigmatized, especially those outside the mainstream. Media exploits and depersonalizes images of sexuality and sensationalizes stories that incite hate and fear, driving the siege mentality of our cities.

The media oligopolies dominate not only broadcasting, but film making, book publishing, the newspaper business, magazines and the must business, as they are now converging in cyberspace. For example, let's explore just one conglomerate, the S.I. Newhouse empire. Newhouse owns the New

Yorker, Self, Details, GQ, Vanity Fair and Parade, along with many other magazines and newspapers round the country. He is the biggest publishing magnate in the U.S. and a major force in Britain. He owns Random House, Knopf, Pantheon, Crown, and Fodor's Travel Guides.

In general the monopoly in magazine holdings alone is enormous; from 1981 to 1988, the number of twenty dominant corporations went to three. The three are: Time Warner, News Corp, and Hearst.

Now let's go to network TV. Despite attempted takeovers, extreme corporate turbulence and declining prime-time viewing, the three television networks -- Capital Cities/ABC, CBS, and NBC - still dominate the field, enjoy the most revenues and great power. GE owns NBC; Westinghouse owns CBS and Disney owns ABC. Let's see them now for what they are. These three do more than control the media; they are silent, truly invisible powerhouses, controlling what they want through a complicated but effective interlocking network of personal contacts with powerful government people, memberships on federal advisory boards, and just plain money. Individual corporations can and do give \$100,000 donations to a special president's council, a gift which guarantees easy access to decision makers. It's not unusual to sink millions of dollars into influencing the government's policies. Again, the corruption of the political process and the eroding of democratic procedures -- out of sight from the average America.

The board of directors of some of these corporations is where the power fans out. Under the law, any director of a company is obliged to act in the interests of his or her own company. Thus, comes a potential conflict when an officer of corporation (A) sits on the board of corporation (B). On behalf of whose interests does this director act?

This kind of power or linkage is an endless chain -- and is the root of many evils. It tends to disloyalty and is a violation of the fundamental law that no man can serve two masters. It is undemocratic, for it rejects the platform: "A fair field and no favors." This collective threat to democracy is coming on several fronts: the homogenized mass media that controls us, and the takeover -- with government compliance -- of the power center by polluting multinational corporations with loyalty to no one but the bottom line. Democracy can't work unless we all have access to a wide range of different sources of reliable information. The mass media deprives us of that access.

Budget Cuts, Poverty and Ending the Cash Nexus

By Bruce E. Parry

In an article on the budget, the Wall Street Journal recently estimated the following cuts from 1995 in billions:

Housing & Urban Development 5.5 Health & Human Services 3.4 Education 2.3 Labor 1.6 Foreign Operations 1.5 Transportation 1.1 Energy & Water 1.5 Interior Dept 0.5 Agriculture & Rural Development 0.5 Commerce Dept. 0.4 EPA 0.6 NASA 0.5

Given the spread of both urban and rural poverty, the danger of unemployment, and the tragic state of the environment and national infrastructures, there has to be some explanation of why every major political figure is calling for across-the-board cuts in the federal budget. How can cutting the budgets of the very areas that are in crisis solve the problems? The answers to these questions lie in the economic undergirding of our political system.

The economic changes taking place today are the result of replacing electrical-mechanical technology with electronic technology in production. The world economic order is so now intertwined that products cannot be made without cooperation among people around the globe, coordinated and controlled through satellite-based communications systems above earth with neither country or nationality.

Completion of international globalization was brought home by the downturn of 1974 and 1975. There were massive layoffs in auto, steel, rubber, glass, durable goods, textiles and other "smokestack" industries. Many of the workers never returned to those jobs. That downturn was the first domestic indicator of the changed world economy. It was both the harbinger of globalization arrived and the impetus to electronic retooling.

Electronic Revolution

The demand for computers and computing ability had been fed by globalization. Demand for integrated inventory, payroll, financial and accounting packages and international communications pushed companies like IBM to the peak of economic power and to the top of the Fortune 500. Bigger was better. If a mainframe did not suffice, supercomputers were available. Fast, versatile mini-computers began to make their mark in smaller organizations.

The first downturn was from 1979 to 1981[1] : major industrial companies retooled their plants with electronics. As a single example, General Motors closed its Baltimore Assembly plant, sent much of the workforce off to computer training, and rebuilt the inside of the plant with robots and electronics. After the renovation, the plant bore little resemblance to what it had been. Robots began the process by welding the body pans and frames. The machines that most closely resembled human workers automatically sprayed rubberized sealant in the gaps between metal parts as the cars rolled down the assembly line. The paint shop was replaced with automation. The workforce of thousands was reduced overall, by about 500 workers immediately, and by thousands more in later years.

Hundreds of thousands of industrial workers were thrown out of work. The work force in auto and steel has never been the same since. More than half the workers were gone in each industry. Detroit and Pittsburgh were symbols of the devastation. Those that continued to work were in economic

combat: wage and benefit concessions, job reorganization and elimination, and retraining were the norm.

The industrial aspect of the electronic revolution was, perhaps, less visible than the rapid diffusion of personal computers, video and arcade games, microwaves and hundreds of other consumer items. Its effect was no less profound.

Breaking the Cash Nexus

In the advanced capitalist countries today, there are factories, mills, plants, stores and even farms with virtually no labor. No one is putting the product together, or drilling, forging, molding, cutting or bending the parts. What labor there is, is technical: programmers, maintenance workers, machine overseers; inspectors with the technical expertise to make adjustments. Robots, computers, and machines, in the meantime, are performing what is normally considered work.

Shops like this produce electrical switches and cars, but they also reproduce themselves: there are factories where robots and computers produce robots and computers. Cybernetics, machines that produce machines that produce products, is the beginning of the "workerless society." These plants represent the future; they represent where production technology is headed. There is no economic or historical force to stop it.

The implications are profound. When robots create the products, there is no need for labor or the laborers that provided it. It is here that the Social Contract breaks down. The Social Contract is between capital and labor. Capital provides the jobs and labor provides the work. In return, capital pays wages with which workers provide for themselves and their families. The efficacy, fairness and even justness of this system have been argued for hundreds of years, but the basic Social Contract worked to the degree that it provided many, if not most, with the necessities of life.

Without workers, however, there is no basis for the Social Contract. If workers are replaced by electronics and therefore not needed in the work place, there is no basis for paying them wages. With no wages, there is no way for them to provide for themselves or their families. As hundreds of thousands are put out of work, there is added downward pressure on wages for those who are still employed. Wages fall and even those still employed are less able to provide. The Social Contract breaks down because the circulation of money in the Cash Nexus has been broken.

There are more jobs

This scenario has not played out in its pure form. There are more jobs now than ever. The U.S. labor force is 126 million and growing. Billions work around the globe. All-robot firms are still rare. There are programs to help those in need: public assistance, food stamps, public housing, and even soup lines and shelters.

There are a number of reasons. First, the process has just begun. Nevertheless, it has played out sufficiently for homeless people to be on the streets. Poverty continues to swell. While in rural settings, the homeless are more hidden, rural poverty still accounts for nearly half all poverty in the U.S.

Second, the U.S. is a world industrial power. It has been able to shift much of the burden overseas. Poverty in the Third World is long standing and deep. In Mexico, for example, some 60 percent of

the population lives in poverty. About half of that is in devastating need, unemployed, homeless, malnourished and starving.

Third, a lot of capital has shifted from manufacturing to sales. This shift has generated jobs. Manufacturing jobs have always paid well; sales and service jobs are equated with minimum wage. Thus, while there are more jobs, wages are lower for those still employed. This is part of the reason that the number of jobs have increased.

The new poverty

Twenty percent of the homeless work; many work multiple jobs. They still cannot command sufficient resources to put a roof over their head and food on the table on a regular basis, let alone maintain their families. Poverty today results from human labor's base value being practically nothing. The value of labor in any market tends to hover to the lowest necessary level. In a competitive market, if workers are willing to work for less, the capitalist will lower wages to that level, given equal quality and adjusting for required education and other special training or skills. In today's market, the level of wages is tending to equalize with the wages of robots. Robots, of course, do not receive any wages.

The devaluation of human life in modern culture that so often receives comment is a direct result of its falling monetary value in the market. Our commercial society values people by what they do, rather than who they are. Those who are prevented from working are not valued. Valueless labor also explains the political climate.

Perhaps the most devastating misbelief in America today is the idea that we do not live in a class society. Classes are properly defined in terms of people's relation to production and distribution, not their wealth. Those who own businesses constitute the capitalist class. With stock ownership, pension funds, mutual funds and the like, identification is complicated, but since people do own businesses, they constitute an economic class. The capitalist class is the ruling class.

What does that mean? Virtually everyone knows how this country is run. Business runs it. Businesses make donations to the political campaigns of the candidates they like and those they do not like. The point is not to support the ones they like, but to make them beholden to their funders. Ross Perot, both a politician and the CEO of a major corporation, succinctly summed this up when he said, "When politicians are trying to get votes, they play every tune they can get their hands on. CEOs understand that: O.K, the politicians are going to have to punch us around a little bit to look like populists. But once they get in office, we own them because we funded them.[3]

Furthermore, the laws that are passed are often suggested and always influenced by lobbyists paid for by business. Political Action Committees (PACs) have merely raised the entire process of electing "public servants" and passing legislation to the level of commercial enterprise. It is regularly reported after every election, what the going price for elective position is, be it a Senate seat, a state legislative position or a mayoralty. It does not make any difference that anyone can play; not everyone has the money to play. Instead of "one person, one vote," the system has become "one dollar, one vote".

The counterparts to the capitalists in bourgeois society, as Marx was wont to note, were the proletarians, the workers, those who owned nothing and were therefore forced to sell the one thing they had: their ability to work. The unemployed were a "reserve army" ready to be thrown into the battle of work as soon as capital expanded sufficiently to require their services. They stood by, in poverty, waiting for a chance to work, acting as an social anchor on the wage rate.

It is within that context that the New Deal was born. Unemployment compensation, Social Security, and later various public assistance programs, housing and food supplements, were stopgaps. They were supposed to allow the poor to survive until the expansion of the economy pulled them into employment. The programs also helped maintained the wages of the employed. When the rising waters rose, all boats were supposed to float away from the pier of the government dole.

And so it was according to scholarly and popular perception--until the emergence of that anathema to modern society: the permanent welfare recipient. This was no longer someone being maintained between jobs. The perception has shifted: many or most are no longer employable. They are not just unemployed workers, they have no relation to the means of production.

History has not been kind to the poor and it isn't likely to be in the 1990s. The first to identify this grouping referred to it as a "lumpen proletariat," for one reason or another incorrectly confusing it with the detritus of feudal society Marx referred to as "criminal flotsam." The next scholar to label it was William J. Wilson, who called it the "underclass," the term, which has stuck, in polite company. The popular media has variously identified its members as "welfare queens," "inner city poor," and other, less flattering appellations. In each case there is an implication that because of certain social standards of conduct, the words "Black," "Latino," or "minority" are there but have been spoken. The references are often made with regard to youth, gangs, drugs, and criminal activity. This New Class has been portrayed as the very reason that upstanding, suburban [white] people should not dare to come to it.

In fact, the New Class is the key to understanding the economic, social and political climate in which we are living. Its existence, its meaning, its members and why they are important reveal why the political climate is shifting to the right, why politicians are calling for all the social cuts, why we are experiencing social crisis and what the historical result is going to be.

The New Class

The New Class, like so much resulting from the implementation of electronics, is new and unformed. But it exists. It consists of all those who are and have been thrown out of the process of production and distribution, and are moving into a position of having no relation to these basic economic functions. Historically large groups of African Americans, Latinos and other minorities moved into this class first. But the New Class isn't Black. Layoffs, poverty, and homelessness are hitting whites too. Youth are particularly hard hit.

One of business' goals is to cut taxes and eliminate all other tariffs, fees, regulations, laws and customs that will tend to reduce their final [after-tax] rate of profit. The only way to do that is to eliminate what the taxes are spent for. The programs most vulnerable are social programs that affect specific groups. There is plenty of history and discontent to whip-up in order to swing the political mood behind such cuts, not excluding racial antagonism.

Every proposed change affects millions of people and businesses. It is therefore becoming more difficult to get consensus among the parties. Of particular concern to the rulers are the disenfranchised. Those with less and less political access have no recourse but to demonstrate their dissatisfaction in the streets. That, in the most general way, is what happened in Los Angeles in 1992. The leaders are removing the economic basis of a minimum level of political satisfaction. They are therefore losing the economic basis of their political control and support of the masses of people. They must adopt some other form of control. The laws are being continually molded to do that. The

latest efforts include both the termination of affirmative action and the streamlining of death penalty appeal processes.

Programs like welfare reform have been touted as the next step in the process of change. It is not politically viable to call it what it is: the next step in its elimination. The term "welfare" is a collective term covering a number of programs. The elimination of welfare has already led to the elimination of numerous general assistance programs, aspects of supplemental security income, limitation of AFDC and strictures on food stamps. We are told the reform will not go too far, but will merely eliminate "unneeded" programs. Public assistance programs are being dismantled piece-by-piece, programs such as food stamps, AFDC, supplemental security income, social security disability and eventually social security.

What is true for public assistance, among the most vulnerable program, is true of other programs. The effort in education is to eliminate public education and move to private education. Health care is the same: the elimination of public health care and its privatization. We have already proceeded to the point where there are more than 40 million people with no health care of any kind. In parkland, in oil reserves, even in the prison system, they are selling off every possible government function.

No conspiracies

This is not a conspiracy. These things do not happen because business people are bad or just because the wrong politicians are being elected. The reasons run deeper; they are systemic. When these programs were begun many businesses understood that sharing the costs of maintaining a labor force (and relative labor peace) at home was the condition for maximizing profits.

Business no longer feels that necessity. It is educating enough workers to meet its needs. A recent pole showed that 95 percent of Americans feel corporations are responsible to the communities they are in and to the workers they employ[4] . There is no legal basis for that supposition, however. Business is not mandated to provide health care, education or anything else not in its own self-interest.

It is in this sense that the New Class is politically key. It is the members of the New Class who are first experiencing the final vestiges of economic security being removed. As AFDC, general assistance, SSI, food stamps, and housing assistance are curtailed or terminated, they are left without recourse. They are the ones who become homeless, who are left in the streets, who the media and politicians blame in order to turn our enmity against them.

People continually ask, "Why doesn't the government do the logical thing?" Why don't they provide food for the hungry, health care for everyone, and equal schooling for children? Why don't they reform the electoral process so that anyone can run? Why don't they enforce equal rights? The answer is that the politicians are doing the logical thing: logical for them and for the businesses that foot their bills.

There is no conspiracy. The truth is coldly calculated. Business computes how much health care might cost under various proposals and then how much it ought to spend lobbying on the issue. It is just as coldly calculated as calculating how much insurance to get. It is a cost-benefit analysis. It answers the questions of cost minimization and revenue maximization under given conditions. It is not that the system is crazy; it is just that the system is cold, impersonal, calculating and not in the interests of anyone who does not live off profit.

We need politicians and political parties that are willing to take up the fundamental questions. One is, "Why does every law passed have to guarantee profits?" Another is, "Can we actually debate that question openly and fairly in the U.S?" If not, then politics has to be taken outside the normal, electoral bounds.

Conclusion

Americans have long-established "rights," developed through legislation and custom. They are in serious danger. Their legal basis will never be maintained if the struggle remains within the political parties of the capitalist class: the Democrats and Republicans. But there are no established parties that are even nominally independent of the capitalists. Establishment of such a party must be the next step.

The very technology that seems to be creating the chaos is the solution to it. It is possible to completely eliminate the "Cash Nexus" and replace it with a "Need Nexus." Instead of rationing goods and services on the basis of money income, it is time to move to a system that rations it on the basis of need. When we produce with computers and robots that require no labor, it only makes sense that the fruits of that production process also require no labor. Instead, the goods must be made available to everyone who needs them.

At the same time, there is plenty of work to be done. Education, establishing equality, providing housing, food and health care, rebuilding infrastructure, cleaning up the environment and a million other tasks present themselves. They are not being done because they are not profitable. But they are beneficial, even crucial. If all the work and labor to be done were shared, we could evenly reduce the number of hours and intensity of work. We could raise the standards of living of everyone.

That is the kind of system we need to fight for. The economic basis of the current system is corrupt. It can no longer provide what it once guaranteed: life, liberty and the pursuit of happiness. We, on the other hand, can settle for nothing less.

Endnotes

[1]Technically, there were two downturns, a brief one in 1979 followed by a longer 1980 to 1981 recession. I feel, as did many of my colleagues, that it was actually one long recession with a fortuitous (1980 was an election year), but chance upswing in the middle.

[2]Rationing has become a bad word since the enforced shortages of World War II. What is not said, is that in day-to-day existence, income is a rationing system. Goods and services are rationed to those who have the money to pay for them. The distinction between "demand" and "effective demand" demonstrates this: despite personal demand, you can only buy that for which you have the money.

[3]Business Week, March 25, 1996.

[4] Business Week, March 11, 1996.

Excerpt from 'The Jobless Future'

Shorter Hours, Free Time & the Dogma of Work

By Stanley Aronowitz & William DiFazio

Even when one-third of the U.S. labor force was officially unemployed throughout the 1930s, and many workers were on short-time schedules, they still blamed themselves for their joblessness. There was no dignity for those who could not find jobs; the conventional wisdom, shaken for more than a decade but not displaced, was that there was "always" plenty of work for those who wanted it.

This homily derives from the larger American ideology according to which there cannot, by definition, be a disjunction between broad economic growth and jobs. Individuals, not the economic and social system, are ultimately responsible for their fate; the market adjusts itself at a level approximating full employment, and any joblessness is "frictional" -- that is, temporary -- for responsible and able-bodied individuals. This key precept of the dominant ideology resumed its virtually uncontested hegemony after World War II, when official statistics recorded jobless rates of less than 6 percent until the early 1980s.

There are, of course, exceptions to the universal principle of paid labor as the sole path to male (and, increasingly, female) dignity, but these turn out to be only variations on the theme that work is a "need." One may retain "dignity" if income has been "earned" through past usury or ownership of business. Unwork becomes dignified only if income is derived from retirement or disability. The implicit assumption is that the retired and the disabled would have remained in the paid labor force if they were able-bodied or younger. Retirement is still considered a reward for a lifetime of faithful paid work, although some research has contended that relatively few retirees in the United States prosper unless they have income acquired through labor or property in addition to their Social Security benefits. From the standpoint of the conventional ethic, paid labor is considered optional for women.

Contrary to the ideologically conditioned theory shared by sociologists, psychologists, and policy analysts that "nonwork" produces, and is produced by, social disorganization and is symbolic of irresponsibility and personal dysfunctionality, recipients of guaranteed annual income who are relieved of most obligations to engage in labor do not fall apart. The incidence of alcoholism, divorce and other social ills associated with conditions of dysfunctionality does not increase among men who are not working. Nor do they tend to experience higher rates of mortality than those of comparable age who are engaged in full-time work. Given the opportunity to engage in active nonwork, they choose this option virtually every time.¹ For example, East Coast longshoremen who are not working but receive adequate income find many things to occupy their time. Many spend more time with their families, some engage in side businesses, and others take up hobbies or fix up the house. They retain their community and much of its culture. Most important, they are happier because they do not have to labor every day at a hard, often life-threatening job where the dangers associated with loading and unloading cargo are compounded by the need to handle materials that are frequently hazardous to their health.

Because of the pleasures of nonwork -- work in the specific sense used here, paid labor under a hierarchical management system -- the men are not pleased to be called in to put in a day's labor. Most of all, they have regained "free" time. This freedom, perhaps more than the activities in which they had become absorbed as an alternative to paid labor, fulfills the premier promise of

technological displacement that in its earlier ideological expressions was heralded by the labor movement and intellectuals as the main historical benefit of industrialization. An alarming number of workers, both intellectual and manual, surrender nearly all their waking and even dreaming hours to labor. The by now ancient slogan of the movement for shorter hours -- "eight hours work, eight hours sleep, and eight hours to do with what we will" -- has been abandoned. The notion of free time is as distant from most people's everyday experience as open space. Labor has been dispersed into all corners of the social world, eating space and time, crowding out any remnants of civil society that remained after the advent of consumer society, and colonizing the live world. We are able neither to play; unlike the older industrial model where labor was experienced as an imposition from above, the dispersal of work makes the enemy invisible because labor is now experienced as a compulsion dictated by economic anxiety more than by the "need" to work.

The Need to Reduce Working Hours

There has been no significant reduction in working hours since the implementation of the eight-hour day through collective bargaining and the 1938 enactment of the federal wage and hour law. Since then, we have witnessed a slow increase of working time despite the most profoundly labor-displacing era of technological change since the industrial revolution. People are laboring their lives away, which, perhaps as much as unemployment and poverty, has resulted in many serious family and health problems. In turn, lengthening of working hours has contributed to unemployment and poverty among those excluded from the labor system.

Therefore, there is an urgent need for a sharp reduction in the workweek from its current forty hours - a reduction of, initially, at least ten hours. The thirty-hour workweek at no reduction in pay would create new jobs only if overtime was eliminated for most categories of labor. And, although some people may prefer flexible working arrangements that are more compatible with child-rearing needs or personal preference, the basic workday should, to begin with, be reduced to six hours, both as a health and safety measure and in order to provide more freedom from labor in everyday life. Finally, we envision a progressive reduction of working hours as a technological transformation and the elimination of what might be termed makework in both private and public employment reduces the amount of labor necessary for the production of goods and services. That is, productivity gains would not necessarily, as in the past, be shared between employers and employees in the form of increased income, but first in fewer laboring hours.

Obviously, restricting laboring hours raises some important questions: How do families maintain their living standards if income is substantially reduced by restricting overtime and other work-sharing arrangements? Will people use free time to develop their capacities or will time be absorbed destructively? Who will pay for work-sharing? Is it feasible in a global economy where capital moves freely in search of cheap labor? ...

An End to Endless Work

At a basic level, our proposals involve much more than an effective legislative struggle. They also require a significant effort to pose alternatives to the values that have propelled American cultural ideals since the end of World War I. The persistence of the old values, many of them crucially tied to the period of American economic expansion and world dominance, has constituted one of the most significant tools in the arsenal of insurgent conservatism. The conservatives have been able to mobilize working-class and professional constituencies with a populism that is based on resisting the implications of change.

Like many who have come before us, we believe that among the crucial tools of domination is the practice of "work without end," which chains workers to machines and especially to the authority of those who own and control them -- capital and its managerial retainers. To be sure, labor did not enter these relations of domination without thereby gaining some benefit. In the Fordist era, as Hunicut has brilliantly shown, organized labor exchanged work for consumption and abandoned its historical claim of the right to be lazy, as Paul Lafargue put it.² Here, within limits, we affirm that right but confess another: the freedom of people emancipated from labor to become social agents.

Needless to say, we reject the idea that liberal democratic states have already conferred citizenship and that apathy is the crucial barrier preventing many from participating in decision-making. Such optimism, unfortunately promulgated by many intellectuals of the left as well as the right, blithely ignores the social conditions that produce "apathy," especially the structural determinants of disempowerment, among them endless work. Nor are we prepared to designate the economic sphere, including the shop-floor "rational-purposive" activity that on the whole has been effectively depoliticized and functions only in terms of the perimeters of instrumental technical rationality.

Management's control over the workplace is an activity of politics. There are winners and losers in the labor process. To render the workplace rational entails a transformation of what we mean by rationality in production, including our conception of skill and its implied "other," unskill transformation of what we mean by mental as opposed to physical labor and our judgment of who has the capacity to make decisions under regimes of advanced technologies.

Politics as rational discourse -- as opposed to a naked struggle for power -- awaits social and economic emancipation. Among the constitutive elements of freedom is self-managed time. Our argument in this book is that there are for the first time in human history the material preconditions for the emergence of the individual and, potentially, for a popular politics. The core material precondition is that labor need no longer occupy a central place in our collective lives, nor in our imagination. We do not advocate the emancipation from labor as a purely negative freedom. Its positive content is that, unlike the regime of work without end, it stages the objective possibility of citizenship.

Under these circumstances, we envision civil society as the privileged site for the development of individuals who really are free to participate in a public sphere of their own making. In such a civil society, politics consists not so much in the ritual act of selection, through voting, of one elite over another, but in popular assemblies that could, given sufficient space and time, be both the legislative and the administrative organs. The scope of popular governance would extend from the workplace to the neighborhood. For as Ernest Mandel has argued, there is no possibility of worker self-management, much less the self-management of society, without ample time for decision-making. Thus, in order to realize a program of democratization, we must create a new civil society in which freedom consists in the first place (but only in the first place) in the liberation of time from the external constraints imposed by nature and other persons on the individual.

The development of the individual -- not economic growth, cost cutting, or profits -- must be the fundamental goal for scientific and technological innovation. The crucial obstacle to the achievement of this democratic objective is the persistence of the dogma of work, which increasingly appears, in its religious-ethical and instrumental-rational modalities, as an obvious instrument of domination.

Footnotes:

1. William DiFazio, Longshoremen (South Hadley, MA: Bergin and Garvey, 1985)
2. Paul LaFargue, The Right to Be Lazy (Chicago: Charles Kerr, 1907)

This book is available as a \$17.95 trade paperback from University of Minnesota Press, 1994.

Freedom, Community and the Third Wave

By Paul Shafer

This is the dawning of a New Civilization. By now the claim that we are entering a new age of some kind or another is routine. Alvin Toffler's Third Wave argument, for example, claims we are experiencing a technological revolution of dramatic proportion that is changing the way we think, communicate, and act. New technologies have created previously unimaginable possibilities for the exercise of individual enterprise and for participation in the evolution of a new society. In short, the so-called Third Wave offers civilization a new conception of freedom, both in terms of individuals and communities, a freedom unencumbered by the mass mentality of the old forms of civil society and state.

Fact or fiction? In part the answer to this question depends on your point of view. According to a recent document distributed by the Progress & Freedom Foundation entitled A Magna Carta for a New Civilization, the Third Wave is a promising and inevitable reality that ought to be ushered in with all due speed. Viewed through the telescopic lens of privilege and optimism, the future holds all the excitement of the latest high-end automobile: it's speedy, stylish, and its sheer novelty is exhilarating. Who wouldn't want to drive a BMW or Mercedes? Of course in reality most people settle for something far less, even the bus or subway, and would have a difficult time imagining a future so rich in technological possibility.

It should not be surprising, then, that there are other perspectives on technology. The National Community Building Network and The Center for Human Resources at Brandeis University have collaborated on a more practically oriented document entitled Community Builders Guide to Telecommunications Technology. Their insights are derived from the real needs of people and their communities. In what follows I will review the major points of both positions, concluding with an evaluative analysis of the Third Wave argument.

The Magna Carta for a New Civilization is based on the thoughts of its four co-authors: Ms. Esther Dyson, Mr. George Gilder, Dr. George Keyworth, and Dr. Alvin Toffler. Its primary function is to provide theoretical description of the new epoch humankind has entered--the Third Wave--and to suggest a political, economic, and cultural agenda the authors believe is necessary in order to make a complete transition from Second to Third Wave.

The Magna Carta begins with a provocative, if controversial, thesis:

"The central event of the 20th century is the overthrow of matter. In technology, economics, and the politics of nations, wealth--in the form of physical resources--has been losing value and significance. The powers of mind are everywhere ascendant over the brute force of things."

Given this thesis, the bulk of the document is devoted to a descriptive analysis of the major components of the social sphere by focusing on important distinctions between Second and Third Wave elements in each area. The authors explain the nature of typically Third Wave concepts like cyberspace, though most of their analysis focuses on more traditional Second Wave components of Western society like property, the marketplace, freedom, community, and government. In conclusion, they sketch out a set of recommendations for the remaking of government in order to pave the way

for a Third Wave civilization. The political question of our age, an age still in transition, asks who will shape the nature of cyberspace and with it the character and institutions of a new age.

The central metaphor for the changes in society that have given rise to speculation about an epochal shift to a new age is cyberspace. Cyberspace is a bioelectronic environment of knowledge that exists everywhere there are telephone wires, coaxial cables, fiber-optic lines or electromagnetic waves. In this sense, it is both universal, stretching across the globe in every direction, and formless. Like a frontier, cyberspace is continually expanding as people create and define its limits at an increasingly accelerated pace. According to the authors of the Magna Carta, the exploration of cyberspace is the key to a future filled with individual opportunity and freedom:

"Cyberspace is the land of knowledge, and the exploration of that land can be a civilization's truest, highest calling. The opportunity is now before us to empower very person to pursue that calling his or her own way."

The bioelectronic frontier poses some critical challenges to a society still largely enamored with the old ways. In fact, as the Magna Carta argues, the social institutions of the Second Wave must all be radically transformed before the Third Wave can fully take root. Primarily, this means that the mass mentality of centralization and standardization with which our institutions and culture have been built, must be "demassified." Consequently we must rethink some of the most basic concepts of our culture, including property, the marketplace, freedom, community, and government.

There are several forms of property that make up cyberspace: "Wires, coaxial cable, computers and other 'hardware'; the electromagnetic spectrum; and 'intellectual property' -- the knowledge that dwells in and defines cyberspace." The Magna Carta argues that intellectual "cyberproperty" is the key Third Wave property form. The most fundamental social transformation in the new civilization will be the shift from a mass-production, mass-media, mass-culture civilization to a demassified civilization, which means that knowledge must itself be demassified:

"The dominant form of new knowledge in the Third Wave is perishable, transient, customized knowledge: The right information, combined with the right software and presentation, at precisely the right time."

Thus, the big question as we stand at the threshold of the new civilization concerns the ownership of cyberspace property rights. Who will define the nature of these rights and how?

Actionable knowledge--a concept encompassing "data, information, images, symbols, culture, ideology, and values"--is also the key to understanding the Third Wave economy. "Customized knowledge permits 'just in time' production for an ever rising number of goods." This transforms the market, creating the potential for a dynamic competition to replace the static competition typical of the mass production mentality of the Second Wave. The downsizing and restructuring trend of recent years is an example of business using Third Wave technology to make themselves more dynamic.

Third Wave innovations demand not just a re-thinking of property and markets, but of the American concept of freedom itself. The authors of the Magna Carta understand freedom in terms of individual liberty, and argue that a reaffirmation of the basic principles of such freedom is necessary for a genuine exploration of the latest American frontier--cyberspace. In practice this means rejecting the mass institutions of the industrial age--"corporate and government bureaucracies, huge civilian and military administrations, schools of all types"--to make room for the flourishing of individual liberty

and the pioneer spirit. No longer will individuals be required to give up their freedom in order for the system as a whole to work:

"The complexity of Third Wave society is too great for any centrally planned bureaucracy to manage. Demassification, customization, individuality, freedom--these are the keys to success for Third Wave civilization. "

Given all the talk about individual liberty and the accompanying plurality of interests in the Third Wave society, what will be the nature of community? The Magna Carta argues that the freedom and diversity already emerging as mass society breaks up should not be understood in terms of the fragmentation and balkanization of society, but as an opportunity for new forms of community. Though no one knows what they will look like, "cyberspace will play an important role knitting together the diverse communities of tomorrow, facilitating the creation of 'electronic neighborhoods' bound together not by geography but by shared interests."

Finally, the Magna Carta argues that government must be reinvented for the 21st Century. Third Wave government will be vastly smaller than the current one (by 50 percent or more), though it will not necessarily be weaker. In fact, the transition from Second to Third Wave "will require a level of government activity not seen since the New Deal." The authors outline five proposals defining the role of government during this transitional period:

1. Creating and facilitating the conditions for universal access to interactive multimedia.
2. Promoting dynamic competition through antitrust regulation.
3. Defining and assigning property rights in cyberspace.
4. Creating pro-Third Wave tax and accounting rules.
5. Remaking government through the model of decentralization.

In order to grasp the future, the authors of the Magna Carta argue that we must understand that the most basic political question does not concern control over the last days of industrial society, but who will shape the new civilization rising to replace it:

"It is time to embrace these challenges, to grasp the future and pull ourselves forward. If we do so, we will indeed renew the American Dream and enhance the promise of American life."

A Different Perspective

The Community Builders Guide to Telecommunications Technology proffers a much different perspective on technology. For serious community builders, the central metaphor for the Third Wave --or any other age, for that matter--is not cyberspace, but community. Where Toffler and company are content to wait and see what the communities of the future will look like ("No one knows what the Third Wave communities of the future will look like...") the authors of the Community Builders Guide realize the necessity of acting today to build the communities of tomorrow. It is not technology that shapes the process of community development, but people. At the same time, however, they understand the relevance of the new technologies for community building and have developed a strategic vision for the incorporation of technology into organizational planning.

It is essential that community builders take an active role in their approach to technology; they must "ask serious questions about what issues they want to address using technology, and how the information super highway can help them achieve community goals and improve the lives of its

citizens." Thus, community builders must "be deliberate and strategic as they venture out in the midst of this information revolution."

The function of the guide is threefold: (1) to introduce community builders to some of the opportunities and potentials of the new telecommunications technologies; (2) to raise awareness of relevant policy questions affecting the use of and access to technology by community organizations; and finally (3) to provide a process to aid community groups in assessing needs and resources that might be addressed through new technology.

The authors of the Guide argue that telecommunications can be utilized as an effective community-building tool in three different areas. The first of these involves information sharing that enhances community-building activities by linking together groups with common interests. Secondly, technology makes possible increased public access to information and civic processes. Finally, technology can improve service delivery to communities at easily accessible sites in areas like education, health and social services.

The overarching policy issue affecting communities concerns access and use. Barriers that affect access to technology such as cost, location, training and others must all be fought if communities are to effectively use new technologies. Community organizations must be especially aware of phenomena such as technology redlining and the market-driven development of infrastructure if they are to ensure fair access for people outside the loop of capital.

In conclusion, the authors of the Guide offer a collaborative community assessment process to help organizations find a starting point for their utilization of technology. "Since the technology serves the people, and since people make communities, our focus here is on how to get people together for the purpose of building together. With a spirit of collaboration the assessment process becomes more of an exploration of resources than an exploration of need; the process is a community treasure hunt. Once discovered and developed, the existing community resources will guide the plan for technological supports."

Which path points the way to real freedom--the Third Wave frontier or the technological community treasure hunt? Before answering this question one must acknowledge the necessity, in any comprehensive reckoning of society, for both theoretical and practical scrutiny of the issues at stake.

The Community Builders Guide recognizes the practical necessity of strong community-level organization for a healthy society. Individual participation in social institutions as diverse as family, neighborhood groups, trade unions, church organizations, and countless others establishes common ground and shared interest among the diverse elements of society. These institutional links, and not the myth of libertarian freedom, form the backbone of a free society to the extent that every society is necessarily determined by its social character, that is, by what unites and is held in common. (Libertarians must find their way back to Rousseau's state of nature.) Without this understanding of the real bonds that hold together, any theoretical account of society is necessarily one-sided and abstract.

Perhaps the real question, then, concerns the relation of technology to the social fabric of our society. A genuine account of the now and future society, in other words, must consider the affect of new technology on the social institutions that make the values of a free society real. According to the Third Wave-inspired authors of the Magna Carta, the concepts definitive of our present society--property, the marketplace, freedom, community, and government--will all be revolutionized by technology and the bioelectronic frontier. Yet technology, in itself, is nothing new; after all, primitive sticks and stones are a form of technology and affected human life in their own way just as

significantly as cyberspace. Thus, it is not technology itself--whether fire, gunpowder, printing press, or microchip--that is the primary issue. What is really at stake are the ideas and values constitutive of civilized human life and the form they take in actual social and political institutions.

To fully understand the relation of Third Wave technology to both the ideas and institutions of society therefore requires more than crystal ball speculation about the future. Whatever the future holds, it must necessarily emerge from the actuality of the here and now. Before we leap toward an uncritical embrace of the bioelectronic frontier and the free enterprise it promises, we must interrogate the ideals constitutive of a free society and determine which social forms make those ideals a reality.

As the Community Builders Guide points out, there are many very real political issues to consider as we make decisions about the technological future. How, for example, can we guarantee fair use and access to Third Wave technology? How can we help the many disenfranchised victims reconnect themselves to society? What is to prevent the elite classes from consolidating their power? Cyberspace alone provides no answer to these questions. What is needed is critical analysis of capital, of accumulated power, of the real meaning of freedom and democracy. Even as we embrace cyberspace as the wave of the future, we must continue to address the old questions from the past.

Kids and Computers: Discovering Learning in the Game of Solitaire

By Toni Stone CTCNET

For many of us, there comes a time when we need a time passer. Games and puzzles are good for this. Games, the good ones anyway, spark concentration and engagement. Developing strategies and plotting moves require thinking; often so much thinking that there is no room in our heads for more worrisome or scary thoughts about our real lives. Learning to play a game, too, is more fun than learning to do arithmetic, yet it calls forth the same sort of analytic skills.

Still, I've always harbored private doubts about, for example, a game like solitaire. I've seen people in computer centers (and in offices) play it by the hour. "This," I think privately, "is a time waster, not even a time passer. Perhaps we ought to take this game off all the computers."

A recent experience in Greensboro, NC, has altered my thinking. I was visiting for the first time the Triad Minority Development Corporation (TMDC) affiliate. This impressive program is working toward economic development for its community by giving young people and adults the opportunity to develop computer skills that will open up new ways of learning and new career paths.

It was an informal occasion and, as I walked into the computer lab, I noticed that one boy was playing solitaire. You can imagine the thoughts that went through my head. I continued back in the lab to where a kid of about three or four was struggling to get into a chair in front of a computer, her mother standing anxiously by. It turned out the kid wanted the solitaire game, not that she'd ever played it, but she wanted what she'd seen on the other boy's screen.

As kids will, she put her hand over the mouse and started Clicking. The game shrank, and almost disappeared. I helped her find the corner of the game screen and guided her hand to pull it back to full size. Well, she pulled it back and forth, to large and then to small, again and again, but finally tired, and then she started Clicking on the card shapes on the screen. Sometimes something happened, sometimes not. It didn't seem to matter. She was all Clicks.

"Slow down," I suggested. "Try to figure out what's going on. What is the computer doing when you Click?" She had a red eight. I suggested she move it to a black nine. She did, and it stayed there. I cheered. After trying to move virtually every other card on the screen and with me asking "Why did it stay there?" or "Why didn't it stay?" she eventually got the idea: numbers go down, black goes on red or red on black. The big thrill came when she found she could move a whole stack if only she could place the cursor on the top card in the stack. That was a problem!

The computer room closed before she could finish the game. On the way out, her mother confided to me that she hadn't realized the child even knew her numbers, much less had any understanding of sequence. She'd been afraid the game would be way beyond the girl's ability and would simply be a frustration. She was delighted!

I, on the other hand, was reflecting on lost opportunities. I had thoroughly enjoyed working with this girl. She had shown me solitaire as a vehicle for developing number recognition, sequencing skills, and for strategizing, to say nothing of increasing hand-eye coordination and acquiring computer manipulation skills. But I had missed the chance to go back to the older boy who had also been playing the game. Missed the chance to talk with him about his strategies, about how he'd learned to play it, about how he was thinking; missed the chance to find out what it was that intrigued him^{3/4}the

challenge, the passing of time, something else? And I was mindful of all the similarly missed chances in my past and hopeful that I would not let any future opportunities glide by me so easily.

Don't misunderstand. I'm not advocating universal acceptance of endless amounts of time spent by individuals playing solitaire on the computer³/₄or any other game that seems, once learned, to demand little in the way of skill or strategy. Rather, what I learned in Greensboro is that it's important, before condemning such involvement out of hand, to raise questions, to engage the player in human dialogue, to make sure that solitaire, or any similar activity, is not a solitary pursuit.

Young People Are Already Shaping the Media of the Future

The following article is a brief commentary delivered to the News in the Next Century Conference sponsored by the Radio and Television News Directors Foundation and held at the Cantigny Conference Center of the Robert J. McCormick Tribune Foundation last Fall.

By Carl Davidson Networking for Democracy

To get an idea of what will be happening with media in the future, it helps to look at what young people are doing with media today.

What is happening is an explosion of creativity. Perhaps it would be better to say "explosions," since there are a wide variety of experiments with a variety of new media tools. Here's a few examples: Rock Videos. For every slick production on MTV, there are thousands of home-brew rock videos circulating that were created when a friend of the neighborhood teenage garage band shows up at a session with the family camcorder. Then another kid gets a PC with a CD-ROM drive and other multimedia add-ons. Before you know it, they've put together a miniature video production studio for less than the price of a new pickup truck.

The Zine Scene. There are so many new electronic publications popping up that no one can keep track of them. A few publications, like the Alternative Press Review and FactSheet5, make an effort to track a maddening diversity of new journals, many with a half-life of two or three issues. These are the 1990s versions of the underground press of the 1960s--the former a product of the photo offset press, the latter a product of desktop publishing software, the PC and the Internet. Most of the content is about culture--hip-hop, rap, and cyberpunk. The politics are rebellious, whether left wing anarchist or right wing skinhead. Some have limited-run hard copy editions done on cheap newsprint without much attention to good looks. The best graphics often appear only in the electronic versions, where the cost is minimal.

FreeNets and Group Home Pages. Young people like to show their stuff off, and these media provide an electronic version of the public square. The kids at DuSable High in Chicago, for instance, managed to get, through serendipitous means, their school computers linked to the Internet with a fast T-1 line. DuSable is located in one of the poorer public housing projects in the city, but these youngsters take great pride in the fact that their student paper, the Panther, now has a home page on the net and is read by students in South Africa. Now students at other high schools in the city are clamoring to catch up.

Beezers, Pagers and Cellular Phones. Hundreds of storefronts selling these devices have popped up in every major city in the country. While a good chunk of the business is connected to gang activity and the drug trade, a lot branches out in other directions. Cellular communications are playing the same role for inner city youth that CB radios have played for truck drivers.

What are the general trends discernable in these examples?

1. The tools of the trade are becoming miniaturized and relatively cheap. What was previously mainly available to large corporations is now accessible to a vastly larger number of small entrepreneurs. The means of media production are becoming widely dispersed at the same time that a handful of global media giants are being formed.

2. The media market, to use Alvin and Heidi Toffler's term, is becoming "demassified." The national mass market is being supplanted with a mosaic of segmented niche markets. This is not only driven by the desire of advertisers to get more bang for their buck; it also helps new subcultures find a means of distribution and feedback.
3. The new means of media distribution are becoming universal and relatively cheap-- although some "info-rich" vs. "info-poor" gaps are slower to close than others. The VCR and audio CD are already everywhere. The PC is in 30% of households and growing fast. Internet surfers are increasing exponentially. The desire of children to play video games at home is accelerating the pace. It's now possible to do decent, high-speed net surfing in your own home on a \$500 used computer with a \$100 28.8 modem and a \$12 a month on-line account. It still excludes the children of the poor, but it's well within reach of many college students and working-class families.
4. The global market of the global village has arrived, but it's a networked mosaic rather than a traditional, uniform mass market. It's sometimes easier to find a like-minded group on another continent than in your own city. It's a global linking of the niches.
5. The new media tools are creating new hybrid forms of cultural and artistic expression. The interactive CD-ROM disk of Bob Dylan's Highway 61, the New Age graphics and music in the CD-ROM game Myst, and the new ability to post sound and video clips of self-published works on the InterNet are a few leading examples.

These trends all pose several critical questions: How will an aspiring media worker or artist of the future get paid in cyberspace? What does decentralized ferment at the grass roots have to do with the formation of giant media empires? What are the political implications?

As for getting paid in cyberspace, the immediate answer today is that a great majority of young media workers don't get paid--their work is both beyond the market and softening the edges of the market.

For example, it's extremely difficult these days to make a living as a writer. There's simply too much good writing available on the net at no cost. Most zines can choose their content from a rich supply of material that is never paid for.

Strategically, however, the key word for getting paid in cyberspace is interaction. The software giants are now demonstrating this with a vengeance. They recognize that the number of bootlegged copies of their programs is enormous. So they lower the cost of software, but raise the rates for technical support services. Borland's Paradox, for instance, dropped from \$500 to \$100 for a vastly improved product. But to get access to an 800 technical support number that someone will answer in less than five minutes will cost you \$250 a year, every year. In this way, they might even sell the program for \$10 and still make money.

A writer, therefore, has to begin viewing his or her writing differently. The article or essay or video clip is given away; it's not the product, it's advertising for a related but a different product. On the basis of the appeal of your article, you go on to sell yourself as a speaker or seminar leader or editor of a specialty newsletter. You get paid to the degree that you can establish an ongoing, preferably person-to-person, back-and-forth communication with your customers.

The successful journalist of the future, therefore, will not simply be an employee of a large city newspaper or TV station. With the shrinking number of major dailies, this is an elite, restricted job

market anyway. A writer would do better as an independent contractor who develops a niche, an area of expertise, in which he or she can become a consultant and teacher as well as a writer. Nor should writers limit themselves to the printed word. A variety of new skills will be needed-- the ability to combine text with graphics, sound and video; create documents in hypertext; format documents for Home Pages and CD ROM, etc.

Despite the impact of the creative energies bubbling up from below, the importance of the media giants in shaping the media of the future will still be decisive. The simple reason is that the massive amounts of resources involved in assembling the architecture of the global information infrastructure are far beyond the reach of local entrepreneurs. Inner city youth may make ingenious use of beepers and cellular phones, but the economies of scale needed to launch a network of satellites to sustain cellular communications is far beyond them.

But there is one arena where the small scale, hand-held new media technology can have a magnified impact: politics. If we proceed from Tip O'Neil's maxim that "all politics is local," then the usefulness of the technology already in the hands of young people becomes quite apparent. Imagine what happens when the street-based beeper-cellular mini-networks are used to get out the vote. Or think of the Rodney King video and imagine what happens when homegrown rock videos shift into the realm of political documentary and agitation. Then think of the synergy unleashed when creative breakthroughs in one part of the world are posted on the Internet, a la the Zapatistas and their Home Page on the World Wide Web beamed up to satellites from laptops in the jungles of Yucatan.

I think it's going to be hard to predict just how these insurgencies and experiments will bring themselves to fruition. But I am fairly certain that the future of media is not going to be 500 channels of home shopping. Even if the media giants wanted to move in that direction, the dynamic interplay and conflict between the young and the establishment is bound to move things in directions that can be both more creative and more destructive at the same time. So fasten your seatbelts; it's going to be a bumpy ride.

Town Meetings on Technology: Denmark's Experience with the Consensus Conference

By Richard Sclove Technology Review

In a democracy, it normally goes without saying that policy decisions affecting all citizens should be made democratically. Science and technology policies loom as grand exceptions to this rule. They certainly affect all citizens profoundly: the world is continuously remade with advances in telecommunications, computers, materials science, weaponry, biotechnology, home appliances, energy production, air and ground transportation, and environmental and medical understanding. Yet policies are customarily framed by representatives of just three groups: business, the military, and universities. These are the groups invited to testify at congressional hearings, serve on government advisory panels, and prepare influential policy studies.

According to conventional wisdom, the reason for this state of affairs is that nonexperts are ill-equipped to comment on complex technical matters and probably wouldn't want to anyway. But the success of an innovative European process dubbed the consensus conference has begun to shed new light on the subject. Pioneered during the late 1980s by the Danish Board of Technology, a parliamentary agency charged with assessing technologies, the process is intended to stimulate broad and intelligent social debate on technological issues. Not only are laypeople elevated to positions of preeminence, but a carefully planned program of reading and discussion culminating in a forum open to the public ensures that they become well-informed prior to rendering judgment. Both the forum and the subsequent judgment, written up in a formal report, become a focus of intense national attention--usually at a time when the issue at hand is due to come before Parliament. Though consensus conferences are hardly *mea public policy*, they do give legislators some sense of where the people who elected them might stand on important questions. They can also help industry steer clear of new products or processes that are likely to spark public opposition.

Since 1987 the Board of Technology has organized 12 consensus conferences on topics ranging from genetic engineering to educational technology, food irradiation, air pollution, human infertility, sustainable agriculture, and the future of private automobiles. And the board's achievements have recently led to new incarnations of the Danish process--twice in the Netherlands and once in the United Kingdom. Other European nations, as well as the European Union, Canada, New Zealand, and Australia, are actively considering consensus conferences as well.

Ironically, the process is gaining popularity just as the U.S. Congress has abolished its Office of Technology Assessment (OTA), whose establishment in 1972 helped motivate Europeans to develop their own technology assessment agencies. But the truth is that when the OTA faced the chopping block, those rallying to its defense were primarily a small cadre of professional policy analysts or other experts who had themselves participated in OTA studies--hardly a sizable cross-section of the American public. By contrast, a consensus conference format, which engages a much wider range of people, holds the potential to build a broader constituency familiar with and supportive of technology assessment. And there is no reason why the United States could not adapt the process.

Framing the Issues

To organize a consensus conference, the Danish Board of Technology first selects a salient topic--one that is of social concern, pertinent to upcoming parliamentary deliberations, and complex, requiring judgment on such diverse matters as ethics, disputed scientific claims, and government policy. The

board has also found that topics suited to the consensus conference format should be intermediate in scope--broader than assessing the toxicity of a single chemical, for instance, but narrower than trying to formulate a comprehensive national environmental strategy. The board then chooses a well-balanced steering committee to oversee the organization of the conference; a typical committee might include an academic scientist, an industry researcher, a trade unionist, a representative of a public interest group, and a project manager from the board's own professional staff.

With the topic in hand and the steering committee on deck, the board advertises in local newspapers throughout Denmark for volunteer lay participants. Candidates must send in a one-page letter describing their backgrounds and their reasons for wanting to participate. From the 100 to 200 replies that it receives, the board chooses a panel of about 15 people who roughly represent the demographic breadth of the Danish population and who lack significant prior knowledge of, or specific interest in, the topic. Groups include homemakers, office and factory workers, and garbage collectors as well as university-educated professionals. They are not, however, intended to comprise a random scientific sample of the Danish population. After all, each panelist is literate and motivated enough to have responded in writing to a newspaper advertisement.

At the outset of a first preparatory weekend meeting, the lay group, with the help of a skilled facilitator, discusses an expert background paper commissioned by the board and screened by the steering committee that maps the political terrain surrounding the chosen topic. The lay group next begins formulating questions to be addressed during the public forum. Based on the lay panel's questions, the board goes on to assemble an expert panel that includes not only credentialed scientific and technical experts but also experts in ethics or social science and knowledgeable representatives of stakeholder groups such as trade unions, industry, and environmental organizations.

The lay group then meets for a second preparatory weekend, during which members, again with the facilitator's help, discuss more background readings provided by the steering committee, refine their questions, and, if they want, suggest additions to or deletions from the expert panel. Afterward, the board finalizes selection of the expert panel and asks its members to prepare succinct oral and written responses to the lay group's questions, expressing themselves in language that laypeople will understand.

The concluding public forum, normally a four-day event chaired by the facilitator who presided over the preparatory weekends, brings the lay and expert panels together and draws the media, members of Parliament, and interested Danish citizens. On the first day each expert speaks for 20 to 30 minutes and then addresses follow-on questions from the lay panel and, if time allows, the audience. Afterward, the lay group retires to discuss what it has heard. On the second day the lay group publicly cross-examines the expert panel in order to fill in gaps and probe further into areas of disagreement.

Once cross-examination has been completed, the experts are politely dismissed. The remainder of that day and on through the third, the lay group prepares its report, summarizing the issues on which it could reach consensus and identifying any remaining points of disagreement. The board provides secretarial and editing assistance, but the lay panel retains full control over the report's content. On the fourth and final day, the expert group has a brief opportunity to correct outright factual misstatements in the report, but not to comment on the document's substance. Directly afterward, the lay group presents its report at a national press conference.

Lay panel reports are typically 15 to 30 pages long, clearly reasoned, and nuanced in judgment. The report from the 1992 Danish conference on genetically engineered animals is a case in point, showing

a perspective that is neither pro- nor anti-technology in any general sense. The panel expressed concern that patenting animals could deepen the risk of their being treated purely as objects. Members also feared that objectification of animals could be a step down a slippery slope toward objectification of people. Regarding the possible ecological consequences of releasing genetically altered animals into the wild, they noted that such animals could dominate or out-compete wild species or transfer unwanted characteristics to them. On the other hand, the group saw no appreciable ecological hazard in releasing genetically engineered cows or other large domestic animals into fenced fields, and endorsed deep-freezing animal sperm cells and eggs to help preserve biodiversity.

Portions of lay panel reports can be incisive and impassioned as well, especially in comparison with the circumspection and dry language that is conventional in expert policy analyses. Having noted that the "idea of genetic normalcy, once far-fetched, is drawing close with the development of a full genetic map," a 1988 OTA study of human genome research concluded blandly that "concepts of what is normal will always be influenced by cultural variations"; in contrast, a 1989 Danish consensus panel on the same subject recalled the "frightening" eugenic programs of the 1930s and worried that "the possibility of diagnosing fetuses earlier and earlier in pregnancy in order to find genetic defects' creates the risk of an unacceptable perception of man--a perception according to which we aspire to be perfect." The lay group went on to appeal for further popular debate on the concept of normalcy. Fearing that parents might one day seek abortions upon learning was, say, color blind or left-handed, 14 of the panel's 15 members also requested legislation that would make fetal screening for such conditions illegal under most circumstances.

This central concern with social issues becomes much more likely when expert testimony is integrated with everyday citizen perspectives. For instance, while the executive summary of the OTA study on human genome research states that "the core issue" is how to divide up resources so that genome research is balanced against other kinds of biomedical and biological research, the Danish consensus conference report, prepared by people whose lives are not intimately bound up in the funding dramas of university and national laboratories, opens with a succinct statement of social concerns, ethical judgments, and political recommendations. And these perspectives are integrated into virtually every succeeding page, whereas the OTA study discusses ethics only in a single discrete chapter on the subject. The Danish consensus conference report concludes with a call for more school instruction in "subjects such as biology, religion, philosophy, and social science"; better popular dis "immediately understandable" information about genetics; and vigorous government efforts to promote the broadest possible popular discussion of "technological and ethical issues." The corresponding OTA study does not even consider such ideas.

When the Danish lay group did address the matter of how to divide up resources, they differed significantly from the OTA investigators. Rather than focusing solely on balancing different kinds of biomedical and biological research against one another, they supported basic research in genetics but also called for more research on the interplay between environmental factors and genetic inheritance, and more research on the social consequences of science. They challenged the quest for exotic technical fixes for disease and social problems, pointing out that many proven measures for protecting health and bettering social conditions and work environments are not being applied. Finally, they recommended a more "humanistic and interdisciplinary" national research portfolio that would stimulate a constructive exchange of ideas about research repercussions and permit "the soul to come along."

Not that consensus conferences are better than the OTA approach in every possible way. While less accessibly written and less attentive to social considerations, a traditional OTA report did provide more technical detail and analytic depth. But OTA-style analysis can, in principle, contribute to the

consensus conference process. For example, the 1993 Dutch consensus conference on animal biotechnology used a prior OTA study as a starting point for its own more participatory inquiry.

Timeliness and Responsiveness

Once the panelists have announced their conclusions, the Board of Technology exemplifies its commitment to encouraging informed discussion by publicizing them through local debates, leaflets, and videos. In the case of biotechnology, the board has subsidized more than 600 local debate meetings. The board also works to ensure that people are primed for this whirlwind of post-conference activity. For example, the final four-day public forums are held in the Parliament building, where they are easily accessible to members of Parliament and the press.

Nor is it any accident that the topics addressed in consensus conferences are so often of parliamentary concern when the panelists issue their findings. The board has developed the ability to organize a conference on six months notice or less largely for the purpose of attaining that goal. This timeliness represents yet another advantage over the way technology assessment has been handled in the United States: relying mostly on lengthy analysis and reviews by experts and interest groups, the OTA required, on average, two years to produce a published report on a topic assigned by Congress. In fact, one complaint leveled by the congressional Republicans who argued for eliminating the agency was that the process it employed was mismatched to legislative timetables. Upon learning about consensus conferences and their relatively swift pace, Robert S. Walker, Republican chair of the House Science Committee, told a March 1995 public forum that if such a process can "cut down the time frame a useful information, that would be something we would be very interested in."

The Board of Technology's efforts do seem to be enhancing public awareness of issues in science and technology. A 1991 study by the European Commission discovered that Danish citizens were better informed about biotechnology, a subject that several consensus conferences had addressed, than were the citizens of other European countries, and that Danes were relatively accepting of their nation's biotechnology policies as well. Significantly, too, Simon Joss, a research fellow with the London Science Museum who has conducted interviews on consensus conferences with Danish members of Parliament, has found the legislators to be generally appreciative of the process--indeed, to the point where several eagerly pulled down conference reports kept at hand on their office shelves.

And although consensus conferences are not intended to have a direct impact on public policy, they do in some cases. For instance, conferences that were held in the late 1980s influenced the Danish Parliament to pass legislation limiting the use of genetic screening in hiring and insurance decisions, to exclude genetically modified animals from the government's initial biotechnology research and development program, and to prohibit food irradiation for everything except dry spices. Manufacturers are taking heed of the reports that emerge from consensus conferences as well. According to Professor Tarja Cronberg of the Technical University of Denmark, Danish industry originally resisted even the idea of establishing the Board of Technology but has since had a change of heart. The reasons are illuminating.

In conventional politics of technology, the public's first opportunity to react to an innovation can occur years or even decades after crucial decisions about the form that innovation will take have already been made. In such a situation, the only feasible choice is between pushing the technology forward or bringing everything to a halt. And no one really wins: pushing the technology forward risks leaving opponents bitterly disillusioned, whereas bringing everything to a halt can jeopardize jobs and enormous investments of developmental money, time, and talent. The mass movements of the 1970s and 80s that more or less derailed nuclear power are a clear example of the phenomenon.

By contrast, early public involvement and publicity--of the sort that a consensus conference permits--can facilitate more flexible, socially responsive research and design modifications all along the way. This holds the potential for a fairer, less adversarial, and more economical path of technological evolution. A representative of the Danish Council of Industry relates that corporations have benefited from their nation's participatory approach to technology assessment because "product developers have worked in a more critical environment, thus being able to forecast some of the negative reactions and improve their products in the early phase."

For example, Novo Nordisk, a large Danish biotechnology company, reevaluated its research and development strategies after a 1992 panel deplored the design of animals suited to the rigors of existing agricultural systems but endorsed the use of genetic engineering to help treat incurable diseases. The firm now wants to concentrate on work more likely to win popular approval, such as animal-based production of drugs for severe human illnesses.

Bringing It All Back Home

Finding suitable topics for U.S. consensus conferences would hardly be difficult; a variety of technically complex and socially significant issues currently on the federal agenda could work. One likely candidate would be the evolution of the information superhighway. The World Wide Web and other information systems promise to significantly affect everyone in our society, including many people who do not presently use computers and who are poorly represented in current deliberations on telecommunications policy.

Another good topic would be post Cold War reorganization of the U.S. national laboratory system. All taxpayers finance that system, which is intended to function as a national resource. However, blue-ribbon commissions appointed to help chart the labs' future have focused on the concerns of scientists, the military, industry, and the communities immediately adjacent to the labs--not on the needs of the American public as a whole.

Moreover, the mechanisms for distributing lay panel reports and encouraging follow-on social debate are readily available in this country. They include the Internet and the League of Women Voters. Also, the Connecticut-based Study Circles Resource Center, the Public Agenda Foundation, and the Kettering Foundation are experienced in facilitating nonpartisan, public-affairs discussions across the United States--everything from study groups with four or five people to large community forums. Of course, a lay panel composed of, say, 15 people would represent a feeble statistical sample in a nation whose population numbers 250 million. However, hearing the considered views of a diverse group of 15 ordinary citizens would be a marked improvement over excluding the lay perspective entirely, which is the norm in most contemporary technology policy analysis and decision making.

Skeptics could also point out that consensus may be much easier to attain in a small, fairly homogeneous nation such as Denmark. But it is not as if consensus is impossible here; U.S. juries routinely reach consensus on highly contested, complex legal disputes. And besides, the significant feature of the consensus conference model is not consensus itself but the cultivation of informed citizen judgment. The final report can and often does identify issues on which the panel is unable to reach agreement. The report from the 1993 Dutch consensus conference on animal biotechnology included majority and minority of fact, believing that consensus is not essential to the model at all, Dutch organizers renamed their variant simply a "public debate."

Consensus aside, would an ad hoc assemblage of U.S. citizens even be capable of deliberating together reasonably? There is some reason to think so. The intensive preparatory weekends that precede a public consensus conference help by letting lay panelists get to know one another and develop their ability to reason together. More to the point, key real-life trials have met with encouraging results. For instance, although Britain is populous and racially and socioeconomically diverse, panelists on the first U.K. consensus conference proved quite able to converse and work together.

And the Jefferson Center--a Minneapolis-based nonprofit organization that explores new democratic decision-making methods--has developed a deliberative format, known as a "citizens jury" process, that is similar in many ways to a consensus conference. In 1993, such lay panels formed working relationships sound enough to permit an examination of such contentious issues as national health care reform and federal budget restructuring. The panels' conclusions did not directly alter government policy, but they received enough media attention to influence public debate, and elected officials paid attention. Indeed, representatives from the budget jury were invited to discuss their proposals with the U.S.

Senate Finance Committee.

As to the question of who should organize consensus conferences, European organizers stress the need to seek an institution that is--and will be perceived as--scrupulously impartial on the issues under debate, authentically committed to democratic deliberation, and of sufficiently high stature to attract strong media, popular, and government attention. Consider, for example, the Library of Congress or a trusted nonprofit organization such as the League of Women Voters. But for maximum media attention and social influence, congressional or presidential sponsorship, with bipartisan oversight, would presumably be ideal. With many Americans convinced that the federal government has grown seriously out of touch with the concerns of ordinary citizens, perhaps consensus conferences would be one way to start rebuilding trust.

Of course, we might start on a more modest level, to learn some of the ropes, before going national. Norman Vig, a Carleton College political scientist who has studied technology assessment throughout western Europe, recommends experimenting carefully in different U.S. institutional settings and at various governmental levels. For instance, the consensus conference methodology could be applied in a university setting, or at the state level on issues in science and technology policy pending before the legislature.

At least in the abstract, we Americans are fiercely proud of our democratic heritage and our technological prowess. But it is striking that we do virtually nothing to ensure that these twin sources of national pride are in harmony with one another. Consensus conferences are not a magic bullet for all that ails democracy or for ensuring that science and technology are responsive to social concerns. But they do reawaken hope that, even in a complex technological age, democratic principles and procedures can prevail and, indeed, extend into the technological domain.