When Jeremy Rifkin (author, The End of Work: The Decline of the Global Labor Force and the Dawn of the Post-Market Era) addressed the Winnipeg Social Planning Council last June, he outlined the key task of the next quarter-century: creatively rechannelling the vast store of human energy and talent which industry will slough off with the maturation of the Information Age. Failure to act with vision and determination will be catastrophic to both community and economy. Key to the recapture of these resources is the “first” sector: civil society.

THE FUTURE OF WORK & THE SOCIAL AGENDA OF THE INFORMATION AGE (I)

Jeremy Rifkin

We’re in the midst of a fundamental transformation in the nature of work. We’re moving out of the Industrial Age into the Information Age. Sophisticated computers, telecommunications, technologies, robots, and other intelligent machines are fast-replacing entire job categories.

So, if you’re a file clerk or a secretary; if you work in a stock room; if you’re a telephone operator, a bank teller, a librarian; if you’re garden-variety middle management; if you’re on the factory floor; if you’re in wholesale or retail - chances are your job is headed for extinction.

The best way to understand the gravity of this transition in history is to look back at the agricultural transition at the beginning of the century in Canada and the United States. A hundred years ago the majority of workers in both countries were on the farm. Today less than 3% of our workforce are directly engaged in farming. We have very sophisticated technologies producing more output than we can consume. Imagine had you said to a Canadian farmer in the last century that in the next century we will pay farmers in North America not to produce.

Now we’re experiencing a profound revolution of comparable sorts in the industrial sectors: manufacturing and service.

When I was a youngster in college, the United States was a blue-collar nation. In the 1960s, one-third of our workforce was on the factory floor. Today less than 17% of United States workers are in the factory, but we’re still the number one manufacturing power in the world. We’re simply doing it with less people, more machines.

U.S. Steel - big company. In 1980 this company had 120,000 employees. Today, U.S. Steel has only 20,000 workers. These 20,000 people are producing more steel than 120,000 people did 16 years ago. That, my friends, is the industrial handwriting on the wall. Ten years from now, 12% of our workforce will be on the factory floor. We’ll still likely be the number one manufacturing power.

By the year 2020, we will see the virtual elimination of the blue-collar factory worker from the pages of world history. We already have near-workerless factories. It’s long been assumed that if one
loses a job in the manufacturing sector, he or she can be re-trained for a white-collar job in the service sector. Now, as you know, all the major white-collar industries are de-constructing, re-engineering, and automating. Banking, insurance, retail, and wholesale - the big service companies are eliminating layer after layer after layer of management and infrastructure. They are flattening the old Corporate Pyramid.

Their goal is to create a new type of company called the Virtual Company. Actually, it’s more like a network of relationships than a formal organization. A very flexible, fluid network made up of a small entrepreneurial elite, a core professional staff, then a “just-in-time” workforce: a workforce that’s as ephemeral, flexible, transitory, and immediate as just-in-time invention, just-in-time production, just-in-time inventory, just-in-time markets.

That’s why we’re seeing the marginalization of permanent workers into temporary work, leased work, contingent work, contract work, outsourced work.

Sears Roebuck, a United States Company, eliminated 50,000 workers in 1993 in one day. Profits were up 10%. You have comparable stories to tell all over Canada. How many of you have relatives, neighbours, or friends who have been downsized out of a job in the last three years? How many of them have found comparable jobs with comparable benefits since they were laid off?

Now, why is it there’s a difference between the anecdotal evidence in every audience I speak to and the official unemployment statistics? Let’s not pick on Canada, let’s pick on the United States. We’re bragging that we’re lean, we’re mean, we’re competitive, and we’ve created millions of new jobs - you’ve heard this from south of the border. The President says we’ve only got a 5.6% unemployment rate. Yet, across the United States the number one issue with every American is job security. Everyone’s asking the same question: Will there be a place for me and my children in this new, global, Information Age economy? Sound familiar?

Why the difference between the public’s concern and the official government statistics? Here’s the reason. Those statistics do not tell us of all the millions of people who have stopped looking for work. If you stop looking, you’re not included in the official unemployment figures. That’s true here in Canada as well. In the United States, we call them the “Missing Men” - mostly men - five or six million that are out there, that are out of the loop. We have no official way to keep count of them anymore. Five or six million. In the United States, when you add up the number of people who have stopped looking with the number of people who have been moved from permanent to just-in-time work and are underemployed, our employment rate now hovers at 14%, the same as Germany.

I want to share one statistic with you: 75% of all the jobs in an industrial society can now replace it. Only 5% of the companies in the world have begun to re-engineer their infrastructure to accommodate the speed of the new technology revolution. Put those two statistics together and we begin to understand we’re only at the cusp of this technology revolution, only in the early years of a 5-decade transition in history that will be as profound as the shift from agriculture to the Industrial Revolution.

B y the way, let me deal with Pat Buchanan for a moment. He located the right issue, he just has the wrong analysis. You see every country has their Pat Buchanans, and their French Jean-Marie Le Pens, and their Zhirinovskys of the Soviet Union. We’ve got a new generation of ultra right-wing politicians emerging all over the industrial world. We should take them very seriously, because they are exploiting a vacuum. There is not an appropriate diagnosis of this technology revolution and because the economists and the politicians refuse to speak to what’s really happening - they’re either naive or disingenuous - that vacuum is being filled by the Pat Buchanans. They may find every convenient scapegoat to blame. It’s affirmative action. It’s gender-bias. It’s cheap labour markets abroad. It’s “The International Banking Conspiracy.” It’s the Jews. It’s the Blacks. It’s the United Nations.

One of the favourite target topics is the cheap labour abroad. In point of fact, in the United States less than 10% of the jobs that have disappeared in the last 15 years went overseas to cheap labour markets, primarily in textiles and electronics. Most of the jobs that disappeared were like U.S. Steel - we didn’t need the people, we put in the machines. But it’s hard to glean an emotional furor around a technology revolution, and I use this word very carefully, we’re sitting at the beginning of proto-fascist politics for the first time in my lifetime, since 1945.

I visit political leaders and business leaders and labour leaders all over Europe and America, and you can smell the ugly politics under the surface - the fear, the anger, the fury, the rage - because . . . people’s labour is no longer valued and needed. People are not just exploitable, they’re not even relevant. When your only identity is selling your labour in the marketplace, and that value is no longer needed, rage is under the surface. If you
know anyone who has been downsized, the most important cost is the emotional cost of their well-being, not the cost to the pocketbook, because our identity is so wound up in selling our labour in the marketplace that it is the only way we define ourselves. When somebody’s labour is no longer valued, they believe they’re worthless, and they lose all sense of personal esteem.

In the past when one sector mechanized a new sector has emerged in time to absorb the displaced workers. When agriculture mechanized, at the turn of the century, the Industrial Revolution was able to absorb some of those displaced workers. When the assembly lines began to mechanize in the ’50s and ’60s, the service sector emerged to absorb some of that displaced labour. Now all three of those sectors are automating, re-engineering themselves and we see lots of people being let go. And, true to form, there is a new sector emerging. This sector, the knowledge sector, is the sector that every politician and political leader I know is pinning hope upon hope will save us. They say we will create as many new jobs in this knowledge sector as we lose jobs in blue and white collar industrial work.

You’ve heard this argument in Canada. The knowledge sector - the scientists, the engineers, the professionals, the technicians, the consultants, the producers. Even if you could re-train the entire Canadian workforce for these knowledge sector jobs - which you couldn’t because it would take too many years of education - but, let’s assume for the sake of argument that everyone could be re-trained and upgraded in their skills. (And that’s what the politicians are saying: hang in there, simply upgrade your skills and you will find a place. Correct?) The problem is they’ll never likely be enough jobs in the knowledge sector in any country, to absorb the millions of people that go into traditional blue- and white-collar industrial work.

The reason is this, and this is the bottom line: what separates the Industrial Age from the Information Age? The Industrial Age needs mass human labour to produce goods and services. The Information Age, by contrast, relies on small, elite, and boutique workforces accompanied by highly intelligent machines to process goods and services in an automated marketplace. The Industrial Age ended slave labour. The Information Age will end mass wage labour. That’s the anthropological divide and the challenge and opportunity for us and our children. It’s a great turning point in history.

Well, about a year ago I had an opportunity to debate Dr. Laura Tyson as the Chief Economist at the White House. She said, “Jeremy, your thesis in The End of Work breaks down because you’re not anticipating all the new products, the new services, the new technologies that will be created on the information super highway. We don’t even know what they are yet. Surely the human imagination is limitless, we will create all sorts of new things. People walk. That will create markets and jobs.”

Compelling argument! After the show she reminded me that the horse and buggy lost out to the automobile and a lot of people lost their jobs in the livery trade, a lot more people found jobs on the assembly line. Why wouldn’t it be comparable in cyberspace along the information superhighway?

If some bright entrepreneur in this world were to come up with a new product line in the Information Age, something with universal appeal like television, you could manufacture that product in a near workerless factory. You could market that product with a near virtual company. You would create jobs at the high end - elite, very well-paid, but not mass labour. Success in this new sector will be measured by few and not more jobs.

I work with Fortune 1000 companies. I can tell you they don’t disagree with the diagnosis in my book. It’s the economists and politicians who are below the curve here. What they say is, “Jeremy, success in our sector, the knowledge sector, will mean few and not more knowledge workers. We’ll need the best engineers and architects. For garden-variety, computerized design’s already doing it. We’ll need the best doctors, lawyers and accountants, but garden-variety, we can have software do much of that work.”

A lot of the professional or technical work of the next century will be done by intelligent machines. That means we will have very well-paid jobs for the symbolic analysts, the top conceptual people out of the best universities. We will have a lot of jobs at the bottom end, menial labour that machines can’t do.

It’s the jobs in the middle that we created during the Industrial Revolution that are nowhere in sight and they created a middle class, a bourgeois culture, and a democratic revolution. What we are seeing around the world is the beginning of a deeply polarized humanity. In every country you can smell it when you get off the plane, you can feel it in the streets. The top 20% in every country are the information knowledge workers. They’re doing well. Hooked into McLuhan’s global village. Prior to the electronic marketplace.

I was just in Vancouver and Kelowna. Vancouver is the city state of the 21st century and there are people in Vancouver today who have more in common with
their virtual address than their geographical address. There are people there, professionals, who have a greater collegiality with their counterparts in Hong Kong and Paris than either have with someone down the street - two totally different worlds, because those at the top tier, they're not involved in geography, they're involved in cyberspace. Their world is a temporal world of the electromagnetic spectrum. They could be anywhere because their world resides in a computer and along the frequencies and waves of the planet. All they need to be is within a short hop, skip, and jump to the local airport. I see them when I get on the planes, all over the world, the new elite.

The bottom 80% of the workforce in every country is the industrial workforce from management to the factory floor being marginalized into temporary, leased, part-time, contingent, and contract work with lower wages against rising productivity. That’s where we have to look for both the challenges and opportunities.

Let me deal with this Information Age for just one more moment. The Vice-President of the United States, Al Gore (good man), he reminds us that his father was responsible in part for passing the Interstate Highway Act, which created the highway and suburban culture in the United States - lots of new jobs along the Interstates. The Vice President says won't we create comparable opportunities on the information superhighway?

Yes and no. Let’s take home shopping channels as an example, all right? Now God only knows who that consumer is. We may have a 100 shopping channels in Canada in five years from now with electronic cash interactive services. This will create jobs. Telemarketers, on-air hosts, writers, producers, technicians - very well paid.

One more example the Vice President uses. He says, “Look, our mind can create all sorts of new sciences and technologies and new industries. Look at biotechnology,” he says, “Here's an industry that did not exist 20 years ago. We have a whole new industry in Canada and United States around the world. Can’t we do more like this?”

Well you know how many employees have been created in this industry with all the government subsidies in every country? In the United States a grand total of 92,000 workers. You would have to create a new science, a new technology, and a new frontier for exploration every seven days. You could never catch up. It’s a difference between mass and elite workforces. It would bio-tech the microbes out of workers.

This technology revolution is a double-edged sword. It could lead and is leading now to a pretty grim future. I don’t have to tell you that. Most of you work in the communities, you’re up having to deal head on with these issues of unemployment, underemployment, homelessness, poverty, disease every single day. You’re on the front lines, I see it in your faces.

How do we turn this from a negative to a positive? This technology revolution could lead to a Renaissance, to a transformation of the human spirit, to a leap forward for civilization in the next century. We’re on the cusp of a technology revolution that could free up millions and millions of people from the toil of the marketplace. The problem is we’re not asking enough of this technology revolution. There’s no vision. There’s no mission.

You know it’s interesting. I have long been a critic of many technologies as you may know, but I find myself in the strange position of being the only optimist in this debate, guarded though it may be. The Alvin Tofflers, the George Gilders, the John Nesbeds, the Newt Gingrichs, to a person - no vision, no mission. All they can say is maybe you can re-train and tread water and not lose ground. In order to move from a negative to a positive and create the possibility for a Renaissance for our children, we have to be willing to ask two tough questions that the politicians will not ask as yet. You have to force them to ask:

1. What do we do with the millions of people who will be needed less or not at all in an increasingly automated global marketplace?
2. How do we begin a sober, spirited debate on how best to share the vast productivity gains of this technology revolution, so its benefits extend beyond the corporate elite to include everyone?

Every new technology is power. There’s a myth in this sector that technology is neutral, value-free, can be used for good or bad. You’ve heard this? One of the great myths of the century that allows us not to take responsibility for the introduction of these technologies.

Tools are power. Every tool is embedded with power. A bow and arrow gives me more power than my throwing arm. A locomotive gives me more power than my running legs. A computer amplifies certain forms of memory. Tools are embedded with power to allow us to exploit it so we can have an advantage. When power is exercised something wins and something loses. Built into the exercise of power is inequity. So whenever a new technology is introduced to help out society, the first question should be: How do we address the inequities that it creates?

Sometimes I feel like Chaunce the gardener in the movie Being There. This is so embarrassingly simple and obvious that I wonder why people ask me to come and say it to them. It’s kind of embarrassing isn’t it? (I told you that you wouldn’t need notes for this.) I’m serious - I wonder.
I want to share two object lessons with you. If we understand these pieces of history we can get a handle on what we should avoid and what we need to do.

The first object lesson is the 1920s. In the 1920s, the second industrial revolution kicked in and replaced the first industrial revolution. Electricity, oil, and assembly lines replaced steam-powered plants. The technology was dramatic, productivity soared, and employers said, “We can now start letting our workers go.” We don’t need them.” Then, one day, Henry Ford looked back at all the showrooms across the country. Lo and behold, the cars had been stacking up. He realized they had been firing their customers. Machines don’t buy goods and services, only people do. So he said to his fellow business people, “Gentlemen, perhaps we ought to re-hire these workers or who will buy my Fords?”

The business community did not listen to his sage advice and that was probably one of the few pieces of sage advice this man ever had. I’m not a fan of Henry Ford, for various reasons, but the business community decided - in the United States, at least - to listen to the United States Chamber of Commerce (I don’t know what they did up here) and the Chamber of Commerce said, “Look, let’s not worry about those who are unemployed. We can’t do anything about that. Let’s concentrate on those who are still working and get them to save less and buy more to jump-start purchasing power.” So, they created the first mass-marketing and advertising campaigns of the 20th century, and they zeroed in on the first and second generation of immigrant families.

They said to those youngsters growing up in America, “It’s embarrassing to be like your parents, those immigrants, they still make things at home. That’s old-fashioned. That’s European. That’s inappropriate. You want to live in America, you buy store-bought brandnames.” They embarrassed an entire generation into buying at the store. They ended home production, and the banks sweetened the kitty by saying, “We’ll install a new venue called instalment credit to help you out.” By 1929, those who were still working were so in hoc, so extended on credit, the market crashed. The rest is history.

And, you should know that at the height of the depression, employers in 1936 were still replacing people with machines to try and get more out of a smaller and smaller market, adding fuel to the fire and firing more customers. And in 1939, on the eve of the great New York World’s Fair the Harris survey asked Americans, “What is the chief reason for this Depression?” The majority of Americans understood it quite well: technological displacement of human labour.

Let’s not kid ourselves as to what got us out of the Depression. The business community economists like to call it trickle-down technology: “We created new markets, new opportunities, new jobs.” Some, but not a lot. What got us out of the depression:

1. The Japanese bombed Pearl Harbor and saved our economies.
2. We created a military industrial complex after the war subsidized with government funds.
3. The surplus labour was hired on as public employees. Government workers in every country. That’s what absorbed the displaced labour.

Let’s share one other object lesson with you that you won’t know about. In fact, Americans don’t know about it (most Americans). To understand what happened to the African-American community in the 1950s is to have a clear picture of what’s in store for everyone else, unless we act, and act fairly quickly. Their story is now everyone’s story, and it’s the best-kept secret in America. African-American families know it but no-one else knows it. Let me share this with you.

In 1945 the majority of African-Americans were in the South yolked to a share-crop system. Political emancipation after the Civil War did not lead to economic emancipation. But in 1945 we saw the introduction of the mechanical cotton-picker in the Mississippi Delta. It freed up Black labour from the fields. Two or three years later, the chemical companies introduced defoliants. You didn’t need black hands to weed. No longer exploitable, they were redundant and no longer necessary in the South.

Within 10 or 15 years, six million African-Americans moved North in what Nicholas Leeman, author of The Promised Land, called “one of the great migrations in peace-time history.” Here’s what we forget. In the North, black men found jobs - good jobs in steel, oil, rubber, chemical refineries from Los Angeles to Chi-
chicago to Detroit to Minneapolis to Boston. These were unskilled jobs, factory floor jobs at the bottom of the pyramid, but union paid work. And any African-American family will tell you, there was family life, there was income, there were flourishing communities. What happened to the African-American community in the United States? Funny how we never ask. Did it just self-destruct on its own?

In the late ‘50s, American employers dropped two shoes which changed the course of history for African-Americans and the rest of our country. First, employers introduced the first technology of the Information Age on the factory floor. It was called “numerical control.” It replaced the very unskilled work that black men held in the factories. Then employers dropped the second shoe. They began to suburbanize their plants along the new Interstate Highways. They were anxious to escape the militant trade unionism of the cities. It started with the River Rouge plant in Detroit.

The combination of automation and suburbanization locked the black labour force in the inner cities - trapped, irrelevant, redundant, not exploitable, and increasingly invisible. And you remember, you older people, the riots began in Watts and moved to Detroit in the mid ’60s. The cities burned and White America said (and you were probably looking at that and saying), “What is going on down there?”

What happened was this: this was the first group to fall victim to the Information Age economy. Thirty years later, a million African-American men march on Washington. Behind the dysfunctionality, the loss of families to drug abuse, to crime - no jobs. Out of the loop, not even exploitable under our economic system.

Today one out of every three African-American men in the United States of America between the ages of 18 and 33 is in jail, on parole, or awaiting trial. We’ve incarcerated an entire people. That’s just the beginning unless we come to grips with that story because it’s now our story. It’s everyone’s story because the technology revolution is now moving up the ladder to skilled work, to service work, to middle management, to upper middle management in every country in the world.

I have hope that we can turn the corner. Guarded hope. Some of it lies with what I have been learning lately inside the business communities, surprisingly enough. Would you like me to share with you what business leaders say privately? I teach them and I get the inside scoop.

There is a lot of greed at the top, it’s a winner-take-all mentality. Below CEO everybody feels like you do, that they could be cut tomorrow morning. The CEOs, they’ve got the money, they’ve got the parachutes, they’ve got the stock options. They could be out tomorrow, it wouldn’t make any difference. Below that level everyone’s vulnerable, scared to death. It’s true that in most companies you’re rewarded for going to the board room and saying, “I got a way to cut the labour costs for the next quarter. We can replace so many people with so many machines. They’re cheaper, we can reorganize the structure. I guarantee you our stock will go up on the market” - and I will be promoted.

The problem is now they’re beginning to experience a disquieting trend on the aggregate level. I just doubled the micro level. They’re beginning to realize they are losing purchasing power across the entire economic landscape. They have marginalized so much of the workforce that there isn’t enough purchasing power to empty the inventory. The dawning awareness came at the Christmas shopping season. It was stagnant, it was a bust. The high technology goods were being bought, like computers, by the knowledge sector, but no one else was buying.

The second Achilles heel. Every employer I know would rather have a small workforce on time-and-a-half than pay a larger workforce with a full benefit package. Same here in Canada? What’s the main benefit? Pension funds. Retirement funds.

Here’s the problem. When you marginalize your workers from permanent benefits to just-in-time employment because you don’t want to pay that pension fund you lose the chief source of investment that keeps the capitalist system alive around the world. It’s not the Bronfms, it’s not the Steve Forbes that maintain the market, it’s you! It’s millions and millions of people across the world, from management to the factory floor whose pension funds are the chief source of capital for the world’s markets.

In the United States those funds are worth $5 trillion - trillion. Globally, you have a lot of pension funds up here - the funds are worth $8 trillion. Surprising, isn’t it? The workers own, but they don’t control the means of production. So the ultimate irony is that banks and insurance companies use all of our money to invest in machines that take away our jobs and our pension funds. Kind of a Catch-22. These funds are worth more than all the commercial assets in the United States banking system. In the United States our funds represent 72% of all the savings in the country, and they own 30% of the stock market and 40% of the bond market.

So, when employers marginalize their workforces, they lose purchasing power at one end and pension fund investment capital at the other, and these two Achilles heels warp all the discussion in Ottawa and Washington about deficits and debts and lowering interest rates. Yet there isn’t a politician in this country or the United States that would put this on the political agenda. Every business person I know privately understands this. Interesting.

In our next issue, Jeremy Rifkin sketches out the terms under which the corporate, public, and community sectors could turn technological displacement to society’s benefit. Reproduced with permission of the