

Y2K: On Planning for the Unforeseeable

By Rich Ahern
with research by Alan Lewis

I. Why2K?

The many difficulties of dealing with the Y2K problem begin with its name. Y2K is clever shorthand for saying that, at 12:01 AM on January 1st of the year 2000, an unknown and unknowable number of personal computers, mainframe computers, and embedded systems (microchips), will malfunction, with unforeseeable consequences. Areas of potential impact include banking, transportation, manufacturing, telecommunications, electrical power, oil and gas supply, and more or less everything characteristic of modern technology-based civilization. The potential severity of these breakdowns, and the "domino" or ripple effects that they may precipitate, ranges from negligible—a "bump in the road"—to catastrophic.

The problem stems from the practice in past years of programming computers to read 4-digit years as 2-digit dates in order to save what was then precious storage space. When 12-31-99 rolls over to 01-01-00, unfixed computers will assume that the date still refers to the 20th century—1900, not 2000. Then, depending on many variables (precise hardware and software in use, specific application, etc.), the computer may produce faulty output, or just plain freeze up ("crash"). The problem is on the one hand trivial, in that it only involves this minute matter of two dropped digits, and on the other hand vast in scope, in that it is deeply embedded in millions of different physical machines, and hundreds of thousands of software applications, consisting in sum of hundreds of billions of lines of code.

There are further complications. In some instances the original code (the "source" code, in programmer-speak) has been lost, so it cannot be remediated. In other instances the original code is available but written in antiquated languages no longer used, and for which programming expertise is difficult or impossible to come by. In most instances the remediation programs were started late and were underfunded, understaffed, and mismanaged. In many instances there is no remediation program underway at all, and in almost all instances there has been a failure to appreciate the scope and difficulty of the problem. It is a colossal mess.

But Y2K is not just a January 1st 2000 gremlin; the problems have already begun. Throughout 1999 are rollover dates that may prove to have significant impact on computer functions: new fiscal years for most governments and corporations begin on April 1st, July 1st, and September 1st. September 9, 1999—a.k.a. 9/9/99—might also cause problems in some systems, as programmers sometimes use strings of 9's to designate end-of-file, abort-program, or other "special" functions. On August 22nd, the Global Positioning Satellite (GPS) system will roll over to zero, with potential impact on ground-based military and civilian devices that require precise location, velocity, and time data (e.g. planes, helicopters, trains, ships, fighting vehicles, missiles, police cars, ambulances, tractors). There is concern for February 29, 2000, which is not a normal leap year date; many programmers were unaware, and did not account for, this once-in-four-centuries exception to the rule. Related to that, on December 31st, 2000, some computers will not recognize that the year 2000 has 366 days. Thousands of firms and smaller governmental bodies that will not have repaired their systems in time will be racing to do so throughout the year 2000. Indeed, one expert has predicted that 92% (such precision!) of the problems will occur after January 1st, 2000. The effects of Y2K could ripple on for years or even decades into the next century. Only time will tell.

II. Y2K: A Multi-Faceted Problem

The part of the Y2K problem that draws the most attention from analysts, management, politicians, the media, and laymen alike, is the vast base of software applications with date functionality that requires remediation, installed on millions of desktop computers, legacy mainframe computers, minicomputers, network servers, and so forth. A leading computer consulting and analytic firm, the Gartner Group, estimates that globally 180 billion lines of software code will have to be screened [*Fortune* magazine, via *Awakening*]. Correcting "all Y2K-affected software would require over 700,000 person-years", estimates Capers Jones, President of Software Productivity Research [quoted in *Awakening*].

For a large organization, the process can be exceedingly complicated, involving the stages of building awareness, planning, taking inventory, triage (deciding which critical systems need fixing first), assessment (of time, cost, resources), resolution (repairing, re-engineering, retiring and replacing systems, and creating "bridges"), testing, deployment, and fallout (quality control, and so forth), [based on "How to 2000", by the Raytheon team]. What might seem to be the shortest stage, testing,

Please Note:

When we say "we" we refer primarily but not entirely to the principal author of the essay. Because of time pressures in preparing the essay, there was not the opportunity to cooperatively edit and reach consensus on all aspects of it. However, by and large it does reflect the views of the Ad Hoc Working Group. A modified version may be developed later with fuller group participation.

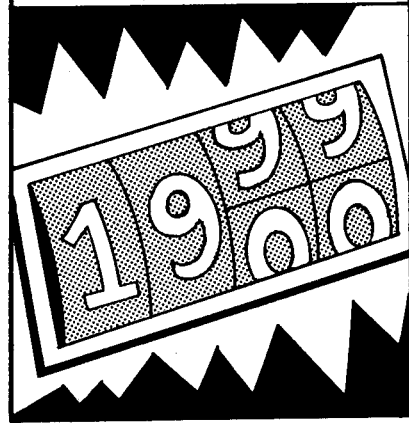
While we hope that the overall spirit of our contribution would be embraced by other members and friends of the Huron Valley Greens, it does not necessarily reflect the considered views of the Greens in all respects.

THIS MODERN WORLD

THE END OF THE MILLENIUM
HAD FINALLY ARRIVED.

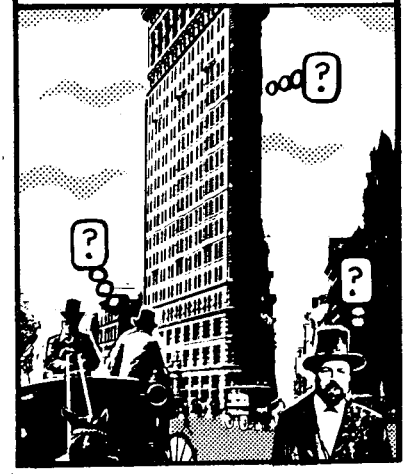


AT THE STROKE OF MIDNIGHT,
DEC. 31, 1999, COMPUTERS
EVERYWHERE SET THEMSELVES
BACK AN ENTIRE CENTURY--

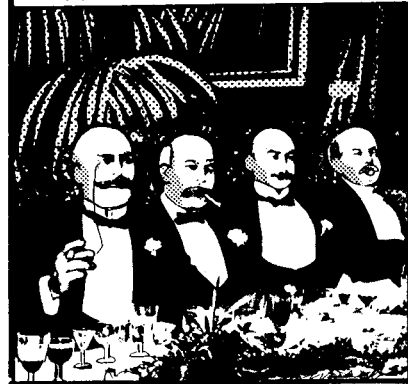


by TOM TOMORROW

--AND UNEXPECTEDLY TOOK ALL
OF SOCIETY BACK WITH THEM.



AMERICANS FOUND THEMSELVES
THRUST INTO A TIME IN WHICH
VAST WEALTH AND RESOURCES
WERE CONCENTRATED IN THE
HANDS OF A VERY FEW--



--WHILE THE MOST BASIC NEEDS
OF THE INDIGENT AND THE
WORKING POOR WERE ALL BUT
IGNORED.



OBVIOUSLY, EVERYONE FELT
RIGHT AT HOME.



should ideally be allotted an entire year itself, at least for large institutional systems—a luxury that few organizations have allowed for.

If only such systems were all that needed attention, there would be good cause for great anxiety. But another part of the problem receives far less attention, even though it also has the potential for causing widespread disruptions. We have seen estimates that there are anywhere from 20 to 70 billion embedded microchips, not counting those in computers recognizable as such, but in everything from elevators to tankers, hospital equipment, railroads, airplanes, manufacturing equipment, electric power plants, and so forth. Somewhere between 1% and 5% of embedded systems are thought to be "date-sensitive microchips in embedded control processes", [Victor Porlier], sometimes embedded in concrete, underwater, in off-shore oil rigs, or encased in steel in railroad switches, and other devices. There simply is not enough time nor person-power available to begin to detect and correct these billions of chips.

A third type of problem involves the exchange of electronic data within and among institutions. There is the danger that if one system is fully compliant and another is not, the compliant system could be "infected" or "contaminated" by transfers of incorrect dates or other data. Some analysts fear that fully Y2K-compliant systems of even the largest institutions could thereby be rendered non-compliant, thus negating the effects of the many millions of dollars and countless hours expended over years in a massive effort to fix and test the problems in good time. There are stop-gap measures (bridges and patches) to prevent such a disaster from occurring, but unless all computer interfaces are protected, and all co-communicating institutions are compliant, there is still the possibility that critical mishaps could occur.

That leads us to still another problem: that of "supplier-customer dependency chains", [Victor Porlier]. General Motors, for example, does business with upwards of 50,000 independent firms. Like nearly all large-scale competitive enterprises today, they operate with slim inventories on a "just-in-time" delivery basis. We have seen how, in 1998, if only one plant for any reason closes down, their entire North American production line can soon be shut down. Multiply this threat by all of the large firms in all industries throughout the U.S. and we realize that we will be very fortunate indeed if no major disruptions occur in the American economy.

The Y2K problem is often called the "Millennium Bug", but that's too cute; "Millennial Dinosaur" or "Millennial Octopus" might be better similes. "Millennial Bomb" and "Timebomb 2000" imply a sudden explosion and collapse, which could be the case, but if the situation does become severe, it could just as easily result from an incremental erosion of present conditions.

III. The Global Context

When reading the reassuring words of the Chairman of the President's Y2K Council, John Koskinen, and some other spokespersons, one tends to relax a bit, until one recalls the abysmal global lack of Y2K preparedness. The U.S., Canada, Great Britain, Australia, and a half-dozen smaller, mostly

northern European nations, fall into the most advanced of four Y2K compliance categories [*Business 2.0* magazine, Jan 1999], meaning only 15% of companies in those countries will suffer at least one mission-critical system failure. Most European-Union nations, including Germany and France, have been so preoccupied with conversion to the Euro currency that they lag far behind in their Y2K preparations. The Russian government has budgeted no money at all for Y2K problems and has appealed to "NATO to help fix computers that control Russia's nuclear weapons" [AP]. Russian nuclear power plants and gas pipelines are highly vulnerable.

China, most of southeast Asia, and virtually all of Africa, are in the lowest preparedness category, in which 2/3 of the companies are expected to suffer at least one mission-critical system failure. Chinese power systems, mid-East shipping, and the economies of some developing nations could face breakdowns. With Japan's economy in severe recession, and inadequate funding so far available for Y2K, even Japan could suffer serious problems.

Business 2.0 quotes Deutsche Bank's Ed Yardeni as saying, "If Brazil's telecommunications lines malfunction during 2000, this alone could cause disruptions in the global just-in-time production system severe enough to trigger a global recession". It is hardly comforting to learn that (according to Merrill Lynch) Brazil's telephone monopoly as of mid-1998 was indeed reported to be "woefully inadequate". Yes, we do live in an interdependent world of economic globalization, and therein lies perhaps the greatest threat to the foundations of our "bridge to the 21st century".

Y2K does not exist in a vacuum; domestically and globally it is but one of a great number of interconnected problems, sometimes referred to as "the global problematique"—the sum total of all global problems.

A few years ago there was a palpable official sense of smugness about the trend of events. The cold war had seemingly magically dissolved; capitalism now reigned unopposed around the world; Francis Fukuyama proclaimed that meant "the End of History"; George Bush announced the advent of the New World Order; and Bill Clinton has never ceased to extoll the strength and supremacy of a righteous America.

But behind the rhetoric stands the bleak reality. It would be unnecessary to remind ourselves of the true state of the Union revealed by social indicators, if every presidential State of the Union message since Jimmy Carter's did not paint such a false picture which then becomes "conventional wisdom" in the media and subsequently so in popular opinion.

The high rates of incarceration, incidence of crime, both legal and illegal drug abuse, racism, suicide, divorce, homelessness, lack of adequate healthcare, political and economic illiteracy, anxiety over job security, obsolete infrastructure, environmental degradation, depletion of resources, the state of ethics which reflects—along with postmodern philosophy—the collapse of belief in the validity of the foundations of truth, beauty, goodness, and sense of purpose... all of these and more form the domestic background for consideration of the possible impacts of Y2K.

Globally, the ever-widening gap between rich and poor nations, and between rich and poor people within all nations, reveals the Achilles heel of the post-cold war world disorder. It cannot go on endlessly without reaching the breaking point of human resilience. The rosy image of "developing na

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tions" has turned grey with the realization of their burden of endless debt, coupled with the inhumane imposition of "structural readjustment" that impoverishes their people. The "Asian Miracle" collapsed; Africa and the Balkans are in turmoil; distress in Russia continues unabated. The planet is groaning under the stress imposed by endless economic expansion and population growth.

Even this abbreviated reminder of the fragility of the real world disorder should be sufficient warning that the specter of widespread civil unrest and global economic collapse is real, even without the repercussions of inevitable Y2K-related failures that threaten to be the spark that ignites the potentially explosive forces compounding the problems of world peace, prosperity, and social justice.

IV. What's Being Done and Not Being Done

While the majority of people are doing little or nothing at this point to prepare for Y2K, the Federal government and the largest corporations have been taking the problem very seriously; it is big business. The Gartner Group has estimated that worldwide, \$600 billion will be spent to correct the problem; half of that cost will be borne by the U.S., and a tenth of that, or \$30 billion, by the Federal government. Others have estimated the global cost might reach \$1 trillion. Capers Jones has estimated the ultimate cost of modification over 50 years will be more than \$5 trillion—a figure comparable to the current U.S. national debt.

The cost of litigation over Y2K-related failures, wrong advice, failed correction procedures, and unmet obligations, has been estimated to reach \$1 trillion, a bonanza for law firms but a huge loss for business. Ironically, the legal profession is at the very bottom of the heap of all 25 economic sectors in their rate of progress towards correcting their own Y2K problems. Medical practices are the next lowest segment.

"But think what all that work will do for the GDP!" Yes, it will rise as a result, which just shows how inaccurate the GDP and GNP really are in terms of measuring the benefits and liabilities of economic growth. But the indirect economic and social costs of Y2K could be far greater than the sum of expenditures for correcting Y2K. Some analysts fear that real productivity will drop, due to the diversion of human and material resources to fixing Y2K, bringing with it a serious recession.

World Oil magazine [via YES! magazine, spring 1999], "reported last year that oil and gas firms are likely to fix less than 30% of the systems that could potentially fail on January 1st, 2000." Although 95% of telephone systems are expected to be ready, other utilities, transportation networks, hospitals, agriculture, food processing, and

the construction industry are lagging behind. Lufthansa airline has reportedly cancelled flights at the beginning of 2000, and other airlines may follow suit, especially to countries where airports are judged to be non-Y2K-compliant. Some insurance companies have notified airlines that such flights would not be insured. Insurance premiums for loss of business due to Y2K problems is now costing up to \$330,000 per year for every \$1 million worth of protection, which does little to persuade us that Y2K problems will be in the negligible category.

As for the Federal government, John Koskinen maintains that 90% of federal computer systems will be ready for the March 1st 1999 deadline set by President Clinton. Social Security and the Veteran's Administration are among the best, while the laggards include such important departments as the Department of Defense and the State Department. The 90% figure sounds pretty promising until we recall that that leaves only 9 months for testing rather than the recommended one full year; and testing is reportedly the hardest part of computer compliance.

Of those governmental agencies and other institutions, both large and small, that are paying full attention to Y2K, it appears from recent reports, other than from Mr Koskinen, that few are on schedule; "on schedule" usually refers only to mission-critical systems, not those that would merely cause inconveniences or that could be fixed at a later date without serious interruptions. But even computer hardware and software that have been "fixed" are well-known frequently to develop glitches in other areas. "Using industry benchmarks, every million lines of code you change will introduce 100 to 1000 undetected errors" [Year 2000, Dick Lefkon, editor].

While big business and big government have been engaged in correcting Y2K problems for up to a decade, surveys have indicated that half of all small and medium sized businesses and half of all municipalities in the U.S. are so far doing nothing to cope with Y2K; many of them are not even planning to do anything, preferring to adopt a "wait and see" or "fix on failure" approach. Half of the people in the country have no intention at this point of preparing for the possible disruptions. There is great concern that many of the firms that are unprepared could not fill orders in time, nor pay bills, nor meet payrolls, resulting in many thousands of bankruptcies. Unprepared municipalities could fail to deliver essential services. Complacent individuals and families could lose their complacency rapidly should failures occur.

There is grave concern over the possibility that, as January 1st, 2000 approaches, people might panic and rush to hoard food and other supplies and to take extra cash out of the bank. To prepare for a possible run on the banks, the Federal Reserve has stockpiled an extra \$200 billion cash, about a third more than usual (AP). Alan Greenspan has advised leaving one's money where it is. Nevertheless, surveys show that a third of all Americans plan to stockpile food, fuel, generators and other supplies and equipment, while a half are planning on taking extra cash out of the bank. Some people are moving to smaller communities or buying land in the country; others are buying gold and silver and preparing to barter goods in case the economy collapses. An unknown but presumably substantial minority of Americans have bought or plan to buy guns and ammunition to protect themselves from looters desperate for food and water.

Needless to say, in light of these indications, we are alarmed at the low levels of pro-active preparedness for Y2K at the community level. It behooves us to raise the ante and do more. If the optimists are right and Y2K becomes a non-event, we will still have gained a great deal in terms of our proven capacity to work together towards a common goal. (Y2K is not the only crisis on the horizon!) And if the pessimists prove to be the better prognosticators, then our preparations will prove to be invaluable. Either way, we can't lose.

V. On Conceiving, Interpreting and Evaluating Scenarios

The groundwork has now been prepared for consideration of the range of impacts of the Y2K threat.

We will consider below four scenarios—negligible, moderate, severe, and catastrophic. The last may seem extreme, but as a point of reference consider that some pessimistic scenarios call for several possible levels of severity beyond even the catastrophic: "apocalyptic" and even "unimaginable" (a total meltdown followed by irreversible devolutionary spiral). Hence our lower limit of "catastrophic" is far from the perceived absolute-worst cases.

It is ordinarily assumed that expectations of each scenario will elicit commensurate preparations, but clearly this is not always the case. A person, family, community, or nation may anticipate catastrophic impacts, but be so economically deprived that the only possible preparedness level would be in accord with the "negligible" scenario. Conversely, one might reasonably anticipate negligible impacts but, being of a cautious nature, and having ample resources, prepare for severe or even catastrophic outcomes. Physical and mental capacities, time available to make preparations, and level of awareness, could also influence one's level of preparedness.

Another common assumption we find is that the extent of the breakdown of computer systems and/or technological infrastructure will be commensurate with its impact on institutional and individual human well-being. Again, this is not necessarily so. It depends on whose assessment is applied. A revolutionary Marxist, Trotskyist, Maoist, could well feel triumphant seeing widespread economic collapse, believing that would be the signal for their cadre to assume its role in bringing about the dictatorship of the proletariat. A Christian fundamentalist might be overjoyed with an apocalyptic event, believing that the time had come for The Rapture and 1000 years reign of the Christ. But such extremes are not the only examples. Millions of adherents to New Age beliefs would view destructive forces as the necessary cleansing of the old to make way for the new, while many cyberphiles already welcome the crisis as the opportunity to create a new, more coherent, still more-sophisticated, state-of-the-art cyberspace wonderland.

Additionally, people's perceptions of the Y2K issue are powerfully influenced by anxiety, frustration, fear, anger, denial, and ignorance that frequently accompany major uncertainties, ambiguities, and complexities; we often face these emotions and attitudes when explaining our views to others for the first time.

There are a number of other qualifications that could be made, but the point we wish to make is that people, whether laymen or experts, whether others or ourselves, build, interpret, and evaluate scenarios based on many factors other than logic and facts of the case. When the ambiguities are great, as they are in the case of Y2K, we must remember to be particularly cautious, indeed humble and respectful of others' opinions, and willing to adopt them as our own when the weight of the evidence or of logic shifts to their side.

VI. Four Possible Y2K Scenarios

1. **Negligible.** We find that, in general, those who are the least knowledgeable on the Y2K issue tend to be the least concerned. That does not mean they will not be proven to be right when all is said and done. And there are

consultants with considerable expertise who anticipate only minimal inconveniences. Still, how should we react to the switch-around in only one month's time of consultant Peter DeJager, one of the earliest doomsayers who, after writing to President Clinton, warning of the impending severity of the Y2K crisis, only one month later expressed barely minimal concerns?

Some of the comments we have heard from typically unconcerned citizens run something like these: "Bill Gates will take care of it!" or "Those people who design computers are so bright there is no way they won't find a solution." Faith in technology and the "invisible hand" is a recurring theme; faith in progress, defined in material terms, is a variation on that. We see these as soon-to-be-outmoded 20th century religions that lie behind the incredible end-of-the-century computer glitch fiasco in the first place. There simply are not enough knowledgeable computer specialists in the world to solve all of the problems in time to avoid serious disruptions. The U.S. is already attracting computer programmers from Mexico, India, and elsewhere to help with the problem. With demand exceeding supply, the compensation being paid for people with relevant computer skills is skyrocketing. Some institutions simply will not be able to afford the cost of making corrections before the deadlines.

Victor Porlier, in his book, *Y2K*, lists a number of reasons why so many people are not worried about Y2K: media coverage has been poor; there is resistance to bad news; there is a tendency to disbelieve dire warnings; many people are accustomed to trusting authority; they have seen floods, tornados, hurricanes, power outages, and ask "how bad can it get?... we get through them"; and finally, it's just too complicated. People find it difficult to grasp the interconnectedness of the problems.

2. **Catastrophic.** At the other end of the spectrum is the doomsday or catastrophic scenario, sometimes referred to as TEOTWAWKI: The End Of The World As We Know It. Trains wouldn't run, planes wouldn't fly, ships wouldn't sail, and trucks and cars would have no fuel. The electric power grid, telecommunications, water and sewage disposal systems would all fail, and garbage would pile high on the streets. People in urban areas would soon have no food, no water, and cities would be dark. Nuclear power plants and nuclear missile systems would malfunction. Governments would not be able to provide basic services and martial law would be declared to suppress the riots after banks were shut down and the economy collapsed.

The chief promulgator of a scenario akin to that is Gary North, who has a "larger agenda of Christian Reconstructionism, an outgrowth of Calvinism" [reports *Business 2.0*, March 1999]. Its "advocates call for the imposition Old Testament-style theocracy, complete with capital punishment for adultery, homosexuality and blasphemy. North calls for the execution of women who have abortions and those who advise them to do so." North is married to the daughter of the leader of Christian Reconstructionism, theologian Rousas John Rushdoony.

North believes that "the Y2K crisis ... will wipe out every national government in the West. Not just modify them—destroy them. I think the U.S.A. will break up the way the U.S.S.R. did. Call me a dreamer. Call me an optimist. That's what I think. This will decentralize the social order. That is what I have wanted all of my adult life. Just don't be in a city when deliverance comes" [from an email to Steve Davis, who published it on his website; via *Business 2.0*].

North's predictions are obviously based less on evidence than on his wishful thinking. This scenario would be more believable only if nothing at all were being done to confront the Y2K challenge. Needless to say, even if this scenario were to come to pass, North's evil "larger agenda" would be wholly unjustifiable. Therefore, we do not recommend preparing to deal with this scenario.

It needs to be added for balance that Gary North's website, in our estimation, is one of the most fruitful sources of information available.

THIS MODERN WORLD

by TOM TOMORROW

1999
A LOOK BACK

AH, TO RE-LIVE THE YOUTHFUL EXUBERANCE OF THOSE GLORIOUS, CAREFREE DAYS!

HEY--REMEMBER HOW THE MON-ICA VIRUS INFECTED OUR BRAINS THAT YEAR?

THE FIRST VICTIMS WERE TV NEWSCASTERS...OF COURSE, NO ONE REALLY NOTICED ANYTHING DIFFERENT AT FIRST...

OUR TOP STORY TONIGHT--A FIVE CAR PILEUP ON INTER-STATE 80!

SOURCES SAY THE CRASH HAD NOTHING TO DO WITH THE PRESIDENT'S SEX LIFE! FOR MORE ON THE STORY, LET'S GO LIVE TO THE WHITE HOUSE!

ACTION McNEWS ACTION McNEWS ACT McN

...BUT SLOWLY, WE BEGAN TO REALIZE THAT THE PRESIDENTIAL SEX SCANDAL HAD BECOME IN-ESCAPABLE -- NO MATTER WHERE WE TURNED...

"Daddy says cigars are okay -- as long as you don't inhale!"

...AND THAT NONE OF US WERE CAPABLE OF COMPLETING A SENTENCE WITHOUT MENTIONING IT SOMEHOW...

I'M HOME, DEAR! WHAT THE PRESIDENT DID WAS CLEARLY WRONG -- BUT IT DIDN'T RISE TO THE LEVEL OF IMPEACHMENT!

YES, BUT WHAT KIND OF EXAMPLE DOES THIS SET FOR THE CHILDREN? AND HOW WAS YOUR DAY?

SCIENTISTS THEORIZED THAT OUR ENTIRE SOCIETY WAS SUFFERING FROM SCANDAL OVERLOAD SYNDROME... BUT BY THAT POINT, THEY WERE IN NO CONDITION TO DO ANYTHING ABOUT IT...

MUST CONCENTRATE... MUST FIND A CURE... IT WASN'T ABOUT SEX-- IT WAS ABOUT THE LIES!

MAYBE IF WE JOLTED THE SYNAPSES... WITH ELECTRICITY... BUT WE ALL LIE ABOUT SEX!

THEN, OF COURSE, THE Y2K GLITCH CAUSED OUR COMPUTERS TO GO HAYWIRE AND WE WERE ALL ENSLAVED BY KILLER ROBOTS.

WE SURE DIDN'T SEE THAT ONE COMING! OH WELL-- AT LEAST IT TOOK OUR MINDS OFF YOU-KNOW-WHO...

CEASE YOUR CHATTER, BIOLOGICAL UNITS --OR BE DESTROYED!

MUST CONCENTRATE... TOMORROW'S Y2K...

1-20-99 © TOMORROW'S Y2K... MUST CONCENTRATE... TOMORROW'S Y2K...

There are two scenarios which we do take seriously.

3. **Moderate interruptions of normal life.** This is the officially-sanctioned point of view, involving regional, short-term power blackouts, scattered water and sewage problems, limited banking and financial problems, etc. The Red Cross and Federal Emergency Management Agency, for example, advise having food and supplies on hand for a few days to a week. This is the also the most likely possibility, according to the media and most institutional representatives.

The current Senate select committee report on Y2K states that some level of economic disruption is inevitable: "This problem will affect us all individually and collectively in profound ways ... It will indeed impact the individual businesses and the global economy. In some cases, lives could even be at stake ... Those who suggest that it will be nothing more than a 'bump in the road' are simply misinformed." [Senator Robert Bennett, (R-UT) and Christopher J Dodd (D-CN), in a report on the Year 2000 computer problem to be released in March 1999; see <http://www.mercurynews.com/breaking/docs/022975.htm>]. The report was characterized as "low-key".

The Senate report also states that there is no national strategic plan to assure that crucial infrastructures will continue to function. Neither is there a national contingency plan in the event of widespread infrastructure failure [Detroit Free Press, Feb 24, 1999]. Precisely. Paying attention to Mr Clinton's peccadilloes has captivated the government and the citizenry while critical issues, of which Y2K is only one, have been marginalized.

John Koskinen is quoted as saying, "as it becomes clear our national infrastructure will hold, overreaction becomes one of our biggest remaining problems". But to us it is not at all clear that our national infrastructure will hold. And we believe the best way to avoid overreaction is to be well-prepared as communities for major disruptions. "Better safe than sorry."

We consider the moderate interruption scenario to be very believable. 4. **Severe disruptions.** We also think that this scenario is supported by sufficient evidence and logic to justify reasonable preparedness in case it occurs. It envisions deprivations of basic human needs on the order of great national disorders, but nationwide.

We remember the dire warnings of imminent disaster when the Comet Kahoutek passed close to earth; nothing happened. Then New Agers were agitated over the prospects of major disruptions in anticipation of the planetary conjunction; nothing happened. On the other hand, Dick Lefkon reminds us that after AIDS was recognized as a threat to the general population in 1985, it took

11 years of significant funding to bring forth medicines that could effectively combat the disease. And metric conversion in the U.S. never was completed, even with a 20-year deadline.

Fears based on astrological phenomena are one thing, but they can hardly be compared to the substantial realities of life right here on earth that portend the potential for major Y2K-related disruptions. The possibility, perhaps probability, of economic recession cannot be easily dismissed. Disruptions abroad are certain, and could endanger domestic tranquility. The soothing pronouncements of the President and certain high government officials must be read against the background of countless distortions and outright lies that run through the entire 20th Century, in our nation as well as elsewhere. We ought not take such opinions at face value, but must constantly compare opinions from extreme sources as well as from the more moderate spokespersons.

VII. On Planning for the Unforeseeable

There can be no scientific or totally logical resolution to the Y2K problem. Rational problem-solving requires sufficient reliable evidence in order to justify conclusions. But it should be clear by now that there are vast discrepancies in the estimates and opinions of people who are knowledgeable on the Y2K issue. Science depends on theory, which in turn must be based on repetitive cases for verification or refutation of its findings. But Y2K is obviously unprecedented. Analysis in this case is far more of an art than a science. There is no way to predict, with any degree of certainty, the outcome of the Y2K crisis. At best we can judge that a rather broad range of possibilities of intermediate severity is likely.

Rather than engaging in the textbook rational planning model that leads inexorably towards only one solution, we will need to become familiar with the many complexities of contingency planning. Much as we human beings prefer simple solutions, there are times when complex problems cry out for complex solutions. To oversimplify in the face of complexity can lead to counterproductive activities that can be worse than not planning at all.

We realize that this will be an unwelcome approach for a society that demands certainty and has had, until recently, such grand faith in "progress". Contemporary thought, however, is beginning to become accustomed to chaos theory and the mystery of the ways in which nature seems magically to evolve order out of chaos. As for progress, the GNP, the GDP, economic growth, and other social indicators, they are all already in the process of being redefined in our collective goal to create sustainable futures.

We see this development not necessarily as a loss, but potentially as a gain: rather than living life as a science or a technology, overburdened with regulations and rules of proper procedure, we look forward to a more healthy balance of the rational and the intuitive, freeing ourselves to once again live our lives more organically, creatively, and adventurously, using science and technology in the service of life, rather than having life serve mammon and the machine. We hereby reclaim for ourselves and posterity the Art of Life.

VIII. Domestic Protectionism

The anxieties connected with the more severe scenarios of Y2K cannot be easily dismissed by attributing them to an intense case of paranoia. Anyone over 70 remembers the hardships and deprivations of the so-called Great Depression. Most people know that stock market levels have far more to do with people's psychological states than with the true values of the companies whose stock is being traded. In fact, the whole economy can be reasonably perceived as one huge confidence racket, susceptible to abrupt changes of public opinion based on subjective interpretations of the significance of the color of Alan Greenspan's tie or other trivial clues.

Knowledgeable government officials are hardly unprepared for possible future extreme citizen reactions. One example is a powerful gov-

ernment agency of which too few people are aware: the aforementioned Federal Emergency Management Agency (FEMA). Those who do know of FEMA generally assume that its only purpose is benign, to assist the public in times of danger from floods, hurricanes, tornadoes, earthquakes and other natural disasters. FEMA's original and predominant role is to protect the US government in case of extreme foreign or domestic threats. Its powers grew under Oliver North and General Richard Secord. FEMA is empowered by a long series of Presidential executive orders that would permit draconian measures in times of national emergency.

Yes, we do consider our treasured rights and liberties to be in danger. We believe, along with Thomas Jefferson, that "Eternal vigilance is the price of liberty". But we think that the best way to preserve those liberties is not by employing isolated, negative, protectionist, reactive measures, but rather by pro-active, positive programs that would obviate the necessity and temptation to employ drastic measures by governments against their own people.

What distresses us most, perhaps, is that at all levels of government, once their own computer systems are fixed and tested, there appears to be far greater emphasis devoted to preparing for the threat of public violence and to protect the interests of government bodies and big business from Y2K disruptions, than there is to ensuring that the conditions of society are livable enough that the preparations for civil unrest are rendered unnecessary.

We have seen little information on what the 50 states have been doing to prepare for the fallout from Y2K. But we are hardly reassured when we recall Michigan's unconstitutional 1970's compilation of its infamous "Red Squad" files on citizens, many of whom were peace-loving, church-going activists working for peace and social justice and who were non-violent both in principle and in practice. The only real information we have seen so far regarding preparedness by the states is that four states have passed legislation protecting businesses by passing liability limits on Y2K-related litigation. Other states and the Federal government are considering similar legislation.

When emergency situations arise requiring, say, distribution of food and water, or the provision of shelter, the existing emergency management agencies, and the police and fire departments, deserve our heartfelt gratitude and respect. However, we do question the merit of placing the primary responsibility for Y2K planning under such agencies. Is Y2K not far more of a planning problem than it is a security problem? Would it not be far better to place Y2K preparations under the guidance of city and county planning commissions?

Finally, we understand the necessity that many people feel for making individual and family preparations for Y2K and other emergencies; indeed, such preparations would minimize dependence and recourse to overstressed emergency agencies in times of crisis. However, it is sad that some individuals are so terrified of potential civil unrest, and so disillusioned with and alienated from their government, that they feel compelled to assume a bunker mentality to ward off the threats of roving looters or perceived state terrorism.

IX. A Viable Alternative

During the past several months, a small number of communities have concluded that it's better to be pro-active rather than reactive: to mitigate the risks to citizens from Y2K, instead of merely preparing to squelch civic uprisings and breakdown of authority and order. Boulder (CO), the Bay Area (CA), Montgomery County (MD, near DC), Spokane (WA), and Medford and Portland (OR) are all at the forefront of this movement.

A recent article in the *Portland Oregonian* describes how: City officials are drafting ambitious plans to organize Portland's 200,000 households into small, self-sufficient units, marshaled by potentially thousands of neighborhood leaders trained to head off problems resulting from the Year 2000 computer problem.

If approved and executed beginning this spring, the effort would be one of the nation's largest municipal Y2K preparedness efforts.

"We're taking this seriously," Mayor Vera Katz said [recently]. "The purpose is not to raise a tremendous amount of concern, but to be prepared for an emergency. It doesn't mean it's going to happen."

Portland's approach, though mammoth in scale, will try to walk a middle ground between doomsayers who predict social collapse and naysayers who predict a colossal yawn on Jan. 1, 2000 ...

The City Council will be asked in coming weeks to approve as much as \$150,000 to finance the outreach campaign, including a full-time public information officer, a telephone-and-Internet referral network, a city Y2K Web site, outreach materials and assistance from the Global Action Plan for the Earth, an international environmental organization that created the community-organizing model.

Bravo! On reflecting on the types of responses that could be taken to Y2K, we distinguish between two dimensions of response, as follows.

VARIETIES OF RESPONSE TO POTENTIAL Y2K CRISES		TYPE OF AGENCY RESPONDING			
		GOVERN'T: -FEMA -Nat'l Guard -State Police -Co. Sheriff etc.	RELIEF AGENCIES: -Red Cross -Salv Army -OXFAM etc.	CITIZENS PREPAREDNESS GROUPS	COMBINED: Community Preparedness Groups Council's & Assns
TYPE OF RESPONSE	REACTIVE: Respond to crisis after it occurs	Suppress civil unrest and violence arising from lack of necessities		Vigilante groups, citizens' militia, bunker mentality	
	PROACTIVE: Provide for needs before crisis occurs	Stockpiling & distribution by Nat'l Guard, etc.	Stockpiling & distribution by relief agencies	Stockpiling & distribution by citizens' groups	Coordinated efforts by all agencies

We are not so wealthy nor so blessed with ample human resources of time and talents that we can afford to cover all fronts. We must focus our energies. We believe that the most efficient and effective program is the primarily pro-active approach, relying on a coordinated program of both governmental bodies and citizen's preparedness groups, calling this combination the "Community Y2K Preparedness Approach". In unity there is strength.

The current position of governmental bodies and, in general, the media pundits, which is employing spin control to minimize the threat of panic is, we believe, a policy that could lead to the very disaster that it attempts to avoid. By the fall of this year there could well be enough Y2K-related failures that finally citizens will realize the magnitude of the threat and begin making panicky, eleventh-hour preparations. The time for even minimal precautions to preclude such a scenario will thereby have been squandered.

We believe a far more prudent approach is to do what we can, without panic, and even without anxiety, but rather with due deliberation and a heightened common sense of purpose that has been ignored for too long. As in biblical times, we believe that the wiser path would be to stockpile gradually now, while supplies are abundant, in order to avoid hoarding later, when shortages become evident. Do we still believe in the potential for true, direct (as opposed to electoral) democracy? This is our great opportunity to find out! The time to test our fundamental principles, so persuasively stated in the Declaration of Independence, has now arrived.

X. Where to Begin

We are well aware that a statement such as this will be insufficient in and of itself to create consensus in even the most liberal-minded communities. What is important is that people, in large groups and small, should get together and organize for doing their own research, assessing the information, developing and deliberating on and evaluating alternative courses of action, and deciding on the best one, based on the criteria of both desirability and feasibility of both the ends and the means to achieve those ends. Then do it!

What we propose, in effect, is to revive the model of the New England Town Meeting. It is still alive and often well in our northeastern states. Both Thomas Jefferson and Tom Paine believed that democracy would never take hold in America unless and until the Town Meeting model were propagated across all the United States. The establishment of "townships" in Michigan and elsewhere was meant to facilitate this process, which unfortunately never went much beyond New England.

Today, the words "Town Meeting" have been so misused that they can apply to any gathering of the public, the blatantly obvious as the Albright/Berger/Cohen propaganda effort in Columbus, Ohio, designed to corral support for offensive measures against Iraq. But when we refer to Town Meetings, we mean an assembly of citizens debating issues of common concern, moderated by an impartial facilitator, in which politicians and experts are welcome to speak like anyone else, from the floor, with no greater power other than the power of persuasion.

There is precious little time left, but we believe there is still sufficient time, if used wisely, to not only garner support locally, but in neighboring communities throughout the state, the nation, and even the world. In spite of the potential for computer and telecommunications breakdowns, these same technologies enable us to communicate and to prepare cooperatively on a global as well as local scale, at unprecedented speed. It will do little good for any one community to be well-prepared if its neighbors are left unprepared; we can and we must all be prepared. The time has arrived to initiate grassroots globalization. ☑

What's Happening Locally?

The accompanying essay is the first result of the meetings so far of the Huron Valley Bioregion Ad Hoc Y2K Community Preparedness Group, which began as a project of the Huron Valley Greens/Green Party.

We chose the name of the group for three reasons:

- to emphasize the need to organize our efforts beyond municipal boundaries so as to include both town and country and a network of neighboring communities;
- to distinguish ourselves as a citizen's group that hopes to cooperate with but be distinct from the county or other governmental bodies;
- to stress our belief that urban and rural development ought to be more in harmony with natural processes, a bioregional approach.

We would next like to expand our group to be able to accomplish all that needs to be done as suggested in the essay, and to include a more diverse representation of groups and individuals in the Huron Valley watershed area. The organizational model that we advocate would be as we described in the essay—the New England Town Meeting format. We think that our next task ought to be to do further research, both an extension and revision of issues covered in the essay with the hope of reaching a broad local consensus on the nature of the Y2K problem, and to find out what is being done locally and at the state level in the public, corporate and private sectors. We would particularly welcome help from faculty and students at U of M, EMU, WCC, Concordia and Cleary Colleges (perhaps papers for credit?). With luck and diligence we might be able to report back some results in the next Agenda. All who are interested, please contact us by leaving a message on the Greens answering machine: 734-663-3555.

The next two meetings will be at 336½ S. State St. (3rd Floor, above Wazoo) on Thursday, March 4th and Thursday, March 18th.